Empowered lives.
Resilient nations.

Government of Burkina Faso

United Nations Development Programme

Project Document

<table>
<tr><td colspan="3">Project title: National Child Project under the GEF Africa Minigrids Program – Burkina Faso</td></tr>
<tr><td>Country: Burkina Faso</td><td>Implementing Partner (GEF Executing Agency): Burkina Faso Rural Electrification Agency (ABER)</td><td>Execution Modality: National Implementation Modality (NIM)</td></tr>
<tr><td colspan="3">Contributing Outcome (UNDAF[1] and CPD[2]):

UNDAF priority areas:

Pillar 3: Sustainable inclusive growth, decent jobs and food security

CPD identified national priority or goal and cooperation framework outcome involving UNDP:

Echoing the UNDAF with the goal to: Revitalize Productive Sector and Stimulate Employment Creation. Outcome 3.2: By the end of 2020, populations, especially young people and women in intervention areas (urban/rural), increase their income, adopt sustainable production and consumption patterns, and improve their food security.</td></tr>
<tr><td colspan="2">UNDP Social and Environmental Screening Category: Substantial</td><td>UNDP Gender Marker: GEN2</td></tr>
<tr><td colspan="2">Atlas Award ID: 00118893</td><td>Atlas Project/Output ID: 00115515 – Burkina Faso</td></tr>
<tr><td colspan="2">UNDP-GEF PIMS ID number: 6510</td><td>GEF Project ID number: 10474</td></tr>
<tr><td colspan="3">LPAC[3] meeting date: TBD</td></tr>
<tr><td colspan="3">Last possible date to submit to GEF: 19 June 2021</td></tr>
<tr><td colspan="3">Latest possible CEO endorsement date: 19 December 2021</td></tr>
</table>

[1] Cooperation Framework between Burkina Faso and the United Nations System (UNDAF) 2018 - 2020
[2] Country programme document for Burkina Faso (2018-2020)
[3] Local Project Appraisal Committee, consisting of Country Office, Implementation Partner and key country and development partners, convened just before endorsement as a final step to ensure alignment.

Project duration in months: 48 months	
Planned start date: 01 February 2022	**Planned end date:** 01 February 2026
Expected date of Mid-Term Review: 01 February 2024	**Expected date of Terminal evaluation:** 01 November 2025

Brief project description:

Access to electricity in Burkina Faso has improved significantly as evidenced by an increase in the rural electrification rate from 3.2% in 2016 to almost 10% in 2019 (World Bank, 2020). Despite this level of progress, grid extension continues to be the primary method of electrification. The Government of Burkina Faso (GoBF)'s efforts to increase electricity access to rural communities have not been able to keep pace with increasing demand. In addition, off-grid electrification faces key barriers such as inadequate policy and regulatory framework, lack of access to financing, lack of local technical capacity and high-cost of new connection, among others.

However, decentralized renewable energy technologies, particularly solar-battery minigrids, offer opportunities to deliver clean and cost-effective solutions to off-grid areas as a result of falling hardware costs, a digital revolution and innovative private sector business models.

Against this background, as part of the UNDP-supported, GEF-financed Africa Minigrids Program (AMP), this project seeks to increase access to clean energy by increasing the financial viability of, and promoting scaled-up commercial investment in renewable energy (RE) minigrids in Burkina Faso with a focus on cost-reduction levers and innovative business models. Specifically, the National Child Project under the AMP in Burkina Faso will promote solar minigrids with storage in some of the existing ecovillages and in the Northern, Central North, Central and Boucle du Mouhoun regions by scaling-up private investments. The proposed project will showcase derisking instruments and cost reduction levers by linking minigrid development to productive energy uses. It will directly support the GoBF's strategies for poverty reduction through socioeconomic development in rural areas, and its climate change mitigation objectives as indicated in the Nationally Determined Contribution (NDC) of the country.

FINANCING PLAN	
GEF Trust Fund grant	USD 924,566
UNDP TRAC resources	USD 800,000
Confirmed cash co-financing to be administered by UNDP	USD 0
(1) Total Budget administered by UNDP	**USD 1,724,566**
(2) Total confirmed co-financing to this project not administered by UNDP[4]	**USD 103,693,243**
(3) Grand-Total Project Financing (1)+(2)	**USD 105,417,809**
SIGNATURES:	

[4] Out of this total, USD 2,080,867 are co-financed activities administered by UNDP and not contributing to project results. This co-financing corresponds to three other projects (UNDP/PACOS, UNDP/GOLCOS and PAMED) implemented by UNDP Burkina Faso which will support Components 1 and 2 of the project.

NOTE: IF THE PROJECT DOCUMENT IS IN FRENCH OR SPANISH, THE FINAL PROJECT DOCUMENT MUST BE CLEARED BY THE RTA BEFORE SIGNATURE.		
Signature: print name below	**Agreed by Government Development Coordination Authority**[5]	**Date/Month/Year:** *within 25 days of GEF CEO endorsement*
Signature: print name below	**Agreed by Implementing Partner**[6]	**Date/Month/Year:** *within 25 days of GEF CEO endorsement*
Signature: print name below	**Agreed by UNDP**[7]	**Date/Month/Year:** *within 25 days of GEF CEO endorsement*
Key GEF Project Cycle Milestones: **Project document signature**: within 25 days of GEF CEO endorsement **First disbursement date**: within 40 days of GEF CEO endorsement **Inception workshop date**: within 60 days of GEF CEO endorsement **Operational closure:** within 3 months of posting of TE to UNDP ERC **Financial closure:** within 6 months of operational closure		

5 *Other evidence of government agreement may be accepted in lieu of a signature, unless the programme country government requires a signature.*

6 Not required when UNDP is the implementing partner (i.e. DIM implementation modality). If a UN Agency is the implementing partner, and has signed a SBEAA with UNDP, then the Government Development Coordination Authority, UNDP and UN Agency sign the project document. If an IGO is the implementing partner, and has signed a SBEAA with UNDP, then the Government Development Coordination Authority, UNDP and IGO sign the project document. If a CSO/NGO is the implementing partner, the Government Development Coordination Authority and UNDP sign the project document and attached it to the Project Cooperation Agreement to be signed by the CSO/NGO and UNDP.

[7] *For NIM projects this is the Resident Representative. For DIM projects in a single country this is the Resident Representative. For global, regional DIM projects this is BPPS.*

I. TABLE OF CONTENTS

List of Tables

List of Figures

List of Boxes

List of Acronyms and Abbreviations

ABER	*Agence Burkinabé de l'Electrification Rurale* (Rural Electrification Agency of Burkina Faso)
AMP	Africa Minigrids Program
APER	*Association des Professionnels des Énergies Renouvelables* (Renewable Energy Professionals' Association)
CO	Country Office
COPERES	*Conseil Patronal des Énergies Renouvelables du Sénégal* (Business Council for Renewable Energies of Senegal)
COOPEL	*Cooperative d'Électricité* (Electricity Cooperative)
CO_2	Carbon Dioxide
DREI	Derisking Renewable Energy Investment
ECREEE	ECOWAS Center for Renewable Energy and Energy Efficiency
ECOSHAM	ECOWAS Standards Harmonization Model
ECOWGEN	ECOWAS Program on Gender Mainstreaming in Energy Access
ECOWREX	ECOWAS Observatory

ESCO	Energy Service Company
ESMF	Environmental and Social Management Framework
FSP	Full Sized Project
GCF	Green Climate Fund
GEF	Global Environment Facility
GhG	Greenhouse Gas
GoBF	Government of Burkina Faso
GGGI	Global Green Growth Institute
GIZ	*Deutsche Gesellschaft für Internationale Zusammenarbeit*
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
HACT	Harmonized Approach to Cash Transfers
HH	Household
IP	Implementing Partner
IPP	Individual Power Producer
IRENA	International Renewable Energy Agency
KWh	KiloWatt Hour
MSP	Medium Sized Project
O&M	Operations and Maintenance
PIF	Project Identification Form
PPL	People
PIR	Project Implementation Report
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
MoEGECC	Ministry of Environment of Green Economy and Climate Change
MoEMQ	Ministry of Energy, Mines and Quarries
MW	Megawatt
NDC	Nationally Determined Contribution
NREAP	National Renewable Energy Action Plan
NEEAP	National Energy Efficiency Action Plan
NREL	National Renewable Energy Laboratory
RE	Renewable Energy
SDGs	Sustainable Development Goals
SEFA	Sustainable Energy Fund for Africa
SE4ALL / SEforALL	Sustainable Energy for All
SESP	Social and Environmental Screening Procedure
SHS	Solar Home Systems
SONABEL	Société National Burkinabé d'Electricité (Burkina's National Electricity Company)
SIDA	Swedish International Development Agency
SP/CNDD	Permanent Secretariat/National Committee for Climate Change
STAP	Scientific Technical Advisory Panel
UNCDF	United Nations Capital Development Fund
UNCOOPEL BF	National Union of Electricity Cooperatives in Burkina Faso
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

II. DEVELOPMENT CHALLENGE

1. With a young and rapidly growing population of over 20 million, of which 70.2 percent (World Bank, 2019)[8] live in rural areas, Burkina Faso is the fifth most populous country in West Africa. The country's Growth Domestic Product (GDP) growth was estimated at 6% in 2019, bolstered by increased public investment and higher prices for gold and cotton, which are the country's two main exports. However, this has not translated into improved standard of living for most of the population. The rates of poverty and unemployment remain very high in this landlocked country, particularly in rural areas with 36.7% of the population living below the poverty line of US$1.90 per day, in 2019 (World Bank 2020). In fact, 90% of people living below the poverty line in Burkina Faso are in rural areas. This rural predominance of poverty originates from prevailing inequalities in terms of illiteracy, gender and lack of basic infrastructure and services such as electricity. Moreover, Burkina Faso is classified as a least-developed country (LDC) and has a Human Development Index score of 0.4 in 2019[9], which is in the "Low Human Development" category positioning the country at 182 out of 189 countries and territories.

2. The country's economy is predominantly dependent on the agricultural sector, which accounts for roughly 40% of GDP. The sector employs 75% of the total population while over 80% of the rural population depend mainly on small-scale subsistence farming as their main source for sustenance and revenues. The sector is however, characterized by low productivity owing to the fact it is mostly rain-fed, thus highly subject to adverse impacts of climate change such as erratic rainy seasons, variable rainfalls, floods, droughts, bush fires and other extreme events.

3. Burkina Faso, as the rest of the world has been drastically affected by the COVID-19 pandemic. The pandemic has brought about social and economic impacts and hardships to the population in general. It has particularly affected the informal sector that provides a good part of the GDP in Burkina Faso and mobilizes 70% of total non-agricultural employment (UNDP,2020)[10] Some impacts include disruption of supply chains (foods, fuels and other goods and services), productive activities and demand for goods and services. The vulnerability of the rural population, which is disproportionately poorer than their counterparts in urban areas, is further worsened by the pandemic because they mainly rely on subsistence farming to make a living. From a social point of view, it is expected that poverty and inequalities will increase as a result of the pandemic, increasing the prospects of insecurity and social protests.

4. One of the main impediments to Burkina Faso's socioeconomic development and effective post-COVID-19 recovery is the country's dire energy situation. Burkina Faso has one of the lowest electricity access rates globally with a national electrification rate of only 25% in 2019, with a significant disparity between urban areas with 65% of the urban population having access, compared to only 10% in rural areas. Moreover, considerable socio-economic inequalities exist in terms of access considering that less than 5% of the poorest households versus 50% of the wealthiest are connected to the national grid. A similar urban-rural electrification gap can be observed in SMEs, public health and education facilities across the country. For instance, electricity access rate stands at 10.5% for SME in urban areas and only 1.9% of rural SME have access[11]. Access to electricity is an important lever for poverty alleviation, especially for rural women and young people who are predominantly active in the agriculture value chains. Therefore, improving access to electricity in the country is important to reducing poverty, addressing gender inequalities and many other forms of exclusion (financial, etc.).

[8] World Bank online country data page: https://data.worldbank.org/country/BF
[9] UNDP Human Development Report 2020: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/BFA.pdf
[10] https://www.undp.org/content/undp/en/home/coronavirus/socio-economic-impact-of-covid-19.html
[11] Energy sector vision (MOE, July 2018)

5. A significant part of Burkina Faso's population remains without access to electricity is a result of systemic barriers such as policies, regulatory and institutional framework as well as other market barriers such as lack of access to finance, lack of technical skills, etc. preventing private sector investment. Electricity prices in Burkina Faso are among the highest in West Africa at (USD 0.22/kWh) (ECREEE 2019)[12] on average. To complicate matters, these prices are lower than electricity generation costs (USD 0.26/kWh), with the difference subsidized by the Government. This is mostly explained by over reliance on thermal generation running on imported diesel and heavy fuel oil (HFO), which accounts for 288MW of the total 355MW installed capacity (SONABEL 2017 Annual Report). Yet, the sector is characterized by a dire deficit in the power supply, which was estimated between 80-110 MW in 2017, with supply barely meeting demand during non-peak periods.

6. Therefore, the country is confronted with the following two challenges: i) the need to increase substantially the power supply in urban and rural areas to meet a fast-growing demand; ii) Improve the reliability, affordability and quality of the overall service. To address these challenges, the GoBF has started to harness its renewable energy potential, in particular, its excellent solar potential with solar irradiation of 5.5kWh/m2/day for 3,000 to 3,500 hours per year, creating considerable opportunities for the development of decentralized solar energy solutions. Currently, the GoBF is pursuing a mix of public and private sector investments in new grid-connected and off-grid solar power plants in order to reduce generation costs. Importantly, the regulatory and institutional framework for the power sector in Burkina Faso is evolving, most notably, with enactment of the Electricity Law of 2017, which opened the door to some investments in the energy sector including West Africa's biggest solar power plant, the 33 MW Zagtouli power plant on the outskirts of the capital Ouagadougou. Energy produced by the Zagtouli plant cost 45 CFA francs, about 8.4 US cents per kilowatt-hour[13], i.e. less than a third of the current average electricity generation costs in Burkina Faso.

7. However, market risks continue to impede increased private sector investment especially in rural electrification amidst recent reforms in regulation. In off-grid areas more specifically, the key barriers and risks that currently prevent the effective deployment of decentralized renewable energy solutions such as solar PV minigrids are detailed in Table 1.

Table 1: Barriers impeding the scale-up of private sector investment in solar PV minigrids

Barrier Category	Description
Energy Market Barriers	• At the moment, unclear and unfavorable rules for minigrids development prevail i.e., the existing delivery model/framework through electricity cooperatives (COOPEL) is restrictive and impedes commercial investment in the minigrid sector. Most minigrids operated by COOPELs have failed to sufficiently tap into productive uses. • The legal status of private sector in rural electrification market has not been sufficiently clarified. Many sector stakeholders still debate permissibility, which impairs bankability and adds to sector confusion. Few companies took a leap of faith by investing in minigrids but are now having challenges with the regulator and utility, ABER and SONABEL around tariffs, licensing, scaling-up, co-existence with the grid, etc. • The sheer lack of specific rural electrification strategy puts renewable minigrids at a disadvantage as grid extension is favored. There is an unclear role of clean energy minigrids in the market structure. • Local developers have limited capacity and experience with development of business and financing plans that would be bankable within the local market.

[12] Off-Grid Solar Market Assessment Burkina Faso Report" in the framework of the Regional Offgrid Electrification Project (ROGEP) http://www.ecreee.org/sites/default/files/ecreee_rogep_regional_report.pdf

[13] Burkina Faso launches Sahel region's largest solar power plant
http://www.ecreee.org/news/burkina-faso-launches-sahel-regions-largest-solar-power-plant

Developer Risks	• There is a limited availability of public GIS data to facilitate investment decision-making, consumer decision making, or policy decision making. • Industry associations in the mini-grids sector have a limited influence to lobby or pressure for change along a shared platform.
Financial Barriers	• Fiscal incentives for minigrids are unclear at this stage. The clarity, applicability, and enforceability of the fiscal regime under the COOPEL framework is not well-defined. • Developers of solar PV minigrids do not have access to financing because financial institutions are not equipped to understand minigrid models, which they consider risky to lend to.
Labor Risks	• Both public and private sector actors lack technical capacity when it comes to technological and business models innovations in minigrids.
Technology/digital Barriers	• The market is characterized by components of relatively poor quality. A lack of quality management within the market damages the perception of all solar products. • *Payment Risk:* Regulatory resulting in lack of fintech companies offering USSD services. Without access to the USSD network most of Burkina Faso's emerging fintech industry is unable to serve the rural poor. • Low penetration and usage of digital tools by stakeholders (rural electrification agency, regulator and minigrid developers).
End-User Credit Risk	• The existing policy/regulatory framework is not conducive to women and youth entrepreneurs' engagement in the renewable energy and mini-grids business, and not oriented towards unlocking the untapped potential for green jobs and productive uses. • Existing consumer associations, especially prominent women's groups, are not well versed in or familiar with solar minigrids as solutions to electricity, which creates a social acceptance risk for the developers. • Due to extreme climate events, most smallholder farmers lose income and sell their assets sometimes.
Hardware Risk	• Poor quality installations can undermine the confidence of the market in solar minigrids.

8. Addressing the lack of access to sustainable and affordable electricity in rural areas is consistent with the GoBF's national strategies and plans, described in Table 2.

Table 2: Alignment with National Strategies and Plans

National Plan/Strategy	**Date**	**Description**
Energy Sector Policy	2014-2025	Policy seeks to lower its cost of energy, increase the electricity access rate to 95%, and has a renewable energy target of 50% by 2025.
National Plan for Economic and Social Development (PNDES)	2016	Plan places special emphasis on improving the living conditions of the population and identifies lack of infrastructure as a major impediment to poverty reduction. Though the PNDES expired in 2020, a subsequent plan will most likely recognize the important role of energy for the poverty reduction in Burkina Faso.
Burkina Faso's SE4ALL action agenda	2015- 2030	Sets Burkina Faso's long-term objectives in terms of renewable energy and energy efficiency.
Sustainable Development Goals (SDGs)	2015-2030	Project essentially supports SDGs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 17

Nationally Determined Contribution (NDC)	2015-2050	NDC seeks to support implementation of the mitigation contributions pledged by Burkina Faso to achieve the Paris agreement. Both the energy and agriculture sectors have been identified as priority for adaption and mitigation as both have the potential to build the resilience of vulnerable populations especially women and youth in the agriculture value-chains.
National Adaptation Plan (NAP)	2015-2025	Plan includes measures to address climate change by promoting sustainable technologies to enhance the development of relevant areas such as agriculture, livestock, water, forestry and biodiversity through integrated solutions including renewable energy and energy efficiency.
National renewable energy action plan (NREAP) and national energy efficiency action plan (NEAP)	2015- 2030	The Plans include a broad range of RE&EE measures to be implemented at national levels to achieve to the regional ECOWAS Renewable Energy and Energy Efficiency Policy targets.
Energy Sector Policy Letter (LPSE)	2016-2020	The policy letter focuses on the following: • developing energy production from renewable sources; • Strengthening thermal electricity production; • increasing the population's access to modern energy services; • promoting energy efficiency; • promoting regional cooperation in the field of energy; • Ensure the availability of hydrocarbons in quality and quantity; • ensure the financial stability of the energy sector.
Law 014-2017/AN	2017	Law on the general regulation of the energy sector.
Sectoral Policy "Industrial and Artisanal Transformations (TIA)"	2018-2027	Considering the challenges facing the sector, the vision adopted for the "industrial and artisanal processing" sectoral policy is as follows "By 2027, Burkina Faso will have an efficient and modern secondary sector, supported by a diversified and competitive industrial and artisanal fabric that will generate sustainable growth and decent jobs. In this respect, its overall objective is to make the industrial and artisanal sector competitive, a creator of high added value and decent jobs.
Strategic Plan for the Development of the Energy Sector	2017	Describes the situation of the energy sector and the investment plan for production-transport-distribution and rural electrification
Burkina Faso/World Bank COVID-19 Preparedness and Response Project	2020	The purpose of the Project is to prevent, detect and respond to the threat posed by COVID-19 (Coronavirus) and strengthen national systems for public health preparedness including health system strengthening with electricity.

III. STRATEGY

9. Strategy: The AMP project adopts a systemic approach to increasing electricity access in off-grid communities using solar PV minigrids. The project will support the scaling up of private investments through the deployment

of innovative business models and financing with a focus on achieving cost reductions of solar PV minigrids. The overall objective is to increase the commercial competitiveness of solar PV minigrids with storage through their mainstreaming in the agricultural value chain; increase the affordability of renewable electricity for end users, thereby, reducing reliance on the baseline technology (i.e. diesel minigrids). As illustrated on Figure 1, AMP will emphasize - and seek to develop comparative advantages - in three '*key areas of opportunity*' (national dialogue on delivery models; productive use; and mainstreaming digital innovation). This will result in overall reductions in greenhouse gas emissions. The proposed strategy is squarely aligned with the GEF Strategic Focal Areas CCM-1-1 "Promote innovation and technology transfer for sustainable energy breakthroughs for de-centralized renewable power with energy storage".

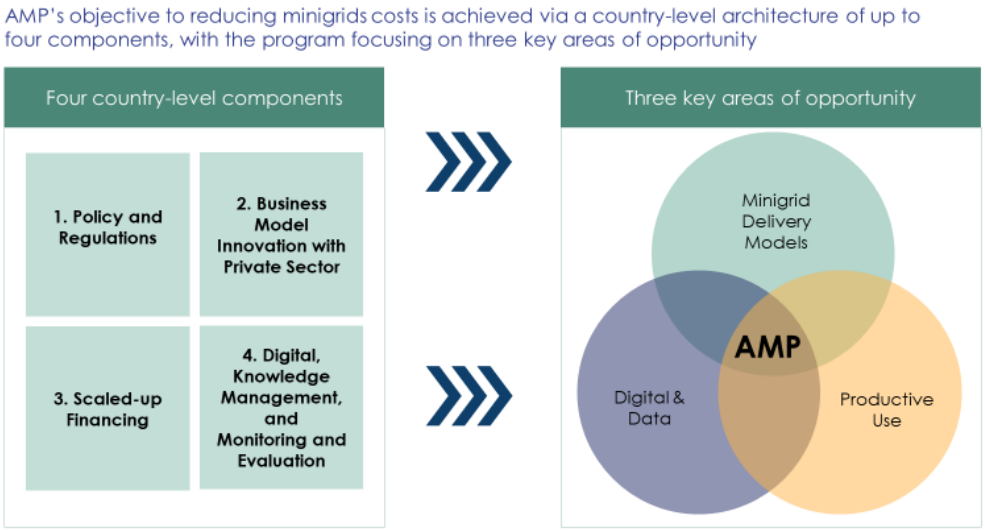


Figure 1: AMP's objective, architecture and areas of opportunity

10. Minigrid delivery model. As described in the previous section (Table 1) and further in Section IV (Results and Partnerships), the current delivery model for minigrids in Burkina Faso relying on electricity cooperatives (COOPEL) subsidized by ABER has shown its limitations in terms of efficiency and sustainability. A key objective of the AMP project is to promote and guide a national stakeholders dialogue towards the definition of a new delivery model that could overcome the past challenges and allow deployment at scale. The concept of minigrid delivery model and what identifying a new one entails is further described in Box 1.

Box 1: The Concept of a Minigrid Delivery Model and Status in Burkina Faso

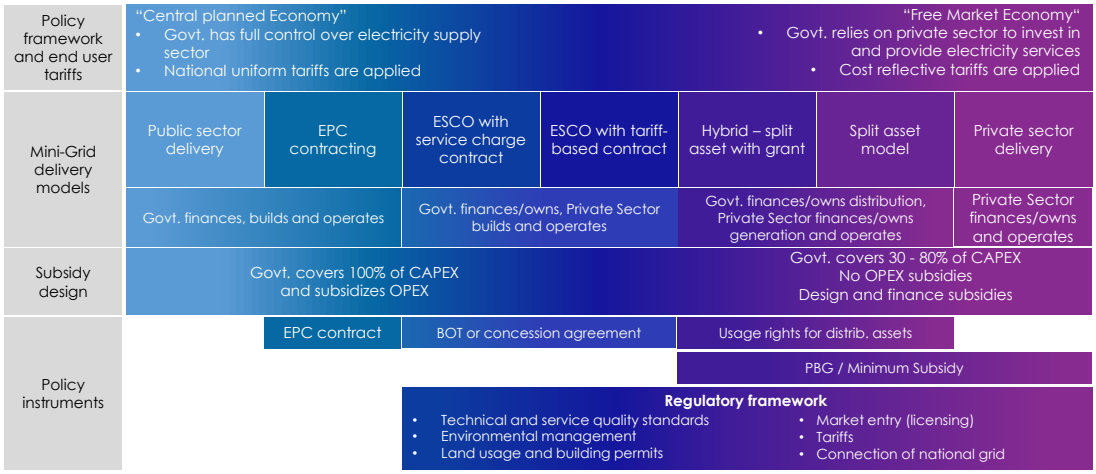
Concept of Minigrid Delivery Model

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

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

In each country, identifying one (or more) delivery models will provide a framework for all sector stakeholders to plan for the longer term, particularly with regard to mobilizing private investment as one of the main objectives

of the project. Figure 2 below describes the spectrum of design options for delivery models, across a number of different elements (ownership, policies, finance etc.)



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

Figure 2: Conceptual outline of minigrid delivery models

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

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

Current Status of Minigrid Delivery Models in Burkina Faso

As the market in Burkina Faso is not yet very developed, key aspects of the mini-grid delivery models are still undefined and need to be further evaluated. Table 3 provides a summary of the current status of key aspects of minigrid delivery models in Burkina Faso as understood from consultations during PPG.

Table 3: Current status of minigrid delivery models in Burkina Faso

Aspect	Current Status
Ownership and Operation	Currently almost all existing minigrids are owned and operated by electricity cooperatives (COOPELs), which in practice include community members with limited technical and financial expertise. The GoBF is however willing to explore alternative models involving the private sector as owner and/or operator of the mini-grids.
Tariff mechanisms	At the moment, the minigrid tariffs are capped and too low to be cost-reflective, which deters private sector investments in the sector. The GoBF has however expressed its willingness to revise its current tariff model and this project includes key activities to support the GoBF in this process (Output 1.4).
Subsidy mechanisms	The GoBF is heavily subsidizing COOPELs at the moment to allow them to maintain their services, which is another incentive for exploring alternative delivery models. The level of subsidy that the GoBF will be willing and able to

	commit in the future for new minigrids is not determined yet, and will be assessed in the scope of this project.
Regulations	During the PPG consultations, the GoBF has expressed a strong willingness and readiness to put in place an appropriate regulatory framework including required tools to implement envisaged minigrid policies. This will be supported through this project, in synergy with other initiatives implemented by partners to further revise and strengthen the policy, regulatory and institutional frameworks for off-grid electrification.

The possible options for each aspect need to be thoroughly understood by stakeholders and substantiated with real examples. The decisions for/against certain options must be openly discussed and weighed up in terms of the interplay between the aspects and the resulting consequences for the sector. These decisions are often influenced by the historical and cultural background on the one hand, and by the current political and economic situation of a country on the other.

To this end, one of the first activities envisaged in the project is to get all relevant stakeholders on board and initiate a process of national dialogue to weigh up all aspects of mini-grid delivery models (Output 1.1), with the aim of defining one or several sector-wide delivery models. The project's pilots (Output 2.1) will also explore delivery models by demonstrating an alternative approach to COOPELs promoting the involvement of the private sector for increased efficiency and sustainability of the installed minigrids.

11. Digitalization represents a key opportunity for Burkina Faso that will be leveraged in this project. For two decades, the GoBF has been implementing telecom sector reforms which have resulted in notable improvements in the Information and Communication Technology (ICT) sector. The country has created a relatively competitive environment for telecommunication services and has been one of the leading countries in the region in terms of adopting Economic Community of West African States (ECOWAS) ICT policies.[14] As of 2018, 86% of the households own a portable telephone, of which 97% are in urban areas and 82% in rural areas, and mobile money services have been launched since 2013.[15] On the other hand, only 32% of the population is covered by 3G network and only 12% of households has internet access, seven percentage points lower than the average in Africa. As further explained in Box 2, digital technologies and solutions are fundamental to enabling off-grid electrification. However, little data is available on the use of digitalization in the off-grid electricity sector in Burkina Faso, highlighting the need to demonstrate innovative approaches in the area that could be further replicated by other existing or planned mini-grids projects in the country. Digital is a cross-cutting theme in this project, applying across all components, as well as in its own Component 4.

Box 2: Digitalization Minigrids

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. Figure A 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. Figure 3 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.

[14] International Telecommunication Union (ITU), Burkina Faso Country Profile, 2018.
[15] ITU estimates as of 2018.

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

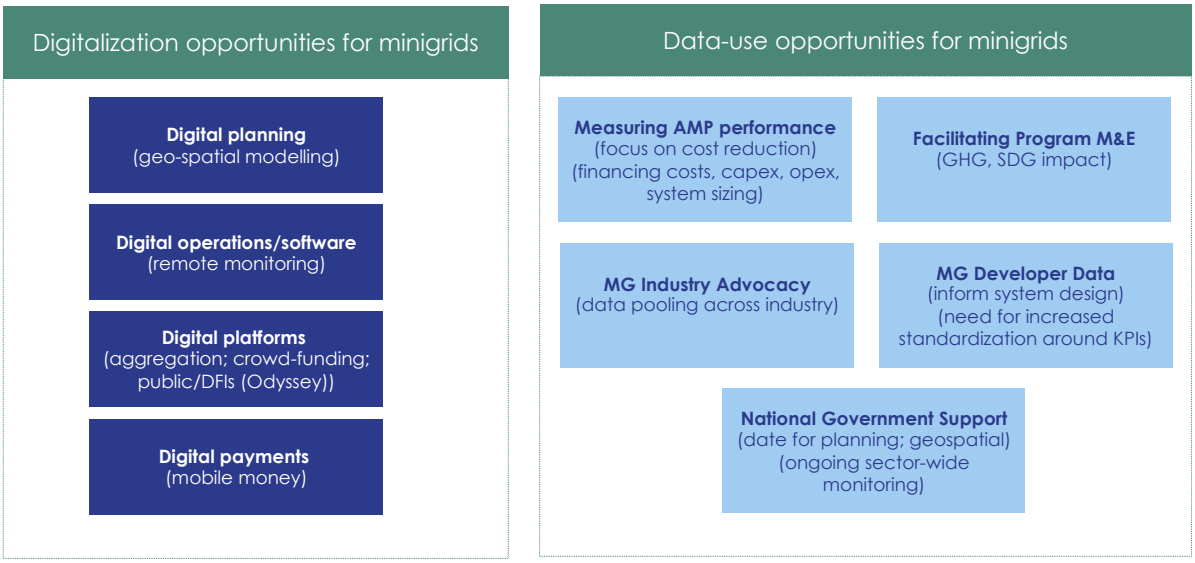


Figure 3: Digital and data opportunities for minigrids in the AMP

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

12. Moreover, the strategy of this project will support the GoBF's COVID-19 response and recovery by building the resilience of the vulnerable populations and health facilities through provision of sustainable energy and income

generating activities under Output 2.1 (pilot projects). Specifically, the pilot projects will target the water and agriculture sectors as demanded by Burkina Faso's national stakeholders during the PPG phase, which called for showcasing water-energy and food nexus in order to promote socio-economic growth, increase private sector engagement and reduce poverty in rural areas.

13. Theory of Change (ToC): The ToC, described on Figure 4 and Annex 20, is premised on a baseline context where the energy access rate of the country is low with a glaring contrast between the rates in urban and rural areas, respectively 65% and 10% (World Bank Energy Progress Report 2019)[16]. Although, the government is making progress towards increasing access to electricity, systemic barriers and risks, such as financial, social, policy and regulatory and technical capacity gaps are hampering the scaling-up of solar PV minigrid with batteries in Burkina Faso. The ToC for the Burkina Faso Child Project, mirrors that of the AMP Regional Child Project.

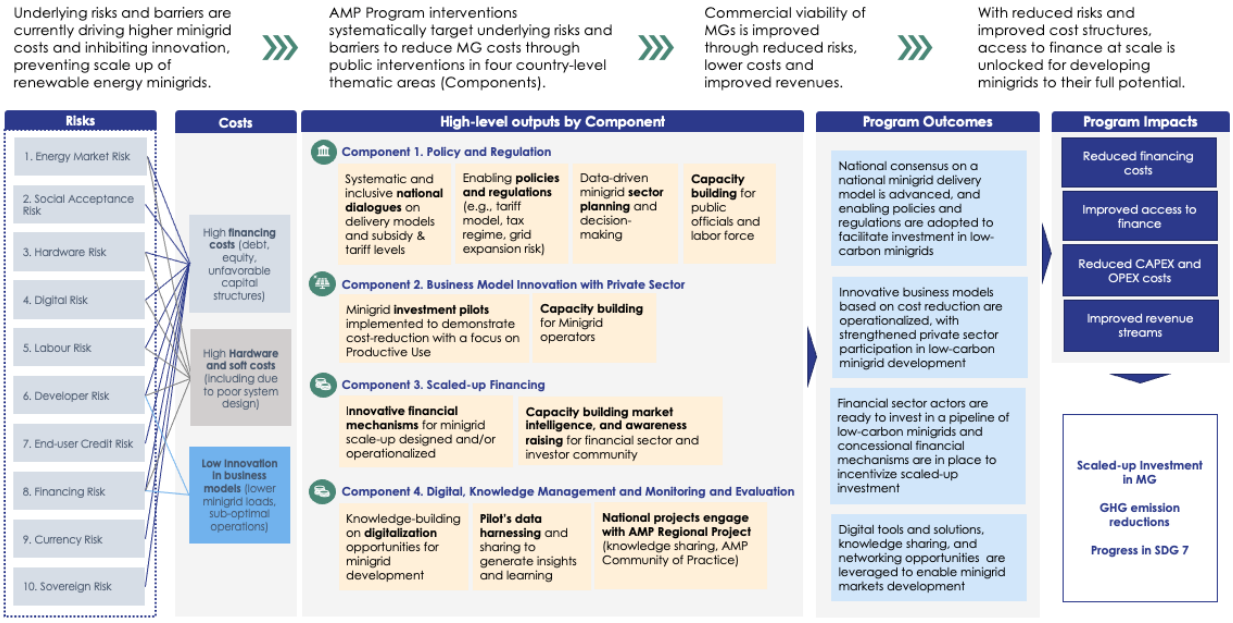
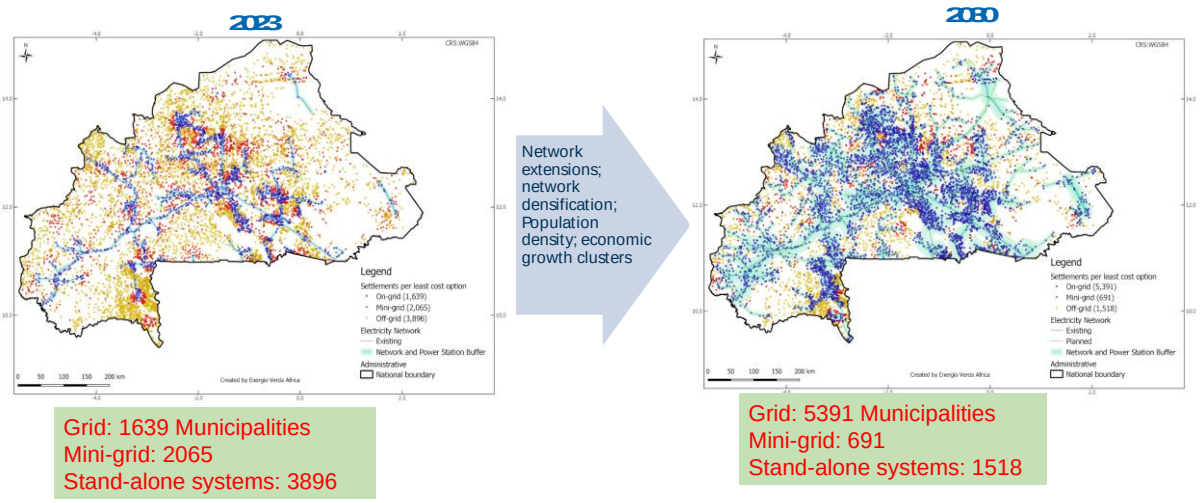


Figure 4: Theory of Change for the AMP Burkina Faso Child Project (see also Annex 20)

14. Today, decentralized power is key to complementing existing efforts at closing energy access gaps. Innovative off-grid solutions – namely renewable energy minigrids ('minigrids') offer great potential for electricity access, poverty reduction and GHG emission reduction. However, underlying risks result in three key negative drivers for clean energy minigrids: high financing costs, with elevated costs of equity, debt and prevalence of unattractive capital structures; high hardware/soft costs, reflecting market barriers and poor system design; and lack of innovation in business models, holding back revenue growth and new sources of demand. When these underlying investment risks are mitigated through the project's cost-reduction levers and innovative business models, it will result in competitiveness and financial viability of renewable energy minigrid.

15. When solar minigrids with storage become more competitive against diesel-based alternatives, this will crowd-in private investment, thus ushering in various development benefits such as: increased investment, GHG emission reductions, increased rural electrification for poor rural communities, lower tariffs for end-users, etc. There is a significant potential for minigrids deployment in Burkina Faso. Based on the map on Source: Burkina Faso Off-grid Market Assessment Report, ECREEE 2019
16. Figure 5, minigrids will remain the least-cost option for increasing energy access for about 9% of the municipalities in Burkina Faso by 2030, even if all planned grid connected projects are implemented.

[16] World Bank (2019) Tracking SDG 7, The Energy Progress Report



Source: Burkina Faso Off-grid Market Assessment Report, ECREEE 2019

Figure 5: Maps showing municipalities with least cost electrification options in Burkina Faso

17. Consequently, this project will address the lack of access to energy through a series of interventions embedded in four key areas / project components (PC):

    Component 1: **Policy and Regulation**
    Component 2: **Project and Business Model Innovation, with Private Sector Engagement**
    Component 3: **Scaled-up Financing**
    Component 4: **Digital, Knowledge Management and Monitoring and Evaluation**

18. The program's specific outputs under each of these four components are designed to systematically target the underlying investment risks for renewable energy minigrids advancement in Burkina Faso. This strategy is appropriate to the Burkina Faso context where several causal investment risks for renewable energy minigrids are preventing increased private investment, GHG emission reduction, progress towards SDG7 and livelihood improvement.

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

19. Alignment with GEF Focal Area: The program is aligned with Objective 1 of the Climate Change Focal Area to "Promote innovation and technology transfer for sustainable energy breakthroughs", and through CCM-1-1 – "Promote innovation and technology transfer for sustainable energy breakthroughs for de-centralized renewable power with energy storage".

20. It also contributes to points 113, 118, and 119 of the GEF-7 Programming Directions to accelerate "the speed and scale of sustainable energy investment in developing countries", to develop "innovative business models that go beyond business as usual" and to foster innovation. The overall contribution towards supporting "transformational shifts towards low emission and climate-resilient development pathways" is particularly

important given access to affordable renewable energy is unavoidable for sustainable development, particularly in a context where countries are struggling to extend national grids to secure energy access to off-grid communities. Since many of the national child projects under the program will develop low-carbon minigrids supported by innovative business models that can be scaled-up, the programme also aligns with the objective to focus "on the demonstration and early deployment of innovative technologies to deliver sustainable energy solutions that control, reduce or prevent GHG emissions" (117). In addition, the program follows GEF's advice to deliver focused interventions "through programmatic approaches or regional projects" (118).

21. Incremental cost reasoning**:** The program has a clear incremental cost reasoning, building on the baseline analysis and program's area of focus and niche. The baseline analysis, as set out in earlier section, has identified that generation costs for renewable energy minigrids in developing countries are not competitive with fossil-based alternatives. The key drivers behind this are identified. It is the case that generation costs are falling, based on a number of baseline trends, but there is a need to further accelerate this. The program has a focus on minigrid cost-reduction – across hardware costs, soft costs and financing costs – and innovative business models for minigrids. With this clear focus, the program has a specific niche, being complementary to existing activities. In this way, the program has the aim of promoting more efficient and effective use of existing development resources and programs. In short, the program's alternative scenario will result in additional falls in generation costs, making renewable energy minigrids more competitive, and spurring more investment, GHG emission reductions, and electrification.

22. Global Environmental Benefits: Direct and indirect emission reductions expected from the project amount to 14,353 tCO_2e and 495,000 tCO_2e respectively[17]. The emission reductions will emanate from pilot project investments (Output 2.1) and indirect emission mitigation, from creating a general enabled investment environment, and subsequent investment flows. The methodology for the contributions is following the financial model developed at PPG stage to take a standardized approach at analyzing minigrid pilots which will receive support from national child projects in AMP and provide revised estimations for the projects' target contributions to GEF-7 Core Indicators to replace those developed during the PFD Phase. More details on the calculations of the global environmental benefits for this project are provided in the Annex 13 of this project document.

23. Further, the program will contribute to significant energy cost-reductions as a result of the displacement of diesel and petrol generators by the child project through the increased utilization of renewable energy minigrid storage and other energy efficient appliances / equipment. Therefore, the child project, once demonstrated and scaled will support the improvement of energy security in Burkina Faso, since the share of renewable energy resources will grow and dependency on imported fuels will decrease.

IV. RESULTS AND PARTNERSHIPS

24. Expected Results: The overall project objective is to **support access to clean energy by increasing the financial viability and promoting scaled-up commercial investment in solar PV minigrids in Burkina Faso**. Four components/outcomes have been developed to scale up solar PV minigrids based on cost reduction levers, while simultaneously embedding the renewable minigrids in the agriculture value chain for productive energy uses and renewable electricity-induced local commodity value addition. The activities proposed under the four project outcomes will seek to: (1) address policy, regulatory and institutional barriers to promote private sector investments in solar minigrids at scale (2) propose innovative business model approaches coupled with cost reduction levers to strengthen private sector participation in solar PV minigrid development for maximizing SDG

[17] At the AMP regional project, 10% of the indirect GHG impacts calculated at the Burkina Faso project level are allocated to the regional child project, in line with the apportioning of the overall program budget. This reflects the benefits of national projects accessing the regional project's support. To avoid double counting, this 10% is removed from the indirect totals for the Burkina Faso project.

impacts; (3) make low-cost financing more accessible, and financial schemes more attractive to private investors; and (4) support the scaling up of rural electricity access for the sustainable development of communities through a sound and robust knowledge management framework.

25. The PPG phase followed a participatory, inclusive and adaptive approach, with regular consultation and engagement with all key stakeholders at the local, national, and regional levels. These included key stakeholders identified in the PIF and those identified during the PPG phase. In line with the UNDP and GEF principles, specific attention was given to gender and socio-environmental issues. The PPG methodology ensured a seamless collaboration which stimulated deep and wide engagement from all market actors for baseline analysis, and facilitated the mobilization of co-financing. This process allowed the identification of priorities for the targeted communities as well as their cost and relevance, and ensured that the project activities are based on the needs of the key stakeholders, including the most vulnerable groups (women, youth, small-scale farmers, etc.). The activities under each outcome described in this section were designed on the basis of these consultations, and some changes were brought to the project design as compared to the PIF stage (see Table 2). Also, components, outcomes, outputs and activities were designed in compliance with the GEF additionality principle.

26. There are strong linkages with the AMP Regional Child Project across all four project components, in particular with the Regional Project Component 2 which will provide access (if requested) to a variety of dedicated technical and operational support to AMP National Child Projects, as follows:
    1) **Access to specialized expert international consultants in selected areas** (DREI, data, GIS modeling, mini-grid business models, etc.) hired, retained, contracted and paid for by the AMP regional project and made available to all participating national project staff and selected beneficiaries on as needed basis. The areas of support, listing of available firms/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 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.
    5) **Specialized advisory support for implementing UNDP's minigrid DREI analyses**. During project implementation, the UNDP DREI Core team, working with the regional project, will make available to national teams and consultants the resources and tools to conduct full quantitative DREI applications, and will provide ongoing support and quality assurance.

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

27. **Project Component 1: Policy and Regulation (PC1)**

28. This component seeks to address policy, regulatory and institutional barriers identified in the baseline scenario preventing private sector investments for the uptake of renewable energy minigrids in Burkina Faso. This is a key component, which will support the market with clear and transparent policies and regulations in order to create the enabling environment to build private sector confidence in the renewable energy minigrid sector. This, in turn, will allow for low-cost commercial capital to start flowing in Burkina Faso for off-grid electrification through solar PV minigrids with storage. For the private sector to invest, they require clear, transparent and long-term domestic policies and regulations, which are well-designed, implemented and enforced, thus contributing to de-risking the sector. The policy and regulatory activities undertaken under this component will address a variety of barriers to investment, from energy market risk, to digital risk, to labor risk, amongst others. Though activities under this component are mainly targeted towards public officials and institutions, the private sector and civil society will reap the benefits. Also, many of the activities will involve the private sector to ensure the industry's buy-in from the beginning which will support adoption.

29. Weak and inadequate policy and regulatory framework as noted in the baseline phase by stakeholders (government, donor agencies, private sector, consumer groups and other civil society actors), is a major driver of minigrid markets fragmentation and immaturity. For instance, three of the main bottlenecks around the current policy and regulatory framework identified by stakeholders during the baseline assessment are low tariff caps (levelized), an electrification strategy which favors grid extension and the cooperative business model (COOPEL). Burkina Faso has historically favored an electricity cooperative model through COOPELs rather than private ownership, but the efficiency and effectiveness of this approach when it comes to minigrids have been rather poor, as suggested by stakeholders during the baseline assessment. COOPELs receive substantial grants and loans from ABER. They face several financial and technical difficulties as they rely on continuous subsidies from ABER to cover fuel, operational and maintenance services. Furthermore, COOPELs do not have the technical capabilities and therefore rely on external technical providers to manage the distribution network. In addition, relationships and responsibilities vary and are not bound by serious contractual agreements. Also, most local cooperatives are not financially sustainable and suffer losses; despite financial support and concessional loans provided by ABER. This baseline is not appropriate for scaling-up commercial investment in clean energy minigrids, which explains why some donor organizations, which are highly involved in the electricity sector, have clearly indicated their unwillingness to invest in the minigrid space until policy and regulatory reforms are put in place to support more private sector participation.

30. Against this background, the following activities have been proposed in collaboration with various stakeholders at the national and local levels to support the creation of a conducive environment for more private sector investment. As is the case for the energy space in general and the minigrid market in particular, there are several organizations, either planning or implementing activities in relation to policy and regulatory framework (Component 1). For instance, the following donors will be implementing activities, as follow: the AfDB (outputs 1.1 to 1.6), Sida (outputs 1.1 to 1.6) the EU (1.1 to 1.5) and the World Bank (1.2 to 1.4). Therefore, a close coordination will be instituted as suggested during and agreed during the PPG phase. The Multi-Stakeholders Platform (output 1.1) will highly facilitate such coordination.

31. *Implementation Arrangement:* This component will be implemented by ECREEE and DGER as Responsible Parties. These two organizations (an intergovernmental organization and a government agency respectively) have the mandate and experience to work on policy and regulatory related issues. DGER is in charge of policy formulation at the national level and ECREEE works at the regional level, thus, ensuring policy interventions resulting from the Burkina Faso AMP Project are aligned with the regional needs and objectives. These two organizations are closely involved with and consulted by donors, which will serve to make coordination even more efficient. According to UNDP procurement rules, UN agencies, intergovernmental organizations and government agencies selected to serve as responsible parties are exempted from competitive procurement processes. ABER will therefore be able to formalize these engagements through e.g. direct contracting during implementation. More precisely, it is planned that ABER will sign an agreement with ECREEE, which will subsequently sign a framework for collaboration with DGER.

32. *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*

Support the operationalization of the multi-stakeholder platform created by ECREEE and WB in the framework of the Regional Off-Grid Electrification Project (ROGEP), which has not been active due to lack of capacity and initial support. The AMP project will ensure the platform is fully operationalized to play its role of **ensuring coordination and facilitating national dialogue for the definition of minigrid delivery model(s)**. The current platform, which was created as part of a regional initiative, includes all relevant stakeholders from government, local authorities, civil society, local media, private sector, rural communities, etc. While the mission of this platform is manifold, it is mainly expected to contribute to the discourse about putting in place a conducive environment for promotion of rural electrification through an increased private sector investment. For instance, the platform is expected to initiate a national dialogue to identify the optimal mini-grid delivery model based on the key questions around "government control over mini-grid assets and operation", "the required (and available) levels of public funding", "the resulting electricity retail tariffs" and "the required regulatory framework". Also, it will work to develop synergies, on the one hand, between different off-grid electrification initiatives and, on the other hand, between institutional actors, the private sector, local authorities and civil society to maximize the expected results and impacts.

Given the large number of actors, especially donors moving into the sector with considerable funding, this platform will be key for coordination of all initiatives so as to reduce the potential for conflicts, duplication, overlap or other issues. Based on interactions from the PPG phase, it appears that all relevant actors are keen to get on board. This project could, therefore, play a key role in steering the overall process for the entire sector. This will entail working jointly to propose solutions (policy, regulatory, financial and capacity building) in order to remove key barriers hindering the uptake of renewable energy minigrids and other off-grid solutions in Burkina Faso. Some of the key activities the multi-stakeholders platform is expected to work on, are the identification of delivery model (s) for minigrids; the development of a waste management strategy; the development of a guide on the importation process; support for the establishment of an online one-stop-shop (website). Specifically, the platform is expected to align the ongoing dialogue with activities implemented in parallel under the other outputs and capitalize on feedbacks and lessons learnt from these activities.

In terms of sequencing, it is advisable that this activity starts in 2021 even prior to CEO endorsement so that the multi-stakeholder platform can be fully operational at the onset of this project. Therefore, this activity will build on the Sida-financed rural electrification project in the Liptako-Gourma, which is expected to start in 2021 before the AMP project. ECREEE will support the MoEMQ to relaunch the platform in the framework of the Liptako-Gourma project as it is well-positioned to facilitate follow-up activities in collaboration with the key actors. This platform will build on lessons learnt from the multi-stakeholder platform in Senegal, which is the benchmark for a functional and active platform in West Africa. Platforms in Zambia and Kenya will also be used as benchmark. These platforms were able to achieve considerable success in terms of advocacy towards the government and in terms of streamlining the actions and points of views of all stakeholders on key issues related to the sector. Some notable achievements that set these platforms apart are: tax exemption on renewable energy products, importation guide, waste management guide, support towards a functioning private sector association, etc. Hence, this project, when launched, will further strengthen the existing platform in Burkina Faso by leveraging learnings and support dissemination of knowledge products linking with Project Component 4 and the regional AMP project so it fits the needs of the off-grid market. Moreover, this project will support the government in finding ways to maintain the platform over time, and in promoting the active participation of the platform in key knowledge-sharing and capacity-building events so it can continue to be operational and relevant beyond the project.

- Activity 1.1.1: *Support the operationalization of the multi-stakeholder platform* that includes all relevant stakeholders from government, donors, local authorities, civil society, local media, private sector, rural populations, and initiate a national dialogue to identify optimal mini-grid delivery model (s) based on the key questions such as "government control over mini-grid assets and operation", "the required (and

available) levels of public funding", "the resulting electricity retail tariffs" and "the required regulatory framework" (see Strategy section).

- Activity 1.1.2: *Conduct gap analysis/studies and targeted capacity building on key issues identified by the platform, such as importation of RE technologies, gender mainstreaming, e-waste management, etc.* and suggestions for delivery models. Make sure that the probable consequences of any decision taken for the overarching framework are evaluated and well understood by all stakeholders. Some of the first tasks under this activity are as follow:
    - Activity 1.1.2.1: Review import procedures and taxation/duty rules for mini-grid components. Discuss required changes with relevant ministries and authorities, in consultation with other stakeholders.
    - Activity 1.1.2.2: Support the relevant ministries and authorities for the improvement of import procedures and reduction of import tax/duties for mini-grid components, following the official administrative procedures prevailing in the country. This includes drafting of proposals for change, calculation/assessment of macroeconomic effects, drafting and submitting the new text in the relevant law or regulation for government approval.
    - Activity 1.1.2.3: Review existing environmental impact assessment framework. Coordinate simplified procedures for Environmental Impact Assessments in mini-grids of certain categories.
    - Activity 1.1.2.4: Develop standardized waste management and mandatory recycling procedures to be applied by operators of mini-grids falling in the categories defined under Act 2.4.1.
- Activity 1.1.3: *Develop a "one-stop-shop" (using the results of Activity 1.1.2) for prospective mini-grid developers, including guidance on these key issues*. This "one-stop-shop" will be a single online resource aggregating key information about the sector for developers and other stakeholders. It can also be a single point of reference for the announcement of tenders, other relevant information, and also a central hub for a Community of Practice.

33. *Output 1.2: Formulation of rural electrification strategy/plan, incorporating transparent targets and supported by multi-tier data*. As a result of Output 1.1, which serves to ensure sector leadership, constructive debate and adequate data, leading to useful tools and decisions around specific delivery models, tariff, etc. a rural electrification strategy will be drafted in close coordination with other relevant actors in an inclusive manner to ensure buy-in of the delivery model selected. Considering that the country currently does not have a rural electrification strategy taking into account minigrids, ABER indicated the need to initiate the drafting of a comprehensive rural electrification strategy as early as possible in order to ensure that renewable energy minigrids with storage are appropriately incorporated in upcoming projects. The existing energy policy and regulatory framework places the emphasis on grid extension; therefore, the rural electrification plan drafted by this project will provide the GoBF with the necessary tool towards achieving its electricity access targets efficiently. Several donors such as SIDA, GIZ and the EU have indicated that this lack of appropriate strategy is a bottleneck preventing further investment in the rural electrification sector. The formulation of a rural electrification strategy/plan will draw on lessons from other successful cases from the region, with technical assistance from the regional AMP project and ECREEE's experiences in supporting countries in policy development. Specifically, the regional AMP project will ensure that the strategy draws experience from other countries with similar electrification strategies/plans such as Mali, Senegal, Nigeria as well as Tanzania and Kenya as benchmarks. SIDA's support towards this output will be financial and operational as the promotion of RE minigrids is part of its core interests in Burkina Faso. Activities towards formulating a rural electrification plan have been budgeted by Sida already, therefore, the AMP will coordinate closely with this partner. The multi-stakeholder platform will also play an important role in the process of drafting and validating this output.

34. *Output 1.3: Domestication of quality standards for solar mini-grid components, and institutional capacity of national stakeholders involved in setting or reinforcing standards strengthened*. Quality standards are important regulatory measures that the GoBF must implement to support the private sector involved in mini-grids development. It is therefore important that the government sends a clear signal to the private sector by developing a set of standards to ensure that the equipment is reliable and adequately covered by warranties

and post-sale O&M. This activity will be implemented under the aegis of ECREEE. As a Member State of ECOWAS, the GoBF is also committed to the ECOWAS Regional Renewable Energy Policy (2015-2030), which seeks to create a harmonized regulatory framework with common tax policies and standards, among others. Therefore, the quality standards of Burkina Faso should be done in relation with ECREEE and the ECOWAS Standards Harmonization Model (ECOSHAM)[18] to avoid duplication of efforts. This will ensure that the quality of the components and installations meet the expectations of end-users not only in Burkina Faso but through the ECOWAS region.

The following activities will be carried out:

- Activity 1.3.1: Review existing domestic standards and identification of gaps. Present results to standards organization/bureau.
- Activity 1.3.2: Develop new standards filling the gaps based on existing international standards in coordination with standards organization/bureau. It is important to align this activity with the regional initiatives on standards undertaken by ECREEE and WAEMU.

35. *Output 1.4: Capacity building of public officials (regulator, ministries, agencies) and private sector to fully play their role (tariffs, design procurement/tender processes that incorporate cost-reduction levers and innovative business models etc.) vis-à-vis texts emanating from the Energy Law.* The GoBF has indicated its intention to promote renewable energy minigrids through private sector investment as evidenced by reforms undertaken or underway. Often times, even the best reforms fail to deliver the expected outcomes because of the lack of capacities of the parties in charge of executing or reinforcing the said reforms. Hence, these reforms engaged by the GoBF need to be operationalized in the most optimal manner in order to shorten the learning curve within the public (ABER, ANEREEE, ARSE, ABNORM, customs, etc.) and private sector. This project will therefore support the process by conducting trainings on key thematic areas not covered by other donors such as cost-reduction levers, innovative business models, etc. Additionally, the project will share best practices and provide technical advice from neighboring countries, Eastern and Southern Africa, which have more mature mini-grid markets. This will involve working in close coordination with other development partners (AfDB, WB, Sida, the EU, AFD, etc.) supporting the GoBF develop a mini-grid regulatory framework, including tariff model, tax regime, and grid expansion risk mitigation. The following activities will be carried out:

    - Activity 1.4.1: Draft mini-grid regulation in close coordination with the regulatory authority based on the outcomes of Output 1.2, including tariff regulation methodology, licensing procedure and licensing exemption rules, technical regulation, customer service aspects, penalties and arbitration mechanisms.
    - Activity 1.4.2: Develop the tariff calculation tool adjusted to the country's specific requirements in cooperation with the regulatory authority.
    - Activity 1.4.3: Support the regulatory authority in the preparation and conduction of public consultations. Adjust the regulation and tariff tool as the result of public consultations and decision of the regulatory commission.
    - Activity 1.4.4: Develop and implement / roll-out a license application management online platform including training of relevant parties such as staff from ABER, ARSE and private sector companies.
    - Activity 1.4.5: Conduct a diagnosis of mini-grid tender related administration processes in relevant ministries and authorities.

      Activity 1.4.6: Develop comprehensive training materials on mini-grid tendering concepts around the delivery model selected and organize training of trainers (ToT) on optimized mini-grid tendering procedures. This activity will address key barriers identified and build on the recommendations and results of Activity 1.4.5 (diagnosis).

[18] ECOSHAM refers to the Standard Harmonization of the ECOWAS region. It includes a model and procedures for harmonization of Standards, and conformity assessment procedures and Measures in order to reduce Technical Barriers to Trade. file:///C:/Users/aadebiyi/Downloads/ecowas_ecosham_engl_0%20(2).pdf

36. *Output 1.5: Operationalizing a certification scheme for installers and technicians building on ECREEE's Regional Certification Scheme*.

This output will build on the existing Regional Certification Scheme (RCS) implemented by ECREEE in close collaboration with GIZ and IRENA. The overall goal of the RCS is to promote professional competency of technicians and other qualified professionals and address the quality assurance gaps that exist along the renewable energy and energy efficiency value-chain. The RCS also seeks to promote the accreditation of additional partner institutions in all ECOWAS countries to undertake the certification examination and training in the off-grid photovoltaic sector implemented by ECREEE and IRENA since 2018. In Burkina Faso, two centers of excellence, namely, 2iE and IRSAT have been accredited by ECREEE and will participate in the RCS. These centers have bought into the certification scheme. Trainings will be provided to trainers and other support provided in order to operationalize the certification scheme in Burkina Faso. The industry association will also be highly involved in this activity. In the framework of this project, the following activities will be carried out:

- Activity 1.5.1: Develop country specific job-task analysis and curriculum.
- Activity 1.5.2: Analyze existing universities, higher learning institutions and vocational training programs and conduct a gap analysis. Introduce the findings to the authorities in charge of providing the budget to these institutes, ministry of energy and industry associations.
- Activity 1.5.3: Train the trainers from key academic and research institutions such as 2iE, University of Ouaga and IRSAT to administer the certification tests.
- Activity 1.5.4: Run a pilot phase of certification exams.

37. *Output 1.6: Light quantitative mini-grid DREI techno-economic analysis carried in Year 4*

The UNDP, in the framework of the Sida-funded Rural Electrification Project in the Liptako-Gourma region will conduct a fully-fledged DREI analysis on minigrids in 2021 as well as capacity-building activities of dedicated staff at ABER. Therefore, building on these activities, the DREI analysis will be updated to track evolutions in financing costs as well as in hardware and soft costs. New interviews in a smaller sample than in 2021 will be conducted to collect updated data on the risk environment and financing costs, and the key financial modelling inputs will be updated with the latest hardware and soft costs. The outputs will be a brief update note of 2-5 pages specifically focusing on changes in (i) the risk environment, (ii) financing costs, hard and soft costs, and LCOE. Together, the DREI analysis conducted in the scope of the Sida-funded Rural Electrification Project in the Liptako-Gourma region and the AMP Child Project will therefore act as key mechanism to reach the following objectives:

- Identify policy and financial derisking instruments;
- Track cost reduction;
- Clearly communicate these results to stakeholders in the form of various national and regional reports.

At the regional level, the aggregated data from the national refreshed DREI outputs will be fed into an update note to the regional flagship AMP knowledge product (10-20 pages), which will provide an end-of-program overview of the evolution in mini-grid costs. It is not the intention here to fully update the flagship report, but to deliver a separate update note.

More importantly, from an operational perspective, it is envisioned that these national light quantitative DREI analyses will be centralized, administered and performed by the regional project. This will create efficiencies across the program (i.e. avoiding multiple small procurements). The regional project will hire a team of international consultants to update all national-level DREI analyses, with technical support from the DREI Core Team[19]. The team of consultants will be provided with access to all materials from the full-fledged quantitative DREI analyses that took place in Year 1 (or in 2021 in the case of this project in Burkina Faso). The need for

[19] See footnote **Error! Bookmark not defined.**

national consultants is not foreseen and the team of international consultants will liaise with national project managers as needs be.
It is expected that these updates to national and regional reports be launched at the start of Year 4, for 2 months duration, and feed into the terminal evaluation.

38. In line with the principles of AMP, the above activities under Component 1 set the stage for the those in other components, especially Component 2. Overall, the development of clear national delivery models will have significant impacts on the nature of the private sector-based business models planned for Component 2. Specifically, the pilot projects (Output 2.1), as well as Outputs 2.2 and 2.3 will have strong linkages with the inclusive multi-stakeholder dialogue on delivery models (Output 1.1), minigrid strategy (Output 1.2), capacity-building of stakeholders (Output 1.3) and domestication of quality standards. In particular, the inclusive multi-stakeholder dialogue will support the decision-making process on the delivery models for the pilot projects.

39. Project Component 2 (PC2): Business Model Innovation with Private Sector Engagement

The involvement of private sector (developers, supply chain, investors, financial intermediaries, etc.) in minigrid cost-reduction will be central to the program's approach. A range of activities will be offered to engage and support the private sector. **This component aims to demonstrate new minigrid delivery models (see Box 1, above) involving the private sector and innovative business models, especially in productive uses.** The component will center around three key outputs (2.1, 2.2 and 2.3), specifically the implementation of pilot projects focusing on productive uses as anchor load while targeting the most vulnerable populations, such as women, youth and small-scale farmers in high-impact agriculture value-chains. Demand aggregation is a form of cost reduction for minigrid developers. Therefore, it is befitting that during the PPG inception workshop and further stakeholders' consultations, all actors unanimously suggested that the pilot projects focus on productive uses and SMEs, in order to add value. Additionally, ABER, the implementing partner and several stakeholders have requested that the pilot project also seeks to confirm delivery models for social infrastructure such as health and education facilities. Gender mainstreaming will be a guiding principle for the design and implementation of this component. Additionally, Outputs 2.2 of this component will focus on building the capacity of private sector actors as well as institutions such as ABER and ARSE in procurement processes. In particular, ABER and private sector companies respectively will be trained in the use of a digital platform (Output 4.2) to launch a tender process and apply to it.

40. *Output 2.1: Pilots developed, including on productive use/innovative appliances and modular hardware/system design, leading to cost-reduction in mini-grids*
Throughout the PPG phase, stakeholders clearly indicated that this project should focus on productive uses of energy instead of electricity for household demand, which is already a tangible market and is being addressed by many existing and upcoming projects and programs with mitigated results. This is in direct line with the baseline scenario, which shows that the increasing demand for electricity in Burkina Faso is driven in part by the need for off-grid electricity in the mining and agriculture sectors, two of the country's main economic sectors. While the mining sector is one of the largest consumers of electricity in the country, demand for large irrigation systems is also significant, with more than 100 locations identified through an assessment exercise conducted by the EU. The consistent demand for irrigation pumps makes these locations highly suitable for off-grid solar installations using innovative technologies (SustainSolar, OffgridBox, Differ Community Power, etc.) and business models (InspiraFarms, ColdHubs, JUMEME's KeyMaker Model, etc.). To date, the social (health, education, community infrastructure, etc.) and productive use market seems to not have been concretely addressed by past programs, which have mostly focused on connecting households. It appears, that the productive use of energy (PUE) market has been given the least attention with very little baseline data available. Considered a relatively new market segment, productive use market dynamics are not yet well understood or investigated. Therefore, the pilot projects will target first and foremost the productive uses as anchor loads to

ensure commercial viability and to lower cost and risk through demand aggregation. Hence demonstrating ways to address the demand and ability to pay issues.

Objectives of the pilots:

The pilot projects in Burkina Faso will have **three main objectives**, aligned with AMP's guiding principles and objectives for the pilots (Figure 6):

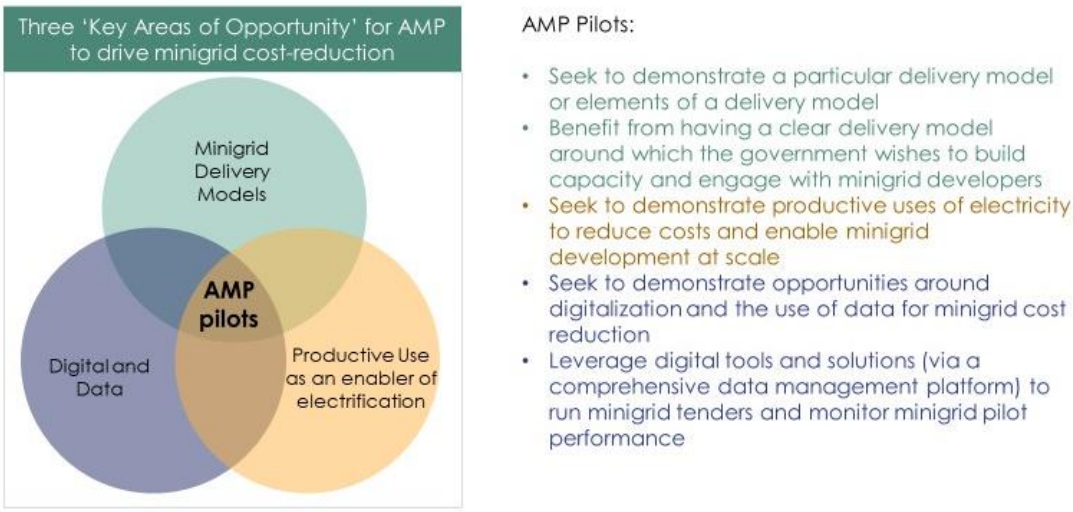


Figure 6: Objectives of Pilots in AMP National Projects

Objective 1. Demonstrate a **new delivery model** aside from the electricity cooperative (COOPEL) model where minigrids are operated by private sector companies. The pilots will serve to select a new delivery model for minigrids as the current cooperative model through COOPELs has shown major limitations towards upscaling solar PV minigrids. ABER intends to use this pilot to address the challenges related to the unsustainability of the current approach to develop minigrids in Burkina Faso. Therefore, this project will serve as the catalyst by gearing interventions toward this market segment.

Objective 2. Demonstrate **productive uses of electricity** to reduce costs, increase viability and enable minigrid development at scale. The primary targets and actors of the pilot projects will be small scale farmers (women and youth, mostly) who will benefit directly from the electricity supplied by the solar minigrids. As explained in the development challenge section, poor rural populations, of which over 80% are active in the agricultural sector, are faced with problems of accessibility, cost, sustainability and quality of power supply as well as difficulties in accessing financing for the acquisition of efficient productive equipment. This results in high-post harvest losses in value-chains such as mango, horticulture, milk, rice, sorghum, fish, meat, etc. due to lack of electricity. By focusing on the productive uses segment, it is more likely that the full generation capacity of the minigrids will be used from the first day of operation, which goes to prove a new business model for the local private sector. Therefore, the pilot will support productive uses stimulation such as direct value chain support (capitalization of important local value-chains such as maize, rice, mango, and vegetables, *e.g. JUMEME's Key Maker model* [20] and business-in-a-box converting/installing multi-functional platform e.g. the minigrid innovation lab[21]. The technology of choice for the pilot project will be solar PV with storage demonstrating innovative turnkey systems such as containerized systems along with various business models, which have been

[20] JUMEME's unique mini-grid model gains traction in Tanzania: https://www.seforall.org/stories-of-success/jumemes-unique-mini-grid-model-gains-traction-in-tanzania

[21] The minigrid innovation Lab works with developers to identify, design, and test innovations across Africa https://www.crossboundary.com/labs/our-prototypes/

employed with success in other countries. Discussions with stakeholders stressed the need that this activity promotes such innovative technologies for power production coupled with productive equipment such as grinders, mills, oil presses, dryers, water pumps, cold chain to households, micro-businesses, rural cooperatives (agriculture and water), rural health facilities. This will, therefore, enable the development of productive activities, increasing the economic competitiveness of rural populations, enhancing efficiency of agri-food processing, and reducing greenhouse gas emissions while promoting gender equity and improving livelihoods.

Objective 3. Demonstrate **opportunities around digitalization** and leverage digital tools and solutions to run minigrid tenders and monitor minigrid pilot performance. The new delivery model and opportunities around productive use of electricity will be supported by digital innovations to ensure data sharing and increase minigrids viability.

As the PPG phase took place in the midst of the COVID-19 pandemic, it became also apparent that a key additional objective of the pilot projects would be to contribute to the GoBF's COVID-19 response and recovery, and to increase the resilience of vulnerable populations. During consultations, stakeholders proposed the energy-water-food nexus as a high-impact opportunity for this project, in addition to the health sector. The pilot project, by focusing on productive use of renewable energy for agriculture, SMEs and health facilities, will support Burkina Faso's COVID-19 response and recovery efforts. In particular, the most vulnerable populations (women, youth, smallholder farmers, etc.) will be supported to recover from the dire socio-economic impacts of the pandemic and to build their resilience to futures shocks (climate, sanitary, etc.). As such, the pilots have been designed in such a way that they will present the following characteristics:

- Support green recovery including investments in sustainable, inclusive, resilient, low-carbon, low-polluting, nature positive and circular economy-based pathways for poor communities to withstand future shocks coming from climate change, natural and manmade disasters, and other global challenges.
- Support climate change adaptation and resilience projects through resilient livelihoods and infrastructure to support green recovery and future resilience.
- Enhance engagement of the private sector as well as opportunities for accelerating renewable energy businesses thereby offering a pathway toward green recovery efforts.
- Build the resilience of small vulnerable rural communities through solar PV minigrids in a market-based approach.
- Support gender mainstreaming where women's specific needs are taken into consideration. More importantly, women and other vulnerable groups will be involved /trained.

Description of the pilots:

The pilots will be a combination of **greenfield minigrids** (pilot type #1) and **productive use overlays** on existing minigrids (pilot type #2), using for instance multi-functional platforms as an anchor load. All mini-grids supported by the project will be 100% solar PV minigrids with batteries.

As the KeyMaker Model and numerous other initiatives have shown, capturing the most value from productive use stimulation is best achieved via strategic location of the intervention. For example, a minigrid powered agricultural processing facility (for example oil pressing or maize grinding) will be most effectively used and create the most significant energy demand stimulation if the community is located closer to areas of high agricultural productivity or conveniently clustered around other villages. This way the output from numerous villages can be aggregated and higher volumes of throughput of the productive use machinery can be maintained.

ABER recognizes that the productive use of energy (PUE) market in Burkina Faso is underdeveloped and yet holds significant potential as a rural economic development mechanism. As such, although the pilots for the first phase of this project have already been selected, focused capacity building and knowledge transfer

activities will take place to ensure that relevant stakeholders are aware of the tools[22]and techniques[23] available to analyze value chains and prioritize the location of interventions and the selection of future PUE focused mini-grid sites. As part of Project Component 3, UNCDF will also be expected to provide entrepreneurship training support to the small businesses involved in the pilot in the form of technical assistance. ABER will coordinate calls for the procurement of equipment to be installed in both pilot projects. The pilots support decarbonizing the agricultural value-chain (a major driver for climate change) and increasing the revenues of small-scale farmers by preventing or removing less desirable diesel-run generators at both the production and post-harvest level, which is consistent with GoBF's poverty reduction strategy and the NDC. It is to note that climate change (characterized in particular by extreme weather events or variations in water availability), which affects Burkina Faso, represents a risk to the pilot projects, as smallholder farmers may not be able to pay consistently for electricity bills from the minigrids, leading to customer credit risk to the minigrid developer. Component 3 will aim to mitigate this risk, through several interventions including the identification and development of a Minigrid Funding Facility (MFF).

For both pilot projects described below, the mechanism used to ensure that the deployed mini-grids will be used for lifetime (20 years) is to introduce a private sector-led delivery model in collaboration with ABER, and to support productive uses as anchor loads to strengthen the viability and sustainability of the systems. As described further below (see in particular Table 4), the minigrids will be fully owned and operated by a private sector company. In addition, the selected sites were screened to make sure they are not included in existing plans for grid extension in the near future. Also, the project is introducing containerized minigrid solutions, which can be easily redeployed to other locations if need be. This is important considering the fragile and evolving security situation in Burkina Faso, even though the selected sites are currently not located in instable areas.

Further to the sustainability of the mini-grids, the tendering process that will be conducted by ABER to select private sector developers/operators for the minigrid pilots will include requirements and criteria related to the replacement of batteries and converters, which will be placed under the responsibility of the companies. These replacements will play a key role in ensuring that the minigrids remain viable and deliver a satisfactory service in the long run, therefore will need to be included in the financial modelling prepared by the companies. The project will seek to support the companies in this planning exercise, for instance by specifying in the contract with the operators/owners of the minigrids an amount to be put aside by the companies in escrow account specifically for replacing components such as batteries and converters. Similarly, companies will be asked to include a product take-back clause in their proposal to support waste management throughout the lifetime of the minigrids. The National Renewable Energy Agency (ANEREEE), one of the stakeholders involved in the project, is already working on a plan for management of e-waste, which will have to be applied to all rural electrification projects, including AMP. Also, as part of the support from Tony Blair Institute and AfDB's Yeleen Rural Electrification project to the mini-grid sector in Burkina Faso, a mechanism for the management of equipment at the end of their usage is being developed. The AMP project will collaborate with these stakeholders in addition to ABER in the scope of Output 1.1 to develop a guide on e-waste for the minigrid sector. Further details on the assessment and management of environmental risks, including waste, are included in the SESP (Annex 6 to the project document) and ESMF (Annex 10 to the project document).

Pilot type #1 [Greenfield minigrids]: Community Solar Energy Platforms (CSEP)

This project, co-financed by the Swedish Cooperation (Sida) in the framework of the Africa Enterprise Challenge Fund (AECF), will provide access to modern electricity and energy efficient productive equipment to households, micro-businesses and rural cooperatives through the deployment of containerized Community Solar Energy Platforms (CSEP) composed of a 20kWp PV power plant, battery storage and a minigrid, as well as agricultural processing and storage equipment customized to the community and made available using digital payment,

[22]For example, GIS tools like the SPAM dataset of agricultural productivity and Open Street Map to determine journey time to markets.

[23] Such as energy use mapping and business case assessment (including process value addition and techno-economic modelling of equipment)

with remote monitoring technology. Though this type of technological solution has not yet been deployed in Burkina Faso, there are several manufacturers / developers internationally by the likes of Off-Grid Box, SustainSolar, Akuo Energy, Winch, SolarEdge/Kokam, Metka, just to name a few.
Based on initial data, to be finalized during project implementation, it is anticipated that GEF support is expected to co-finance the deployment of 3 CSEPs (60kWp) out of a total of 20 installed by the same developer in 20 villages of Burkina Faso.
This pilot activity will demonstrate (i) demand aggregation as a cost-reduction lever; (ii) productive use of energy and efficient appliances; (iii) private sector-led delivery models; (iv) flexible tariff regime for increased viability of minigrids; (v) innovative financing; (vi) socio-economic development through renewable energy minigrids.
More details on this pilot are provided in Annex 17.

Pilot type #2 [Productive use overlays of existing minigrids]: Increasing Energy Access through Productive Uses in the Ecovillages of Burkina Faso

Under this pilot activity, the project will support productive use overlays to existing minigrids advanced by ABER in collaboration with the Ministry of Environment through DGECC and SP/CNDD, the organization in charge of the Ecovillage Initiative. This pilot type will i) mainstream productive use of energy through innovative containerized solutions and efficient appliances for milling, grinding, presses and refrigerators, (ii) support financial and social inclusion through the innovative financing for acquisition of energy efficient appliances and use of PAYG technology, (iii) showcase hybrid private sector and cooperative delivery models, (iv) support socio-economic development and (v) capacity-building of business/farming cooperatives.
Based on initial data, to be finalized during project implementation, it is anticipated the project will support productive-use overlays on 485 kWp of containerized energy solutions (such as Off-Grid Box, SustainSolar, Differ Community Power, etc.) equipped with all the hardware and software needed to produce electricity and clean water in six villages/sites. Customized submersible solar water pumps, irrigation and cold storage, sewing machines, grinders, milling machines, presses, welding and carpentry equipment will also be delivered using an innovative financing scheme (third-party ownership leasing model).
More details on this pilot activity are provided in Annex 17.

Principles to follow during implementation:

While the **delivery model** that will be used has not been fully identified at this stage, it is expected that both pilots will demonstrate a new delivery model involving **the private sector**, different from the COOPEL model traditionally used for minigrids in Burkina Faso. The private-sector led delivery model is further described in **Error! Reference source not found.** below.

Table 4: Delivery model followed by the minigrid pilots implemented in the project

Aspect	Expected status to be implemented by the project
Ownership and Operation	Under the pilot project, the Government of Burkina Faso, through ABER, intends to test private ownership and operation, in order to overcome the limitations of the baseline model relying on ownership and operation by electricity cooperatives (COOPELs).
Tariff mechanisms	For the first time, the Government of Burkina Faso will test the possibility of charging different tariffs for peak and non-peak hours. This mechanism, to be tested during the pilot project, will increase the viability of the minigrids, as it allows the operator to favor anchor loads and larger consumers connected to the mini-grid.
Subsidy mechanisms	The only subsidies planned under the pilot project are the funding contributions towards the equipment (CAPEX subsidy). GEF funding will supplement private sector investment in order to showcase technical and technological innovations in the minigrid sector.
Regulations	The regulatory framework will evolve as part of the AMP project. The current delivery model has been decried as a bottleneck by both public and private

	investors. The AMP project will provide the evidence-base for changing regulations to support more private investments in the minigrid sector. A list of possible regulations have been proposed during PPG phase and will be further elaborated as a result of the DREI study conducted in 2021 (see Output 1.6). Furthermore, the national multi-stakeholder platform which will be put in place under Output 1.1, will work towards the implementation of the policy and regulatory amendments.

For both pilots, the use of a **digital management platform** for tendering the pilots will be central in this project, like in other AMP child projects. More precisely, the digital management platform (see Output 4.2) will be used to select/confirm pilot sites and/or minigrid partners, and then to gather and analyze data once the pilots will be commissioned.

Project's activities related to pilots. Table 5 below sets out the activities the project will execute on related to both pilot types.. By using digital platforms for pilots, capacity of key stakeholders will be developed, which will then set the foundation for later using digital platforms for sector-wide large-scale tenders.

Table 5: Summary activities related to advancing the project's minigrid pilots

Activity	**Description/Comments**
Activity 2.1.1 . Develop a detailed project plan (the project's 'Minigrid Pilot Plan') for advancing the project's minigrid pilot(s).	The PMU will lead and develop, in close collaboration with other stakeholders and support from the AMP Regional Project, a detailed project plan (the project's 'Minigrid Pilot Plan') for advancing the pilot(s). Once prepared, the project's Minigrid Pilot Plan will first be reviewed for clearance by UNDP (CO and BPPS NCE), and then shared with the Board. This activity should be completed by the end of year 1. Building on the information already in this project document, the project's Minigrid Plan Pilot Plan will determine, among other aspects, the following: - Clear objective for the pilot(s) - The minigrid delivery model(s) which will be demonstrated in the pilot(s). The delivery model will ensure full financial sustainability, including O&M, of the minigrid over its asset lifetime. - The proposed type of pilot(s), which can include: (i) greenfield pilots, including productive use and (ii) productive use overlays, on existing pilots. - The estimated target number of pilot(s), based on ex-ante estimates of available GEF INV - Inputs, as necessary, on site selection, including based on geo-spatial mapping, for the pilot(s) - Site-specific assessments and other requirements (e.g., demand sizing, social and environmental safeguards (SES) assessments, gender assessments, e-waste disposal). Some assessments may be needed to be performed by the project ex-ante, to inform follow-up competitive tenders - The use of the digital platform for o Competitive tendering, as necessary. o Ongoing data collection from mini-grid pilot(s), including data-sharing requirements from mini-grid pilot(s), as well as digital hardware requirements - The project's approach to ensure minimal concessionality for the level of GEF INV support to the pilot(s) (when there are private sector beneficiaries) - Review of the IP's modalities for transfer of GEF INV support to the pilot(s), ensuring they are aligned with UNDP's policies and financial rules. - If a pilot includes GEF INV support for productive use, ensuring the pilot takes a third-party ownership model to productive use equipment - Coordination and rationale on any associated project technical assistance activities which may benefit the minigrid pilot(s) - Brief summary updates, at the time of drafting the plan, on the status in Burkina Faso of o Any other solar-battery minigrid pilots (specifications, any results/findings to date), and o Examples of minigrid productive use applications (specifications, any results/findings to date)
Activity 2.1.2 Design of tender process for	The project's pilot(s) may involve private sector engagement in various forms, including models involving private sector minigrid ownership, private sector EPC, and private sector O&M services.

pilot(s) using a digital platform.	Where there is private sector engagement in the pilot(s), a competitive tender process will be executed using the digital tendering feature of the digital platform procured under Component 4. Under this activity, the PMU, working with the digital platform vendor, specialist engineering, financial, procurement, and legal expertise, and the AMP regional project, will translate the approach set out in the project's Minigrid Pilot Plan into the design of a customized tendering process on the digital platform, including requirements, specifications and evaluation criteria. At the end of this activity, the tendering process on the digital platform will be ready to launch. The tender process itself should be launched before the end of Year 2. This activity may also include capacity building for government personnel with the digital platform, as well as planning for capacity building to be available to private sector developers who will participate in the tender. -
Activity 2.1.3 Execution of tender, contracting and payments to the selected pilot beneficiaries	In year 2, the tender will be launched and executed according to the design finalized in activity 2.1.2, resulting in pilot beneficiaries being selected. Submissions to the tender will be competitively assessed against evaluation criteria (engineering, financial), with the PMU supported by appropriate expertise. Following selection of beneficiaries, the PMU/IP will enter into legal contracts with the selected minigrids, again supported by appropriate expertise, and make payments on pre-defined milestones, including on commissioning of minigrid plants. The digital platform will validate payment milestones. This activity may also include capacity building for government personnel with the digital platform, as well as capacity building to private sector actors to engage with the competitive tender. -
Activity 2.1.4 Monitor pilots, collect and aggregate data shared by pilots	Data generated by the pilot(s) will be collected using the digital platform, connecting directly to remote monitoring and smart metering equipment. Data that are not amenable to be collected by remote sensing will be collected either by the mini-grid operator or some alternative way to be defined by the PMU. Data collected from the pilot(s) will be used at the project level to, among other purposes: (i) track the performance of the mini-grid systems in real-time; (ii) validate the underlying pilot(s) assumptions and business case; (iii) track performance enhancement in mini-grid capacity utilization; and (iv) generate insights and lessons learned to share with the AMP Regional Project. Also, data collected from pilot(s) will be shared with the AMP Regional Project for aggregating and analyzing data across all AMP national child projects. The regional project will use these data to: (i) generate insights and lessons learned; and (ii) inform the development of knowledge products, both to be disseminated across AMP participating countries and the broad mini-grid sector. -

As set out in the activities above, in return for benefiting from GEF INV support as a pilot, the asset owner of the minigrid pilot will be obliged to **share digital data from the minigrid's performance with the AMP national project**. Details on digital data sharing for minigrids are provided in Box 3.

Box 3: Digital data sharing for minigrids

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

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

The specifications around the data generation by the demonstration pilots supported by the project will consult and follow guidance/standards provided by the AMP Regional Project. A standardized Quality Assurance and Monitoring Framework (QAMF) for application in all minigrid pilots supported under the project will be developed in year 1 of the regional project and disseminated to all national projects (see Output 4.3).

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

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

In order to fulfill this requirement, minigrid pilots included in this project will have to **use specific digital hardware and software**, that will need to be included as part the evaluation criteria and/or required specifications in the digital platform tender for the pilots. Table 6 provides a generic set of specifications for a minigrid digital hardware and software, with indicative pricing, that should be used as reference during implementation.

Table 6: Initial Specifications for Minigrid Digital Hardware and Software

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

While the pilots will aim to demonstrate innovative approaches around **productive use of energy**, it will be important to ensure that the GEF INV financial support will be provided via a **third-party ownership model**, as opposed to a self-ownership model. Third party ownership models involve the minigrid asset owner purchasing the productive use equipment, and then effectively leasing it back to the end-user, as part of an energy as a service offer. This third-party ownership model is necessary to justify the use of climate finance, as the funding can be presented holistically as part of the overall system design required for an economic minigrid. Similarly, while technical assistance to build capacity for productive uses associated with the pilot investment can be included, **the amount of GEF budget to technical assistance programs for general productive use should be limited** and moderated. This is due to the related issue that climate finance should be directed to activities that specifically reduce emission reductions.

Overall, the level of GEF INV financial support provided to each pilot project should follow **a clear methodology on additionality**, based on willingness/ability to pay, which will be determined by a study at the beginning of

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 pilot sites/developers.

41. *Output 2.2 Capacity of winning tender bidders such as new COOPELs and private sector developers from industry associations strengthened to develop and implement innovative business models and cost-reduction levers*
This activity will be implemented in the form of technical assistance and training for private sector companies and COOPELs so they can fully take advantage of existing innovative business models and drivers for cost-reduction.
Several tenders are expected to be launched in Burkina Faso over the next three years. Also, recently tenders have been won by project developers. However, some of these tender winners from AECF, funded by Sida, and others have yet to start implementation due to lack of capacity. Through this output the AMP project will support tender winners (including the ones implementing the pilot projects described in Output 2.1) to develop and implement innovative business models and cost-reduction levers.
    - Activity 2.2.1: The commercial capacity of mini-grid operators will be developed. Activities will include direct commercial support such as business training, revenue diversification and tariff design. Indirect commercial support activities will include operational capacity building (such as technical staff trainings) and building internal M&E capabilities with remote monitoring and data systems to track important business metrics such as site ARPU (average revenue per user).

    - Activity 2.2.2: The landscape of complementary rural service providers will be mapped. These include providers of education, health, agricultural and other rural development services as well as commercial providers of services such as telecoms companies, health service extension organizations, rural development agencies, micro-finance providers, private education providers and internet service providers. Links will be forged between minigrid operators and third-party service providers that could extend their services into newly electrified communities and integrative business models developed.

    - Activity 2.2.3: Business models that incorporate potential partnerships with complementary anchor loads such as telecom towers, multi-functional platforms, etc. will be assessed and developed.

42. *Output 2.3 Support provided to establish and grow a national industry association for private sector developers*
The current association, Renewable Energy Professionals Association (APER), established in the framework of the ECOWAS Entrepreneurship Support Facility will be strengthened to play a more robust role for the industry. To this end, it is important to leverage and build links with existing industry associations such as Alliance for Rural Electrification (ARE) and African Minigrid Association (AMDA) that can both offer assistance and guidance about establishing and growing successful associations. ARE, which, as recently established a West African office hosted by the AfDB, will be key partner for supporting the minigrid association due to proximity and shared language (French). Additionally, AMDA will be consulted for its specific focus on minigrids and its experience on setting-up and growing a minigrid association. The following activities will take place:
    - Activity 2.3.1: Research will be done to collate all of the relevant private sector players in-country that might be possible association members.
    - Activity. 2.3.2: Champions will be identified in government to support the chapter and provide a direct liaison to the government.
    - Activity 2.3.3: Key Ministries will be contacted to ensure any support is forthcoming and the necessary parties are made aware of any plans.
    - Activity 2.3.4: Notices will be placed in national media to ensure wide coverage of information pertaining to the opportunities for the private sector and the establishment of an industry association.
    - Activity 2.3.5: Meetings will be convened with interested parties and a draft association governance structure will be put into place. This work can be supported by AMDA and collaboration with ECREEE.

43. **Project Component 3 (PC3): Scaled-up financing.**

44. Access to low-cost, commercial capital (equity and debt), ideally in local currency, is key to reducing the cost of minigrids, and ensuring the long-term commercial sustainability of minigrid markets. In markets which are being supported by donor partners, concessional finance and/or capital subsidies and results-based financing can provide additional cost-reduction. The project will establish partnerships with development banks and commercial financial institutions (local banks, microfinance institutions, etc.), and will support the development of innovative cost-efficient financial mechanisms that lead to minigrid cost-reduction thus bringing minigrid markets to maturity. Access to finance for both the supply and demand segment is important to promoting the uptake of renewable energy minigrids. Several initiatives aiming to support access to finance for energy service companies have been implemented in Burkina Faso. Learnings from these projects indicated that banks are looking to share the investment risks and that consumer finance is a key market driver that needs further innovation. The full spectrum of this barrier is not addressed in the existing or upcoming projects in the mini-grid sector.

45. Implementation arrangement. This activity will be implemented by UNCDF as responsible party, in close collaboration with the Swedish Cooperation (Sida), which has confirmed during the PPG phase its intention to set-up a first loss guarantee scheme to incentivize banks to lend to off-grid companies. Lessons learned from Sunref, REACT and CEADIR will inform training modules and technical assistance. Commercial financial institutions (CFI) will be trained to understand minigrid business and financial models, and to set-up appropriate financial products for the mini-grid markets.

46. *Output 3.1: Domestic financial sector capacity-building on business and financing models for minigrids*
Much like other nascent markets, local financial institutions in Burkina Faso are unfamiliar with the off-grid solar sector and therefore, have a limited understanding / experience with lending to off-grid solar companies due to real or perceived risks. During the off-grid market assessment conducted in the scope of the PPG stage, many of the FIs pointed to a lack of expertise in assessing risks and in structuring/developing customized products for the off-grid solar sector. While programs such as SUNREF have supported participating FIs, there remains a significant gap in overall local capacity. Therefore, FIs would benefit greatly from technical assistance and capacity-building trainings through this output to facilitate lending to off-grid solar companies. This output will build on the results of the workshop on Innovative Financing, that UNDP Country Office in Burkina Faso plans to organize in 2021 (self-funded). The ensuing activities will be informed by the outcomes of this workshop.

    - Activity 3.1.1: Local financial institutions will be identified and assessed to determine their capacity and appetite for lending to off-grid solar companies.
    - Activity 3.1.2: Workshops, dialogues and conferences will be conducted with representatives from the leading financial institutions to **create awareness of the opportunities that exist with lending to the mini-grid industry.** The same will be organized for investors on project assessment and financial structuring. In both cases various examples of business model and financing mechanism best practices will be presented. Innovative decision-making tools such Nithio's[24] artificial intelligence-driven lending platform will be showcased to the market ecosystem to support capital flow into the minigrid market.
    - Activity 3.1.3**:** This activity will build on the workshops under Activity 3.1.2 organized for minigrid actors and will develop a framework for better collaboration between financial institutions, national government agencies and international donors towards developing and scaling up hybrid and innovative schemes focused on **unlocking finance and reducing the costs of capital and risks.** Examples might include donor programs creating first loss pools or currency hedging facilities.

47. *Output 3.2: General market intelligence study on minigrids in regions complementary to WB and AfDB investments*
This output will provide key information to market actors in order to support an increased engagement of the private sector, foster innovation in technology and business model by reducing perceived financial / investment

[24] https://www.nithio.com/

risks, which results from lack of market information. Terms of references will be developed at the onset of the project to define the scope of this study, which will include among other things:

- Conduct assessments of the current state of electricity access and the enabling market environment, including the review of trade conditions for renewable energy equipment;
- Describe and quantify demand and supply for minigrids and standalone off-grid solar systems for households, private enterprises, productive value-chains (agriculture and water) and public facilities such as health centers and schools;
- Assess the level, capability and willingness of existing financial institutions to provide financing to private off-grid solar companies as per Activity 3.1.1;
- Using tools such as Nithio's Consumer Credit Intelligence combining rich customer insights with scalable, structured institutional debt financing.
- Based on the above three tasks, mechanisms on how to incentivize the private sector and financial institutions to enter or expand off-grid solar will be recommended. Suggestions on how to strengthen the enabling market environment towards an efficient and mature solar minigrid market will be expected.

- Activity 3.2.1: **Prepare a market readiness report** in an inclusive and cross-sectorial approach ensuring the involvement of agencies in charge of energy and rural electrification as well as other relevant actors, such as rural/community development. This will actually, complement the said market assessment done in 2019 by ECREEE in the framework of ROGEP, which focused mainly on solar home systems (SHS) and standalone systems. The report will quantify the size of the market for minigrids as well as provide comparative assessment of the Burkina Faso market with similar ones in terms of tools and policies for an enabling environment. This report will serve to showcase the investment and business opportunity in the minigrid sector, especially for FIs, so as to garner their interest. This output will generate a comprehensive market intelligence report including key information at macro, meso and micro level with an in-depth analysis of risks and opportunities.
- ∉ Activity 3.2.2: Prepare a report summarizing all findings from the GIS analysis and site identification **exercise to quantify the size of the mini-grid pipeline**. Emphasis will be placed on their suitability and risk as investible assets. This will build on Activity 3.2.1 and geo-spatial assessment to be done under the Liptako-Gourma Minigrid Project.
- Activity 3.2.3: **Findings of the general market intelligence study will be disseminated** widely via multi-stakeholder dialogues through the platform established in Output 1.1 (one-stop website), workshops and conferences under Component 4. These will be organized for the domestic investor community as well as for the international ones in relevant events.

48. *Output 3.3: Design support, including development of operational guidance, provided for Minigrid Funding Facility (MFF, or equivalent financial mechanism) under rural electrification agencies/funds*

This activity will support the development and implementation of innovative financial instruments for both the supply and demand sides to facilitate investment in and viability of minigrids. Also, innovative financing solutions for minigrid development are identified and implemented through the MFF (or equivalent) with supporting human and institutional strengthening.

- Activity 3.3.1: A mapping exercise will be undertaken to identify and characterize all existing minigrid funding and support programs underway and planned nationally. This gap analysis will be undertaken to identify the opportunities and challenges associated with different funding mechanisms.
- Activity 3.3.2: Local and international private sector players will be engaged to determine what they see to be the key financial barriers. AMDA and any other organization with locally relevant private sector knowledge will be interviewed towards the same end.
- Activity 3.3.3: A set of possible financing mechanisms will be proposed, for example direct capital subsidies for the purchase of productive use equipment or a usage subsidy to reduce the running costs of productive users of minigrid services. These will be dependent on the delivery model operating or planned in the country in question. An analysis of any legal implications of various funding models will be undertaken.

- Activity 3.3.4: Government stakeholders including any rural electrification agencies will be engaged to ascertain the appetite for the different funding mechanisms proposed. A report summarizing this as well as the capacity of the relevant agencies to manage a finance mechanism will be prepared. Champions will be identified in relevant institutions. These will be key contacts for the development of any centrally administered funding program;
- Activity 3.3.5: The national digital platform for minigrids will be launched with the responsible agency[25]. This would provide an M&E platform for general insight into the status of the sector as well as being a useful foundation for any local, government to run a Results Based Finance scheme.
- Activity 3.3.6: Trainings will be provided to rural electrification staff on the launch and management of a Minigrid Funding Facility.
- Activity 3.3.7: Opportunities and connections will be identified with domestic and international organizations that might provide access to innovative, **non-standard finance sources**. Capacity building will take place to create systematic linkages with these sources of finance if appropriate.
- Activity 3.3.8: The potential for national and regional financial aggregation of minigrid assets will be explored. Aggregation can take the form of:
  - **Operational aggregation** whereby operators cooperate to share access to operational or development resources. This can lead to considerable savings and cost reductions;
  - **Project aggregation** whereby minigrids are bundled together to form larger investable assets. This process creates larger portfolios to crowd in investors that might not consider small projects. This level of aggregation requires upfront and standardized due diligence to be carried out before projects can be bundled. This further reduces transaction costs for investors. Aggregating across multiple developers and markets further reduces the risk.
  - **Connection aggregation** exploits the large amount of data that is constantly being generated and uploaded to the cloud in near real time from the smart meters installed on minigrids. This information includes data on energy being consumed and revenue being generated from each individual minigrid connection. The granular nature of this data allows different types of customer to be aggregated into asset classes with different characteristics. For example, all of the high revenue producing, consistent connections, which will most likely be productive use of electricity systems, across multiple sites can be aggregated into a high-performance class suitable for commercial investors willing to appropriately pay for revenue producing assets. Innovative examples of securitization in the energy access space will be investigated for their relevance and presented to developers as appropriate.

49. *Output 3.4: Feasibility study support provided to minigrid developers, creating a pipeline of investible assets*

- Activity 3.4.1: Depending on COVID-19 restrictions, online and in-person workshops and trainings will be provided to developers to enhance their capacities on the best ways to carry out meaningful and accurate feasibility studies. Introductions will be made to the various tools available including survey tools, GIS mapping and site selection techniques, business plan development and financial modeling using the appropriate online platforms. The key outcomes of these trainings will include:
  - **Right-sizing mini-grids:** Technical over-design of mini-grids is a major stumbling block for financially viable mini-grids. Correct demand assessment is key to ensuring the developer is not overly optimistic or cautious, which in both cases seriously impact the financial viability of the minigrid.
  - **Business plan writing:** A winning business plan has two key elements, long-term financial projections and an accurate assessment of risks and mitigation activities. These are fundamentally important for creating an investible asset.

[25] This could, for example be a local adaptation of the Quality Assurance Framework prepared by SEFA (Sustainable Energy Fund for Africa) for Nigeria, Togo and Guinea that is hosted on the online Odyssey platform.

- Activity 3.4.2: Surveys are a key tool to creating more accurate and meaningful feasibility studies. Developers will be assisted with survey design in the following ways:
  - The design of questions to elicit responses that can lead to the most accurate assessment of potential demand for minigrid services;
  - Village level observation and surveying points. For example, counting the number of fossil fuel-based generators being used in the village. This provides a useful proxy for offsetable load, baseline and projected energy demand, willingness and ability to pay for energy services and an indication of existing productive uses for energy;
  - How to design survey processes to avoid biases associated with gender, ethnicity or any other common biases.

  From these survey results, developers will be assisted with assessing the potential for various minigrid sites according to their specific characteristics and business model profiles.

- Activity 3.4.3: Developers will be supported with access to GIS mapping results. For example, tools such as Village Data Analytics and Fraym can be used to identify and characterize minigrid sites across the whole country or targeted areas of interest. These sites will then, be ranked according to their suitability for minigrids.

- Activity 3.4.4: Developers will be made aware of and, if necessary, supported to upload any site data to ECOWREX and other platforms such as the Odyssey online portal. One of the functions of these platforms is to provide investors with a pipeline of investable assets.

- Activity 3.4.5: Materials will be prepared, and events organized to build awareness of the investment potential of mini-grids in the country. For instance, in collaboration with ECREEE an investment roundtable will be organized either as standalone event or in the framework of the ECOWAS Sustainable Energy Forum (ESEF). Lists of suitable investors and funding agencies will be put together and provided to the industry association operationalized in Output 2.3.

- Activity 3.4.6: A process for standardizing potential mini-grid assets will be developed. This will include quality standards as per Output 1.6 on domestication of the quality standards as well as data reporting protocols linked to the ECOWAS Observatory (ECOWREX).

- Activity 3.4.7: An aggregation online platform of suitable mini-grid projects will be developed to create an access point for the pipeline of investible assets. Also, these sites will be uploaded to the Burkina Faso page / country profile on ECOWREX.

50. *Output 3.5: Capacity building provided to minigrid developers and investors on measuring and reporting on impact indicators, building credibility in impact investment as an asset class*

- Activity 3.5.1: Developers will be made aware, via workshops, dialogues and webinars of the availability of remote monitoring hardware, smart meters and software packages available (for example Ferntech, New Sun Road and AMMP) that unlock access to near real time data and allow sites to report accurately on impact indicators.

- Activity 3.5.2: An assessment of existing minigrid specific monitoring and reporting frameworks (e.g. AMDA Data Benchmarking Report) will be undertaken in an effort to determine which are suitable and which impact indicators would be most suitable for the national sector. An example is the NREL inspired Quality Assurance Framework developed for SEFA.

- Activity 3.5.3: A comprehensive framework will be developed for measuring the Sustainable Development Goal impacts of investments into the minigrid sector. This will be made available to the relevant investor community and the minigrid developers.

51. **Project Component 4 (PC4): Digital, Knowledge Management and Monitoring and Evaluation**

Component 4 is a key interface with the AMP Regional Child Project. As such, details on linkages to the regional project as relevant for digital, knowledge management and monitoring and evaluation activities under the Burkina Faso project are described in Box 4 below. The results of Component 4 in the Burkina Faso project will feed the AMP Regional Project for onward sharing with other participating countries. There will also be opportunities for these results to be shared directly with other countries through corresponding knowledge management activities built into each child project. This will serve better integration between national projects. Integration will also be enhanced through the programmatic approach proposed for national project design around three core thematic areas mentioned above. More information on the timeline of knowledge management activities can be found in **Annex 4.**

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

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

- **Digital.**
    a. **Knowledge building/sharing.** The regional project will build and share knowledge with the project on the potential for use of digital tools and solutions, including leveraging minigrid projects' data to improve the commercial viability of renewable energy minigrids.
    b. **Data aggregation platform.** The AMP Regional Project will make a data management platform available to aggregate data from all national project pilots based on a common M&E framework to track Results Framework indicators as well as program objectives, SDG impacts and GHG emission reductions for all child projects.
- **Knowledge Management**.
    a. **Knowledge tools**. 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. The toolkits will support both public and private sector (e.g. minigrid developers) and the overall minigrid market
    b. **Knowledge 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.
    c. **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.
    d. **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.
- **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 cost-reduction objectives and intended SDG impacts and GHG emission reductions. 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. 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.

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

- Activity 4.1.1: Develop and implement a **project digital strategy**
  Leveraging digital tools/innovation for institutional stakeholders such as ABER and ANEREE, private sector minigrid developers and operators, was identified as one of the key enablers for scaling-up commercial investment in renewable energy minigrids, during stakeholders consultations. Being a nascent market, local developers and COOPELs have not been able to take full advantage of digital tools such as smart meters, remote monitoring, etc. This activity will remedy this situation by supporting the design of a digital strategy for the project in year 1 which will be implemented thereafter. The Project

Digital Strategy will updated on an annual basis to reflect learnings from project implementation, guidance received from the AMP Regional Project on digital tools and solutions, and insights gained from minigrid pilot(s) data.

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

53. *Output 4.2: Minigrids Digital Platform implemented to run tenders and manage data from pilots, and to support minigrids scale-up and cost-reduction*

To reduce human error and to promote crowding in more investment in the Burkina Faso market through transparent and designed tendering processes, a digital platform will be procured by the project in its first semester of implementation to serve different purposes including:

Specifically, for minigrid investment pilots under Component 2:

- Running digital tenders by which minigrid developers will be selected as beneficiaries to receive support under the project.
- Managing all technical and financial data related to minigrid sites.
- Providing ongoing data gathering and M&E on the minigrid pilots. Part of this data will also be sent through the data management platform to the regional project for the overall monitoring of AMP.
- Providing minigrid developers - selected to implement minigrid pilots with support from the project - access to a set of best-in-industry digital tools for analyzing minigrids (e.g. demand forecasting, system optimization, distribution network design, detailed financial modeling at the site and portfolio level).
- Supporting capacity building for minigrid developers and government stakeholders around the use of the minigrids data management platform.

The implementation of this digital platform will support the IP in running and managing minigrid tenders and then systematically monitoring minigrid pilots and collected data from pilots. This, in turn, is expected to result in improved project design and system optimization, reduced uncertainties and increased transparency in minigrid tenders attracting more bidders and competition and lowering transaction costs associated with bidding.

For the project and minigrid sector more generally:

- Providing a centralized database for all distributed energy projects/programs at the national level.
- Collecting, managing and aggregating data from all minigrid sites.
- Running digitized tenders and administering grants (other than for Component 2 pilots).
- Verifying the performance of minigrid systems for improved sector oversight.
- Performing real-time monitoring and evaluation of electrification projects/programs.
- Applying advanced analytics of minigrid portfolios to generate critical insights to advance the sector.

Similarly, as part of the roll-out of the digital platform, minigrid developers (as well as key government and other stakeholders) will receive capacity-building and in-depth training to use analytical tools and data management technologies.

- Activity 4.2.1: Develop Terms of Reference (TORs) for procuring a minigrids digital platform
  All national child projects will use standardized TOR provided by the AMP Regional Project and tailor them to the specific country/project needs. A set of preliminary minimum requirements for the data management platform, to be met during implementation, are provided in Table 7.

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

Table 7: Initial Specifications for the Project's Digital Platform

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

54. *Output 4.3: A Quality Assurance and Monitoring Framework for measuring, reporting and verification of the sustainable development impacts of all minigrids pilots supported, including GHG emission reductions[26], is adopted and operationalized based on standardized guidance from the regional project[27]*

    Working with the GGGI and other key stakeholders involved in Burkina Faso's NDC process, the project will look to establish an MRV system. This quality assurance framework will be widely disseminated to minigrid operators through the Multi-Stakeholders Platform and industry associations.

[26] At the AMP regional project, 10% of the indirect GHG impacts calculated at the Burkina Faso project level are allocated to the regional child project, in line with the apportioning of the overall program budget. This reflects the benefits of national projects accessing the regional project's support. To avoid double counting, this 10% is removed from the indirect totals for the Burkina Faso project.

[27] The national project will not need to 'develop' their own QAF; it will be developed by the 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 minigrids operators receiving support.

- ∉ Activity 4.3.1: Provide inputs and feedback to the regional project on the development of a **standardized Quality Assurance and Monitoring Framework (QAF)**
  A standardized Quality Assurance and Monitoring Framework (QAF) for application in all minigrid pilots supported under AMP national projects (also referred to in this document as a common M&E Framework) will be developed in year 1 of the regional project and disseminated to all national project staff. It is expected that the national project staff will provide both inputs and feedbacks on the development of this framework as well as on how best to operationalize the committing to its adoption by the minigrid operators receiving support from the national project.

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

55. *Output 4.4: M&E and Reporting, including (i) Conducting inception workshop and preparing report, (ii) Ongoing M&E, (iii) Mid Term Evaluation and (iv) Terminal Evaluation*

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

- Activity 4.4.2: Ongoing project monitoring
  Data on the results framework indicators will be systematically collected and analyzed to provide decision-makers, managers, and stakeholders with information on progress in the achievement of agreed objectives and the use of allocated resources, as set out in the Monitoring and Evaluation Plan. Continuous monitoring will provide management and the main stakeholders with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. It will provide regular feedback on performance of the ongoing activities taking into account the external environment. Information from systematic monitoring will serve as a critical input to ongoing management decisions (adaptive management), evaluation, and learning. In addition, and similarly to all other AMP national child projects, **this project will comply with the AMP regional child project's M&E protocols and provide timely reporting data to the regional project**.

  The GEF Core indicators included in the UNDP Project Document (Annex 15) will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Also, the indicators found in the Results Framework will be monitored as per the Monitoring Plan in Annex 5 and the M&E Plan and Budget in Section VI of this project document.

  This project is accompanied by various plans including Stakeholder Engagement Plan (Annex 9), mitigation plan for project risks (Risk Register in Annex 7), and Gender Action Plan (Annex 11). These plans will be reviewed according to the monitoring and evaluation requirements. According to the project's social and environmental risk rating, there is a need to carry out continuous monitoring of the social and environmental safeguards as proposed in the Environmental Social Management Framework

(ESMF) and other SES frameworks/plans (Annex 10). The ESMP that will emanate from the ESMF will also be monitored under this activity. Data collected by monitoring GEF Core indicators, Results Framework indicators, project plans and social and environmental safeguards will be used to prepare the PIR to report to the GEF.

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

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

56. *Output 4.5: Engage with regional project, including, but not limited to, via (i) participating in Communities of Practice and (ii) capturing and sharing lessons learnt*

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

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

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

57. *Output 4.6: Knowledge networks / Communities of Practice / industry associations strengthened to promote minigrids development*

- Activity 4.6.1: Establish a **national Community of Practice**
  Fostering and facilitating knowledge sharing around minigrids development and rural energy access (private and public sectors, government, technical and financial partners) in Burkina Faso, is important to the development and sustainability of a minigrid sector. Therefore, this output will support the creation of a Community of Practice. Currently, in Burkina Faso there are three industry associations which have overlapping themes such as renewable energy, energy efficiency and electrification. However, these associations do not have a platform for convening, interfacing and exchanging learning. Therefore, the Community of Practice will be linked-up with other knowledge networks at various levels, and linkages will also be established with the national multi-stakeholders coordination platform strengthened as part of Output 1.1. Other groups such as AMDA, ARE, GOGLA, IRENA, ECREEE, will be made aware of the existence of the CoP for mutually beneficial collaboration. This Community of Practice will implement events such as B2B events, hackathons, webinars, etc. The community will meet 3 times per year and on-demand.

58. *Output 4.7: Lessons learned captured and disseminated at all levels*

    - Activity 4.7.1: Support collection and dissemination of lessons-learned through various media such as workshop, conferences, communication campaigns, etc.

59. *Output 4.8: Replication plan (including investment plan) for scaling up rural energy access developed*

    - Activity 4.8.1**:** Replication plan for scaling-up investment in minigrids
      A plan for scaling up minigrid investments in each participating country will be developed based on data gathered and lessons learned from implementation of project activities across all AMP countries and from GEF-funded minigrid projects worldwide, knowledge shared by the regional project with the national projects, and insights gained from participating in AMP Communities of practice. The Program's comprehensive approach to reduce financing, hardware and soft costs will create the enabling environment to attract public and private investments. This coupled with sound knowledge management underpinned by a robust theory of change is expected to catalyze markets.

    - Activity 4.8.2: Market surveys
      More detailed market surveys will be carried out in each participating country to assess scaling-up and replication impact potential.

60. Some amendments were made as a result of findings from the PPG activities and comments received in the PIF. Further context analysis, review of existing barriers, and meetings with various stakeholder groups carried out during the PPG phase, have confirmed the strong relevance of the original project and its additionality to ongoing and planned national and international programs to support energy access in Burkina Faso. However, the changes explained below and in details in Table 2 were deemed necessary in order to ensure the project meets the needs of the market:
    1. **Component 1 — Policy and Regulation,** contains the original project activities from the PIF but additional outputs were added as part of the activity to be implement from Output 1.2 to Output 1.6. It was determined that the capacities of the regulator, ARSE and ABNORM which were recently established need to be enhanced so they can fully play their role in the promotion of a conducive environment for minigrids. This will facilitate the implementation of policy, legal and regulatory instruments from the Energy Law. In addition, a minigrids strategy will be drafted.
    2. **Component 2 — Project and Business Model Innovation, with Private Sector Engagement**, concerns the development of Innovative business models based on cost reduction operationalized to support and strengthen private participation in solar PV-battery minigrid development. No major changes were made on this component except that Output 2 on building capacity of winning tender bidders / new

COOPELs to develop and implement innovative business models and cost-reduction levers will now include capacity building for other private sectors actors.

3. **Component 3 — Scaled-up Financing,** was referred to as Innovative Financing in the PIF. Contains the original project activities from the PIF but a new output to support the implementation of a financial instrument to facilitate investment in minigrids. For instance, a guarantee fund supported by Swedish Cooperation and/or consumer financing supported (connection fees) by MCC and Swedish Corporation was included.
4. **Component 4 — <u>Digital, Knowledge Management and Monitoring and Evaluation</u>,** contains the original project activities from the PIF, these remain unchanged.

Changes to planned activities are presented in Table 8 following stakeholders consultations. Throughout the PPG phase, stakeholders were asked to determine the priority level of the outputs. As a result, the PPG team categorized each output through an internal sequencing exercise, which was further refined at the validation workshop. Therefore, activities are now listed in order of priority.

Table 8: Changes brought to the project design as a result of baseline activities

Components and Budgets	**Initial Outputs at PIF Stage**	**Outputs at CEO Endorsement (Changes as a result of PPG Activities)**	**Justification for change**
Component 1— Policy and Regulation Initial Budget: $291,469 New Budget: $195,351 Co-financing: $5,387,116	Output 1.1: Minigrid DREI techno-economic analyses carried out to propose most cost-effective basket of policy and financial derisking instruments	*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*	This output was added to fully address the lack of sector leadership and coordination of renewable energy minigrid development. The Mini-grid DREI techno-economic analyses, which was originally output 1.1 is now output 1.6. Some of first activities this new Output 1.1 is supposed to carry-out are: develop a guide on Importation of renewable energy technologies. Support the activity started by the AfDB's SEFA under the Yeleen Project to establish waste management policies and plans to ensure mini-grid hardware and batteries are properly handled at end-of-life. Developers and other stakeholders need clarity in order to make business decisions. This in itself is a cost-reduction tool. Burkina Faso is attracting considerable donor funding towards rural electrification including minigrids. The AMP Child Project will be useful by contributing toward preventing environmental degradation by components at the end of their shelf-life with this output in collaboration with all of the major projects/donors.
	N/A	*Output 1.2: Formulation of rural electrification strategy/plan, incorporating transparent targets and supported by multi-tier data*	Stakeholders including ABER constantly highlighted that this project will add value if supporting the drafting and adoption of a national rural electrification strategy / plan

	N/A	*Output 1.3: Domestication of quality standards for solar mini-grid components, and institutional capacity of national stakeholders involved in setting or reinforcement standards strengthened*	This was originally Output 1.2 in the PIF. However due to resequencing it has been moved to 1.3.
	N/A	*Output 1.4: Capacity building of the regulator ARSE, ABER (vis-à-vis texts emanating from the Energy Law and private sector to fully play their role) such as designing procurement/tender processes that incorporate cost-reduction levers and innovative business models etc.) and to private sector to respond to tenders with proposals that incorporate cost-reduction levers and innovative business models*	This output was expanded to merge two key considerations: capacity-building of government agencies and that of the private sector around minigrid procurement focusing on cost-reduction levers and innovative business models
	N/A	*Output 1.5: Establishing / Operationalizing a certification scheme for installers and technicians building on ECREEE's Regional Certification Scheme*	This change is justified to support the quality assurance standards in terms of minigrid components. Without well-trained technicians, quality standards will still fall short of their intended targets.
		Output 1.6: Light quantitative mini-grid DREI techno-economic analysis carried in Year 4	Due to the fact that the DREI analysis for the first year will be done by the Sida-funded minigrid project (which was not foreseen at PIF stage), this output has been moved to the 4th year of AMP project. It will be an update of the initial DREI analysis contributing also to the regional project.
Component 2— Project and Business Model Innovation with Private Sector Engagement Initial Budget: $274,686 $208,027 (INV) + $66,659 (TA) New Budget: $755,735 $677,350 (INV) + $78,385 (TA)	Output 2.1: Productive-use pilots developed using innovative business models focused on cost reduction levers	*N/A*	Budget was increased for both pilot project and capacity sub-components to take into account the need of the local market in terms of innovative technology and business models in productive use of energy.
	Output 2.2: Capacity of winning tender bidders / new COOPELs strengthened to develop and implement innovative business models and cost-reduction levers	*N/A*	
	N/A	*Output 2.3: Support provided to establish and grow a national industry association for private sector developers*	This change was brought about by the need expressed by stakeholders to ensure the private sector can fully play its role. The lack of a strong voice for the industry has delayed the progress in the minigrid sector. This output will ultimately address this gap.

Co-financing: $65,579,089 $58,777,212 (INV) + $6,801,878 (TA)			
Component 3—Innovative Financing Initial Budget: $136,423 New Budget: $206,372 Co-financing: $4,171,733	Output 3.1: Domestic financial sector capacity-building on business and financing models for minigrids	*N/A*	N/A (No change)
	Output 3.2: General market intelligence study on minigrids in regions complementary to WB and AfDB investments	*N/A*	N/A (No change)
	N/A	*Output 3.3: Support the development and implementation of innovative financial instruments for both supply and demand side (consumers and service providers) to facilitate investment in and viability of minigrids*	Currently, there is no appropriate financial instrument for minigrid companies in Burkina Faso. Financial instruments such as guarantee and/or consumer financing (connection fees) is being explored by MCC and Swedish Corporation. Based on discussions with stakeholders this output can provide support to ensure these are in line with best practices. The capacity of stakeholders in regard to assessing and designing the best financial instruments seems low. Private sector companies would benefit from this technical assistance support in order to facilitate access to finance.
	N/A	*Output 3.4: Feasibility study support provided to minigrid developers, creating a pipeline of investible assets*	To close the access to financing gap, it is important that developers are able to submit bankable projects to banks and investors. This is even more important in the context of a market in transition such as that of Burkina Faso. Also, this output in essence contributes to investment cost-reduction.
	N/A	*Output 3.5: Capacity building provided to minigrid developers and investors on measuring and reporting on impact indicators, building credibility in impact investment as an asset class*	Mobilizing investment, especially from the impact invest and crowdfunding community relies heavily on data on socio-economic impacts. Currently, developers in Burkina Faso we not equipped to properly collect and report on these in order garner the interest of investors.
Component 4—Digital, Knowledge Management and Monitoring & Evaluation	N/A	*N/A*	The budget of this component was increased to take into account needs to fully support linkages between the Burkina Faso project and the regional AMP project.

Initial Budget: $138,027 New Budget: $331,944 Co-financing: $27,175,642			

61. It is important to note that some of the abovementioned project results will be realized by co-financing activities with resources that do not flow through UNDP accounts. In particular, the mini-grid pilots to be built in the projects (Output 2.1) will be funded through a CAPEX (partial) subsidy from the project budget (GEF funds and UNDP TRAC), and the remaining of the CAPEX will be funded by third parties (who will likely be private sector developers, but those are not precisely defined yet). While the funds from third parties will not flow through UNDP accounts, they will directly contribute to the same mini-grid pilots the GEF and UNDP funds are contributing to and will be essential to realizing the project objectives. For this AMP child project, these are "co-financing activities included as project results". The precise sources and amounts of these co-financing activities will only be known at implementation stage. UNDP is accountable to monitor all project results, including results to be delivered by these co-financing activities, to ensure consistency with UNDP and GEF policies and procedures, including social and environmental safeguards policies and requirements (SES). This is further detailed in the ESMF (Annex 10).

62. For these co-financed activities included as project results with resources that do not flow through UNDP accounts (captured on Table 9 below), the following procedures will need to be applied before co-financing activities start:

    1. The co-financing partner's capacities will need to be assessed through the Partner Capacity Assessment Tool (PCAT) and the co-financing partner will need to develop a risk management strategy if gaps are identified, for UNDP's approval and subsequent oversight/assurance.
    2. The co-financing partner will need to sign a legal agreement with UNDP or the Implementing Partner to confirm accountabilities, mentioning in particular the following sentence: "*The co-financed activities will be undertaken in full compliance with [co-financing partner's] policies and procedures. However, because the activities are included in the results of the project the [co-financing partner] commits to monitor these activities consistent with the UNDP Project Document. The Project Board and UNDP will also assume an oversight and assurance role to further ensure the project, including the co-financed activities covered by this letter, remains consistent with UNDP policies and procedures. These arrangements will be confirmed through [signature of Project Document OR signature of Responsible Party Agreement with reference to the Project Document]*.".
    3. Risks stemming from and/or to co-financed activities – as with risks from/to all other project activities – will be included in the project risk register and monitored accordingly. The risk description will clarify relation to the specific co-financing.
    4. Social and environmental risks associated with the co-financed activities will be identified during project design and included in the SESP and relevant safeguard management plans. Relevant safeguards instruments prepared by the co-financing partner will be reviewed by UNDP for consistency with UNDP's SES, during project development and implementation; any gaps will be resolved in discussion with the co-financier.

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

Table 9: List of co-financed activities included as project results

Co-financing source	Co-financing type	Co-financing amount (USD)	Included in project results?	If yes, list the relevant outputs
Private sector developers (To be confirmed at implementation stage)	Grant, Loan and/or Equity investment	To be confirmed at implementation stage	Yes	Output 2.1
TOTAL		**To be confirmed**		

63. Partnerships: In order to ensure the successful implementation of this project and sustainability beyond the project cycle, several stakeholders in the energy market ecosystem have been identified during the PPG phase as active project partners and listed in Table 10. Therefore, the project intends to work in a coordinated manner with these partners from government, private sector and civil society including other donor agencies involved in Burkina Faso. It is important to note that the energy sector in Burkina Faso is rather crowded, however, this project is employing a targeted niche approach to add value where it is needed. Hence, the project will partner with existing and upcoming projects identified during the baseline assessment at the PPG stage to ensure key principles and activities are implemented in a coordinated manner taking into account business model innovation, cost-reduction concept, new minigrid technologies, private sector engagement and gender mainstreaming. The fact that some large projects are expected in the minigrid sector is rather an opportunity for the AMP project as many stakeholders during the PPG phase have suggested for AMP to set a benchmark in terms of policy and regulation, capacity-building, productive uses of energy and other innovations such as remote monitoring, PAYG and also data management.

Table 10: Identified partners for the AMP

Governmental and Intergovernmental organizations		
Institution / Company	**Role in the Energy Sector and involvement in the project**	**Relevance to the project**
Ministry of Energy, Mines and Quarries (MEMQ) and directions	The Ministry of Energy is responsible for defining and implementing national energy policies, development of the energy sector, strategic planning of electrification and regulation and control of electrical infrastructures. The ministry is accountable to UNDP and GEF and will supervise ABER, the Implementing Partner.	Provides overall oversight to the project as the responsible ministry in charge of energy. Actually, mandated ABER to serve as IP for the AMP project. Is a strategic partner to the project's implementation as the ministry in charge of the energy. This partner will be relevant to all components and outputs.
Agence Burkinabé de l'Électrification Rurale (ABER)	National agency for rural electrification under the MEMQ that is responsible for the implementation of national rural electrification policy; mobilizing funding; supporting developers and private sector investment; Serves as the Implementing Partner and co-financier to project.	Serves as Implementing Partner coordinating the AMP project in Burkina Faso on behalf of the MEMQ. Will be the secretariat of the PMU. This partnership is relevant to all components of the project. ABER has committed co-financing to the project and will also ensure coordination with other identified projects as the lead implementer for all rural electrification project.
Directorate General for Renewable Energy (DGER)	In charge of guaranteeing and ensuring the implementation of the policy of efficient integration of renewable energy in the country's sustainable energy supply system. Ensuring	Will be joint responsible party for PC 1 (policy and regulation) in collaboration with ECREEE.

	consultation for synergy other actors of the sector and the technical and financial partners.	
Directorate General of Sectoral Studies and Statistics (DGESS)	Responsible for the design, programming, coordination, monitoring and evaluation of development actions at the Ministry level.	Will participate in PC 1, possibly Output 2.1 (pilot project) in regards to energy efficient technologies and also Output 4.4: A Data Strategy is developed and implemented, including linkages to and following guidance from the regional project; Output 4.3: Lessons learned are captured and shared with the regional project; Output 4.8: A project inception workshop held to officially launch the project and, among other aims, familiarize key stakeholders with the detailed project strategy, roles and responsibilities of the project team
Directorate General for Energy Efficiency (DGEE)	in charge of promotion of energy efficiency, technological innovation, technology transfer and animation of a consultation framework for a synergy of actions with the other actors of the sector and the technical and financial partners.	As directorate under the MEMQ, this partner will participate in PC 1 and output 2.1 (pilot project) in regards to energy efficient technologies.; Output 4.8: A project inception workshop.
Autorité de Régulation du Secteur de l'Électricité (ARSE)	Independent regulatory authority under the Office of the Prime Minister and is responsible for ensuring proper implementation of electricity regulation and laws, protecting electricity consumers' interests, licensing IPPs, setting tariffs, etc. ARSE is one of the key stakeholders of the project. The agency will receive capacity-building in terms setting tariffs, understanding delivery models, etc.	This partner will support Outputs 1.1 to 1.4 and Outputs to 2.1 and 2.2 in terms of regulatory aspects of the project and Output 4.8: project inception workshop. ARSE as a partner will be consulted and lead on regulatory issues related to the project. For instance, in the pilot project new tariffication and delivery models will be tried so ARSE will be consulted by ABER during this process.
Agence Nationale des Énergies Renouvelables et de l'Efficacité Énergétique (ANEREE)	National agency for renewable energy and energy efficiency under the MEMQ, responsible for (i) structuring the renewable energy and energy efficiency sectors; (ii) mobilizing funding; (iii) supporting developers and private sector investments; (iv) and facilitating access to technology. ANEREE will be fully engaged in the project to support activities such as training, quality-assurance, etc. Synergies with existing activities will be leveraged as co-financing.	As a partner, ANEREE will be involved in Outputs 1.1 to 1.5 as well as Outputs 2.1 to 2.3 where ANEREEE will be consulted for the selection of energy efficient equipment. As for Output 2.1 ANEREEE will coordinate with ABER the management of batteries and converters at the end of their shelf-life. ANEREE will also be involved in Output 4.8: project inception workshop.
Agence Burkinabè de Normalisation (ABNORM)	**Agence Burkinabé de Normalisation, de la Métrologie et de la Qualité (*ABNORM*):** *By law ABNORM* is the only national agency responsible for developing standards. One of ABNORM's key objectives is to cover all Burkina Faso's priority sectors for standardization (in particular the food, electro-technical, environmental, building and civil engineering sectors). Therefore, the project needs to involve ABNORM from the onset of Output1.3 Domestication of quality standards for solar minigrid components, and institutional capacity of national standards organizations/bureau strengthened. Additionally, ABNORM must be involved in the certification of skills in the installations and O&M of minigrids.	ABNORM will be a key partner in regard to Outputs 1.1, 1.2, 1.3 and 1.4. This partner will be consulted by ABER around the following in relation to its mandate: Developing and disseminating national standards, technical specifications and codes of practice; Raising the awareness of economic operators and providing training in regard to standards and quality management tools; Ensuring quality control and inspection of products, goods and services, whether imported, exported or locally-produced; Ensuring the certification of products, systems or personnel to national or international standards; Ensuring the calibration of measurement instruments and their traceability to the International System of Units;

		Advising and assisting industrial, commercial and services companies in standardization, certification, metrology and quality matters.
Ministry of Environment	The Ministry in charge of the environment will be a partner in the implementation of the project, as the national ecovillage strategy and its action plan are carried out by this Department. Similarly, it houses the operational focal point of the GEF.	The ministry oversees the Ecovillage initiative, which is expected to house pilot projects. It will be informed on the project's progress as a member of the Executive Board.
Permanent Secretariat of the National Council for Sustainable Development (SP/CNDD)	Role is to mobilize and implement adequate funding for the promotion of sustainable development, will be the linchpin throughout the implementation of this project. It will participate in the strategic orientation of the project.	**SP/CNDD will be a key partner to the project.** The SP/CNDD will be consulted by the ABER regarding electrified the pilot project to be implemented in the 6 ecovillages. Similarly, it will contribute to the scaling up of knowledge and lessons learned, as well as to the perpetuation of achievements in the target ecovillages. SP/CNDD will play a relevant role in Output 4.4: A Data Strategy is developed and implemented, including linkages to and following guidance from the regional project; Output 4.3: Lessons learned are captured and shared with the regional project; Output 4.8: Project inception workshop held to officially launch the project and, among other aims, familiarize key stakeholders with the detailed project strategy, roles and responsibilities of the project team; Output 4.8: Replication plan (including investment plan) for scaling up rural energy access developed. Also, the SP/CNDD will lead social and environmental safeguards aspects of the project.
The Directorate General of Green Economy and Climate Change (DGEVCC)	Under the ministry of environment, Green Economy and Climate Change, DGEVCC is responsible for developing and monitoring the implementation of a national strategy to promote the green economy.	Is already a partner of ABER in the framework of the Ecovillage Initiative. This partnership will continue for the AMP project**.** The partner will be strongly consulted by the ABER in the choice of ecovillages to electrify. Similarly, it will contribute to the scaling up of knowledge and lessons learned, as well as to the perpetuation of achievements in the target ecovillages. It will also play a key role in the promotion and creation of green jobs in electrified ecovillages.
ECOWAS Center for Renewable Energy & Energy Efficiency (ECREEE)	ECREEE is a specialized agency of the ECOWAS with a mandate to promote renewable energy and energy efficiency markets, with the overall objective to contribute to the sustainable economic, social and environmental development of West Africa by improving access to modern, reliable and affordable energy services, energy security and reduction of energy related externalities (GHG, local pollution);	This partner will be a responsible party for the Project Component 1. To this end an agreement will be signed with ABER. ECREEE is also providing co-financing to this project. Lastly, ECREEE will be involved in component 2, 3 and 4 as well.
Cooperatives and industry associations		
Fédération National des Groupements de Naam (FNGN)	Fédération nationale des groupements de NAAM is a cooperative with more than 600,000 members in Burkina Faso, including a support structure for women's activities, a support unit for agro-economic activities, an education program and a microfinance institution. FNGN manages more	FNGN will be a partner specifically on Output 2.1 (pilot project) and will also be on the project's board as representative of the final beneficiaries

	than 160 multifunctional platforms operated by its members.	
Association of Renewable Energy Professionals of Burkina Faso (APER-BF)	APER is the industry association, created since 2016. APER has a membership of 118 renewable energy professionals and is mandated to promote the interests of its members specifically and more generally of the entire renewable energy community.	APER will be a partner specifically on Output 1.1 and will be highly involved on Output 1.2, Output 1.3, Output 1.4, Output 1.5, Output 2.1 (pilot project), Output 2.2, Output 2.3 and several outputs under component 4. APER will also be on the project's board as representative of the final beneficiaries.
African Minigrid Development Association (AMDA)	AMDA (www.africamda.org) is Africa's first trade association dedicated exclusively to the mini-grid industry, and is composed of developers operating AC mini-grids that ensure power reliability of at least 20 hours per day. The association also works closely with a variety of solution providers, including EPCs, hardware and software vendors and integrators.	AMDA will partner with the project to support Output 2.3 and also various outputs of component 4 to promote knowledge-sharing and South-South collaboration, given AMDA's strong experience from Kenya and Tanzania.
Alliance for Rural Electrification (ARE)	The international business association promoting a sustainable decentralized renewable energy industry for 21st century services and creating local jobs and inclusive economies.	With the establishment of its West Africa chapter based at the AfDB, ARE will partner with the project to support Output 1.1, Output 2.3, all of Component 3 and some outputs of Component 4.

In addition to the above, the AMP project will also complement and create synergies with a number of interventions supported by development partners, some of which will provide co-financing to this project. The main relevant development partners and interventions are listed in Table 11.

Table 11: Partners from donor organizations and other relevant projects / stakeholders

Donor	Project/Activity	Synergies and Collaboration Opportunities
AfDB - African Development Bank	**Sustainable Energy Fund for Africa (SEFA) Technical assistance grant** for mini-grid sector reforms with a budget of EUR 0.9 million	PC 1, PC 2 and PC 3. Currently, an assessment of the minigrid sector has been launched by the AfDB. This study will analyze the COOPEL model closely. Moreover, the AfDB will support ABER in development of the e-waste framework, analyses/mapping of productive uses/values chains as well as setting-up task teams in the framework of Desert to Power. To capitalize on these significant synergies, the AMP project will mobilize co-financing and add-value in terms of promotion of the productive uses of energy and sharing-knowledge on minigrid cost reduction. The Yeleen project will mostly be implemented in different areas than the AMP child project. For example, the policy and regulatory work planned under the Yeleen project does not involve a DREI analysis, therefore, the AMP project will add-value by ensuring DREI serves as a tool to the Yeleen Project. The synergy between the various projects of the AfDB, especially Yeleen project, has been translated into a co-financing of USD 22,093,381.
	Yeleen Rural Electrification project aims to install 100 green mini-grids, plus SHS, plus productive use equipment. Planned from 2019 to 2025 and funded by the GCF (USD 27.1 million; 2019-2025), USD 10 million African Development Bank and the French Development Agency (AFD) and the EU (USD7.3 million), aims to create a favorable environment for investment and operation of mini solar grids by the private sector. The project will include the installation of 100 mini-grids (11.4 MW; 50,000 household connections; 3,300 connections for productive use) in Burkina Faso using results-based payments to private sector operators, improving the regulatory framework to mobilize private sector capital in rural electrification investments based on renewable energies, and the supply of equipment for productive use to support economic activity in the targeted regions.	
	Desert to Power is regional umbrella initiative starting in 7 countries originally with a total budget of EUR 185.52 million including a EUR 136.7 million loan, under which the Yeleen project is implemented. In Burkina Faso, the project will lead to the construction	

Donor	Project/Activity	Synergies and Collaboration Opportunities
	of four 52MW solar PV plants and extend the distribution network to connect 30,000 new HH. This project is planned for 2020 to 2024.	
World Bank	**Electricity Sector Support Project (PASEL)** with a budget of USD 215 million including credit facility of USD 50 million, this project is implemented in two phases 2014-2021 and 2019-2024 including expanding access to electricity in rural areas of Burkina Faso. It is expected to support electrification of 300 new rural localities and the connection of 115,000 households, micro, small and medium enterprises (MSMEs), and community infrastructure (schools, health centers, etc.) to modern and reliable energy sources at the lowest cost. Three project components will focus on minigrids, namely Component 1: strengthening existing COOPELs based on commercial and technical performance; Component 3: development, installation, and operation of solar PV minigrids with storage and connection of 25,000 households and MSMEs by competitively selected private concessionaires (operators) to provide reliable, sustainable and affordable electricity; and Component 4: capacity building to improve the operational and commercial performance of COOPELs.	Synergy on cost-reduction and innovative business models will be built between the AMP child project and PASEL. Additionally, the broad policy work planned under PASEL will be supported by the DREI and knowledge tools produced under PC4.
+ DGIS+ CTF	Electrification of 179 localities along the North Core Interconnector (Nigeria-Niger-Burkina Faso) to be implemented from 2018 to 2021 for a USD 69.5 million budget.	
	Burkina Faso Electricity Access Project (total USD 90 million): grid extension to 170 localities (50,000 connections) and installation of solar PV mini-grids with storage (total 10MW) with 25,000 new connections in 220 rural localities. Includes a USD 1.5 million "Lighting Africa" sub-component entirely devoted to decentralized access to energy as part of a larger World Bank power sector support project.	
	Regional Off-Grid Electrification Project (**ROGEP**), in cooperation with ECREEE, provides market development assistance through technical capacity building and grant financing to start-up plus credit lines to regional and local entrepreneurs and CFI for off-grid clean energy projects in 15 ECOWAS member states plus Cameroon, Chad, Mauritania and Central African Republic. Minigrids are, however, out-of-scope for ROGEP, which focus on SHS and standalone technologies (solar appliances, pumps, etc.).	
European Union	APC-EU Energy Facility: **decentralized rural electrification** project in Ziro and Gourma regions with a budget of EUR 12 million from 2014-2020 with a possibility of extension.	The EU is very involved in the energy sector, in Burkina Faso. The EU will be consulted in the implementation of all components of the AMP project. Moreover, the EU will be represented on the Project Board.
	APC-EU Energy Facility: Construction of **12 solar mini-grids** (with total capacity of 3.2MW) by **SINCO** and distribution of **SHS** in the North and Central North regions. Total budget is EUR 12.4 million, co-funded by EUR 8 million and AFD EUR 4.4 million implementation during the 2014-20 timeframe.	

Donor	Project/Activity	Synergies and Collaboration Opportunities
	Yeleen Rural Electrification Project EU will provide EUR 6 million for result-based grant.	
AFD – Agence Française de Développement	**Access to the electricity network for the populations of northern Burkina Faso**: subsidized grid connections in border areas in the North and Sahel regions; target: 27,000 new customers through €3m grant to SONABEL. Status ongoing	AFD is involved in the flagship Yeleen Project and other initiatives. As such, it will be included on the Project Board as a key development partner involved in the energy sector. No co-financing is expected from the AFD at this stage.
	Support **Yeleen Solar Plan 2025** (including rural electrification component)	
	Construction of solar PV mini-grids and distribution of SHS in 42 localities in Hauts-Bassins and Boucle du Mouhoun regions; total capacity of 1.5MW; will electrify 12,400 households, business and public facilities. Credit facility US$10m	
IRENA/Abu Dhabi Fund for Development (**ADFD**)	**Decentralized Rural Electrification Project** (PERD/EnR) funded by the Abu Dhabi Development Fund, IRENA and the GofBF for $10 million aims to electrify 42 localities in the regions of the Hauts Bassins and the Boucle du Mouhoun via solar PV minigrids. The project will target productive use of energy such as solar pumping, cold chain, milling, etc. Concretely, the project consists of developing new/novel generation of energy services platforms. A low-voltage mini-grid will be built in each locality to supply basic social services, households and economic units. The project will impact 73,500 beneficiaries, of which approximately 33,000 direct beneficiaries connected to the electricity service (i.e. 4,260 households) and 44,100 indirect beneficiaries as well as 438 socio-economic and community infrastructures including 70 schools, 28 health centers.	Through PC2, PC3, PC4 this project is closely aligned with the AMP Child project.
Sida	**REACT-EEP with funding from Sida and DFID has funds for ESCOs in Burkina** focusing on the agribusiness and renewable energy nexus, to ensure they rapidly scale and transition to external financing and sustainability. In the framework of the first challenge fund, 3-4 ESCOS that submitted minigrid projects were selected. Connection subsidies are provided in the framework of this project but only for customers in Ouagadougou and Bobo Dioulasso. These projects are ongoing and can be good candidates for co-financing and pilot projects. Budget €4.6m between 2019-2022.	SIDA is highly active in the energy sector in Burkina Faso. This partner was very involved in the PPG phase participating in a series of meetings/interviews. Through its funding portfolio, SIDA will provide co-financing of USD 2.9 million in relation o all 4 project components. As a partner, SIDA is expected to support **Output 1.1** (inclusive national dialogue on minigrids), **Output 2.3** (strengthening the industry association) and **Output 3.3** (Minigrid Funding Facility) as early are 2nd quarter of 2021 ahead of the start of the AMP project. In fact, Sida has started the preparatory work around Output 3.3 by supporting the development and implementation of innovative financial instruments for both supply and demand side (consumers and service providers) to facilitate investment in minigrids in collaboration with UNCDF. Total co-financing of USD 2,918,995 will be leveraged from Sida.
	Beyond the Grid ($63M across 6 countries): The three main components of The Beyond the Grid initiative are: 1) investment/financing innovation; 2) convening/dissemination (multi-stakeholder taskforce); 3) Information and market intelligence (studies and data). Pre-qualification in progress, technology selection – solar home system (SSH) or nano-grid. Minigrids have been removed due to regulatory barriers (pricing: cap rate, security). KfW has also committed an additional funding of $25M to BGFA initiative and more donors and private funds are in discussions to join the initiative.	

Donor	Project/Activity	Synergies and Collaboration Opportunities
+UNDP & UNOPS	**Support for Rural Electrification by RE systems in the Liptako-Gourma Region**, in Mali, Niger and Burkina Faso implemented by UNDP and UNOPS under the coordination of the Liptako-Gourma Authority, with ECREEE as partner. The project started in 2021 and includes 5 components: 1) institutional support, 2) installation of off-grid power supply solutions, 3) Technical support for the improvement of regulatory frameworks, 4) Support for the development of the local private sector in the domain of renewable energy mini-grids and 5) Promotion of productive energy and ecological investment in the cross-border regions of Liptako-Gourma. Two minigrids are expected in the North of Burkina Faso. Total budget of $8 485 765 to be implemented over 37 months starting in 2021.	
Denmark	Water, energy and agriculture project in fragile border areas with a budget of about USD 8.3 million.	Synergy with PC1 and PC2. No co-financing expected although synergy is clearly established.
KfW + FFO	PATRIP aims to stabilize fragile border regions by focusing on cross-border projects to promote local conflict resolution mechanisms, legitimate governance and social cohesion. To this end, PATRIP combines basic infrastructure with cross-border political dialogue between communities and state administration. An important element in this context is the involvement of state actors to strengthen confidence in state security. Bringing together communities from both sides of the border can yield several positive effects in this context, and promote closer cooperation on both a state- as well as an inter-communal level, by: • Creating a safer and more enabling environment for trade; • Increasing the reach of public services; • Providing more opportunities for cultural exchange. The current project is budgeted for USD 11.7 million.	Synergy with PC1 and PC2. No co-financing expected although synergy is clearly established.
Millennium Challenge Corporation (MCC)	USD 450 million compact agreement with the Government of Burkina Faso aims to address the country's main binding constraint to economic growth: access to affordable and reliable electricity. The Strengthening Electricity Sector Effectiveness Project; the Cost-Effective and Reliable Electricity Supply Project; and the Grid Development and Access Project.	Though the MCC is focused on grid-extension, through the engagements during the PPG phase, the MCC has indicated interest in supporting some outputs aside from common thematic areas such as capacity-building of institutional actors. The MCC is specifically interested in the promotion of the productive use of energy and gender mainstreaming aspect of the AMP project. Though the MCC indicated interest in co-financing some outputs of the AMP project where synergy is clear, at this stage it is not able to commit to a specific amount. This will be done mostly likely in 2022, when their interventions are more clearly defined.
Water and Energy for Food (WE4F) - $63M	This multi-donor regional program with Swedish Cooperation, German Cooperation, Netherlands Cooperation and USAID managed by GIZ with a budget of USD 63 million covering West Africa aims to scale water-energy-food innovation for food security, gender and poverty reduction in an environmentally-sustainable way. It would be good to leverage the	Synergy with PC2 and PC4. No co-financing expected although synergy is clearly established.

Donor	Project/Activity	Synergies and Collaboration Opportunities
	focus on gender and E4PU component to benefit BF the child project. The project is on-going and is expect to end in 2024.	
BOAD	**Program for the Promotion of Private Investments in the Solar Energy Sector (PPIPS) in West Africa** Implemented by BOAD with USD 70 million with funding from GCF, the Program aims to address the financial and technical barriers to investment in the solar minigrid market in the Least Developed Countries ("LDCs") in the WAEMU region namely, Benin, Burkina Faso, Guinea-Bissau, Mali, Niger, Togo.	Through technical assistance under PC3 and PC4, the AMP child project will support private sector in developing and submitting bankable projects for loans. Additionally, the project will facilitate roadshows, learning and knowledge-sharing events involving industry association, BOAD and local financial institutions. Though no co-financing is expected, minigrid companies will be support by AMP to develop and submit bankable projects to BoAD.
UNCDF	UNCDF is implementing CleanStart in Burkina Faso. EUR 2 million will be disbursed over 3 years to ESCOs, financial service providers, digital service providers and incubators through calls for proposals. Performance-based financing in the amount USD 50,000-200,000 will be provided as grants, loans and guarantees.	In the framework of the AMP project, UNCDF's long-standing experience in access to financing including digital financing/mobile banking and technical assistance support to ESCOs will be leveraged. UNCDF will be responsible party to implement PC3. In the framework of CleanStart, ESCO, financial service providers will receive training and technical assistance, which will strengthen their technical know-how and facilitate access to credit. A co-financing of USD 600,000 has been mobilized to reflect this synergy.
Global Affairs Canada	Cowater International is implementing a USD 12 million project (2017-2021) funded by Global Affairs Canada (GAC), which aims to electrify 15 rural villages and 30 health and social centers with solar energy. It also aims to create income-generating activities (including a small industrial zone for 10 micro-enterprises) and to provide micro-credit solutions to rural entrepreneurs.	Synergy with components 2 and 4 but, no co-financing is expected.
Global Green Growth Institute (GGGI)	Active in BF since the end of 2018, within the Ministry of the Environment, GGGI is implementing a 5-year country program around: access to green/climate financing, "green city" (city strategy), development of rural areas (Ecovillage, E4PU, solar irrigation, land management, etc.), and Green Governance (MRV systems, Bankable project, etc.). GGGI obtained GCF Readiness funds for the project "Strategic framework and entity support for Burkina Faso" to support Coris Bank accreditation and the IEF. The project started in January 2020. The GGGI will therefore support the preparatory phase of pilot project development (consultation, feasibility study, etc.) and access to finance component through Coris Bank.	Outputs related to capacity-building, access to finance and convening and knowledge dissemination around climate change and renewable energy are key activities where the two projects can collaborate. GGGI has been leading the work around NDC and MRV in Burkina Faso.

64. A number of the abovementioned partners have provided letters of co-financing for this project, as attached in Annex 14 to this project document. As further described in Table 12 below, most of these co-financed activities correspond to funds not flowing through UNDP accounts and whose results are not included in the project results framework. In this case, UNDP is accountable to monitor the risk to realization of co-financing amounts and realization amounts annually in the GEF PIR, at mid-term and at terminal evaluation. Specifically, potential risks associated with co-financing that may affect the Project, including safeguards related risks that fall within the project context or area of influence, will be considered in safeguards due diligence and the project risk

register and monitored accordingly. Risk management measures identified will be only those within the control of the UNDP project (e.g. managing reputational risk). See the ESMF (Annex 10) for more details on the management of risks related to the different types of co-financed activities in this project.

Table 12: List of co-financed activities not included as project results

Co-financing source	Co-financing type	Co-financing amount (USD)	Included in project results?	If yes, list the relevant outputs
Burkinabè Rural Electrification Agency (ABER)	Grant and Loan	75,500,000	No	N/A
African Development Bank	Grant and Loan	22,093,381	No	N/A
Swedish Cooperation (Sida)	Grant	2,918,995	No	N/A
UNCDF	In-Kind	600,000	No	N/A
UNDP	Grant	2,080,867	No	N/A
ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)	In-Kind	500,000	No	N/A
TOTAL		**103,693,243**		

65. The private sector engagement. The crux of the project is to increase private sector investment in the renewable minigrid sector. In fact, all outputs are geared towards this principle of making sure private sector actors are able to thrive in the minigrid market in Burkina Faso. There are over 30 local companies identified in the mini-grid/off-grid sector. With the support from ECREEE and IRENA, an industry association, APER (The Association of Renewable Energy Professionals), was established in 2015. Also, with support from ECREEE and the WB, a multi-stakeholder platform (taskforce/community of practice) including representatives from the private sector was established in 2019. The Burkina Faso child project promotes an active consultation and partnership with the private sector from the formulation to the implementation phase. During the PPG phase APER, the local umbrella industry association and individual companies were consulted to ensure their buy-in and active participation. APER will serve as member of the multi-stakeholders platform as well member of the project's steering committee. Therefore, the private sector will be involved in all decision-making instances related to the project. Private actors will be involved as key counterparts in specialized training and technical advice will be offered based on industry needs. The private sector, from both the supply and demand side, is a major actor in the project, not only as beneficiary but also as purveyor of resources (co-financing and pilot projects) and skills (trainings to local communities, women, etc.).

66. Moreover, the private sector will be actively involved in virtually all project components, policy and regulations, pilot projects around innovative business models, capacity building activities including certification and tenders as well as the design of innovative financial instruments. Aware of the difficulties at this level, the National Agency for renewable energy and energy efficiency (ANEREE), with funding support from the EU, is working to strengthen human capital by training 500 young people in solar energy and establishing a solar cluster/platform. The AMP project will build upon this activity in collaboration with the EU, Sida, ECREEE, Alliance for Rural Electrification (ARE) and the regional AMP, contributing specific content around renewable energy minigrids, certification and standards.

67. Risks*:* The PPG phase identified / confirmed a series of risks that can potentially jeopardize the success of the project and the achievement of the expected outcomes, as listed in Table 13. These risks include but are not limited to the following categories: political and security, social and environmental, operational, organizational and of course, sanitary and socio-economic as a result of the COVID-19 pandemic and its uncertainties. The

overall risk level of this project is moderate. The project's major risks and risk management/mitigation measures are identified and listed in the risk registry in Annex 7.

68. COVID-19 risks, opportunities and mitigation measures: Given the magnitude of the global pandemic of the COVID-19 virus, it is undeniable that it remains a key operational risk to be considered in the framework of this project, as highlighted in Table 13 and Annex 7. At the time of writing, variants and second/third waves of infections are emerging worldwide with concomitant reactions from authorities, ranging from mild restrictions on movement and curfews, to strict lockdowns and strict domestic travel restrictions. The strictest forms of restrictions could negatively impact activities requiring the physical presence of team members and stakeholders. Mitigation measures have been planned in this project. For instance, online communication and teleconferencing options will be investigated and given preference as needed to facilitate social distancing for technical assistance activities. At the pilot level, risks could relate to supply chain delays or disruptions, limited availability of implementation teams due to sickness or restrictions, broader time and cost impacts of COVID-19 compliance for the project, and a reduced ability to pay of minigrid consumers due to the negative economic impacts of the pandemic. These risks will be reassessed at implementation stage and contingency planning developed as needed, for instance to schedule procurement in a way that minimizes disruptions and identify alternatives when bottlenecks are faced by the project. Duty of care for project team members, workers and the target communities will also be ensured, an aspect that is further elaborated in the SESP (Annex 6) and ESMF (Annex 10).

69. COVID-19, represents also an opportunity for the project, especially when it comes to building the resilience of health infrastructure and the rural population through increased access to clean, affordable and reliable electricity. The strategy of this project will support the GoBF's COVID-19 response and recovery by building the resilience of the vulnerable populations and health facilities through provision of sustainable energy and income generating activities under Output 2.1 (pilot projects). Specifically, the pilot projects will target the water and agriculture sectors as demanded by Burkina Faso's national stakeholders during the PPG phase, which called for showcasing water-energy and food nexus in order to promote socio-economic growth, increase private sector engagement and reduce poverty in rural areas. Further elaboration on the opportunities provided by the COVID-19 pandemic is provided in Annex 19.

Table 13: Project Risk Table. See also the Risk Register in Annex 7. Further social and environmental risks are described in the SESP (Annex 6).

#	Description	Risk Category	Rating / Impact & Likelihood	Risk Treatment / Management Measures
1	Lack of Government commitment to develop and implement policies that promote decentralized energy	**Political** ***5.1. Government commitment***	The rating of this risks is **Moderate** because it could make the project less of a priority or redundant and difficult to implement without the support of the government of Burkina Faso's (GoBF). *L =2* *I = 4*	In the PPG phase, all attempts were made to make sure the project's objectives and activities align with national priorities and program especially for rural electrification. The involvement of the ministry of energy through the rural electrification agency (ABER), will ensure government of Burkina Faso's (GoBF) commitment and relevant institutions political commitment to renewable energy promotion in order to boost access to energy through adequate ongoing stakeholder consultations, close coordination and active involvement in project implementation including transparent communication of project milestones to show progress and successes as well as commitment of resources.

				The multi-stakeholder's platform, which will be put in place in the framework of the project and the fact that the UNPD is chairing the donors' coordination group will also serve to manage / mitigate this risk.
2	Changes in regulations and strategy	**Regulatory 6.1 Change in the regulatory framework within the country of operation**	The probability of transformational changes in regulation for the off-grid sector is really high, therefore this risk has a **High** rating. This risk will, however, have very positive impacts on the projects as one of the biggest barriers impeding the widespread promotion of clean energy minigrids is inadequate regulatory framework such as delivery method, tariffs, standards, etc. L=5 I=5	During the PPG phase, all consultations with stakeholders indicated the need for changes regulatory reforms. The project implementer partner (ABER) and technical and financial partners such as SIDA, EU, WB, AfDB indicated that reforms will be engaged in the course of 2021 onward. The AMP Child project (national) and the regional AMP will be highly involved in the formulation, implementation and dissemination of these reforms under their components 1, 2, 3 and 4, which are: Policy and Regulations, Project and Business Model Innovation with Private Sector Engagement, Innovative Financing and finally, Convening, dissemination, tracking (knowledge management). This is one of the rare risks that will have a positive impact on the project and its occurrence is fully expected.
3	Investments made in Component 2— Project and Business Model Innovation with Private Sector Engagement (pilot projects) may not be economically and financial viable and do not demonstrate cost reduction of renewable energy.	**Financial 2.1. Cost recovery**	The rating of this risks is **Moderate** because pilot's projects may not be able to recover cost of investments due to low purchasing power of customers. L =2 I = 4	Stakeholders consultation and engagement in project identification and selection including adequate pre- feasibility studies. Also, pilot projects as per the stakeholders consultations are all based on productive uses in agriculture value-chains in off grid communities in order to safeguard payments. The fact that minigrids are anchored in productive uses which have a constant flow of revenues, this increases the economic and financial viability of the project. In fact, one of the upsides of this project is capitalize on experience from other African countries and South-South cooperation to foster exchanges of knowledge and expertise from other projects.
4	FOREX issues due to the fact that pilot project developers and financial institutions may receive loans and investment in dollars.	**Financial 2.4. Fluctuation in credit rate, market, currency 2.5. Delivery**	The rating of this risks is **Moderate** because pilot projects may be subjected to high interest rates and forex fluctuations and limit bankability of project for funding by investors. L =2 I = 4	Training will be provided to local financial institutions so they fully understand the risks and benefits of solar minigrid projects. Therefore, local FI will be more inclined to finance project in local currency and also put in place financial products in line with the specific needs of the minigrids market.
5	Project delays or disruptions due to COVID-19	**Operational**	The rating of this risk is **Moderate**. L = 3 I = 3	The COVID-19 pandemic is, at the time of writing, at a point of inflection. Variants and second/third waves of infections are emerging worldwide with concomitant reactions from authorities, ranging from mild

				restrictions on movement and curfews, to strict lockdowns and strict domestic travel restrictions. The most robust forms of restrictions could negatively impact activities requiring the physical presence of team members and stakeholders. At the pilot level, risks could relate to: - Supply chain delays or disruptions. Delays with importing or local availability of material and equipment due to reduced manufacturing capacity impacting planned delivery timelines. - Availability of implementation teams. Increased absenteeism of resources due to sickness, the need to care for others, or restrictions on travel may impact project efficiency or progress. - Broader time and cost impact of COVID compliance. Project timelines may be delayed when scheduling around social distancing requirements and/or costs may increase to ensure compliance with COVID-19 guidance. - Reduced ability to pay of minigrid consumers due to the negative economic impacts of COVID-19. Scheduling of activities such as site development and on-site training that may require physical presence in certain localities has been front-loaded, allowing for a buffer in case the sanitary situation deteriorates to the point of preventing the swift realization of these activities. Online communication and teleconferencing options will be investigated and given preference to facilitate social distancing, where needed. During project implementation this risk will be reassessed and following activities may be carried as needed: - Performing a schedule assessment or time-impact analysis, including examining the status of material procurement on projects. - Identifying most critical materials, equipment, products for procurement and engaging suppliers to prioritize delivery and/or expose key vulnerabilities. - Identifying key resources and skills and possible alternatives in case of absences. - Prioritizing and facilitating vaccinations of workers if possible. - Assessing cost impacts of enhanced cleaning, reduced workforce, and other modifications.

				- Assessing what services can be continued offsite to limit schedule delays.
6	Lack of coordination with existing initiatives / stakeholders	**Operational 3.5 Synergy potential (linking with other initiatives as relevant)**	The rating of this risk is **Low**. L = 2 I = 2	There will be representatives of the donor partners in the multi-stakeholders platform. Also, ABER being the coordinating entity for rural electrification projects and the implementing partner of the GEF7 child project will contribute to better coordination. Moreover, the project will employ a robust and inclusive stakeholders engagement.
7	Burkina Faso is highly vulnerable to climate change and is already being impacted by frequent droughts and decrease in water availability which contributes to famine, lowering of agricultural yields and weakening of the economic base, triggering a process of impoverishment.	**Social and Environmental 1.4. Climate change and disaster** **Safety and Security 8.5 Natural Hazards 8.6 Manmade Hazards**	The rating of this risks is **Substantial** as climate impacts and variability mostly droughts and flooding in Burkina Faso are frequent. The impact on the minigrid infrastructure is minimal. However, as the pilot projects are targeting agricultural value-chains (small scale farmers), the climate related risks affect their ability to pay. L =4 I = 4	Climate risks assessment tool will be used to assess the vulnerability of all pilot projects to climate impacts are fully integrated into the project design.
8	Institutional and private sector partners will not be capable of playing their roles	**Operational 3.8 Capacity development of national partners**	The rating of this risk is **Substantial** as with recent reforms and those foreseen, stakeholders will need some time to understand and/or learn their new roles. It is important to ensure the various stakeholders are able to fully take play their role for market uptake of clean energy minigrids. L = 3 I = 4	The project is going to provide capacity building to all stakeholders from government, private sector and civil society. Under components 1, 2, 3, especially institutional actors such as the rural electrification agency, the regulator, and standards body as well as private sector companies and financial institutions will receive targeted capacity building. As far as ABER the implementing partner is concerned, the HACT (assessment) which was done during the PPG phase confirmed that ABER is capable of managing project funds. Moreover, a Responsible Party will implement activities. For which ABER has weaknesses.
9	Workers and target communities are not fully briefed/trained /protected during installation and/or operation of new equipment	**Operational Occupational safety/health and well-being**	The rating of this risk is **Moderate.** L = 2 I = 4	In the framework of pilot project sever stakeholders engagement and sensitization activities are foreseen. Project developers are private sector companies that are used to abiding laws and rules in place in terms of labor and quality standards. However, ABER and ANEREEE will safeguard the target communities by doing appropriate checks and safeguards on equipment (prior to importation and on arrival) and personnel who will be involved in installation. Moreover, the local community will be involved through community-level conversation, sensitizations to understand how to avoid to prevent incidents.
10	Risk to indigenous peoples	**Social and Environmental**	The rating of this risk is **Substantial.**	Due to the relative nature of the term "indigenous" a generic concept is considered.

			L = 3 I = 4	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". At the PPG phase, this country has been found as having indigenous groups at the national level. This increases the risks of the project on indigenous peoples. However, pilots have been delimited to a region where it is unlikely that indigenous people will be found. An indigenous people assessment has been conducted by an Environmental and Social expert, and an Indigenous Peoples Plan Framework (called Vulnerable Groups Planning Framework) is being developed as part of the PPG phase. It is expected that the risks identified here will be mitigated and managed during the project cycle. As part of the ESIA/ESMP, an Indigenous Peoples Plan will be put in place and Free, Prior and Informed Consent (FPIC) secured, if necessary for SES compliance. See ESMF (Annex 10) Attachment II and IPPF for details of assessment and management of this risk.
11	Sector stakeholders do not participate/ engage actively in the project.	**Social and Environmental** **1.11. Stakeholder engagement**	The rating of this risk is **Low**. L =2 I = 2	A well-structured national consultation and dissemination process will be developed that allows for active dialogue and involvement of all stakeholders during the project duration.
12	Limited experience and capacity of project partners and executing entities/Institutions.	**Operational** **3.8. Capacity development of national partners** **Strategic** 7.3 Capacities of the partners	The rating of this risks is **Moderate**. L =2 I = 4	For national procurement rules will be applied to procure experienced project partners and executing entities/Institutions with demonstrated and successful past experience in the sector.
13	Social and political conflicts. More recently, terrorist activities have escalated and the uncertainty of this events could affect project implementation in conflict and terrorist prone areas.	**Safety and Security** **8.1 Armed conflict** **8.2 Terrorism** **8.3 Civil Unrest**	The rating of this risk is **Substantial**. L =2 I = 5	The sites will be selected in a way that project activities will not take place in high-risk areas. Also, the project will work as much as possible with the decentralized authorities of the provinces and rural areas of Burkina Faso. The political will / support for this project is really strong as demonstrated through the PIF and PPG phases, which will serve to safeguard the project and its target population against the various security and political threats. Also, the project will be monitoring of the local and regional security and safety situation in order to inform safety decisions on site selection for pilot project and other activities. The project will benefit from the support of the local security forces and UNDSS to assess access to project sites and how to best protect

				beneficiaries and staff amid the ongoing conflict in the Sahel region.
14	Private sector is not able to deliver pilot projects	**Organizational 4.6 Due diligence of private sector**	The rating of this risk is **Moderate**. L = 2 I = 4	The pilot project selection follows a rigorous process of calls for proposals. Also, ABER, the implementing partner or other stakeholders have to endorse the project and promoter. Prior to the start of the pilot project due diligence will be conducted to ensure the developer is able to fully execute the project without any major risk.
15	Procurements are not done appropriately and selected companies do not have the appropriate capacity to deliver	**Organizational 4.10 Procurement**	This rating of this risk is **Moderate**, as it may jeopardize the implementation of Component 2 (pilot project), which is an important part of the project. L = 2 I = 4	ABER has implemented several tenders. The HACT did not mention this risk as being of any significant importance. However, training on tenders will be provided to ABER and other parties.
16	Confusion in roles	**7.4 Roles and responsibilities of partners**	The rating of this risk is **Low**. L = 1 I = 3	Each partner's role and responsibility will be clearly spelled out. Also, where appropriate, contracts or MoUs will be executed.

70. These risks are presented in more details in the risk log (Annex 7). At this stage no risk is deemed critical. Also, mitigation measures have been identified for all risks in a consultative manner with stakeholders during the PPG. Social and Environmental project risks identified in the SESP (Annex 6) relate mainly to stakeholder engagement, gender and climate change and are categorized as low and moderate. They are mitigated through the Gender Analysis and Action Plan (Annex 11) and the stakeholder engagement plan (Annex 9). As per its standard operating procedures, UNDP will conduct quarterly monitoring and report on the status of risks through its Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

71. Assumptions. The project's success is contingent upon the following key assumptions:

- Involved stakeholders at national and local community levels across different categories are willing and able to participate in and to contribute to the success.
- The security and sanitary situation in Burkina Faso will not further deteriorate to an extent where it will impossible to implement the project activities.
- ABER remains committed to the project and supports all activities such as site identification for pilot projects acquisition of permits and the approval, availability of provision of staff, co-financing, etc.
- There are enough private sector companies that can participate in tenders for the pilot projects.
- Funding from GEF for the project will be available and disbursed in a timely manner.

72. Stakeholder engagement: The Project implementation strategy includes extensive stakeholder participation at all levels. Full details on the stakeholders' participation are provided in the Stakeholder Engagement Plan (Annex F). At a broad level, participation and representation of stakeholders will be ensured through the governance structure and coordination mechanisms (Project Board/Steering Committee) that will be put in place by the Project as outlined under Governance and Management Arrangements (section VIII), and through existing structures at national, municipal and village/community levels. Stakeholders will be consulted and involved in the project from inception to implementation and evaluation to ensure buy-in, ownership of the project and learning, thereby maximizing its impact and sustainability. Several media of engagement will be used including

meetings at national and community level, radio, TV messages and social media. To ensure inclusivity, messages will be translated and vehiculated in the appropriate local languages. Stakeholders will attend the national inception workshop as well as community-level meetings, especially in the framework of the pilot projects where community mobilization activities will be required prior to commencement of any work. The realities of COVID-19 will be factored into the stakeholders engagement. Therefore, meetings where necessary will be held virtually to ensure safety of participants. Several types of actors will be particularly involved in order to guarantee beneficiaries' full participation in the project, especially those representing vulnerable and marginalized groups:

- Association des Professionnels des Energies Renouvelables (APER), AMDA, ARE and Gogla industry association composed of private sector actors representing the voice of the industry.
- The village development committees (*Comité villageois de développement*), which are representatives elected at the village level who represent villages' interests at the Municipal level.
- Fédération National des Groupements de Naam National Federation of Naam Groups (FNGN), a cooperative with hundreds of thousands of members in Burkina Faso and manages more than 160 multifunctional platforms operated by its members.
- The Regional Agriculture Chambers (*Chambres Régionales d'Agriculture, CRA*), which are regional structures representing farmers and promoting their development.
- Women organizations / groups, in order to ensure the specific needs of women are taken into account and their voices are heard.
- Farmers' cooperatives especially in the framework of the pilot projects. This include minority / indigenous groups Fulanis (herders), Bobos and Dogons (subsistence farmers).
- UNHCR, Save the Children, Africare, UN Women
- Workers' unions and youth group at the local, national and international level.

Key components and outputs such as the multi-Stakeholder Platform for National Dialogue, the community of practices at national and regional level, will ensure inclusive and continuous stakeholders engagement throughout the project. Additionally, the Project Board/Steering Committee will serve as vital tool for stakeholder engagement due to its inclusiveness as it is composed of representatives from target beneficiary groups, the private sector, the project executive and development partners. Within this committee all members will be able to contribute to decision-making related to the project. The PPG phase was inclusive with an inception and validation workshop that were both widely attended by various actors in addition to many face-to-face and virtual meetings and focus groups.

73. South-South and Triangular Cooperation*:* The project will build on experience and lessons-learned from African countries with more matured minigrids markets. For instance, under Components 1, 2, 3 and 4, experiences from Mali, Senegal, Nigeria and East African countries will be used to improve the Burkina Faso minigrids market. Transfer of knowledge, study-tours and training will be organized at the ECOWAS and continental level. In addition, to bring the voice of Burkina Faso 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 renewable energy minigrids and showcase the project activities. The project will furthermore provide opportunities for regional cooperation with countries that are implementing initiatives on minigrids in geopolitical, social and environmental contexts relevant to the proposed project in Burkina Faso. As a member of the ECOWAS, a regional institution of 15 countries, Burkina Faso will benefit from ECREEE's activities in minigrids and skills development in the framework of this project. This involvement of ECREEE in several project activities under component 1 and 2 ensures collaboration and knowledge-transfer between the project and others in countries like Mali, Senegal, Nigeria, Ghana, etc. Also, the AMP regional project will ensure collaboration and cross-learning between the participating countries through a dedicated Community of Practice and learning events.

74. Gender equality and Women's Empowerment: Gender-mainstreaming is an integral aspect of the project from the design to the implementation phase. The project will ensure the benefits are equally accessible to women, girls and all vulnerable groups in the target communities; in particular, the pilot projects will focus on the

development and enhancement of income-generating activities for women and youth.

The constitution of Burkina Faso recognizes equality between men and women. The country is making progress towards gender equality and women empowerment. The GoBF developed a National Gender Policy (PNG) in 2009, building on Burkina Faso's Constitution and the Burkina Family Code of 1989, as well as international and regional laws it ratified. The cross-cutting action plan of the PNG is incorporated in sectoral policies in order to curtail inequalities in poverty, health, education, political participation, as well as other vital sectors. Furthermore, Burkina Faso, has signed on to the ECOWAS Policy for Gender Mainstreaming in Energy Access[28] developed by ECREEE and adopted by the Authority of the Heads of States and Government. The goal of the ECOWAS Policy for Gender Mainstreaming in Energy Access is to address existing barriers that may hinder the equal participation of women and men in expanding energy access in West Africa and, by extension, the success of the SE4ALL initiative and the ECOWAS Regional Policies on Renewable Energy and Energy Efficiency.

Despite these efforts, gender equality remains a challenge in Burkina Faso. Burkina Faso ranks 146 out of 159 countries on the Gender Inequality Index[29], with only 9,4% of Parliamentary seats held by women and only 6% of the female population over 25 having at least some secondary education, versus 11,5% for men according to the same UNDP report. The country is in group 5 of the Gender Development Index[30], meaning it has only attained low equality based on the Human Development Index (HDI) achievements between women and men (absolute deviation from gender parity of more than 10 percent). All of the more reason, why gender and social inclusion will be mainstreamed through project activities under components 1, 2, 3 and 4 as women are disproportionately affected by the lack of access to electricity. During PPG phase, a gender analysis followed by a gender action plan (GAP) were developed to ensure that the project actively promotes gender equality and women's empowerment. Organizations involved in addressing gender-based issues were consulted during the PPG bilaterally and in focus groups. Following the analysis, the main recommendations in terms of gender considerations to be taken into account in the project are as follows:

The Gender Action Plan (GAP) (Annex 11) is a result of this participative process. It ensures that gender aspects are fully included in all activities of the project in terms of project target population, activities, organization, performance indicators and are fully reflected in the Project through gender-responsive indicators. The implementation and monitoring and evaluation of the GAP will be under the responsibility of the Project Coordinator.

75. Innovativeness*:* The project is innovative in many ways. The project's primary innovation is its extensive focus on cost-reduction and business model innovation to reduce minigrids' cost, with the overall aim to increase the affordability of renewable electricity to off-grid consumers. In addition, the project will operationalize innovative business models centered on productive energy uses, providing economic opportunities in the form of income-generating activities for local communities. The combined effects of decreasing electricity costs and improved economic conditions will be the increased affordability and capacity to pay for renewable electricity by end users. In a de-risked investment environment, the increasing demand driven by low cost of electricity will catalyze further investments in renewable minigrids thereby creating a virtuous circle for scaling up investments and contributing to higher levels of rural electrification. Moreover, the project is innovative in the sense that below elements are integral parts of its design and implementation:
    1. Participatory approach
    2. Support from AMP regional project and experts
    3. Market-based interventions
    4. Supporting multi-stakeholder dialogue
    5. Gender mainstreaming

[28] http://www.ecreee.org/news/member-states-endorse-ecowas-policy-gender-mainstreaming-energy-access
[29] http://hdr.undp.org/en/composite/GII
[30] http://hdr.undp.org/en/composite/GDI

76. Sustainability: Long-term sustainability is at the crux of the project and is seen across the project's activities and outputs. The active participation of the private sector to establish viable business models in the minigrid sector will ensure that activities continue after the end of the project. The pilot projects are designed using a market-based approach whereby the financial and technical assistance from the GEF project contributes to reducing the cost and risks to the private sector. However, the pilot projects are implemented on a commercial basis so they can be scaled-up. Therefore, the hands-on capacity building and pilot demonstrations are key levers contributing to sustainability.

    At the institutional level, the private sector association APER and the multi-stakeholders' platform are both expected to survive the project because of their relevance. Moreover, the project is aligned with key national development priorities, thus benefiting from a strong political support as evidenced by ABER and the Ministry of Energy. This commitment to the project due to its relevance to national priority needs is confirmed by the excitement, involvement and expectations of stakeholders at the local level (private companies, women groups, local authorities, etc.). Component 1 will result in structural changes, which will support more sustainable private sector-led business models demonstrated as part of Components 2 (pilot project and private sector engagement) and supported by Component 3 (access to innovative finance). Component 4 (knowledge management and M&E) will allow to monitor closely the project results and derive lessons learnt as well as knowledge products that will benefit the sector long after the project closure. The fact that the pilot projects will be private sector-led and economically viable is the epitome for sustainability.

77. Potential for scaling-up: The project holds tremendous potential for scaling-up because as a matter of priority the GoBF has indicated its intention and commitment towards drastically reducing the electricity access gap by 2030 with an interim target set for 2025. Based on consultations during the PPG phase and as exemplified by the co-financing raised for this project, several actors, such as Sida, EU, GGGI, UNDCF indicated their interests in supporting the project, in particular since the pilot projects will demonstrate new and innovative technologies and business models. This will ensure that the minigrid market ecosystem is sufficiently enhanced for increased private sector investment. A replication plan including strategies for scaling-up investments in minigrids will be developed with the help of this project through Output 4.8. This replication plan will be based on lessons learned across all country projects and from GEF-funded minigrid projects worldwide. The scaling-up potential is very high - as the baseline electrification rates in rural areas are very low and the project is the first of its kind in terms of its focus on cost reduction for solar PV minigrids with storage and de-risking investment using UNDP's DREI methodology. The project's comprehensive approach to reduce financing, hardware and soft costs will create the enabling environment to attract public and private investments. This approach coupled with sound knowledge management underpinned by a robust theory of change is expected to catalyze markets given that several donors are planning to support rural electrification efforts in Burkina Faso over the next few years. This project has therefore a high potential of being scaled-up and replicated. All knowledge products from the national and regional child projects such as information tools, guides, plans, etc. will be digitalized and shared with the appropriate stakeholders, ministry, donors, private sector, etc. Project Component 4 Digital, Knowledge Management and Monitoring and Evaluation products which are crucial drivers for its scalability, sustainability and replicability. The project scaling potential will more particularly be achieved through the below:

    - Vertical scaling-up consists of policy, political, legal, regulatory, budgetary and approach changes needed to institutionalize all minigrid and private sector involvement achieved by the project at the national or sub-national level. As such, Component 1 of the project aims to ensure appropriate policies and regulations are in place that address policy, institutional, regulatory and technical barriers to facilitate investment in solar PV-battery minigrids. The national multi-stakeholders platform will facilitate synergies and common action through policy dialogue, a cross-sectoral approach in addition to offering capacity building on key thematic areas in the solar minigrid market value-chain. Moreover, the outputs resulting from the project, such as conducting minigrid DREI techno-economic analyses; capacity building of regulator and other actors; elaborating a minigrid strategy and establishing a certification scheme will lay foundation for an increase investment in the minigrid sector. Dissemination and advocacy of the aforementioned changes will thus be ensured and will provide the necessary scale-up effect. Policy interventions leading to the creation of the

multi-stakeholders platform, the domestication of standards and the capacity-building of the institutional actors will ensure the project can easily scale-up.

- Horizontal scale-up / replication– is cultivated especially through the support to innovative and viable business models and pilot projects focusing on high-impact agricultural value-chains. With large-scale capacity building, public awareness campaigns and outreach foreseen under this project the expansion and replication of demonstrated business models and pilot projects is certain. The awareness raising, trainings, study tours along with catalyzing the role of the private sector through successful pilot and other intervention around innovative financing, will facilitate the replication of the innovative business models and pilot projects to other geographical areas of Burkina Faso and inspire other donors to replicate the project even beyond Burkina Faso.
- Diversification in the scaling-up potential is also sought by the project. Continuous improvement and further innovations will be added intrinsically through the demonstration projects and business models. With the rapid technological and business model innovation currently happening in the minigrid sector, the project offers the opportunity to introduce various proven technologies and business models.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s):

- SDG7: 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;
  - SDG 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix.
- SDG13: Take urgent action to combat climate change and its impacts.
- SDG5: Achieve gender equality and empower all women and girls**.**

This project will also contribute to the following SDGs goals: SDG 1, SDG2, SDG3, SDG4, SDG6, SDG8, SDG9, SDG10, SDG 11, and SDG 12.

This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD):
UNDAF Pillar 3: Sustainable inclusive growth, decent jobs and food security
CPD identified national priority or goal and cooperation framework outcome involving UNDP:
Echoing the UNDAF with the goal to: Revitalize Productive Sector and Stimulate Employment Creation. Outcome 3.2: By the end of 2020, populations, especially young people and women in intervention areas (urban/rural), increase their income, adopt sustainable production and consumption patterns, and improve their food security.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
Project Objective: Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in RE minigrids in Burkina Faso with a focus on cost-reduction levers and innovative business models.	*Mandatory GEF Core Indicator 1:* **Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent (CO2eq)[31]**	*0*	*0 direct* *0 indirect*	*14,353 direct* *495,000 indirect*
	Mandatory GEF Core Indicator 2: **Number of direct beneficiaries benefitting from clean, affordable and sustainable energy access via minigrids, disaggregated by gender and customer segment (residential, commercial and social) (number of people)**	*0 direct beneficiaries;* *0 male beneficiaries;* *0 female beneficiaries;* *0 residential (households; individuals);* *0 commercial (businesses);* *0 social (e.g., schools, health centers).*	*0 direct beneficiaries;* *0 male beneficiaries;* *0 female beneficiaries;* *0 residential (households; individuals);* *0 commercial (businesses);* *0 social (e.g., schools, health centers).*	*5,564 direct beneficiaries;* *2,782 male beneficiaries;* *2,782 female beneficiaries;* *5,310 residential (households; individuals);* *169 commercial (businesses);* *85 social (e.g., schools, health centers).*
	GEF Core Indicator 3: Increase in installed renewable energy capacity per technology (Megawatt peak (MW))	*0*	*0 MW (solar PV)* *0 MWh (storage)*	*0.4 MW (solar PV)* *1 MWh (storage)*
	Objective Level Indicator 4: Number of direct primary jobs created in the MG sector, disaggregated by gender, for [minigrid development, operation and productive use].	*0 primary jobs in minigrid development*	*0 primary jobs in minigrid development*	*70 primary jobs in minigrid development (women 25 and men 45)*

[31] At the AMP regional project, 10% of the indirect GHG impacts calculated at the Burkina Faso project level are allocated to the regional child project, in line with the apportioning of the overall program budget. This reflects the benefits of national projects accessing the regional project's support. To avoid double counting, this 10% is removed from the indirect totals for the Burkina Faso project.

		0 primary jobs in minigrid operation *0 primary jobs in productive use*	*0 primary jobs created in minigrids operation* *0 primary jobs in productive use*	*20 primary jobs created in minigrids operation (10 women and 10 men)* *400 primary jobs in productive use (women 260 and men 140)*
Project Component 1	**Policy and Regulation**			
Outcome 1 **Stakeholder ownership in a national minigrid delivery model is advanced, and] appropriate policies and regulations are adopted to address barriers and facilitate investment in RE minigrids with storage.**	*Indicator 5:* Number of policy derisking instruments for minigrid investments - whose development has been supported by the project - identified and endorsed by the national government	*0 policy derisking instruments for RE minigrids investment (tariffs, customs, standards, financial incentives, etc.) identified and endorsed by the national government*	*1 policy derisking instruments for RE minigrids investment (tariffs, customs, standards, financial incentives, etc.) identified and endorsed by the national government*	*2 policy derisking instruments for RE minigrids investment (tariffs, customs, standards, financial incentives, etc.) identified and endorsed by the national government*
	Indicator 6: 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.)	*0*	*Multi-stakeholder, national dialogue platform on minigrid delivery models established and active.*	*At least one minigrid delivery model is identified and endorsed by the government through the work of the multi-stakeholder platform and dialogue.*
	Indicator 7: Number of trainings held for institutional (ABER, ARSE, ANEREE, ABNORM, IRSAT, 2IE, etc.) and private sector stakeholders such as industry associations, etc.	*0*	*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)*
Outputs to achieve Outcome 1	1.1. An inclusive national dialogue to identify minigrid delivery models is facilitated, clarifying priority interventions for an integrated approach to off-grid electrification 1.2. Formulation of rural electrification strategy/plan, incorporating transparent targets and supported by multi-tier data 1.3. Domestication of quality standards for solar minigrid components, and institutional capacity of national standards organizations/bureau strengthened			

	1.4. Capacity building of the regulator ARSE to fully play its role (tariffs, etc.) vis-à-vis texts emanating from the Energy Law 1.5. Establishing / Operationalizing a certification scheme for minigrids installers building on ECREEE's Regional Certification Scheme 1.6. Minigrid DREI techno-economic analyses carried out to propose most cost-effective basket of policy and financial derisking instruments and contribute to AMP Flagship Report on Cost Reduction			
Project Component 2	**Business Model Innovation with Private Sector Engagement**			
Outcome 2 **Innovative business models based on cost reduction operationalized, with strengthened private sector participation in RE minigrid development**	*Indicator 9:* RE minigrid pilots implemented that demonstrate a delivery model, cost-reduction measure(s) and/or productive use of electricity	*0*	*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)*
	Indicator 10: Capacity of minigrid developers and/or operators is enhanced to implement innovative business models and incorporate cost-reduction levers in minigrid projects.	*No capacity building done.*	*Information disseminated and awareness raised (2 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).*	*Institutional/human capacity strengthened for potential developers (4 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).*
Outputs to achieve Outcome 2	2.1. Pilots developed, including on productive use/innovative appliances and modular hardware/system design, leading to cost-reduction in mini-grids (in regions complementing WB and AfDB investments). 2.2. Capacity of winning tender bidders / new COOPELs and private sector actors (industry associations such as APER and others) strengthened to develop and implement innovative business models and cost-reduction levers. 2.3. Support provided to establish and grow a national industry association for private sector developers			
Project Component 3	**Scaled-up financing**			
Outcome 3 **Financial sector actors are ready to invest in a pipeline of RE minigrids and concessional financial mechanisms are in place to incentivize scaled-up investment.**	*Indicator 11:* Number of market intelligence survey by regions.	*0*	*2 targeted market intelligence surveys /assessment to highlight market opportunity and potential for investment*	*5 targeted market intelligence surveys /assessment to highlight market opportunity and potential for investment*
	Indicator 12: 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 MG	*0*	*Information disseminated and awareness raised (2 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).*	*Institutional/human capacity strengthened for potential developers (4 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).*
	Indicator 13: Capacity of mini-grid developers is enhanced to access finance to meet their capital requirements, contributing to a pipeline of minigrid investment opportunities.	*0*	*Information disseminated and awareness raised (2 out of a possible scale of 5 where 0 represents no capacity and 5*	*Institutional/human capacity strengthened for potential developers (4 out of a possible scale of 5 where 0 represents no capacity and 5*

			represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).	*represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).*
Outputs to achieve Outcome 3	3.1. Domestic financial sector capacity-building on business and financing models for minigrids 3.2. General market intelligence study on minigrids in regions complementary to WB and AfDB investments prepared and disseminated amongst public officials and finance community 3.3. Support the development and implementation of innovative financial instruments for both supply and demand side (consumers and service providers) to facilitate investment in and viability of minigrids 3.4. Feasibility study support provided to minigrid developers, creating a pipeline of investible assets 3.5: Capacity building provided to minigrid 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 and Monitoring and Evaluation**			
Outcome 4 **Digitalization and data mainstreamed, across stakeholders, into local minigrid market development. Increased awareness and network opportunities in the minigrid market and among stakeholders, and lessons learned for scaling up rural electrification using solar PV-battery minigrids.**	*Indicator 14:* A digital strategy for the project is prepared and implemented by the Project Management Unit (PMU) to contribute to project implementation and local minigrid market development	*0*	*The project digital strategy is developed and being implemented*	*The project digital strategy is implemented* *Recommendations for rolling out digital solutions for minigrids at national level have been shared with key national stakeholders. (1)*
	Indicator 15: Number of M&E frameworks and platforms created and adopted and applied for tracking SDG impacts and GHG emission reductions	*0*	*1 M&E framework*	*1 M&E framework*
	Indicator 16: Number of minigrid pilots sharing data on minigrid performance with the regional project and other stakeholders following best practices and guidance provided by the AMP Regional Project	*0*	*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 digital strategy is developed and implemented, including linkages to and following guidance from the regional project 4.2: Minigrids data management platform implemented to run tenders and manage data from pilots, and to support minigrids scale-up and cost-reduction 4.3: A Quality Assurance and Monitoring Framework for measuring, reporting and verification of the sustainable development impacts of all minigrids pilots supported, including GHG emission reductions, is adopted and operationalized based on standardized guidance from the regional project 4.4: M&E and Reporting, including (i) Conducting inception workshop and preparing report, (ii) Ongoing M&E, (iii) Mid Term Evaluation and (iv) Terminal Evaluation 4.5: Engage with regional project, including, but not limited to, via (i) participating in Communities of Practice and (ii) capturing and sharing lessons learnt. 4.6: Knowledge networks / Communities of Practice / industry associations / Other strengthened to promote minigrids development 4.7: Lessons learned captured and disseminated at all levels 4.8: Replication plan (including investment plan) for scaling up rural energy access developed			

VI. MONITORING AND EVALUATION (M&E) PLAN

The project will provide (on a bi-annual/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:

- Standard reporting on all indicators in the results framework for aggregation and reporting to GEFSEC (by the regional project) on the impacts of all participating national 'child' projects for the program as a whole
- Reporting on all additional Key Performance Indicators (KPIs) adopted by the project

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

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

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[32]. The costed M&E plan included below, and the Monitoring plan in Annex, will guide the GEF-specific M&E activities to be undertaken by this project.

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

Additional GEF monitoring and reporting requirements:

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

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

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

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

GEF Core Indicators:
The GEF Core indicators included as Annex will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website. Indicators measuring an increase in capacity building will be measured trough pre- and post-training assessments/surveys to determine the progress out of a scale of 0 to 5 (0 – no capacity; 5 – strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions). If relevant to the project: The required Protected Area Management Effectiveness Tracking Tool (METTs) have been prepared and the scores included in the GEF Core Indicators.

Independent Mid-term Review (MTR):
The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).
The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.
The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.
The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by 01 February 2024. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

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

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

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

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by *01 June 2025*. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

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

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:** To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[33] and the GEF policy on public involvement[34].

Interaction between the project and the AMP Regional Project**:** M&E is a key area of interface between the Burkina Faso national project and the AMP regional Project. The latter can support the PMU Project to undertake planning, coordination, management, monitoring, evaluation and reporting. As such, details on these linkages are provided in Box 5 below.

Box 5: Linkages to the AMP Regional Project - M&E

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

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

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

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

[33] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[34] See https://www.thegef.org/gef/policies_guidelines

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$)	GEF (US$)	UNDP (US$)	Time frame
Inception Workshop	4,000	4,000	0	Within 60 days of CEO endorsement of this project.
M&E required to report on progress made in reaching GEF core indicators and project results included in the project results framework	$3,500 per year for 4 years	0	14,000	Annually before the GEF PIR and at mid-point and closure. This result framework will include GEF core indicators.
Preparation of the annual GEF Project Implementation Report (PIR)	$2,000 per year for 3 years	0	6,000	Annually typically between June-August
Monitoring of stakeholders engagement plan; gender action plan and individual peoples' plan	None	0	0	Throughout the project
Supervision missions	None	0	0	Annually
Learning missions	None	0	0	As needed
Independent Mid-term Review (MTR)	55,000	15,000	40,000	01-Feb-24
Independent Terminal Evaluation (TE)	55,000	15,000	40,000	01-Nov-25
TOTAL indicative costs	134,000	34,000	100,000	Add to TBWP Component 4

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:
This project will be implemented according to UNDP's national implementation modality (NIM) in line with to the Standard Basic Assistance Agreement between UNDP and the GofBF, and the Country Programme.

78. Implementing Partner: The Implementing Partner (GEF Executing Agency) for this project is the **Burkinabè Agency for Rural Electrification (ABER),** which is under the authority of the newly established Ministry of Energy,

Mines and Quarries (MEMQ), with a mandate to implement national rural electrification policy; mobilize funding; support developers and private sector investment.

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

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

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

80. A Harmonized Approach to Cash Transfer (HACT) micro-assessment of ABER was undertaken during the PPG phase. The scope of evaluation focused on 1) financial and internal control capacities and 2) technical and managerial capacities in planning, implementation and monitoring-evaluation of projects. The said assessment of ABER revealed the below findings:

    - ABER has the technical and financial capacities to manage projects and programmes in line with the scope of the UNDP and GEF requirements as evidenced by highly-skilled personnel and appropriate checks and balances to safeguard funds.
    - It is however, recommended to support ABER by updating its procedures manual and by conducting a short orientation/training in UNDP's procedures at the onset of the project.

    ABER will host the project management unit (PMU) to coordinate the implementation of the Project. The PMU will have a Project Manager and Project Assistant.

    During the stakeholders' consultation workshop and subsequent meetings with ABER, it became clear that the agency was working steadfastedly in line with its vision to increase access to affordable energy for rural populations through innovative and reliable solutions, in order to boost productivity, develop the rural economy, and thus improve the livelihoods of the rural communities. Therefore, ABER will promote financially viable solutions and models that protects the environment and respect local customs. The personnel at ABER starting with its leadership and management team is fully dedicated to the above mission. Further capacity assessment of ABER by the PPG team showed that the agency has the operational capacity to play the role of Implementing Partner. ABER has the infrastructure in place and know-how to take on the responsibility and accountability to effectively use UNDP resources and deliver the project's outputs. However, it was also determined that 1) ABER is set to be managing many projects in the coming months; 2) ABER has limitations in terms of mandate especially on policy formulatin and access to financing. Therefore, ECREEE - an intergovernmental organization - and DGER – a governmental entity - (component 1) and UNCDF (component 3) will play the roles of responsible parties (see below). According to UNDP procurement rules, UN agencies, intergovernmental organizations and government agencies selected to serve as responsible parties are exempted from competitive procurement processes. ABER will therefore be able to formalize these engagements through e.g. direct contracting during implementation. More precisely, it is planned that ABER will sign an agreement with ECREEE, which will subsequently sign a framework for collaboration with DGER.

Depending on the amount transferred to them, these responsible parties will also need to undertake a HACT micro-assessment.

81. Responsible Parties: During the PPG phase, consultations revealed that some stakeholders were better positioned to lead specific project activities due their core expertise, development objectives or availability of technical and financial resources, which allows them to better implement the intended activities. The implementing partner will execute an agreement with the Responsible Parties expected to carry out some components/outputs of the project.

82. **UNCDF**: Given UNCDF's experience in financial inclusion and digitalization and considering that the organization is planning specific activities in terms of capacity-building of local financial institutions and promotion of financial digital tools to accelerate the promotion and scaling-up of off-grid energy companies, it is recommended to have UNCDF is responsible for component 3 entirely.

83. **ECREEE & the Directorate General for Renewable Energy (DGER):** For component 1, ECREEE and DGER will share role of responsible party. ECREEE as a regional body has been spearheading policy and regulatory activities in the ECOWAS member states in order to promote sustainable energy markets. This leadership role bestowed upon ECREEE by the Authority of Heads of States and Government has made the agency a key stakeholder in the sector. Burkina Faso has received technical assistance from ECREEE. This shared responsible party role with DGER makes sense since DGER serves as ECREEE's focal point in Burkina Faso. It is expected that ABER will sign an agreement with ECREEE, which will be the recipient of funds earmarked for Component 1. ECREEE will in return fund activities dedicated to DGER. This arrangement is suggested as ECREEE is used to funding activities for DGER and other institutions under the Ministry of Energy, Mines and Quarries.

84. Project stakeholders and target groups (see Annex 9 for full list): During the PPG phase there were extensive consultations with the various categories of stakeholders at the institutional, community and private sector levels. This process will continue during the implementation phase starting with the inception workshop and key stakeholder engagement activities. Also, the project will regularly consult with the beneficiaries both at the individual and the organizational level to ensure that they have an opportunity to provide their input in the decision-making and implementation process. This will promote a greater sense of ownership and strengthen the commitment and sustainability of activities after the project. Output 1.1, the multi-stakeholders platform will serve as a medium for informing and engaging different stakeholders and target groups, that will be represented within the platform. Under Component 4, communication channels will be established through meetings, sensitization and awareness raising campaigns among target beneficiaries, use of print media, social media and community radios to reach out to a wider audience. The specific channel (s) to be used and the timing will be determined by the project management unit and the related costs will be included in the budget.

85. In regards to the key aspects of the project such as the implementation of pilot projects (Output 2.1)., private sector companies will be required to conduct local stakeholders consultation and awaress-building activities. In order to ensure local communities and target groups are fully informed and engaged in the decision-making process regarding the pilot projects, private promoters will submit a letter of endorsement for the pilot signed by representatives of local communities (women and youth groups, head of village, etc.).

86. The key stakeholders will include:

- National **government institutions** such as the MoEMQ, which will host the Multi-Stakeholder Platform and its affiliated agencies and directorates. In the framework of this project the MoEQ and ABER will work closely with the ministry of environment, GEF Focal Point, **SP/CNDD,** which will be kept up-to-date of all project activities as a member of the Project Board /Steering Committee.
- **Civil society organisations (non-governmental organizations**) such as the National Union of COOPEL, and the various other associations/cooperative along the energy, agriculture value-chains and other productive uses, which are important stakeholders in energy market ecosystem from a supply or demand perspective.

The project will rely on these associations for large scale consultations, outreach/awareness. More importantly, civil society organizations will play various roles in the project, such as consultations, advisory, co-financing, as well as supporting decision-making. For instance, FNGN, a federation of women groups involved in the agriculture value-chain could be a stakeholder for the pilot projects.

- **Development/donor organisations** such as AfDB, the World Bank, the Sida, EU, UNCDF and ECREEE will be fundamental stakeholders in the project by providinig co-financing and supporting the implementation of key activities such as studies, capacity-building trainings, awareness-building and knowledge-sharing along the four components.
- **Private sector actors, namely** minigrid companies, industry associations as well as local commercial financial institutions (commercial banks and MFIs) will play an important role in project in virtually all four project components, namely, policy and regulatory activities (Outputs 1.1 through 1.9), project and business model innovation - implementation of pilot projects- (PC 2), access to finance (PC3) and PC4 such as awareness-building, knowledege-sharing, stakeholder consultations. Private sector organizations will be consulted, informed, involved in the decision-making and implementation of the project.
- **National Off-grid Energy Multi-Stakeholder Platform,** created in the framework of ROGEP will be operationalized to play an important role in the implementation arrangement of the project. This taskforce, which will be under the responsibility of the ministry of energy but operationally led by UNDP, Sida and UNCDF will report to with the PSC.

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

88. Project organisation structure: As discussed during the PPG phase, the institutional arrangement of the project will be as follow:

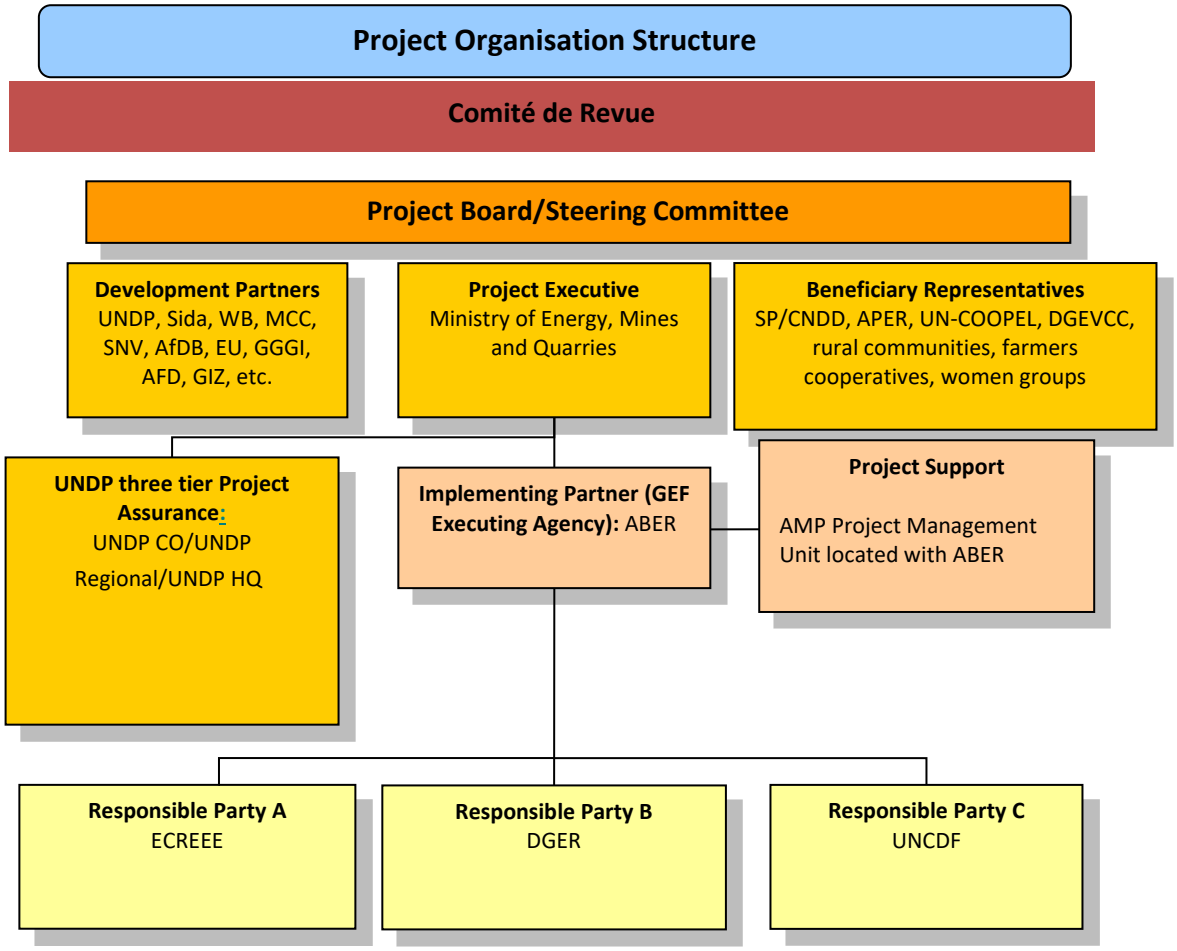


Figure 7: Project Organisational Structure

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

    This entity will be composed of representatives from donor organizations, such as SIDA, UNCDF, UNDP, the Ministry of Energy and APER, representing the beneficiaries, will monitor the project in terms of progress, guide its execution and provide support for the achievement of expected results. Acting in accordance with the UNDP and GEF (GEF/C.39/Inf. 3) policies and procedures, the PSC will also ensure high-level support and participation of key stakeholders both at national and local community levels. The PSC member can be extended to include representatives of all agencies, which are directly involved in the project implementation or have a legal or regulatory stake in project outcomes and execution, such as the GEF Operational Focal Point. The PSC will meet three times a year to periodically review and monitor project implementation progress, facilitate coordination between the project partners provide transparency and guidance, ensure ownership, and support the project's sustainability. It will be chaired by the Ministry of Energy, and can include the GEF Operational Focal Point, all

other GEF executing partners of the project as well as representatives of the relevant government ministries/agencies, the private sector, the civil society, international organizations. Other members can be invited by the decision of the PSC in an *ad-hoc* manner. UNDP will be in charge of providing to all PSC members overall management guidance to the project, compile and present progress reports and ensure quality of the different activities. The final composition of the PSC and its ToR will be defined at the inception phase of the project.

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

Specific responsibilities of the Project Board include:

1. Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
2. Address project issues as raised by the project manager;
3. Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
4. Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
5. Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
6. Ensure coordination between various donor and government-funded projects and programmes;
7. Ensure coordination with various government agencies and their participation in project activities;
8. Track and monitor co-financing for this project;
9. Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
10. Appraise the annual project implementation report, including the quality assessment rating report;
11. Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
12. Review combined delivery reports prior to certification by the implementing partner;
13. Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
14. Address project-level grievances;
15. Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
16. Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
17. Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.

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

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

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

- Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner(s) is/are: UNDP Resident Representative, Sida, AfDB, EU, World Bank.

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

90. **Representation on the AMP Regional Project's Steering Committee/Project Board**: Moreover, 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 project on the AMP regional board will be the **Director General of ABER**. It is expected that the AMP regional project board will meet a maximum of twice per year.

91. **Project Coordinator:** The Project Coordinator has the authority to run the project on a day-to-day basis on behalf of the Project Steering Committee within the constraints laid down by the Committee. The Project Coordinator is responsible for day-to-day management and decision-making for the project. The Project Coordinator's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified timeframe and cost/budget.
The Implementing Partner appoints the Project Coordinator, who should be different from the Implementing Partner's representative on the Project Steering Committee.

    Specific responsibilities include:

    1. Provide direction and guidance to project team(s)/ responsible party (ies);
    2. Liaise with the Project Steering Committee to assure the overall direction and integrity of the project;
    3. Identify and obtain any support and advice required for the management, planning and control of the project;
    4. Responsible for project administration;
    5. Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
    6. Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
    7. Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
    8. Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
    9. Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
    10. Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
    11. Manage and monitor the project risks initially identified and submit new risks to the Project Steering Committee for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
    12. Capture lessons learned during project implementation;
    13. Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available;
    14. Prepare the GEF PIR and submit the final report to the Project Steering Committee;
    15. Based on the GEF PIR and the Project Steering Committee review, prepare the AWP for the following year;
    16. Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Steering Committee;
    17. Identify follow-on actions and submit them for consideration to the Project Steering Committee;

18. Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Steering Committee.

92. **Project Management Unit:** ABER will set-up a Project Management Unit (PMU) composed of key staff from ABER and Project Coordinator. The PMU will be hosted at ABER, which will provide logistical support in the form of stationery, communications, transportation, etc. as part of its co-financing. PMU, will handle the day-to-day activities of the project (implementation and monitoring) according to the work plan. This PMU will report to UNDP and the Steering Committee. Additional support staff may be hired on a short or medium-term basis, if required to strengthen PMU. UNDP and other development partners such as Sida, AfDB, World Bank, UNCDF, MCC, etc. may designate staff to support the project activities as technical experts when appropriate or requested. This will contribute to the success and increase national ownership of the project. The PMU will be funded by the GEF grant and co-financed by ABER. UNDP will provide the PMU with the necessary support in terms of capacity building (management and monitoring).

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

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 105,417,809. This is financed through a GEF grant of USD 924,566 administered by UNDP, USD 800,000 (TRAC) in cash co-financing to be administered by UNDP and additional support of USD 103,693,243. 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.

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

Co-financing source	Co-financing type	Co-financing amount (USD)	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
ABER	Grant and Loan	75,500,000	All 4 project components: Project management, office space, training, community consultations, equipment, personnel, material, studies and travel	Weak commitment and engagement.	The Project Coordinator, UNDP and stakeholders will lobby on behalf of beneficiaries
GEF Agency - UNDP	Grant	2,880,867 (incl. USD 800,000 cash)	All 4 project components: Project management, office space, training,	Conflicting priorities emerge requiring UNDP	Project Coordinator and ABER will work with UNDP to ensure the appropriate funding is

			community consultations, personnel equipment and material	to divert the funds towards addressing them.	provisioned in each year.
African Development Bank (AfDB)	Grant + Loan	22,093,381	All 4 project components: Project management, office space, training, community consultations, equipment, personnel, material, studies	Long delays in processing investment	Project Coordinator and ABER will keep constant communication with AfDB. Also, the Yeleen Project has a Coordinator who is supposed to work closely with ABER.
NGO – Swedish. Cooperation (Sida)	Grant	2,918,995	All 4 project components: Project management, office space, training, community consultations, equipment, personnel, material	Change in priority due to security or COVID-19	ABER, Project Coordinator and UNDP will maintain close coordination with Sida throughout the project.
UNCDF	Grant	600,000	Components 3 and 4: Training, community consultations, personnel, material, studies	Change in priority due to security or COVID-19	ABER, Project Coordinator and UNDP will maintain close coordination with UNCDF throughout the project. The fact that UNCDF is proposed as responsible party to the project will also keep UNCDF engaged.
NGO- ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE)	Grant	500,000	All 4 components: Training, community consultations, equipment, personnel, material, studies, travel	Slow disbursement process	ABER, Project Coordinator and UNDP will maintain close coordination with ECREEE throughout the project. The fact that ECREEE is proposed as responsible party to the project will also keep ECREEE engaged.

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

Should the following deviations occur, the Project Manager/CTA and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF:
a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;
b) Introduction of new budget items that exceed 5% of original GEF allocation.

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

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

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

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file[35]. The transfer should be done before Project Management Unit complete their assignments.

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

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

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

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

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00118893	Atlas Output Project ID:	00115515
Atlas Proposal or Award Title:	Projet Électrification solaire rurale		
Atlas Business Unit	BFA10		
Atlas Primary Output Project Title	Coordination du projet		
UNDP-GEF PIMS No.	6510		
Implementing Partner	Burkina Faso Rural Electrification Agency (ABER)		

Atlas Activity (GEF Component)	Atlas Implementing Agent (Responsible Party , IP or UNDP)	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Note:
COMPONENT 1: Policy and Regulation	**ABER and ECREEE and DGER (RPs)**	**62000**	**GEF**	71200	International Consultants	15,400	14,000	0	7,000	36,400	1
				71300	Local Consultants	12,900	9,900	2,700	4,500	30,000	2
				71600	Travel	22,611	16,925	4,505	1,000	45,041	3
				72300	Materials & Goods	6,000	1,000	1,000	0	8,000	4
				72500	Supplies	1,000	1,000	1,000	0	3,000	5
				74200	Audio Visual & Print Prod Costs	0	1,000	0	3,000	4,000	6
				75700	Training, workshop, conferences	14,000	11,500	3,500	1,500	30,500	7
				72800	IT Equipment	8,000	0	0	0	8,000	8
					sub-total GEF	**79,911**	**55,325**	**12,705**	**17,000**	**164,941**	
		4000	**UNDP**	71200	International consultants	15,400	5,600	2,800	0	23,800	9
				72300	Materials & Goods	4,000	4,000	0	0	8,000	10
					sub-total UNDP	**19,400**	**9,600**	**2,800**	**0**	**31,800**	
					Total Outcome 1	**99,311**	**64,925**	**15,505**	**17,000**	**196,741**	
COMPONENT 2: Project and Business Model	**ABER**	**62000**	**GEF**	71200	International Consultants	19,020	0	0	0	19,020	11
				71300	Local Consultants	6,600	6,600	0	0	13,200	12
				71600	Travel	4,005	16,125	0	0	20,130	13

Innovation with Private Sector Engagement				72100	Contractual services - Companies	0	6,506	3,297	3,297	13,100	14
				72300	Materials & Goods	0	236,378	0	0	236,378	15
				72800	IT Equipment	2,500	0	0	0	2,500	16
				74200	Audio Visual & Print Prod Costs	1,500	0	0	0	1,500	17
				75700	Training, workshop, conferences	7,500	10,000	7,500	0	25,000	18
					sub-total GEF	**41,125**	**275,609**	**10,797**	**3,297**	**330,828**	
		4000	**UNDP**	71200	International Consultants	15,315	15,412	6,409	6,312	43,448	19
				72100	Contractual services - Companies	2,000	2,000	0	0	4,000	20
				72300	Materials & Goods	2,000	177,622	222,000	0	401,622	21
				74100	Professional Services (Audit)	2,000	2,000	0	0	4,000	22
					sub-total UNDP	**21,315**	**197,034**	**228,409**	**6,312**	**453,070**	
					Total Outcome 2	**62,440**	**472,643**	**239,206**	**9,609**	**783,898**	
COMPONENT 3: Innovative financing	**ABER and UNCDF (RP)**	**62000**	**GEF**	71600	Travel	3,224	3,224	3,224	0	9,672	23
				72100	Contractual services - Companies	55,000	25,000	50,000	0	130,000	24
				74200	Audio Visual & Print Prod Costs	3,000	3,000	0	3,000	9,000	25
				75700	Training, workshop, conference	5,000	5,000	5,000	2,500	17,500	26
					sub-total GEF	**66,224**	**36,224**	**58,224**	**5,500**	**166,172**	
		4000	**UNDP**	72100	Contractual services - Companies	0	0	20,000	20,000	40,000	27
					sub-total UNDP	**0**	**0**	**20,000**	**20,000**	**40,000**	
					Total Outcome 3	**66,224**	**36,224**	**78,224**	**25,500**	**206,172**	
COMPONENT 4: Digital, Knowledge Management	**ABER**	**62000**	**GEF**	71200	International Consultants	14,000	0	0	7,000	21,000	28
				71300	Local Consultants	3,000	0	0	3,000	6,000	29
				71600	Travel	7,610	16,344	0	1,500	25,454	30
				72100	Contractual services - Companies	48,500	18,500	0	10,000	77,000	31

				74200	Audio Visual & Print Prod Costs	0	2,500	0	5,500	8,000	32
				75700	Training, workshop, conference	2,500	5,000	0	0	7,500	33
					sub-total GEF - not M&E	**75,610**	**42,344**	**0**	**27,000**	**144,954**	
		62000	**UNDP**	71300	Local Consultants	4,500	1,500	0	0	6,000	34
				75700	Training, workshop, conferences	5,000	0	0	0	5,000	35
					sub-total UNDP - not M&E	**9,500**	**1,500**	**0**	**0**	**11,000**	
COMPONENT 4: Monitoring and Evaluation	**ABER**	**62000**	**GEF**	71300	Local Consultants	0	15,000	0	15,000	30,000	36
				75700	Training, workshop, conferences	4,000	0	0	0	4,000	37
					sub-total GEF - M&E	**4,000**	**15,000**	**0**	**15,000**	**34,000**	
		4000	**UNDP**	71200	International Consultants	0	35,000	0	35,000	70,000	38
				71600	Travel	5,000	5,000	5,000	5,000	20,000	39
				74200	Audio Visual & Print Prod Costs	0	5,000	0	5,000	10,000	40
					sub-total UNDP - M&E	**5,000**	**45,000**	**5,000**	**45,000**	**100,000**	
					Total Outcome 4	**94,110**	**103,844**	**5,000**	**87,000**	**289,954**	
PROJECT MANAGEMENT	**ABER**	**62000**	**GEF**	71300	Local Consultants	16,596	16,596	16,596	16,596	66,384	41
				74100	Professional Services (Audit)	4,000	4,000	4,000	4,000	16,000	42
				74200	Audio Visual & Print Prod Costs	1,113	174	0	0	1,287	43
					sub-total GEF	**21,709**	**20,770**	**20,596**	**20,596**	**83,671**	
		4000	**UNDP**	71300	Local Consultants	24,576	24,576	24,576	24,576	98,304	44
				72300	Materials & Goods	55,000	0	0	0		45
				72800	IT Equipment	8,000	0	0	0	8,000	46
				74200	Audio Visual & Print Prod Costs	0	826	1,000	1,000	2,826	47
					sub-total UNDP	**87,576**	**25,402**	**25,576**	**25,576**	**164,130**	
					Total Project Management	**109,285**	**46,172**	**46,172**	**46,172**	**247,801**	
SUB-TOTAL GEF						**288,579**	**445,272**	**102,322**	**88,393**	**924,566**	

SUB-TOTAL UNDP	**142,791**	**278,536**	**281,785**	**96,888**	**800,000**	
PROJECT TOTAL	**431,370**	**723,808**	**384,107**	**185,281**	**1,724,566**	

Summary of Funds:

	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)
GEF grant administered by UNDP	288,579	445,272	102,322	88,393	924,566
Grant (cash) co-finance by GEF Agency: UNDP	142,888	278,536	281,688	96,888	800,000
UNDP (grant)	520,609	873,349	463,348	223,561	2,080,867
Rural Electrification Agency ABER (grant)	2,601,963	4,364,926	2,315,773	1,117,338	10,400,000
Rural Electrification Agency ABER (loan)	16,287,287	27,322,759	14,495,851	6,994,104	65,100,000
African Development Bank (grant)	4,036,390	6,771,252	3,592,428	1,733,311	16,133,381
African Development Bank (loan)	1,491,125	2,501,438	1,327,116	640,320	5,960,000
ECREEE (in-kind)	125,094	209,852	111,335	53,718	500,000
SIDA (grant)	730,300	1,225,115	649,974	313,606	2,918,995
UNCDF (grant)	150,113	251,823	133,602	64,462	600,000
TOTAL	**26,374,349**	**44,244,322**	**23,473,438**	**11,325,700**	**105,417,809**

Budget Note	Description
1	Includes: - For Output 1.2: This covers contracting of 1 senior international consultant for 12 days (@ $700/day) with expertise in minigrid delivery models in Y1. - For Output 1.4: An international expert on quality standards for minigrids will be recruited for 20 days (@ $700/day), including 5 days in Y1 and 15 days in Y2 to support development of quality standards and institutional capacity-building. - For Output 1.5: An international expert will be recruited for 10 days (@ $700/day), including 5 days in Y1 and 5 days in Y2 to support the operatinalization of the certification scheme. - For Output 1.6: An international consultant @$700/day will be recruited for 10 days in Y4 to conduct the lightweight DREI analysis.

2	Includes: - For Output 1.1: $300 per meeting x 20 meetings of the multi-stakeholder platform over 4 years. - For Output 1.2: A local technical expert will be contracted for 20 days to support the international consultant in drafting a minigrid delivery strategy (@$300/day) in Y1. - For Output 1.3: A local consultant will be recruited for 20 days (8 days in Y1, 8 days in Y2, 4 days in Y3) to support the international expert in providing capacity-building trainings (@$300/day). - For Output 1.4: A national consultant will be recruited to suppport the international expert. This is planned to cover 20 days level of effort (@ $300/day), including 5 days in Y1 and 15 days in Y2. - For Output 1.5: A local consultant will be recruited for 10 days (@ $300/day), including 5 days in Y1 and 5 days in Y2 to support the international consultant. - For Output 1.6: A national consultant @ $300/day will be recruited for 10 days in Y4 to support the lightweight DREI analysis.
3	Includes: - For Output 1.1: DSA for local travel for each meeting (@$200/meeting for 20 meetings, 5 in each year); DSA for 2 people for 5 days @$281/day from the Senegalese platform in 2 trips (3 days + 2 days in Y1); 2 return tickets (Dakar - Ouagadougou) for 2 people from the Senegalese Platform (@$800/flight) in Y1. - For Output 1.2: This covers (all in Y1): 4 days DSA for international consultant ($281*4); 1 international return ticket for international consultant (@$1,500 per return ticket). The international consultant will attend the inception workshop virtually and the dissemination workshop on site. Local travel for local consultant and stakeholders ($20*70). - For Output 1.3: This covers DSA for the international consultant for the 3 trainings (9 days in Y1, 9 days in Y2, 5 days in Y3) @ $281/day; Local travel for participants to the 3 trainings: 30 participants per training @$20/participant/training; 3 return tickets for the international consultant @ $1,500/ticket (1 in each of Y1, Y2, Y3). - For Output 1.4: This covers DSA for the international consultant for the 3 trainings (4 days in Y1 and 12 days in Y2) @$281/day; Local travel for participants to the 3 trainings: 30 participants per training @$20/participant/training, with 1 training in Y1 and 2 trainings in Y2; 3 return tickets for the international consultant @ $1,500/ticket (1 in Y1 and 2 in Y2). - For Output 1.5: This covers DSA for the international consultant for 2 trainings (4 days in Y1 and 4 days in Y2) @$281/day; Local travel for participants to the 2 trainings: 30 participants per training @$20/participant/training, with 1 training in Y1 and 1 training in Y2; 2 return tickets for the international consultant @ $2,000/ticket (1 in Y1 and 1 in Y2).
4	Includes: - For Output 1.3: For procurement of tools necessary for increasing capacity of target stakeholders (@ $1,000 per year in Y1, Y2, Y3). - For Output 1.4: Covers equipement and material for the testing laboratory (bought in Y1), for $5,000 in total.
5	Includes: - For Output 1.3: Supplies related to trainings and building technical capacities of target institutional actors (@ $1,000 per year in Y1, Y2, Y3).

6	Includes: - For Output 1.4: Communication costs at $1,000 in Y2. - For Output 1.6: Communication and translation costs for $3,000 in Y4.
7	Includes: - For Output 1.1: This will cover venues and related cost for for capacity- building trainings of multi-stakeholders' platform on various themes such as e-waste, tax-exemption, fundraising, delivery models, innovative minigrid technologies, etc. This line item will also cover participation of members of the Platform in workshops, when necessary (@$1,500/year). - For Output 1.2: This covers venue and related costs for 2 workshops (inception and dissemination) in Y1 during the minigrid strategy development (@$2,500 per workshop). - For Output 1.3: To cover venue and related cost for the 3 trainings @ $2,500 per training in Y1 and Y2, and $2,000 in Y3. - For Output 1.4: This covers 3 trainings @2,500/training, including 1 training and Y1 and 2 trainings in Y2. - For Output 1.5: This covers 2 trainings @2,500/training, including 1 training and Y1 and 1 training in Y2.
8	Includes: - For Output 1.4: This covers 3 computers and other IT equipment for the testing laboratory (bought in Y1), for a total of $8,000.
9	Includes: - For Output 1.1: 2 consultants paid @ $700 / day for 7 days each to support the national multi-stakeholder platform. - For Output 1.3: International consultant will be recruited for 20 days (8 days in Y1, 8 days in Y2, 4 days in Y3), so 3 trainings in total, to provide capacity-building trainings to targeted public sector stakeholders involved in minigrid promotion such as regulator, agencies, etc. (@ $700/day).
10	Includes: - For Output 1.5: Covers equipement and material for the trainings, $4,000 in Y1 and $4,000 in Y2.
11	Includes: - For Output 2.1: This include: $12K for a legal consultant to support the tender and contracting process for the pilot projects in Y1; $7,020 for a safeguards consultant in Y1.
12	Includes: - For Output 2.2: Local expert to support elaboration and capacity-buidling in collaboration with an international expert: 10 days in Y1 and 10 days in Y2 @ $300/day.. - For Output 2.3: Part-time HR to provide admin services to the Association and also adhoc consulting needs (12 days @ $300/day for Y1 and Y2 each).
13	Includes: - For Output 2.2: This covers DSA for the international consultant for the 2 trainings (5 days in Y1, 5 days in Y2) @ $281/day; Local travel for participants to the 2 trainings: 30 participants per training @$20/participant/training; 2 return tickets for the international consultant @ $2,000/ticket (1 in each of Y1, Y2). - For Output 2.3: This covers DSAs for 4 people for 5 days @ $281/day; 4 return tickets: 1 for the international consultant @ $2,000/ticket, and 3 for the members of the association @ $1,500/ticket.

14	Includes: - For Output 2.1: Sub-contract to international firm/manufacturer to provide O&M @ $6,506 for Y2 then $3,297/year for Y3, Y4.
15	Includes: - For Output 2.1: Procurement of minigrid and related goods and services for the two pilot projects.
16	Includes: - For Output 2.3: 2 computers, 1 printers, etc. for the office @ $2,500 in Y1.
17	Includes: - For Output 2.3: This will cover printing of brochures, business cards and etc. @ $1,500 in Y1.
18	Includes: - For Output 2.1: Training in innovative business models, entrepreneurship, installations, financial literacy for women. Also, issues of IPP and climate change will be covered under these trainings. - For Output 2.2: This covers 2 trainings @2,500/training, including 1 training and Y1 and 1 training in Y2. - For Output 2.3: This covers venue, breaks, etc. fees paid to attend conferences, etc. as well as possible registration fees to attend workshops @ $2,500 in Y1 and $2,500 in Y2.
19	Includes: - For Output 2.1: $6,215 in Y1, $6,312 in Y2, $6,409 in Y3, $6,312 in Y4 for safeguards and gender consultants. - For Output 2.2: International expert recruited for about 14 days to suppport training of target stakeholders (7 days in Y1 and 7 days in Y2 @ $700/day). - For Output 2.3: An international consultant will support the industry association in terms of best-practices, membership growth, bylaws, etc. 12 days @ $700/day (6 days in Y1 and 6 days in Y2).
20	Includes: - For Output 2.3: A firm will be hired to develop/design communication collaterals for the association such as website, deck, etc.@ $2,000 in Y1 and $2,000 in Y2.
21	Includes: - For Output 2.1: Procurement of minigrid and related goods and services for the two pilot projects: $177,622 in Y2 and $222,000 in Y3. - For Output 2.3: This will cover office supplies for the association, i.e. furnitures, etc. @ $2,000 in Y1
22	Includes: - For Output 2.3: To cover initiatial support for industry association in terms book-keeping, audit for 2 years@$2K per year for Y1 and Y2.
23	Includes: - For Output 3.1: This covers: DSAs for the international consultant for 12 days @ $281/day; 3 return tickets @ $1,500/ticket; Local travel for participants to the 3 trainings: 30 participants per training @$20/participant/training.

24	Includes: - For Output 3.1: 3 capacity-building consulting contracts@$5,000 each for Y1, Y2, Y3. - For Output 3.2: Contractual services for market assessment exercises @ $30,000 in Y1. - For Output 3.3: Contractual services for identification of instruments; design of fund operational structure; fundraising for the financial instrument @ $30,000 in Y3. - For Output 3.4: Contractual services for the feasibility study @ $20,000 in Y2 and $20,000 in Y3. - For Output 3.5: Contractual services for the development of the impact framework @ $15,000 in Y3.
25	Includes: - For Output 3.2: For dissemimnation of market intelligence @ $3,000 in Y1. - For Output 3.4: For dissemimnation of studies @ $3,000 in Y3. - For Output 3.5: For dissemimnation of studies @ $3,000 in Y4.
26	Includes: - For Output 3.1: 3 trainings@$2,500 per, including venue, meals and per-diem in Y1, Y2, Y3. - For Output 3.4: To cover venues, food, etc. for 2 trainings at @ $2,500/training in Y2 and Y3. - For Output 3.5: To cover venues, food, etc. for 2 trainings at @ $2,500/training in Y3 and Y4.
27	Includes: - For Output 3.3: Contractual services for identification of instruments; design of fund operational structure; fundraising for the financial instrument @ $20,000 in Y3. - For Output 3.5: Contractual services for the development of the impact framework @ $20,000 in Y4.
28	Includes: - For Output 4.1: Consultant recruited 10 days@$700 to develop digital strategy in Y1. - For Output 4.3: Consultant recruited 10 days@$700 to develop QAMF in Y1. - For Output 4.8: 1 consultant recruited for 10 days to draft a replication and scaled-up plan in Y4 @ $300/day.
29	Includes: - For Output 4.1: Local consultant to support international expert @ $300 per day for 10 days in Y1. - For Output 4.8: 10 days field work/data collection, etc. for national consultant @ $300/day in Y4.

30	Includes: - For Output 4.1: This covers DSAs for the international consultant for 5 days @ $281/day; 1 return ticket @ $1,500/ticket; Local travel for participants to the training: 30 participants per training @$20/participant/training. - For Output 4.3: This covers DSAs for the international consultant for 5 days @ $281/day; 1 return ticket @ $1,500/ticket; Local travel for participants to the training: 30 participants per training @$20/participant/training. - For Output 4.5: This covers DSAs for 6 participants for 4 days @ $281/day; 6 return ticket @ $1,500/ticket (in Y2) - For Output 4.6: This covers local travel for participants to the training: 30 participants per training @$20/participant/training in Y1, and the same in Y2. - For Output 4.8: Local travel for data collection during field visits @ $1,500 in Y4.
31	Includes: - For Output 4.2: Contractual services for the development of the digital platform, including training of local stakeholders @ $45,000 in Y1 and $10,000 in Y2. - For Output 4.5: Hiring in year 2-4 of a consultant or local firm to gather data and audio-visual content (video footage, photos, etc.) on the national project subject of choice for the 'insight brief @ $5,000 in Y2 and $5,000 in Y4. - For Output 4.6: Consultant /firm recruited to support establishment and development of of CoP in Burkina Faso @ $3,500 in Y2 and $3,500 in Y3. - For Output 4.7: A firm is recruited to capture and support dissemination of lessons learned @ $5,000 in Y4.
32	Includes: - For Output 4.5: This will be used to cover costs such as translation services of the insight brief into English or other languages (if applicable/needed, visa fees, etc. @ $2,500 in Y2 and $2,500 in Y4. - For Output 4.7: Videos and briefs are produced and diisseminated @ $3,000 in Y4.
33	Includes: - For Output 4.2: 2 Workshops on data strategy will be held at together with trainings on the digital strategy, as these two outputs go hand in hand @ $2,500 in Y2. - For Output 4.6: Provision for various events/trainings, etc. @ $2,500 in Y2 and $2,500 in Y3.
34	Includes: - For Output 4.3: Local consultant to support international expert @ $300/day for 10 days in Y1. - For Output 4.6: Local consultant @ $1,500 in Y2 and $1,500 in Y3.
35	Includes: - For Output 4.1: Capacity-building on the digital strategy will be held back-to-back with the training on data strategy in first year of the project and also some trainings under 2.1 in regards to tenders and procurement, and use of the digital platform/tool. This is for optimizing budget and also ensuring linkages between these outputs @ $2,500 in Y1. - For Output 4.3: Cost to be applied towards training on using the QAF in coordination of output 2.1 for pilot projects. Training should be strealined with those in component 2, especially around pilot projects @ $2,500 for Y1.

36	Includes: - For Output 4.4: $15,000 for national consultant for MTR in Y2 and $15,000 for TE in Y4.
37	Includes: - For Output 4.4: Inception workshop $4,000 in Y1.
38	Includes: - For Output 4.4: 2x35K for lead consultant for MTR and TE in Y2 and Y4.
39	Includes: - For Output 4.4: This covers local travel for M&E @ $5,000/year
40	Includes: - For Output 4.4: Translation for MTR, TE and other documents/reports from M&E and coordination @ $5,000 in Y2 and $5,000 in Y4.
41	PMU staff: Admin & Finance Expert @$1,383 for 48 months.
42	This will cover audit for 4 years@$4,000 per year.
43	Communication expenses for the PMU: $1,113 in Y1 and $174 in Y2.
44	PMU staff: Full Time Project Manager @ $1,710 for 48 months; driver @ $338 for 48 months.
45	Includes: - For Output 4.4: Vehicle at $52K + 2 motorcycles at $1500 for project coordination/monitoring in Y1.
46	This will cover purchase of 5 computers + printer + scanner.
47	Communication expenses for the PMU.

X. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Burkina Faso and UNDP, signed on 19 July 1976. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

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

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

XI. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

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

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

(b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

    i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

    ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

    iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

    iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

    v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

    b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

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

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any

concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

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

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

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

11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

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

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

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

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

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

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

List of Annexes submitted to this project document:

Annex Number	Title	Submitted as separate document
Annex 1	GEF Budget Template	Yes
Annex 2	Detailed Project Budget	Yes
Annex 3	Project map and Geospatial Coordinates of project sites	No
Annex 4	Multi Year Work Plan	No
Annex 5	Monitoring Plan	No
Annex 6	UNDP Social and Environmental Screening Procedure (SESP)	Yes
Annex 7	UNDP Risk Register	No
Annex 8	Overview of Project Staff and Technical Consultancies	No
Annex 9	Stakeholder Engagement Plan	Yes
Annex 10	Environmental Social Management Framework (ESMF)	Yes
Annex 11	Gender Analysis and Gender Action Plan	Yes
Annex 12	Procurement Plan	Yes
Annex 13	GEF focal area specific annexes	Yes
Annex 14	Additional agreements (Co-financing letters, ICF checklist)	Yes
Annex 15	GEF Core indicators	No
Annex 16	GEF 7 Taxonomy	No
Annex 17	Description of the pilot projects	No
Annex 18	GHG calculation spreadsheet	Yes
Annex 19	COVID-19 related considerations and opportunities	No
Annex 20	Theory of Change	No

Annex 1: GEF Budget Template

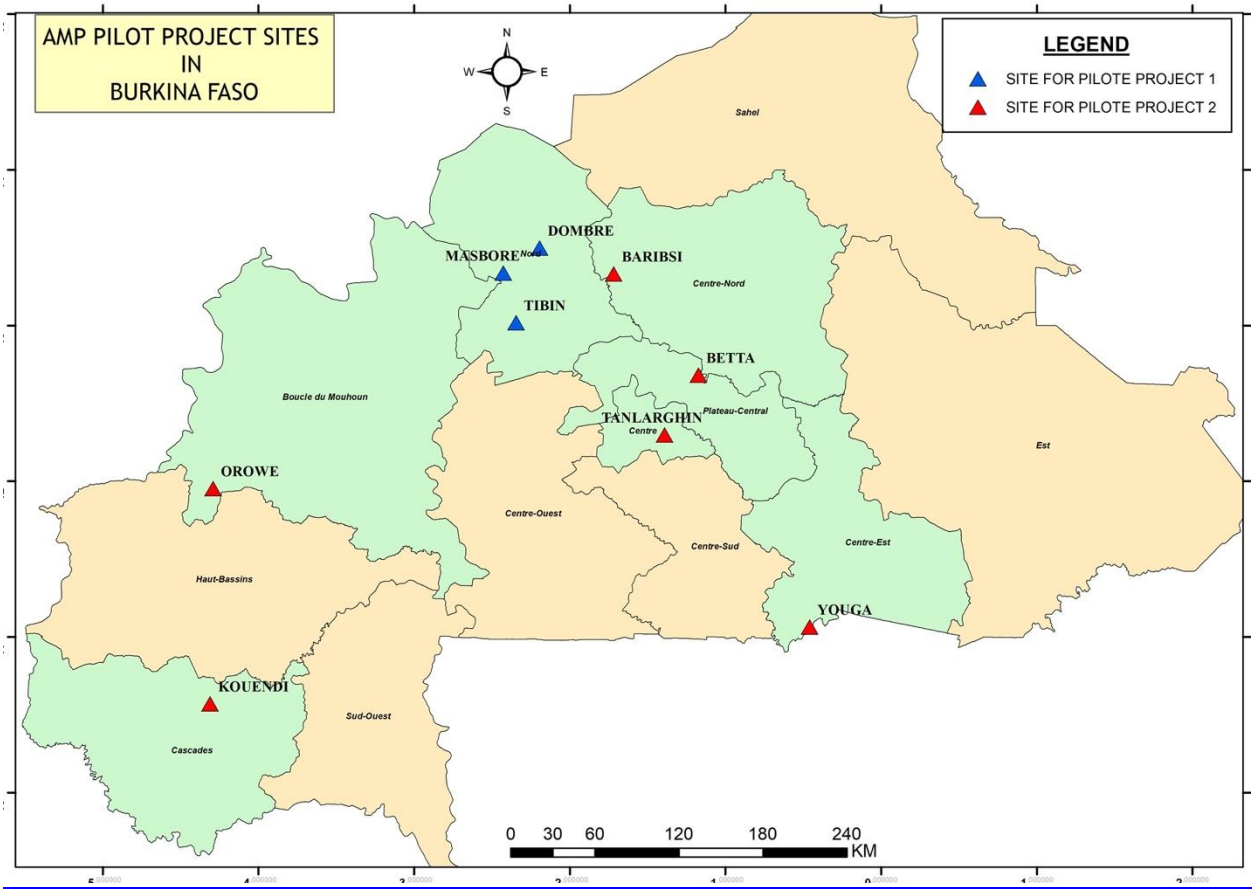
Submitted as separate document.

Annex 2: Detailed Project Budget

Submitted as separate document.

Annex 3: Project map and Geospatial Coordinates of project sites

Overall, the project will be located in Burkina Faso (**latitude:** 12° 14' 22.20" N **longitude:** -1° 33' 30.27" W), a landlocked country in West Africa that covers an area of around 274,200 square kilometers (105,900 sq mi) and is bordered by Mali to the northwest, Niger to the northeast, Benin to the southeast, Togo and Ghana to the south, and the Ivory Coast to the southwest.



Annex 4: Multi Year Work Plan

PROJECT COMPONENT	Outcomes		Outputs	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Policy and Regulation	Stakeholder ownership in a national minigrid delivery model is advanced, and] appropriate policies and regulations are adopted to address barriers and facilitate investment in RE minigrids with storage.	1.1	An inclusive national dialogue to identify minigrid delivery models is facilitated, clarifying priority interventions for an integrated approach to off-grid electrificatio																
		1.2	Formulation of rural electrification strategy/plan, incorporating transparent targets and supported by multi-tier data.																
		1.3	Domestication of quality standards for solar minigrid components, and institutional capacity of national standards organizations/bureau strengthened																
		1.4	Capacity building of public officials (regulator, ministries, agencies) and private sector to fully play their role (tariffs, design procurement/tender processes that incorporate cost-reduction levers and innovative business models etc.)																
		1.5	Operationalizing a certification scheme for installer building on ECREEE's Regional Certification Scheme																
		1.6	Light quantitative mini-grid DREI techno-economic analysis carried in Year 4																
Component 2: Business Model Innovation with Private Sector	Innovative business models based on cost reduction operationalized, with strengthened private sector participation in RE minigrid development	2.1	Pilots developed, including on productive use/innovative appliances and modular hardware/system design, leading to cost-reduction in mini-grids (in regions complementing WB and AfDB investments).																
		2.2	Capacity of winning tender bidders / new COOPELs and private sector actors (industry associations such as APER and others) strengthened to develop and implement innovative business models and cost-reduction levers.																
		2.3	Support provided to establish and grow a national industry association for private sector developers																

Component 3: Scaled-up Financing	Financial sector actors are ready to invest in a pipeline of RE minigrids and concessional financial mechanisms are in place to incentivize scaled-up investment.	3.1	Domestic financial sector capacity-building on business and financing models for minigrids																	
		3.2	General market intelligence study on minigrids in regions complementary to WB and AfDB investments prepared and disseminated amongst public officials and finance community																	
		3.3	Support the implementation of a financial instrument to facilitate investment in minigrid																	
Component 4: Digital Knowledge Management and Monitoring and Evaluation	Increased awareness and network opportunities in the minigrid market and among stakeholders, and lessons learned for scaling up rural electrification using solar PV-battery minigrids.	4.1	A Digital Strategy is developed and implemented, including linkages to and following guidance from the AMP Regional Project																	
		4.2	Minigrids data management platform implemented to run tenders and manage data from pilots, and to support minigrids scale-up and cost-reduction.																	
		4.3	A Quality Assurance and Monitoring Framework for measuring, reporting and verification of the sustainable development impacts of all minigrids pilots supported, including GHG emission reductions, is adopted and operationalized based on standardized guidance from the regional project																	
		4.4	M&E and Reporting, including (i) Conducting inception workshop and preparing report, (ii) Ongoing M&E, (iii) Mid Term Evaluation and (iv) Terminal Evaluation																	
		4.5	Engage with regional project, including, but not limited to, via (i) participating in Communities of Practice and (ii) capturing and sharing lessons learnt																	
		4.6	Knowledge networks / Communities of Practice / industry associations / Other strengthened to promote minigrids development / rural energy access																	
		4.7	Lessons learned captured and disseminated at all levels																	
		4.8	Replication plan (including investment plan) for scaling up rural energy access developed																	

Annex 5: Monitoring Plan

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

Monitoring	Indicators	End of Project Target	Description of indicators and targets	Data source/Collection Methods[36]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Supporting access to clean energy by increasing the financial viability, and promoting scaled-up commercial investment, in RE minigrids in Burkina Faso with a focus on cost-reduction levers and innovative business models.	*Indicator 1:* **Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent)**	14,353 tCO2e direct; 495,000 tCO2e indirect.	Amount of greenhouse gas emissions mitigated (in metric tons of carbon dioxide equivalent). The target value was derived using GHG measurement methodology (see Annex 13).	Source of baseline is PIF. GEF GHG measurement methodology (see Annex 13)	Yearly	UNDP Country Office Project consultant Pilot project developers	Pilot Project monitoring reports from field visits and measurements, and verification reports Consultant report	The Government of Burkina Faso (GoBF) remains committed to the medium and long-term plans and strategies for decentralized electrification through renewable energy particularly minigrid solar with storage. Political and social context in Burkina Faso remains stable for implementing activities.
	Indicator 2: **Number of direct beneficiaries benefitting from clean, affordable and**	5,564 direct beneficiaries; 2,782 male beneficiaries; 2,782 female beneficiaries;	The total and disaggregated number of people that have access to clean, affordable and sustainable energy via	Focus groups Field visits and survey	Quarterly	Rural Electrification agency UNDP Country Office	Project monitoring reports Field visit reports.	The Government of Burkina Faso remains committed to the medium and long-term plans and strategies for

[36] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

	sustainable energy access via minigrids, disaggregated by gender and customer segment (residential, commercial and social)[37] **(number of people)**	5,310 people (residential); 169 people (commercial); 85 people (social).	minigrids pilots for domestic and productive use. Currently, it is unclear how many beneficiaries benefit from clean, affordable and sustainable energy access via minigrids. The value of the target was derived from potential jobs created by pilot projects					decentralized electrification through renewable energy particularly minigrid solar with storage. Target beneficiaries are willing to participate in the project and adopt minigrid system.
	Indicator 3: **Increase in installed renewable energy capacity per technology (MW)**	0.4 MW (solar PV); 1 MW (storage)	Total size of pilot projects developed by direct financing from the project. Currently, the total installed capacity of minigrids is not known.	Feasibility studies Procurement/tenders documents Remote monitoring system data Field visits	Yearly	Rural Electrification agency UNDP Country office Project consultant	Reports of feasibility studies of pilot projects installed. Procurement and Tenders documents Project monitoring reports Pilot projects Remote monitoring reports	Other barriers preventing scale-up of the renewable energy minigrids are removed such as business, technology, developer risks. When estimating the values, it was assumed that funding for pilot project will be available and also co-financing will be made available. Moreover, other donors will use best-practices from AMP project to initiate and

								implement more innovative minigrid projects.
	Indicator 4: **Number of direct primary jobs created in the minigrid sector, disaggregated by gender, for [mini-grid development, operation and productive use].**	70 primary jobs in minigrid development (45 men and 25 women) 20 primary jobs created in minigrids operation (10 women and 10 men) 400 primary jobs in productive use (women 260 and men 140)	Total number of people employed in minigrid development, operation and productive use. This indicator is disaggregated by gender to ensure vulnerable population like women and youth	Stakeholders engagement during implementation field visits and surveys will be used to collect data	Yearly	Rural Electrification agency Project Manager/Coordinator	Field visit and surveys reports Project monitoring reports Pilot Project developers HR records	The assumption is that qualified human resources available to work in minigrid sector; trainings planned in the project will materialize in a timely fashion to allow recruitment of personnel before; productive end-users adopt sustainable energy access from minigrids.
Project Component 1: Policy and Regulation								
Outcome 1 **Stakeholder ownership in a national minigrid delivery model is advanced, and] appropriate policies and regulations are adopted to address barriers and facilitate**	*Indicator 5:* **Number of policy de-risking instruments for minigrid investments identified and endorsed by the national government**	2 policy derisking instruments	Policy instruments adopted by the GoBF that support private sector to scale-up investments in minigrids sector	During the PPG phase baseline data was collected through meetings and literature review. During the project's implementation, further data will be collected through surveys, workshops and stakeholders engagement.	Yearly	Ministry of Energy Multi-stakeholders platform	Project monitoring reports Published government directives	The main assumption is that the Government of Burkina Faso remains committed to the medium and long-term plans and strategies for decentralized electrification through renewable energy particularly minigrid solar with storage. The theory of change implies that policy

investment in RE minigrids with storage.								and regulatory instruments once implemented through the AMP project will set the minigrid market in Burkina Faso on the right course with more private sector investment.
	Indicator 6: **A minigrid delivery model and roadmap to enable minigrid development is endorsed/adopted through a consultative process involving key stakeholders (e.g. relevant ministries, local authorities, rural populations, private sector, media, etc.)**	1 minigrid delivery model	An adopted national framework to support private sector engagement and investments in minigrids sector.	Baseline data collected from stakeholders engagement and literature review. During implementation data will be collected through report from multi-stakeholders platform.	Once developed	Rural Electrification agency Project consultant UNDP country office	National validation meeting report	The delivery model is selected/adopted through a consultative process through the multi-stakeholder platform. The risk of not achieving this indicator will result in the project's failing to showcase another innovative delivery model, which means that the existing electricity cooperative model will continue and stakeholders will not invest in minigrids in Burkina Faso due to the pitfalls of the COOPEL model.
	Indicator 7: **Number of trainings held for institutional**	6 trainings held for key stakeholders on thematic areas	Training to develop capacity of key	Baseline data collected through stakeholders	Quarterly	Project Manager/Coordinator	Training reports	Institutional and private sector actors place high priority on

	(ABER, ARSE, ANEREE, ABNORM, IRSAT, 2IE, etc.) and private sector stakeholders such as industry associations, etc.	related to policy and regulation	stakeholders in the minigrid sectors	engagement and literature review. During implementation, further data will be collected through workshops.				renewable energy knowledge and development. Target beneficiaries are willing to participate in the project and adopt minigrid system.
	Indicator 8: **Number of people trained to implement innovative business models and incorporate cost-reduction levers in minigrid projects (disaggregated by gender and affiliation – government or private sector)**	30 people trained 15 operators/developers 15 government officials At least 25% women	Training to develop capacity of key stakeholders in the minigrid sectors	Baseline data collected through stakeholders engagement and literature review. During implementation, further data will be collected through workshops.	Quarterly	Project Manager/Coordinator	Training reports	Institutional and private sector actors place high priority on renewable energy knowledge and development. Target beneficiaries are willing to participate in the project and adopt minigrid system.
Project Component 2: Business Model Innovation with Private Sector								
Outcome 2 **Innovative business models based on cost reduction operationalized, with strengthened private sector**	*Indicator 9:* **Number of renewable energy minigrid pilots implemented that demonstrate a delivery model, cost-reduction measure(s)**	9 solar PV minigrids are installed with project support	Total number of minigrid pilot projects incorporating a delivery model, cost-reduction measure(s) and/or productive use of electricity	Procurement tenders Inspections and field visits	Once at installation and subsequent yearly	Rural Electrification agency Project developers/Installers Project Manager/Coordinator	Procurement tenders reports Inspections and field visit reports on pilot projects installed	The main assumptions are that new policy and delivery model for minigrid are adopted and implemented and also that cost-reduction of electricity remains feasible in the

participation in RE minigrid development	**and/or productive use of electricity**							Burkina Faso market context.
	Indicator 10: **Capacity of minigrid developers and/or operators is enhanced to implement innovative business models and incorporate cost-reduction levers in minigrid projects**	Institutional/human capacity strengthened for potential developers (4 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).	Enhancing capacity of minigrid developers and/or operators to implement minigrid projects	Workshops	Quarterly	Project Manager/Coordinator	Training reports	Minigrid operators and installers are willing to participate in the trainings and to implement innovative business models and incorporate cost-reduction levers in minigrid projects.
Project component 3: Scaled-up Financing								
Outcome 3 **Financial sector actors are ready to invest in a pipeline of RE minigrids and concessional financial mechanisms are in place to incentivize scaled-up investment.**	*Indicator 11:* ***Number of market intelligence survey by regions***	5 targeted market intelligence surveys /assessment to highlight market opportunity and potential for investment	Market assessment showing opportunities to private sector and financial institutions in engaging in minigrid sector	Field visits and surveys	Yearly	Project Manager/Coordinator	Published market intelligent reports	The assumption is that there are market data gaps on minigrids in Burkina Faso. If financial institutions have access to market info, it will facilitate investment decisions to fund minigrid operators/developers. If market intelligence info is

								not generated, the status-quo will remain and financial institutions will still not be keen to support minigrid sector.
	Indicator 12: **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 minigrids**	Institutional/human capacity strengthened for potential developers (4 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply knowledge and skills to find effective solutions).	Enhance capacity, improve knowledge and awareness of financial institutions to evaluate investments in minigrids	Workshops Webinars Fairs and B2B networking organized	Quarterly	Project Manager/Coordinator	Training and events reports	Government of Burkina continues to send clear policy signals through new policy instruments for financial sector actors to invest in minigrid
	Indicator 13: **Capacity of mini-grid developers is enhanced to access finance to meet their capital requirements, contributing to a pipeline of minigrid investment opportunities.**	Institutional/human capacity strengthened for potential developers (4 out of a possible scale of 5 where 0 represents no capacity and 5 represents a strong capacity to understand relevant issues and apply	Training for Operators/developers to access finance to meet their capital requirements, contributing to a pipeline of minigrid investment opportunities.	Workshops conducted	Quarterly	Project Manager/Coordinator	Training Reports	Minigrid operators and installers are willing to participate in the trainings to access finance to meet their capital requirements, contributing to a pipeline of minigrid investment opportunities.

		knowledge and skills to find effective solutions).						
Project Component 4: Digital, Knowledge Management and Monitoring and Evaluation								
Outcome 4 **Digitalization and data mainstreamed, across stakeholders, into local minigrid market development. Increased awareness and network opportunities in the minigrid market and among stakeholders, and lessons learned for scaling up rural electrification using solar PV-battery minigrids.**	*Indicator 14:* **A digital strategy for the project is prepared and implemented by the Project Management Unit (PMU) to contribute to project implementation and local minigrid market development**	1 digital strategy prepared and implemented	Digital strategy to facilitate data sharing across different minigrid projects in Burkina Faso	Web based database created and linked to ECOWREX, the data platform from ECREEE	Yearly	Project Manager/Coordinator	Digital strategy document Project monitoring reports	Knowledge and data gaps in minigrid sector exist, which are preventing commercial investment and large-scale deployment of renewable energy minigrids. The theory of change is built on the case that if a digital strategy is adopted and stakeholders' capacity are built to fully use the digital strategy more private sector investment will follow.
	Indicator 15: **Number of M&E Frameworks and platforms created and adopted and applied for tracking SDG impacts and GHG emission reductions**	1 M&E platforms	Monitoring and reporting framework and platforms for tracking data on SDG impacts and GHG emission reductions related to the project	M&E Framework	Yearly	Project Manager/Coordinator M&E officer	Project progress reports Independent evaluation reports	The assumption is that stakeholders require knowledge on SDG impacts and GHG emission reductions related to the project and that this data will showcase the impact of solar minifgrid. Hence increase

								investment in the market.
	Indicator 16: **Number of minigrid pilots sharing data on minigrid performance with the regional project and other stakeholders following best practices and guidance provided by the AMP Regional Project**	9 minigrid pilots sharing data on minigrid performance with the regional project and other stakeholders	The total number of minigrid pilots sharing data minigrid performance	Minigrid performance indicators with the regional project and other stakeholders	Quarterly	Pilot Project developers/Installers Project Manager/Coordinator	Pilot projects remote monitoring reports	The assumption is that knowledge and data gaps in minigrid sector exist and project operator/developers are open and willing to share the data on their projects. If the pilot project developers fail to share the data the project will lack a major output under its Component 1, 2 and 4 for informed policy decisions, capacity-building and innovative business models.

Annex 6: UNDP Social and Environmental Screening Procedure (SESP)

Submitted as separate document.

Annex 7: UNDP Risk Register

Note: Further social and environmental risks are described in the SESP (Annex 6).

#	Description	Risk Category	Rating / Impact & Likelihood	Risk Treatment / Management Measures	Risk Owner
1	Lack of Government commitment to develop and implement policies that promote decentralized energy	**Political** ***5.1. Government commitment***	The rating of this risks is **Moderate** because it could make the project less of a priority or redundant and difficult to implement without the support of the government of Burkina Faso's (GoBF). L =2 I = 4	In the PPG phase, all attempts were made to make sure the project's objectives and activities align with national priorities and program especially for rural electrification. The involvement of the ministry of energy through the rural electrification agency (ABER), will ensure government of Burkina Faso's (GoBF) commitment and relevant institutions political commitment to renewable energy promotion in order to boost access to energy through adequate ongoing stakeholder consultations, close coordination and active involvement in project implementation including transparent communication of project milestones to show progress and successes as well as commitment of resources. The multi-stakehoder's platform, which will be put in place in the framework of the project and the fact that the UNPD is chairing the donors' coordination group will also serve to manage / mitigate this risk.	ABER (Implementation Partner) and PMU
2	Changes in regulations and strategy	**Regulatory** **6.1 Change in the regulatory framework within the country of operation**	The probability of transformational changes in regulation for the off-grid sector is really high, therefore this risk has a **High** rating. This risk will, however, have very positive impacts on the projects as one of the biggest barriers impeding the widespread promotion of clean energy minigrids is inadequate regulatory framework such as delivery	During the PPG phase, all consultations with stakeholders indicated the need for changes regulatory reforms. The project implementer partner (ABER) and technical and financial partners such as SIDA, EU, WB, AfDB indicated that reforms will be engaged in the course of 2021 onward. The AMP Child project (national) and the regional AMP will be highly involved in the formulation, implementation and dissemination of these reforms under their components 1, 2, 3 and 4, which are: Policy and Regulations, Project and Business Model Innovation with Private Sector Engagement, Innovative Financing and finally, Convening, dissemination, tracking (knowledge management). This is one of the rare risks that will have a positive impact on the project and its occurrence is fully expected.	ABER (Implementation Partner) and PMU

			method, tariffs, standards, etc. L=5 I=5		
3	Investments made in Component 2— Project and Business Model Innovation with Private Sector Engagement (pilot projects) may not be economically and financial viable and do not demonstrate cost reduction of renewable energy.	**Financial** **2.1. Cost recovery**	The rating of this risks is **Moderate** because pilot's projects may not be able to recover cost of investments due to low purchasing power of customers. L = 2 I = 4	Stakeholders consultation and engagement in project identification and selection including adequate pre-feasibility studies. Also, pilot projects as per the stakeholders consultations are all based on productive uses in agriculture value-chains in off grid communities in order to safeguard payments. The fact that minigrids are anchored in productive uses which have a constant flow of revenues, this increases the economic and financial viability of the project. In fact, one of the upsides of this project is capitalize on experience from other African countries and South-South cooperation to foster exchanges of knowledge and expertise from other projects.	PMU and UNCDF
4	FOREX issues due to the fact that pilot project developers and financial institutions may receive loans and investment in dollars.	**Financial** **2.4. Fluctuation in credit rate, market, currency** **2.5. Delivery**	The rating of this risks is **Moderate** because pilot projects may be subjected to high interest rates and forex fluctuations and limit bankability of project for funding by investors. L =2 I = 4	Training will be provided to local financial institutions so they fully understand the risks and benefits of solar minigrid projects. Therefore, local FI will be more inclined to finance project in local currency and also put in place financial products in line with the specific needs of the minigrids market.	PMU and UNCDF
5	Project delays or disruptions due to COVID-19	**Operational**	The rating of this risk is **Moderate**. L = 3 I = 3	The COVID-19 pandemic is, at the time of writing, at a point of inflection. Variants and second/third waves of infections are emerging worldwide with concomitant reactions from authorities, ranging from mild restrictions on movement and curfews, to strict lockdowns and strict domestic travel restrictions. The most robust forms of restrictions could negatively impact activities requiring the physical presence of team members and stakeholders. At the pilot level, risks could relate to: - Supply chain delays or disruptions. Delays with importing or local availability of material and equipment due to reduced	ABER (Implementation Partner) and PMU

				manufacturing capacity impacting planned delivery timelines. - Availability of implementation teams. Increased absenteeism of resources due to sickness, the need to care for others, or restrictions on travel may impact project efficiency or progress. - Broader time and cost impact of COVID compliance. Project timelines may be delayed when scheduling around social distancing requirements and/or costs may increase to ensure compliance with COVID-19 guidance. - Reduced ability to pay of minigrid consumers due to the negative economic impacts of COVID-19. Scheduling of activities such as site development and on-site training that may require physical presence in certain localities has been front-loaded, allowing for a buffer in case the sanitary situation deteriorates to the point of preventing the swift realization of these activities. Online communication and teleconferencing options will be investigated and given preference to facilitate social distancing, where needed. During project implementation this risk will be reassessed and following activities may be carried as needed: - Performing a schedule assessment or time-impact analysis, including examining the status of material procurement on projects. - Identifying most critical materials, equipment, products for procurement and engaging suppliers to prioritize delivery and/or expose key vulnerabilities. - Identifying key resources and skills and possible alternatives in case of absences. - Prioritizing and facilitating vaccinations of workers if possible. - Assessing cost impacts of enhanced cleaning, reduced workforce, and other modifications. - Assessing what services can be continued offsite to limit schedule delays.	
6	Lack of coordination with existing	**Operational**	The rating of this risk is **Low**.	There will be representatives of the donor partners in the multi-stakeholders platform. Also, ABER being the coordinating entity for rural electrification projects and the	ABER, PMU and AMP Regional, ECREEE

	initiatives / stakeholders	**3.5 Synergy potential (linking with other initiatives as relevant)**	L = 2 I = 2	implementing partner of the GEF7 child project will contribute to better coordination. Moreover, the project will employ a robust and inclusive stakeholders engagement.	
7	Burkina Faso is highly vulnerable to climate change and is already being impacted by frequent droughts and decrease in water availability which contributes to famine, lowering of agricultural yields and weakening of the economic base, triggering a process of impoverishment.	**Social and Environmental** **1.4. Climate change and disaster** **Safety and Security** **8.5 Natural Hazards** **8.6 Manmade Hazards**	The rating of this risks is **Substantial** as climate impacts and variability mostly droughts and flooding in Burkina Faso are frequent. The impact on the minigrid infrastructure is minimal. However, as the pilot projects are targeting agricultural value-chains (small scale farmers), the climate related risks affect their ability to pay. L =4 I = 4	Climate risks assessment tool will be used to assess the vulnerability of all pilot projects to climate impacts are fully integrated into the project design.	SP/CNDD, DGEVCC, PMU
8	Institutional and private sector partners will not be capable of playing their roles	**Operational** **3.8 Capacity development of national partners**	The rating of this risk is **Substantial** as with recent reforms and those foreseen, stakeholders will need some time to understand and/or learn their new roles. It is important to ensure the various stakeholders are able to fully take play their role for market uptake of clean energy minigrids. L = 3	The project is going to provide capacity building to all stakeholders from government, private sector and civil society. Under components 1, 2, 3, especially institutional actors such as the rural electrification agency, the regulator, and standards body as well as private sector companies and financial institutions will receive targeted capacity building. As far as ABER the implementing partner is concerned, the HACT (assessment) which was done during the PPG phase confirmed that ABER is capable of managing project funds. Moreover, a Responsible Party will implement activities. For which ABER has weaknesses.	PMU, ABER,

			I = 4		
9	Workers and target communities are not fully briefed/trained /protected during installation and/or operation of new equipment	**Operational Occupational safety/health and well-being**	The rating of this risk is **Moderate**. L = 2 I = 4	In the framework of pilot project sever stakeholders engagement and sensitization activities are foreseen. Project developers are private sector companies that are used to abiding laws and rules in place in terms of labor and quality standards. However, ABER and ANEREEE will safeguard the target communities by doing appropriate checks and safeguards on equipment (prior to importation and on arrival) and personnel who will be involved in installation. Moreover, the local community will be involved through community-level conversation, sensitizations to understand how to avoid to prevent incidents.	PMU, Private sector companies implementing pilot projects
10	Risk to indigenous peoples	**Social and Environmental**	The rating of this risk is **Substantial**. L = 3 I = 4	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". At the PPG phase, this country has been found as having indigenous groups at the national level. This increases the risks of the project on indigenous peoples. However, pilots have been delimited to a region where it is unlikely that indigenous people will be found. An indigenous people assessment has been conducted by an Environmental and Social expert, and an Indigenous Peoples Plan Framework (called Vulnerable Groups Planning Framework) is being developed as part of the PPG phase. It is expected that the risks identified here will be mitigated and managed during the project cycle. As part of the ESIA/ESMP, an Indigenous Peoples Plan will be put in place and Free, Prior and Informed Consent (FPIC) secured, if necessary for SES compliance. See ESMF (Annex 10 to the project document) Attachment II and IPPF for details of assessment and management of this risk.	PMU, Private sector companies implementing pilot projects
11	Sector stakeholders do not participate/ engage actively in the project.	**Social and Environmental** **1.11. Stakeholder engagement**	The rating of this risk is **Low**. L =2 I = 2	A well-structured national consultation and dissemination process will be developed that allows for active dialogue and involvement of all stakeholders during the project duration.	PMU, UNDP, SP/CNDD

12	Limited experience and capacity of project partners and executing entities/Institutions.	**Operational** **3.8. Capacity development of national partners** **Strategic** 7.3 Capacities of the partners	The rating of this risks is **Moderate**. L =2 I = 4	For national procurement rules will be applied to procure experienced project partners and executing entities/Institutions with demonstrated and successful past experience in the sector.	PMU, UNDP
13	Social and political conflicts. More recently, terrorist activities have escalated and the uncertainty of this events could affect project implementation in conflict and terrorist prone areas.	**Safety and Security** **8.1 Armed conflict** **8.2 Terrorism** **8.3 Civil Unrest**	The rating of this risk is **Substantial**. L =2 I = 5	The sites will be selected in a way that project activities will not take place in high-risk areas. Also, the project will work as much as possible with the decentralized authorities of the provinces and rural areas of Burkina Faso. The political will / support for this project is really strong as demonstrated through the PIF and PPG phases, which will serve to safeguard the project and its target population against the various security and political threats. Also, the project will be monitoring of the local and regional security and safety situation in order to inform safety decisions on site selection for pilot project and other activities. The project will benefit from the support of the local security forces and UNDSS to assess access to project sites and how to best protect beneficiaries and staff amid the ongoing conflict in the Sahel region**.**	MEMQ
14	Private sector is not able to deliver pilot projects	**Organizational** **4.6 Due diligence of private sector**	The rating of this risk is **Moderate**. L = 2 I = 4	The pilot project selection follows a rigorous process of calls for proposals. Also, ABER, the implementing partner or other stakeholders have to endorse the project and promoter. Prior to the start of the pilot project due diligence will be conducted to ensure the developer is able to fully execute the project without any major risk.	UNDP
15	Procurements are not done appropriately and selected companies do not have the appropriate capacity to deliver	**Organizational** **4.10 Procurement**	This rating of this risk is **Moderate**, as it may jeopardize the implementation of Component 2 (pilot project), which is an important part of the project. L = 2 I = 4	ABER has implemented several tenders. The HACT did not mention this risk as being of any significant importance. However, training on tenders will be provided to ABER and other parties.	ABER

16	Confusion in roles	**7.4 Roles and responsibilities of partners**	The rating of this risk is **Low**. L = 1 I = 3	Each partner's role and responsibility will be clearly spelled out. Also, where appropriate, contracts or MoUs will be executed.	UNDP

Annex 8: Overview of Project Staff and Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting		
Project Manager/ Coordinator *(Indicative rate: $20,520/year)*	*Full time over 4 years*	*The Project Manager (PM) will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors.* *Duties and Responsibilities* • *Manage the overall conduct of the project.* • *Plan the activities of the project and monitor progress against the approved workplan.* • *Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.* • *Monitor events as determined in the project monitoring plan, and update the plan as required.* • *To allocate a minimum of 10% of his/her time to regional project activities.* • *Provide support for completion of assessments required by UNDP, spot checks and audits.* • *Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form.* • *Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.* • *Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.* • *Ensure that changes are controlled and problems addressed.* • *Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.* • *Prepare and submit financial reports to UNDP on a quarterly basis.* • *Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log.* • *Capture lessons learned during project implementation.* • *Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.* • *Prepare the inception report no later than one month after the inception workshop.* • *Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.* • *Prepare the GEF PIR;* • *Assess major and minor amendments to the project within the parameters set by UNDP-GEF;* • *Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans;* • *Monitor and track progress against the GEF Core indicators.* • *Support the Terminal Evaluation process.*

Consultant	Time Input	Tasks, Inputs and Outputs
		• *Add technical tasks as necessary*
Project and Finance Assistant *Rate: $16,596/year (total cost to project)*	*Full time over 4 years*	*<u>Duties and Responsibilities</u>* *Under the guidance and supervision of the Project Manager, the Project Assistant will carry out the following tasks:* • *Assist the Project Manager in day-to-day management and oversight of project activities;* • *Assist the M&E officer in matters related to M&E and knowledge resources management;* • *Assist in the preparation of progress reports;* • *Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, TAC, UNDP, project consultants and other PMU staff;* • *Provide PMU-related administrative and logistical assistance.* *<u>Duties and Responsibilities with support and oversight from UNDP Country Office and Project Manager</u>* • *Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager;* • *Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoI financial rules and procedures;* • *Validate and certify FACE forms before submission to UNDP;* • *Provide necessary financial information as and when required for project management decisions;* • *Provide necessary financial information during project audit(s);* • *Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues;* • *Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;* *Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.*
Local / National contracting		
Project Environmental and Social Safeguards Officer / Specialist *Rate: $ 2,500/week*	*6 weeks over 4 years*	*The national expert will be nationally recruited by the UNDP and she/he will be responsible for undertaking social and environmental studies related to the activities of the project.* *<u>Duties and Responsibilities</u>* • Monitor progress in development/implementation of the project ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all safeguard related plans; • Ensure social and environmental grievances are managed effectively and transparently; • Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary; • Ensure full disclosure with concerned stakeholders;

Consultant	Time Input	Tasks, Inputs and Outputs
		• Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation; • Work with the PMU to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project; • Assist the finance and administration staff by providing technical inputs during the preparation and revision of the Management Plan, Annual Work Plans, periodic reports such as the Combined Project Implementation Review/Annual Project Report (PIR/APR), inception report, technical reports, quarterly reports for submission to UNDP, the GEF, other donors and Government Departments, as required; • Ensure quality control of interventions/outcomes/deliverables; • Document lessons learned from project implementation and make recommendations to the Steering Committee for more effective implementation and coordination of project activities; <u>*Education and experience:*</u> • University / Master's Degree in social and environmental sciences or other closely related areas; alternatively 10 years of experience in the same areas. • At least 5 years of progressively responsible experience at the local and/or national level in environmental and social impact studies (including necessary national qualifications to conduct ESIA analysis under the national legislation). • At least 3 years' experience with community engagement in the public sector; • Previous experience in development assistance or related work for a donor organization, governmental institutions, NGO or private sector / consulting firm is a very strong advantage; • Strong analytical, drafting and communication skills; • Experience in the usage of computers and office software packages (MS Word, Excel, PowerPoint, etc) and advance knowledge of spreadsheet and database packages, experience in handling of web-based management systems; Strong research skills
Gender and Stakeholder engagement specialist *Rate: $ 2,500/week*	*6 weeks over 4 years*	*Provide expert stakeholder engagement guidance and support to the PMU in developing pilot projects, needs assessments, community engagement, impact assessments and design of grievance mechanism with specific consideration of inclusivity of gender, youth and other vulnerable groups.* *Expert or Specialist input supported by contracted services for consultation activities such as surveys, focus groups, etc.*
Outcome 2		
Local / National contracting		
Stakeholder engagement specialist *Rate: $ 1,750/week*	*2.5 weeks over 4 years*	*Provide expert stakeholder engagement guidance and support to the PMU in developing pilot projects, needs assessments, community engagement (consultation and information sharing), impact assessments and design of grievance mechanism with specific consideration of inclusivity of gender, youth and other vulnerable groups.* *Expert or Specialist input supported by contracted services for consultation activities such as surveys, focus groups, etc.*
Outcome 1, 2 and 3		

Consultant	Time Input	Tasks, Inputs and Outputs
Local / National contracting		
Gender Analyst / Specialist *Rate: $ 2,000/week*	*15 weeks over 4 years*	*The Gender Analyst(s) will be responsible to provide high quality technical support in ensuring the quality of the gender-responsiveness and mainstreaming of the project, as well as knowledge and capacity building activities, in accordance with the objective and outcomes of the project document and the Gender Action Plan. Expert or Specialist input supported by contracted services for activities identified in the Gender Action Plan.* *<u>Duties and Responsibilities</u>* • *Provide guidance to the various aspects of project design and implementation to enhance mainstreaming gender equality and women's empowerment in all aspects of the project,* • *Guidance for improved gender representation in all project related activities,* • *Ensure inclusivity and gender sensitive communication and consultation,* • *Recommendations for tailored approaches to prioritize women's needs and identified gender equality priorities in the pilot project development,* • *Ensure gender sensitivity in data strategy, data collection frameworks, monitoring, analysis and reporting,* • *Support knowledge sharing, documentation and dissemination of good practices on gender equality, women's empowerment and rights within the project.*
International / Regional and global contracting		
AMP Regional Project Panel of Technical Experts *Rate: $ 800/day*	*26.25 days over 4 years*	*Drawing from the pool of technical experts available at the regional project, obtain technical advisory support as required for:* • *National Dialogue questions and concerns (Output 1.2).* • *Identification of a business model (if not already established by the regulatory framework) and development of the Mini-grid Vision and Implementation Roadmap for Eswatini (Output 1.2).* • *Capacity building including tailoring of training material (Output 1.3).* • *Design and structuring of pilot project business models (Oupts 2.1 and 2.2)* • *Tailoring of training material and knowledge products for industry capacity building (Output 2.3)* • *Design of the data strategy and MRV framework (Outputs 3.1 and 3.4)*
Consultant	**Time Input**	**Tasks, Inputs and Outputs**
For Project Management		
Local / National contracting		
Project Manager/Coordinator *Rate: $25,000/year (indicative)*	*43 weeks / over 4 years*	*The Project Manager (PM), together with the Lead Technical Advisor will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors.* *<u>Duties and Responsibilities</u>* *1 Manage the overall conduct of the project.* *2 Plan the activities of the project and monitor progress against the approved workplan.* *3 Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.* *4 Monitor events as determined in the project monitoring plan, and update the plan as required.* *5 Provide support for completion of assessments required by UNDP, spot checks and audits.*

Consultant	Time Input	Tasks, Inputs and Outputs
		6 Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. *7 Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.* *8 Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.* *9 Ensure that changes are controlled and problems addressed.* *10 Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.* *11 Prepare and submit financial reports to UNDP on a quarterly basis.* *12 Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;* *13 Capture lessons learned during project implementation.* *14 Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.* *a) Prepare the inception report no later than one month after the inception workshop.* *b) Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.* *a) Prepare the GEF PIR;* *b) Assess major and minor amendments to the project within the parameters set by UNDP-GEF;* *c) Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans;* *d) Monitor and track progress against the GEF Core indicators.* *e) Support the Mid-term review and Terminal Evaluation process.* *f) Add technical tasks as necessary*
Project Assistant *Rate: $18,000/year*		*<u>Duties and Responsibilities</u>* *Under the guidance and supervision of the Project Manager, the Project Assistant will carry out the following tasks:* *1. Assist the Project Manager in day-to-day management and oversight of project activities;* *2. Assist the M&E officer in matters related to M&E and knowledge resources management;* *3. Assist in the preparation of progress reports;* *4. Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, TAC, UNDP, project consultants and other PMU staff;* *5. Provide PMU-related administrative and logistical assistance.*
Project Accountant/Finance Assistant/Finance officer *Rate: $12,000/year*		*<u>Duties and Responsibilities</u>* • *Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager;* • *Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoI financial rules and procedures;* • *Validate and certify FACE forms before submission to UNDP;*

Consultant	Time Input	Tasks, Inputs and Outputs
		• *Provide necessary financial information as and when required for project management decisions;* • *Provide necessary financial information during project audit(s);* • *Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues;* • *Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;* • *Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.*
International / Regional and global contracting		
		For Technical Assistance
		Outcome 1
Local / National contracting		
Protected Area Capacity Development National Specialist *Rate: $300/week*	*80 weeks / over 5 years*	*Under close supervision of Lead Technical Advisor and Project Manager (PM) the Protected Area Capacity Development Specialist (PACDS) will work closely with the Protected Area Capacity Development Advisor (PACDA) to conduct protected area capacity building related to the project under Outputs 1.2 and 1.3 and support a working group for improved protected area capacity building and work with that group to:* • *Contribute to the development of a capacity development strategy and action plan for increasing the management effectiveness of the PA system.* • *Coordinate the establishment of PA management standards and a PA and individual performance monitoring system for different categories of PAs.* • *Contribute to the development of a program of training to raise focal competencies of senior and mid-level protected area managers and practioners.* • *Contribute to the indentification of incentive mechanisms for increasing the motivation of field staff.* • *Contribute to the development and institutionalisation of modernized reporting structure and methods.* • *Contribute to the development of law enforcement and habitat/biodiversity monitoring protocols.* • *Coordinate the development and institutionalisation of a PA information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities.* • *Coordinate the development of official guidelines for community engagement and co-management.*
		Outcome 4: KM and M&E
Project Gender Officer		*<u>Duties and Responsibilities</u>* c) Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled; d) Oversee/develop/coordinate implementation of all gender-related work; e) Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;

Consultant	Time Input	Tasks, Inputs and Outputs
		f) Work with the M&E officer and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender issues of the project;
Project Monitoring and Evaluation Officer		*Duties and Responsibilities* • *Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;* • *Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;* • *Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;* • *Oversee/develop/coordinate the implementation of the stakeholder engagement plan;* • *Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results;* • *Facilitate mid-term and terminal evaluations of the project; including management responses;* • *Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products;* • *Support project site M&E and learning missions;* • *Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.*
Outcome		
Project Safeguards Officer		*Duties and Responsibilities* *g) Monitor progress in development/implementation of the project ESMP/ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;* *h) Oversee/develop/coordinate implementation of all safeguard related plans;* *i) Ensure social and environmental grievances are managed effectively and transparently;* *j) Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary;* *k) Ensure full disclosure with concerned stakeholders;* *l) Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation;* *m) Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project;nm*

Annex 9: Stakeholder Engagement Plan

Submitted as separate document.

Annex 10: Environmental Social Management Framework (ESMF)

Submitted as separate document.

Annex 11: Gender Analysis and Gender Action Plan

Submitted as separate document.

Annex 12: Procurement Plan

Submitted as separate document.

Annex 13: GEF focal area specific annexes (e.g. METT, GHG calculations, target landscape profile, feasibility study, other technical reports)

Submitted as separate document.

Annex 14: Additional agreements: such as cost sharing agreements, project cooperation agreements signed with NGOs (where the NGO is designated as the "executing entity"), letters of financial commitments etc..

Co-financing letters combined and attached as a separate document.

Annex 15: GEF Core indicators

Core Indicator 6	**Greenhouse gas emission mitigated**					***(Metric tons of CO_2e)***
		Expected metric tons of CO_2e (6.1+6.2)			
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*3,700*	*14,353*		
	Expected CO2e (indirect)	*727,037*	*495,000*		
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector				
		Expected metric tons of CO_2e			
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)				
	Expected CO2e (indirect)				
	Anticipated start year of accounting				
	Duration of accounting				
Indicator 6.2	Emissions avoided Outside AFOLU				
		Expected metric tons of CO_2e			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*3,700*	*14,353*		
	Expected CO2e (indirect)	*727,037*	*495,000*		
	Anticipated start year of accounting				
	Duration of accounting				
Indicator 6.3	Energy saved				
		MJ			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology				
	Technology	Capacity (MW)			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Solar Photovoltaic	*0.09*	*0.4*		
	Energy Storage	*0*	*1*		
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**				***(Number)***
		Number			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Female	*7,537*	*2,782*		
	Male	*7,537*	*2,782*		
	Total	*15,074*	*5,564*		

Annex 16: GEF 7 Taxonomy

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

	☒**Learning**		
		☒Theory of Change	
		☒Adaptive Management	
		☒Indicators to Measure Change	
	☒**Innovation**		
	☒**Knowledge and Learning**		
		☒Knowledge Management	
		☒Innovation	
		☒Capacity Development	
		☒Learning	
	☒**Stakeholder Engagement Plan**		
☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☒Beneficiaries	
		☒Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☒**Gender results areas**		
		☐Access and control over natural resources	
		☒Participation and leadership	
		☒Access to benefits and services	
		☒Capacity development	
		☒Awareness raising	
		☒Knowledge generation	
☐**Focal Areas/Theme**			
	☐**Integrated Programs**		
		☐Commodity Supply Chains (Good Growth Partnership)	
			☐Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☒Smallholder Farmers
			☐Adaptive Management
		☐Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health
			☐Diversified Farming
			☐Integrated Land and Water Management

			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☒Gender Dimensions
			☒Multi-stakeholder Platforms
		☐Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐Sustainable Commodity Production
			☐Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☒Smallholder Farmers
		☐Sustainable Cities	
			☐Integrated urban planning
			☐Urban sustainability framework
			☐Transport and Mobility
			☐Buildings
			☐Municipal waste management
			☐Green space
			☐Urban Biodiversity
			☐Urban Food Systems
			☐Energy efficiency
			☐Municipal Financing
			☐Global Platform for Sustainable Cities
			☐Urban Resilience
	☐**Biodiversity**		
		☐Protected Areas and Landscapes	
			☐Terrestrial Protected Areas
			☐Coastal and Marine Protected Areas
			☐Productive Landscapes
			☐Productive Seascapes
			☐Community Based Natural Resource Management
		☐Mainstreaming	
			☐Extractive Industries (oil, gas, mining)
			☐Forestry (Including HCVF and REDD+)
			☐Tourism
			☐Agriculture & agrobiodiversity
			☐Fisheries
			☐Infrastructure
			☒Certification (National Standards)
			☐Certification (International Standards)
		☐Species	

			☐Illegal Wildlife Trade
			☐Threatened Species
			☐Wildlife for Sustainable Development
			☐Crop Wild Relatives
			☐Plant Genetic Resources
			☐Animal Genetic Resources
			☐Livestock Wild Relatives
			☐Invasive Alien Species (IAS)
		☐Biomes	
			☐Mangroves
			☐Coral Reefs
			☐Sea Grasses
			☐Wetlands
			☐Rivers
			☐Lakes
			☐Tropical Rain Forests
			☐Tropical Dry Forests
			☐Temperate Forests
			☐Grasslands
			☐Paramo
			☐Desert
		☐Financial and Accounting	
			☐Payment for Ecosystem Services
			☐Natural Capital Assessment and Accounting
			☐Conservation Trust Funds
			☐Conservation Finance
		☐Supplementary Protocol to the CBD	
			☐Biosafety
			☐Access to Genetic Resources Benefit Sharing
	☐**Forests**		
		☐Forest and Landscape Restoration	
			☐REDD/REDD+
		☐Forest	
			☐Amazon
			☐Congo
			☐Drylands
	☐**Land Degradation**		
		☐Sustainable Land Management	
			☐Restoration and Rehabilitation of Degraded Lands
			☐Ecosystem Approach
			☐Integrated and Cross-sectoral approach
			☐Community-Based NRM
			☐Sustainable Livelihoods

			☐Income Generating Activities
			☐Sustainable Agriculture
			☐Sustainable Pasture Management
			☐Sustainable Forest/Woodland Management
			☐Improved Soil and Water Management Techniques
			☐Sustainable Fire Management
			☐Drought Mitigation/Early Warning
		☐Land Degradation Neutrality	
			☐Land Productivity
			☐Land Cover and Land cover change
			☐Carbon stocks above or below ground
		☐Food Security	
	☐**International Waters**		
		☐Ship	
		☐Coastal	
		☐Freshwater	
			☐Aquifer
			☐River Basin
			☐Lake Basin
		☐Learning	
		☐Fisheries	
		☐Persistent toxic substances	
		☐SIDS : Small Island Dev States	
		☐Targeted Research	
		☐Pollution	
			☐Persistent toxic substances
			☐Plastics
			☐Nutrient pollution from all sectors except wastewater
			☐Nutrient pollution from Wastewater
		☐Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐Strategic Action Plan Implementation	
		☐Areas Beyond National Jurisdiction	
		☐Large Marine Ecosystems	
		☐Private Sector	
		☐Aquaculture	
		☐Marine Protected Area	
		☐Biomes	
			☐Mangrove
			☐Coral Reefs
			☐Seagrasses
			☐Polar Ecosystems
			☐Constructed Wetlands

	☐**Chemicals and Waste**		
		☐Mercury	
		☐Artisanal and Scale Gold Mining	
		☐Coal Fired Power Plants	
		☐Coal Fired Industrial Boilers	
		☐Cement	
		☐Non-Ferrous Metals Production	
		☐Ozone	
		☐Persistent Organic Pollutants	
		☐Unintentional Persistent Organic Pollutants	
		☐Sound Management of chemicals and Waste	
		☐Waste Management	
			☐Hazardous Waste Management
			☐Industrial Waste
			☒e-Waste
		☐Emissions	
		☐Disposal	
		☐New Persistent Organic Pollutants	
		☐Polychlorinated Biphenyls	
		☐Plastics	
		☐Eco-Efficiency	
		☐Pesticides	
		☐DDT - Vector Management	
		☐DDT - Other	
		☐Industrial Emissions	
		☐Open Burning	
		☐Best Available Technology / Best Environmental Practices	
		☐Green Chemistry	
	☐**Climate Change**		
		☐**Climate Change Adaptation**	
			☐Climate Finance
			☐Least Developed Countries
			☐Small Island Developing States
			☐Disaster Risk Management
			☐Sea-level rise
			☐Climate Resilience
			☐Climate information
			☐Ecosystem-based Adaptation
			☐Adaptation Tech Transfer
			☐National Adaptation Programme of Action
			☐National Adaptation Plan
			☐Mainstreaming Adaptation
			☒Private Sector

			☒Innovation
			☐Complementarity
			☐Community-based Adaptation
			☒Livelihoods
		☐**Climate Change Mitigation**	
			☐Agriculture, Forestry, and other Land Use
			☒Energy Efficiency
			☐Sustainable Urban Systems and Transport
			☐Technology Transfer
			☒Renewable Energy
			☐Financing
			☒Enabling Activities
		☐**Technology Transfer**	
			☐Poznan Strategic Programme on Technology Transfer
			☐Climate Technology Centre & Network (CTCN)
			☐Endogenous technology
			☐Technology Needs Assessment
			☐Adaptation Tech Transfer
		☐**United Nations Framework on Climate Change**	☐Nationally Determined Contribution
	☒ **Rio Markers**		
		☒Paris Agreement	
		☒Sustainable Development Goals	
		☐Climate Change Mitigation 0	
		☐Climate Change Mitigation 1	
		☒Climate Change Mitigation 2	
		☐Climate Change Adaptation 0	
		☐Climate Change Adaptation 1	
		☐Climate Change Adaptation 2	

Annex 17: Description of the pilot projects

Through the pilot projects, ABER is interested in investigating various innovations in terms of technologies, business models, delivery models, tariffs, use digital tools, etc. which will serve to build the necessary evidence to effect and systematize changes to the regulations and delivery model. For instance, private sector ownership and operation will be used as opposed to the cooperative (COOPEL) model. The pilot project promoters will also be able to apply a flexible tariff regime based on time of use (day vs night tariff) or consumer type (productive uses vs. household). In fact, pilot projects will constitute a real case study for the minigrid market in regards to licensing, delivery model, business model, tariffs, stakeholders engagement, etc. The demonstration projects will inform many of these key elements, which have a direct effect on project costs and risks, hence, impacting private developers' investment decisions. Although, the rural electrification sector in Burkina Faso has seen important qualitative and quantitative efforts, serious gaps still need to be closed in terms of policy and regulatory framework in order to scale-up private sector investment in minigrids.

During PPG phase the pilot project described below were selected in close consultation with ABER, due to both their innovative characteristics well aligned with the objectives of AMP, and their priority nature for ABER in terms of rural electrification. Should the selected pilots vary during implementation, it will be critical to ensure that the key implementation principles described in Section IV (Results and Partnerships), Output 2.1 remain complied with for the new pilots selected. Also, it is important to note that pilot minigrids supported by this project will be 100% solar PV minigrids with batteries.

Pilot project 1 [Greenfield minigrids]: Community Solar Energy Platforms (CSEP)
This project is co-financed by the Swedish Cooperation (Sida) in the framework of the Africa Enterprise Challenge Fund (AECF), which selected a private company after a competitive bidding process ran with ABER. This pilot project aims to provide access to modern electricity and energy efficient productive equipment to households, micro-businesses and rural cooperatives, enable the development of income generating activities, increase the economic competitiveness of rural populations, improve the efficiency of agri-food processing, and reduce greenhouse gas emissions. Each Community Solar Energy platform (CSEP) is composed of the following components:

- An Energy Platform: a 20 kWp photovoltaic power plant, a 80-kWh energy storage solution, a 1 km low voltage minigrid connecting 30 households and 20 micro businesses;
- An Agricultural Facility: electric and efficient agricultural processing equipment (1 milling machine, 1 grinder, 1 press for oil and/or peanut butter, etc.) depending on the specific needs of the community;
- Other equipment: 1 dryer and 1 refrigerator

The CSEP is deployed as a complete containerized solution and made available to the community using digital payment, with remote monitoring technology. Though this type of technological solution has not yet been deployed in Burkina Faso, there are several manufacturers / developers internationally by the likes of Off-Grid Box, SustainSolar, Akuo Energy, Winch, SolarEdge/Kokam, Metka, just to name a few.

This pilot will demonstrate (i) demand aggregation as a cost-reduction lever; (ii) productive use of energy and efficient appliances; (iii) private sector-led delivery models; (iv) flexible tariff regime for increased viability of minigrids; (v) innovative financing; (vi) socio-economic development through renewable energy minigrids.

Overall, the project is expected to install a total of 400 kWp through 20 CSEPs in 20 villages of Burkina Faso. All the 20 sites were selected using specific (demographic, technical and socio-economic) criteria from a list of 150 sites provided by ABER from its database. From these 150 sites, the developer selected 20 following a 7-step process and using criteria such as population size, density, distance from the grid, economic activities, security, etc. The GEF grant is expected to co-finance the deployment of 3 CSEPs in the following 3 villages currently without access to electricity:

- DOMBRE (13°29'54''N, 2°11'39''W): Located in the commune of Namissiguima, province of Yatenga in the North of Burkina Faso, this village relies heavily on subsistence farming, millet, sorghum, corn, beans and

horticulture, so, the energy from the minigrid to be installed will use the existing multi-functional platform (currently running on diesel) managed by a women group and drying and irrigation needs as anchor. In addition to productive uses in the agri-business sector, there are several institutional customers in TIBIN, specifically, 1 market, 1 school, 1 health center and 11 places of worship as well as shops.

- MASBORE (13°20'17''N 2°25'35''W): Located in the commune of Leba, province of Zeba, in the Northern region of Burkina Faso, this village, has diesel multi-functional platform managed privately. The village relies on subsistence farming of sorghum, millet, corn, niebe, peanut, sesame and horticulture, which, along with the multifunctional platform (MFP), provides a viable anchor to the minigrid to be installed for productive uses in the framework of the pilot project. Additionally, Masbore is home to 2 elementary schools; 1 middle school; 2 Koranic schools; 1 health center; 1 market and 8 places of worship. The MFP is currently out-order, hence, in the framework of the pilot, it is envisaged to supply energy efficient food-processing equipment to replace the MFP).
- TIBIN (13°01'10''N 2°20'42''W): Located in the commune of Yako, province of Passore, in the northern region of Burkina Faso, Tibin, relies on subsistence farming of millet, corn and sesame, providing a strong anchor along with the existing diesel-based multi-functional platform, which is managed by a cooperative of women, for use of the energy produced by the minigrid to be installed by the pilot project. Also, there is 1 market, 1, school, 1 health center and 3 places of worship. Women, organized in groups are highly active in income generating activities in Tibin.

This greenfield pilot project with a focus on productive use will support capacity building of women on entrepreneurship and management of the solar energy platforms for the development of income generating activities. The strategy will also contribute to increasing women's leadership through platform and co-ownership of agriculture and energy efficient appliances. Additionally, financial literacy will be conducted towards women and young people. It is also estimated that women will save at least 2 hours and 15 minutes per day as a result of the minigrid. Currently, women spend a good portion of their day, doing chores such as fetching water, watering farms, and processing products manually or using inefficient technologies. Where multi-functional platforms exist, the pilot will not displace their current management mechanism, rather, the minigrids will be strengthen the economic viability of the operators of platform.
Lastly, improved access to health services through the availability of energy for lighting and refrigeration of pharmaceutical products.

Pilot project 2 [Productive use overlays]: Increasing Energy Access through Productive Uses in the Ecovillages of Burkina Faso

This pilot project is for productive use overlay to an existing minigrid developed by ABER in collaboration with the Ministry of Environment through DGECC and SP/CNDD, the organization in charge of the Ecovillage Initiative. This pilot project will i) mainstream productive use of energy through innovative containerized solutions and efficient appliances for milling, grinding, presses and refrigerators, (ii) support financial and social inclusion through the innovative financing for acquisition of energy efficient appliances and use of PAYG technology, (iii) showcase hybrid private sector and cooperative delivery models, (iv) support socio-economic development and (v) capacity-building of business/farming cooperatives.

This pilot project will install 485 kWp using containerized energy solutions (such as Off-Grid Box, SustainSolar, Differ Community Power, etc.) equipped with all the hardware and software needed to produce electricity and clean water in six villages (see Table 14). Customized submersible solar water pumps, irrigation and cold storage, sewing machines, grinders, milling machines, presses, welding and carpentry equipment will also be delivered using an innovative financing scheme (leasing model). Each box system will be composed of *24 modules 340 Wp (8.16 kWp); 23,76 kWh battery capacity (lead gel); 5 KVA inverter.*

This pilot will fully support the socio-economic development of vulnerable populations such as women, youth and small-holder farmers. The gender strategy will consist of targeting women and youth-led income generating activities (vegetable farms, processing of peanuts, shea, sesame, forest fruits) and SMEs led by youth grinding, milling, internet shops.

The sites planned for the pilot projects 1 and 2 are geo-referenced on Figure 7.

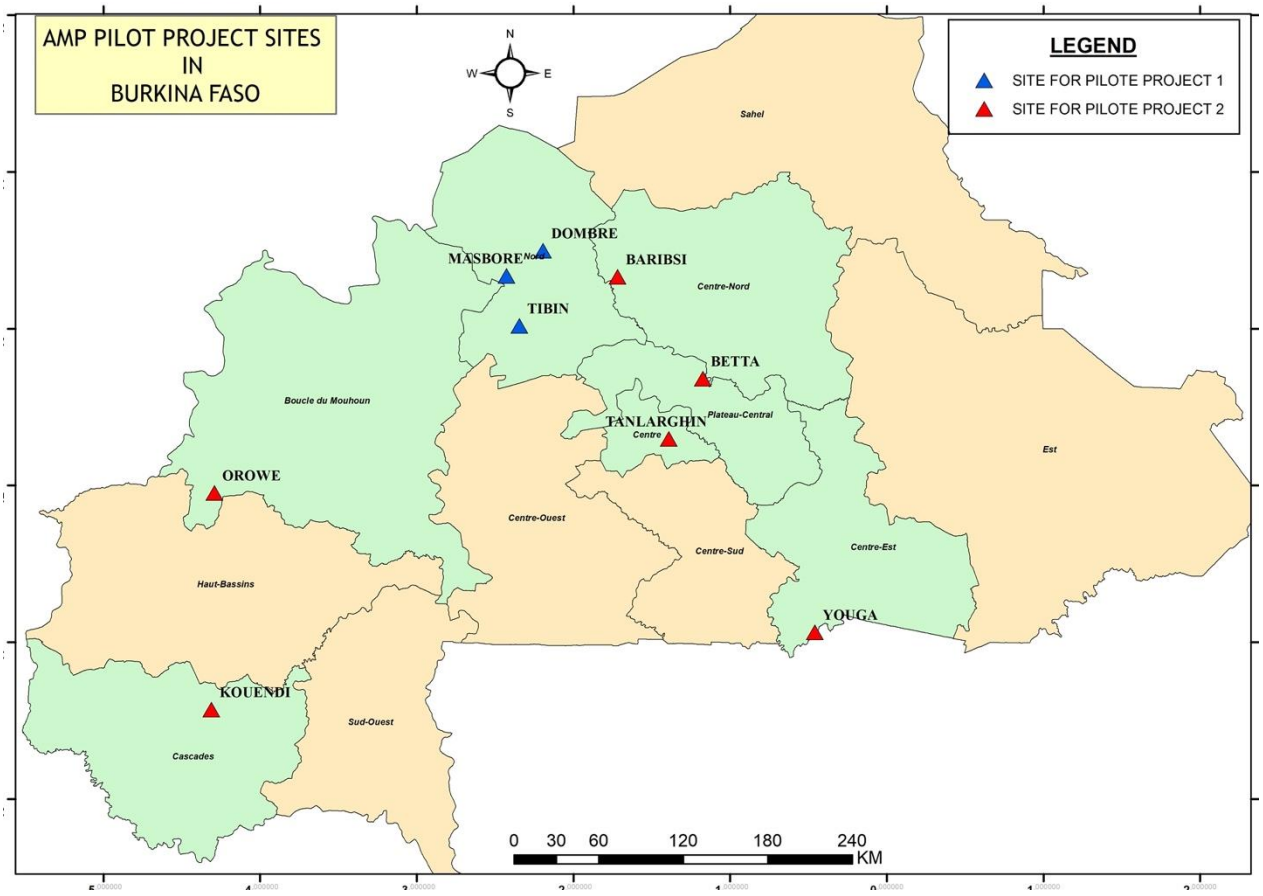


Figure 7: Map of the pilot project sites

Table 14: List of 6 Ecovillages targeted by the 2nd Pilot Project

N°	REGION	PROVINCE & COMMUNE	VILLAGE	POPULATION & NUMBER OF HOUSEHOLDS (HH)	CURRENT ENERGY DEMAND	INSTALLED CAPACITY & STORAGE	SOCIAL AND INSTITUTIONAL USE	PRODUCTIVE USES
1	Centre	Kadiogo & Saaba	Tanlarghin	5 000 & 833 HH	325	50 kWc & 70 KWh	2 schools 1 market 1 health center	Local service economy, milling, welding, IGA (women, refrigeration, processing), agricultural economy (market gardening, irrigated crops ...) Commerces, transformation, services, froid/conservation
2	Centre-Est	Boulgou & Zabré	Youga	1 153 & 211 HH	175	35 kWc & 70 kWh	2 schools 1 market 1 health center 1 security post	1 gold mine (BMC), local service economy, milling, welding, IGA (women, refrigeration, processing), agricultural economy (market gardening, irrigated crops ...). Commerces, transformation, services, froid/conservation
3	Plateau-Central	Oubritenga & Ziniaré	Betta	1 265 & 211 HH	175	35 kWc & 70 kWh	1 school 1 market 1 health center	Horticulture, aquaculture, rice, millet/sorghum, SME (welding, milling/grinding, refrigeration/cold chain). High involvement of women in these activities
4	Nord	Passoré & Latodin	Baripsi	1 944 & 100 HH	175	35 kWc & 70 KWh	1 school 1 market	Local service economy, milling, welding, IGA (women, refrigeration, processing), agricultural economy (market gardening, irrigated crops ...) 1 literacy center, 1 cereal bank, 2 churches
5	Cascades	Comoé & Sidéradougou	Kouendi	4 762 & 794 HH	300	No minigrid installed yet	7 schools 1 market 1 health center	Quality honey, exploitation of forest products, services (commerce, welding, internet café/youth center), processing, cereals and sugar cane residues
6	Boucle du Mouhoun	Banwa	Orowé	2 922 & 487 HH	200	No minigrid installed yet	4 churches 1 school 1 health center 1 market 3 mosques	Local service economy, milling, welding, IGA (women, refrigeration, processing), agricultural economy (market gardening, irrigated crops, etc.) Corn, sorghum, rice, millet, sesame, fonio, cowpea, cotton. With high level of engagement of women and youth.
Total				**17 046 & 2636 HH**				

Annex 18: GHG Calculation Spreadsheet

Submitted as separate document.

Annex 19: COVID-19 related considerations and opportunities

By increasing the commercial viability of renewable energy minigrids and thus encouraging access to long term, affordable and clean energy, AMP projects are well aligned with government efforts to respond to the pandemic and national priorities for long-term green and equitable recovery. The COVID-19 crisis has highlighted the importance of reliable and affordable access to electricity for enabling essential health service delivery, and underpinning the ability of communities to abide by social-distancing measures and overcome the disruption to economic activity. Also, over the medium to long term, access to reliable, affordable, clean energy will be crucial to support economic recovery. Not only are investments in off-grid renewable energy important levers to create jobs and generate financial savings but increasing energy access for the most vulnerable population creates opportunities for local economic development that enhance resilience to shocks and crises. Over the long term, access to reliable, clean energy reduces pressure on ecosystems and may contribute to reducing the likelihood and spread of zoonotic diseases.

The multidimensional COVID-19 crisis creates opportunities for the project 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 as relevant for AMP have been identified for inclusion in each projects as relevant:

- **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.
- **Promoting the inclusion of electric cooking into minigrid operators service offer.** With more attention paid to respiratory health issues as a result of the health crisis, an opportunity arises to address air pollution and make the case for accelerated decarbonization of the electricity matrix, clean transport, and clean cooking and heating technologies. AMP national child projects could provide a way to develop a broad array of energy services as part of a social protection program for the crisis response, particularly focused on provision of clean cooking e-technologies from minigrid operators, which are particularly important to reducing health-related vulnerabilities to COVID-19. Households switching to minigrid-powered electric cooking save money compared with traditional methods. Electric cooking also presents minigrid developers with a valuable opportunity to increase their load factor and boost their revenue.
- **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 specifically 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.

Annex 20: Africa Minigrids Program Theory of Change

Underlying risks and barriers are currently driving higher minigrid costs and inhibiting innovation, preventing scale up of renewable energy minigrids.

AMP Program interventions systematically target underlying risks and barriers to reduce MG costs through public interventions in four country-level thematic areas (Components).

Commercial viability of MGs is improved through reduced risks, lower costs and improved revenues.

With reduced risks and improved cost structures, access to finance at scale is unlocked for developing minigrids to their full potential.