ANNUAL PROGRESS REPORT 2023

AFRICA MINIGRIDS PROGRAM

Supported by: gef

Led by: UNDP

In partnership with: RMI

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1. INTRODUCTION

CURRENTLY, 685 MILLION PEOPLE GLOBALLY STILL DON'T HAVE ACCESS TO ELECTRICITY – INCLUDING 571 MILLION, OR THREE QUARTERS OF THE WORLD'S UNELECTRIFIED POPULATION, IN SUB-SAHARAN AFRICA.

Renewable energy minigrids ('minigrids'), and in particular solar-battery minigrids, represent an important electrification option for remote communities where the extension of national grids may not be feasible in the near future. These minigrids can be rapidly deployed when sites are selected based on market demand, renewable energy availability, geographic suitability, infrastructure accessibility, and maintenance support. They have the potential to empower communities through productive electricity usage, unlocking numerous socioeconomic benefits for some of the world's most deprived populations.

This minigrid opportunity leverages several disruptive trends, including advancements in solar and storage technologies, the rise of digitalization with mobile-money services for convenient payments, and innovative private sector business models tailored to low-income and rural populations.

But despite the opportunity, minigrids still encounter several challenges. These include a lack of a solid pipeline of bankable projects, constraints

in the ability of rural customers to afford cost-reflective tariffs essential for sustainable business models, and capacity limitations within governmental, financial sector, and minigrid developer realms.

The Africa Minigrids Program (AMP) is an ambitious response to this energy access challenge. AMP is currently being implemented in 21 African countries, where **265 million people could be provided electricity access at least cost through minigrids by 2030**, representing a $65 billion investment opportunity. AMP's interventions and collaboration with governments, communities, and partners is expected to play a pivotal role in seizing this minigrid opportunity and supporting market transformation for scaled-up investment in the sector.

This report provides an overview of the status and key achievements of the programme as of end of 2023.

2. OVERVIEW OF THE PROGRAMME

AMP seeks to increase electricity access by enhancing the financial viability and promoting increased commercial investment in renewable energy minigrids.

The programme focuses on reducing minigrid costs, including hardware costs, soft costs, and financing costs, as well as developing innovative minigrid business models. By lowering costs, minigrids become more financially viable, attracting more commercial capital, and leading to reduced tariffs and improved service for end-users.

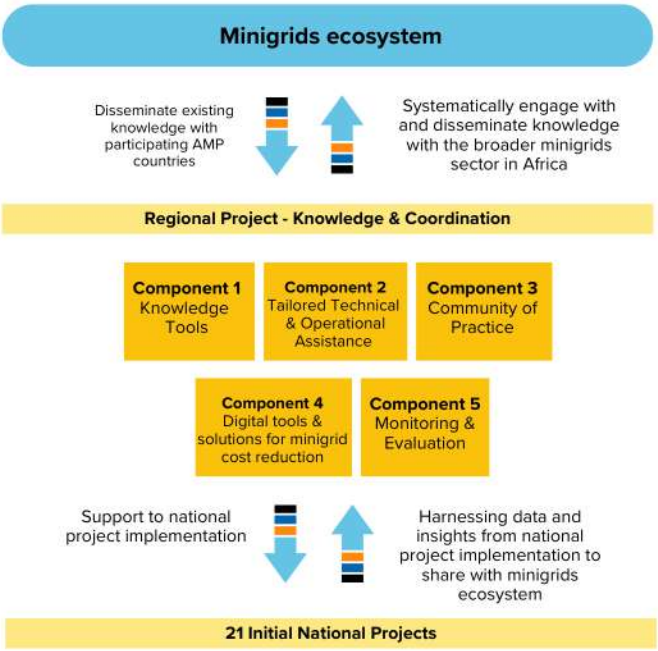
AMP is a **country-led regional technical assistance programme** for minigrids, connecting with a broad spectrum of minigrid stakeholders in Africa and beyond. Beginning iniatially in 21 African countries, AMP is led by he United Nations Development Programme (UNDP) and is primarily funded by the Global Environment Facility (GEF). It is implemented in collaboration with Rocky Mountain Institute (RMI) and the African Development Bank (AfDB).

AMP is expected to provide electricity access to 764,000 direct beneficiaries and to prevent emissions of 1,045,000 tons of carbon dioxide equivalent (tCo2eq).

However, the true impact of AMP goes beyond its direct investments and arises from the private investment and commercial financing flows that can be unlocked by working with governments to build an enabling environment for minigrid development, and with stakeholders and partners to create a supportive ecosystem for minigrid developers and financiers.

HOW IT IS STRUCTURED

Figure 1: The AMP delivery framework



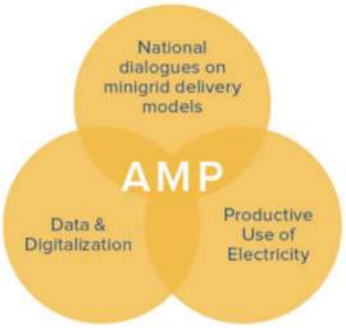
AMP is comprised of two main elements:

- **A Regional Project structured as a 'Knowledge Management' platform,** to support the programme's National Projects, and the Africa minigrids market more generally, through four core sets of activities: (i) knowledge tools for both public and private actors; (ii) tailored technical assistance to countries; (iii) specialized regional Communities of Practice; and (iv) support for digitalization in the minigrids market.
- **21 National Projects, each with a common architecture** consisting of five components: (i) policy and regulations, (ii) business model innovation and private sector, (iii) innovative finance for minigrids scale-up, (iv) digitalization andknowledge management, and (v) monitoring and evaluation.

Cognizant of the range of initiatives in the African market intending to support minigrid development, AMP's offer has been formulated around three 'key areas of opportunity' which are guiding AMP's overall direction, creating a niche identity for the programme. As set out in Figure 2, these areas of opportunity include:

- Advancing national dialogues on minigrid delivery models, with an objective to build ownership and consensus at the national level on different aspects of the minigrid delivery model, including the role of public and private sectors.
- Promoting productive uses of electricity (PUE) in order to improve the economics of minigrid investments while enhancing the social and economic benefits of energy access;
- Leveraging data and digital tools for minigrid development and particularly to reduce minigrid costs.

Figure 2: Key areas of opportunity



How AMP works

Cost-Reduction

AMP focuses on cost-reduction levers and innovative business models. This cost-reduction (in hardware costs, soft costs and financing costs), in conjunction with innovative business models, will increase capital flows to the profit of end-users, who will benefit from lower tariffs and expanded service compared with the baseline.

Policy De-risking

AMP's piloting approach is coupled with policy de-risking activities that will help to attract the private investments that are necessary to deploy minigrids at scale. Policy de-risking consists of working with governments to design and implement the policies and regulations that enable large-scale investments in renewable energy solutions.

Partnerships

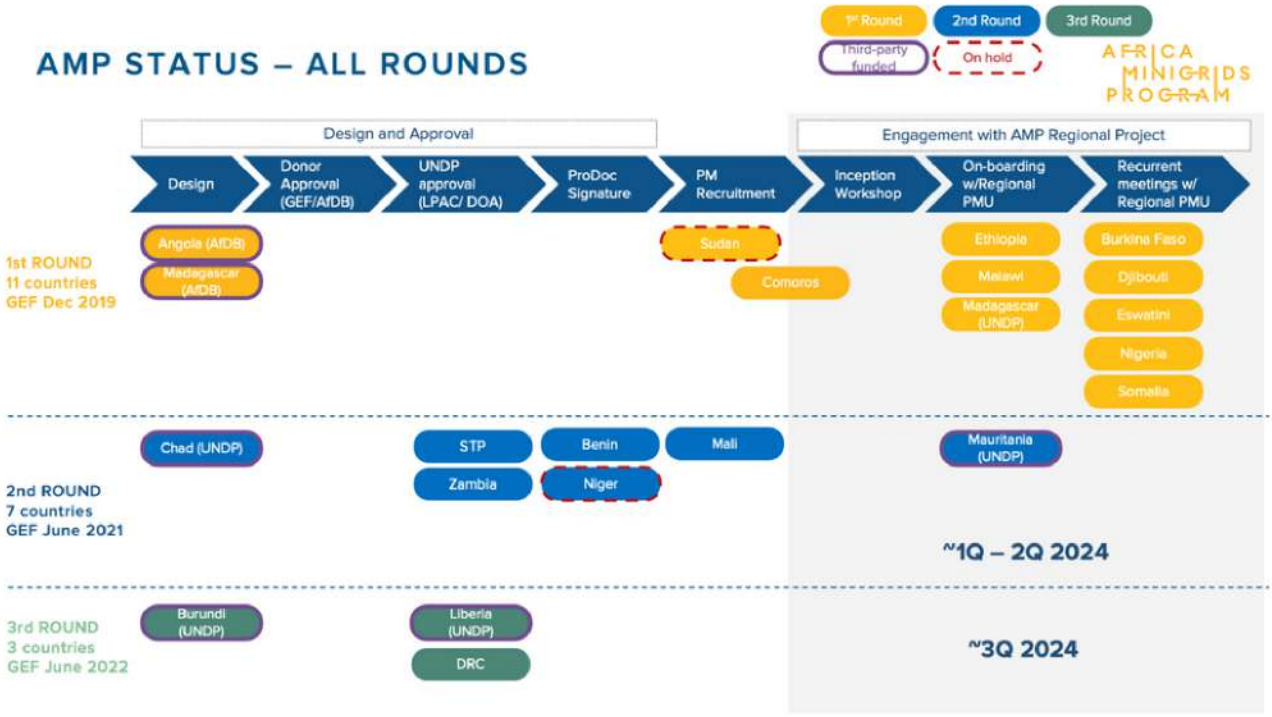
Partnership across stakeholder groups – national governments, development partners, private sector, and civil society – is central to AMP. We hope to complement existing initiatives working hand-in-hand with partners – with the aim of collectively achieving the step-change in scale we all aspire to.

THE TEAM STRUCTURE

Most AMP national projects are implemented by governmental institutions (ministry in charge of energy, rural electrification agency, etc.), with a few exceptions where country programmes are implemented directly by UNDP, such as Madagascar and Somalia.

The AMP regional project is implemented directly by UNDP and its Project Management Unit composed of a Project Manager, a Digital Specialist and a Project Associate.

Several other UNDP experts contribute to the project as part of UNDP's cofinancing to AMP.



2023 AT A GLANCE

The AMP Regional project held its first Project Board meeting in November 2023, followed by a subsequent session in February 2024.

This year saw important developments, with the regional project and most first round national projects kicking off their project implementation and reaching initial implementation milestones.

Concurrently, the second and third round national projects have advanced in their project formulation and are expected to start implementation in 2024 or early 2025.

This report offers comprehensive insights into AMP's advancement at both national and regional scales, alongside an outlook for the programme's vision in 2024 and beyond.

3. KEY ACHIEVEMENTS: REGIONAL LEVEL

1. KNOWLEDGE TOOLS

The minigrid sector in Africa is already subject to a wealth of knowledge tools, guidance and research, reflecting a concerted effort to advance electrification access through minigrids and other off-grid solutions across the continent. However, the challenge lies in effectively harnessing this abundance of resources and aligning them with the specific needs of AMP national projects. To ensure that these projects have access to the latest developments and cutting-edge guidance pertinent to the program's thematic areas and broader objectives within the African minigrid ecosystem, there is a need for streamlining and consolidating available content.

This is precisely why the AMP regional project incorporates a dedicated component focused on knowledge tools to guide and support national project's implementation. In 2023, efforts were firstly directed towards curating existing knowledge on minigrids. RMI, in collaboration with UNDP, developed a comprehensive content library which is now available on the online AMP Community Of Practice (AMP COP) platform (see Box 2). Efforts have been made to facilitate easy access to relevant resources for project stakeholders, enhancing knowledge dissemination and utilization.

Secondly, in order to ease the learning curve of the new national project management units with AMP's key aspects and thematic areas, UNDP led the creation of an onboarding process and materials for national PMUs, ensuring a smooth transition into project implementation. This included the organization of two onboarding meetings per country, slide decks, an onboarding online course and inception workshop support. As a result, by December 2023, eight national projects (out of the 10 already under implementation) had completed both onboarding meetings, indicating successful engagement and readiness for project execution.

Furthermore, significant progress was made in the development of standardized TORs and training materials across various thematic areas. Collaborative efforts between UNDP and RMI resulted in the development of toolkits addressing critical aspects such as minigrid pilot plan development, national dialogues on minigrid delivery models, PUE, and climate resilience. Table 1 provides an overview of the toolkits currently under development and expected to be completed in 2024.

TABLE 1: TOOLKITS UNDER IMPLEMENTATION

	Toolkit	Status and expected date of dissemination
1	**Minigrid Pilot Development Toolkit:** Aims to guide PMUS/IPs in the step-by-step deployment of pilot projects, the minigrid pilot planning and implementation toolkit is structured into three phases, each involving specific steps. In Phase 1, the project management unit (PMU), with support from the AMP regional project, updates and finalizes the Minigrid Pilot Plan, which is then reviewed by UNDP and the project's board. Phase 2 involves a competitive tendering process, engaging the private sector for various services in the pilot projects, using a digital platform for tendering. Phase 3 focuses on monitoring the commissioned minigrid pilots, collecting data to track performance, validate assumptions, enhance capacity utilization, and generate insights for future projects.	An advanced draft was already developed in 2023 and needs to be completed in 2024. The dissemination is expected by 30 Jun 2024.

	Toolkit	Status and expected date of dissemination
2	**Tariff methodology and financial modelling toolkit:** This toolkit aims to provide guidance to the PMUs on minigrids tariff methodologies and financial models, with an objective to give them the capacity to prepare and/or critically analyse and review financial models developed for minigrids pilots (e.g. as part of the pilot feasibility studies). The toolkit will include a comparative analysis of the minigrids financial models/tariff tools available in the public domain or shared by partners to detail their use case, value add, limitations, and overall relevance and usefulness for AMP national projects.	This toolkit is going to be developed during the first two quarters of 2024. The dissemination is expected by 30 Jun 2024.
3	**Toolkit on Community-centric Minigrids:** The Community-centric Minigrid Toolkit offers a structured approach to designing and implementing minigrids that involve significant community engagement, aligning with RMI's insights from the Sharing the Power Initiative. It recognizes the essential role of communities not only as beneficiaries but as active participants in the energy projects that shape their futures, thereby enhancing the sustainability and effectiveness of rural electrification. This toolkit encourages a hybrid partnership model, merging community cooperation with the technological and financial resources of the private sector, to boost the scalability and viability of minigrid solutions across Africa. The content is organized into sections that cover the framework for community-centric design, implementation strategies, illustrative case studies, and a synthesis of key takeaways and programmatic strategies.	This toolkit is going to be developed during the second and third quarters of 2024. The dissemination is expected to take place by 30 September 2024.
4	**Climate Resilience Toolkit:** The Climate Resilience Toolkit aims to enhance the development of renewable energy solutions, focusing on minigrid systems in Africa. It will assess minigrid performance under climate pressures, identify causes of failures in solar PV systems, and recommend best practices to bolster resilience. The content will delve into climate change impacts on minigrid infrastructure, integrating climate resilience in minigrid designs and operations, and address factors such as stakeholder inclusion, reliability, environmental stewardship, cost reduction and monitoring systems. Additionally, the toolkit emphasizes equity, ensuring that vulnerable communities have access to resilient energy systems through improved inclusion, community engagement, equitable pricing, and tailored customer services.	This toolkit is going to be developed during the second and third quarters of 2024. The dissemination is expected to take place by 30 September 2024.
5	**PUE Toolkit:** The main objective of this toolkit is to provide comprehensive guidance to stakeholders on integrating productive use of energy (PUE) into renewable energy (RE) minigrids in rural settings, aiming to enhance livelihoods and maximize minigrid capacity utilization. It serves both public sector entities, like rural electrification agencies, and private sector players, such as minigrid developers, by offering tools for geospatial planning, site selection, and the identification of PUE opportunities to optimize minigrid use. The toolkit includes methodologies for assessing the impacts of PUE on minigrids, focusing on data collection for monitoring and evaluation, and links these processes to financial and operational planning to ensure the sustainability of minigrid projects. Additionally, it provides best practice examples and essential guidance on stakeholder engagement, project implementation, and aligning minigrid deployment with PUE strategies to boost the financial viability and community benefits of minigrids.	An early draft was already developed in 2023 and needs to be completed in 2024. The dissemination is expected by 30 Jun 2024.

	Toolkit	Status and expected date of dissemination
6	**Digital Toolkit:** The toolkit serves as a pragmatic guide and framework for implementing digital solutions in off-grid minigrids electrification. Its objectives include offering practical guidance, ensuring alignment with global minigrid standards, providing digital planning avenues across development phases, and promoting minigrid innovation through digitization. The toolkit aims to equip users with understanding and implementing digital strategies, industry digital platforms, digital payments and remote monitoring, data security, quality assurance and monitoring, and consumer protection for minigrids, which are the main topics of presentation in the toolkit. Further, it offers practical guidance on the mentioned frameworks to both national projects and minigrid stakeholders.	An early draft was already developed in 2023 and needs to be completed in 2024. The dissemination is expected by 31 July 2024.

2. TAILORED TECHNICAL AND OPERATIONAL ASSISTANCE TO NATIONAL PROJECT IMPLEMENTATION

To address the need for specialized skills essential for the implementation of minigrid projects and not readily available in many countries, the AMP regional project established tailored technical and operational support for national projects through its second component. Firstly, an AMP database of experts was established, categorizing international consultants based on criteria such as technical skills, experience, and language proficiency. By December 2023, the database included over 20 international experts covering a wide range of expertise essential for minigrid deployment, who have started to be deployed in selected countries. In the course of 2023, the regional project implemented reactive and proactive support through international experts' mobilization to address specific requests from national projects. Examples include the ecruitment of international experts through TORs developed by the regional PMU to support activities related to national dialogues in Somalia and Burkina Faso.

AMP has also been collaborating with the UNDP-led Powering Equality initiative started in 2023, which is providing dedicated support on gender to AMP national projects in Eswatini, Ethiopia, Madagascar and Malawi (see Box 1).

Box 1: Gender support through Powering Equality

Women across Africa encounter significant challenges in accessing and benefiting from energy resources, including exposure to unsafe cooking fuels, limited job opportunities in the energy sector, and insufficient representation in governance and policy discussions. To address these disparities, prioritizing gender equality within the energy sector is crucial. AMP actively promotes gender equality through clean energy initiatives, with Ethiopia, Eswatini, Madagascar, and Malawi participating in the Powering Equality initiative launched in 2023. This initiative provides targeted support to promote gender equality within existing large-scale energy programs across Africa.

In Eswatini, UNDP collaborated with local government partners to conduct an entrepreneurship training program for over 50 women and organized a learning session exploring the connections between gender equality and energy. In Malawi, UNDP's Gender and Energy office identified women-led businesses within AMP and ACRE project sites, aiming to expand energy access and empower women economically. Ethiopia is integrating gender equality into energy policy frameworks and implementation to strengthen women's influence in energy governance and promote economic empowerment through gender-responsive energy markets. In Madagascar, efforts focus on improving access to modern energy solutions for women's groups and integrating gender equality into public-private dialogues to remove barriers to women's participation in energy-related opportunities.

These targeted initiatives are expected to be continued in the respective AMP national projects and showcased as examples to drive further actions for gender support in other participating countries.

3. COMMUNITY OF PRACTICE

PARTNERSHIPS AND COMMUNICATIONS STRATEGY

A key component of AMP is contributing to the minigrid ecosystem and promoting a community approach where AMP is part of a network of technicians and experts.

The AMP Community of Practice (CoP) aims to realize this ambition by facilitating knowledge sharing and collaborative problem-solving within the program stakeholders and more broadly in the minigrid sector across Africa. It provides a dedicated platform for energy practitioners to connect and work together on their minigrid projects. Through the AMP CoP, participants are accessing learning activities, curated knowledge products, and connecting with peers, ultimately enhancing cooperation and learning within the sector, particularly fostering South-South collaboration.

In 2023, comprehensive communications and partnership strategies were developed for the program to define how to effectively disseminate project work and engage with key stakeholders, with the COP as a core element of the strategies. The communications strategy outlined various channels for outreach and engagement, such as the AMP website, social media channels, and newsletters. On the other hand, the partnerships strategy described key partners' roles and responsibilities and the ways AMP would seek to enhance collaboration efforts.

By design, AMP already includes several partners who have an active role in AMP implementation. The GEF (main donor), AfDB (funding and implementing two national projects and providing co-financing to several others) and RMI (implementing partner for the regional project) are the key program-level AMP partners. Other relevant ones include implementing partners and their responsible parties, as well as other institutions represented at the AMP regional and national Project Boards.

In 2023, the regional project initiated an engagement with several key development partners including AfDB SEFA team, AFUR, AMDA, ESMAP, GEAPP, GIZ GET.Transform, USAID Power Africa and SEforALL, among others. In addition, the Regional Centers for Renewable Energy and Energy Efficiency (CREEEs) from ECOWAS, the Arab States and SADC (ECREEE, RCREEE and SACREEE respectively) were involved as AMP Regional Project Board members.

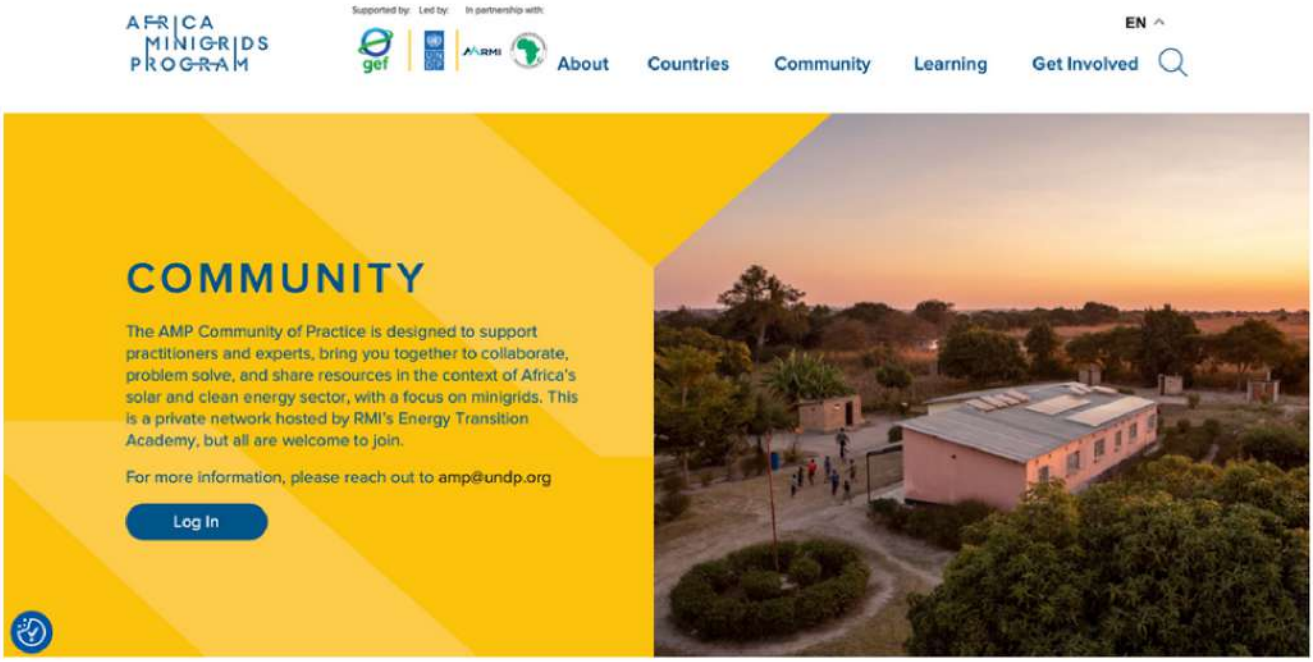
A number of collaborations were discussed and will be further explored in 2024. One concrete example was the development of a project proposal on AMP covering Djibouti, Mauritania, Somalia and the regional level, to be submitted to the AfDB Climate Action Window – Adaptation sub window in collaboration with the AfDB Desert-to-Power program and RCREEE.

OPERATIONALIZING THE AMP COP

The AMP COP was formally established following a needs assessment conducted by RMI to understand PMUs' challenges and topics of interest, laying the groundwork for the COP's focus areas. The AMP COP platform – launched in November 2023 - is an important element of the overall AMP COP framework and composed of an online space leveraging on RMI's Energy Transition Academy (ETA) where the national PMUs can access the content library, online courses, a discussion forum, etc. (see Box 2). Through kick-off calls and demonstrations, RMI raised awareness about the AMP COP platform and facilitated its launch and the registration of national PMU members.

The platform hosted by RMI's Energy Transition Academy is dedicated to rapidly scaling global practitioner and institutional capacity for the clean energy transition through innovative capacity development, technical assistance, and robust community development initiatives.

The platform aims to engage, inform, and upskill participants who are working towards scaling up commercial investment in renewable energy minigrids across Africa, fostering a supportive community of practice focused on sustainable energy solutions.



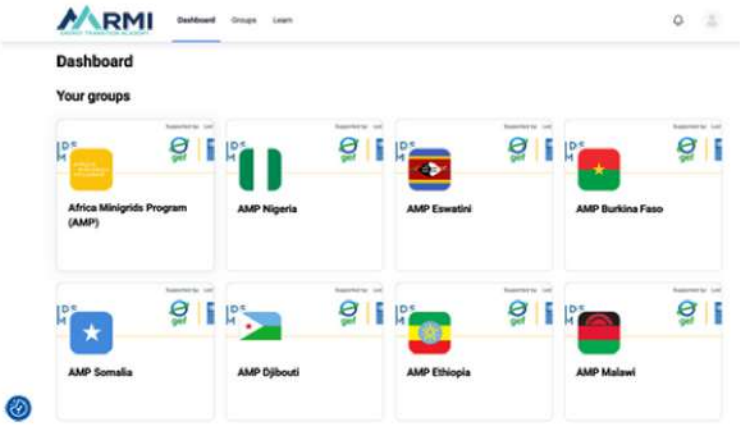
Besides the AMP COP platform, a fully functional AMP website was launched, providing a user-friendly interface for stakeholders to access resources and information. The project also established an active presence on LinkedIn, leveraging social media to engage with industry professionals and disseminate updates and insights.

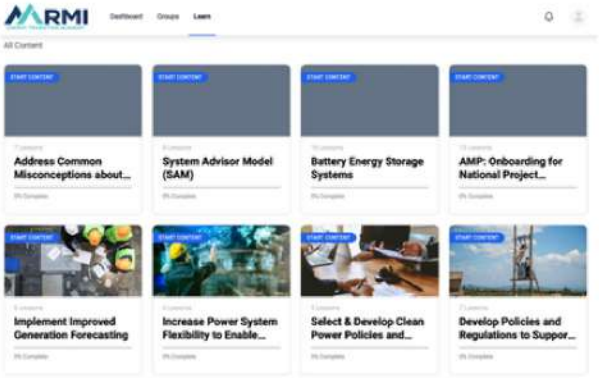
Visit our Website:

SCAN ME

CORE COMPONENTS OF THE COP PLATFORM:

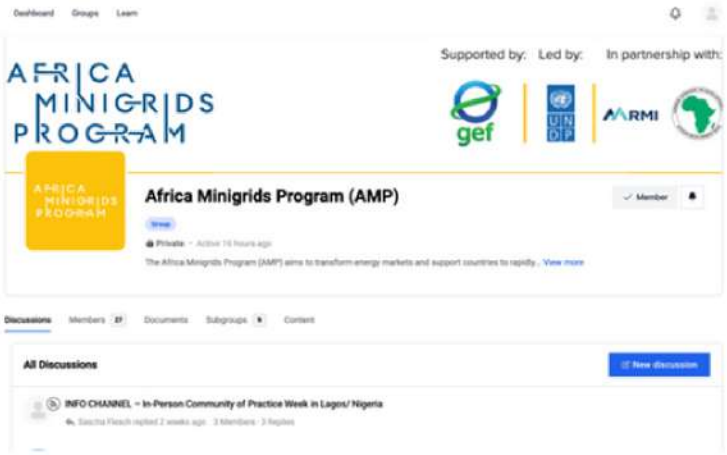
Dashboard: The AMP Community of Practice platform features a personalized dashboard for each registered user. This dashboard is tailored to display content and services based on the user's home country, project focus, and previously engaged materials. It also monitors and displays user progress to enhance learning experiences.





Learning Management System (LMS): This system curates a range of learning opportunities and resources for AMP members. It includes a repository of resources using flexible, customizable open-source learning software that supports interactive content. The LMS facilitates both asynchronous and live remote learning sessions, adapting to various educational needs of the community.

Discussion Forum:
Serving as the central engagement mechanism, the discussion forum offers a structured yet flexible platform where participants can engage in general or private discussions. It also supports virtual convenings, enhancing interaction among community members.

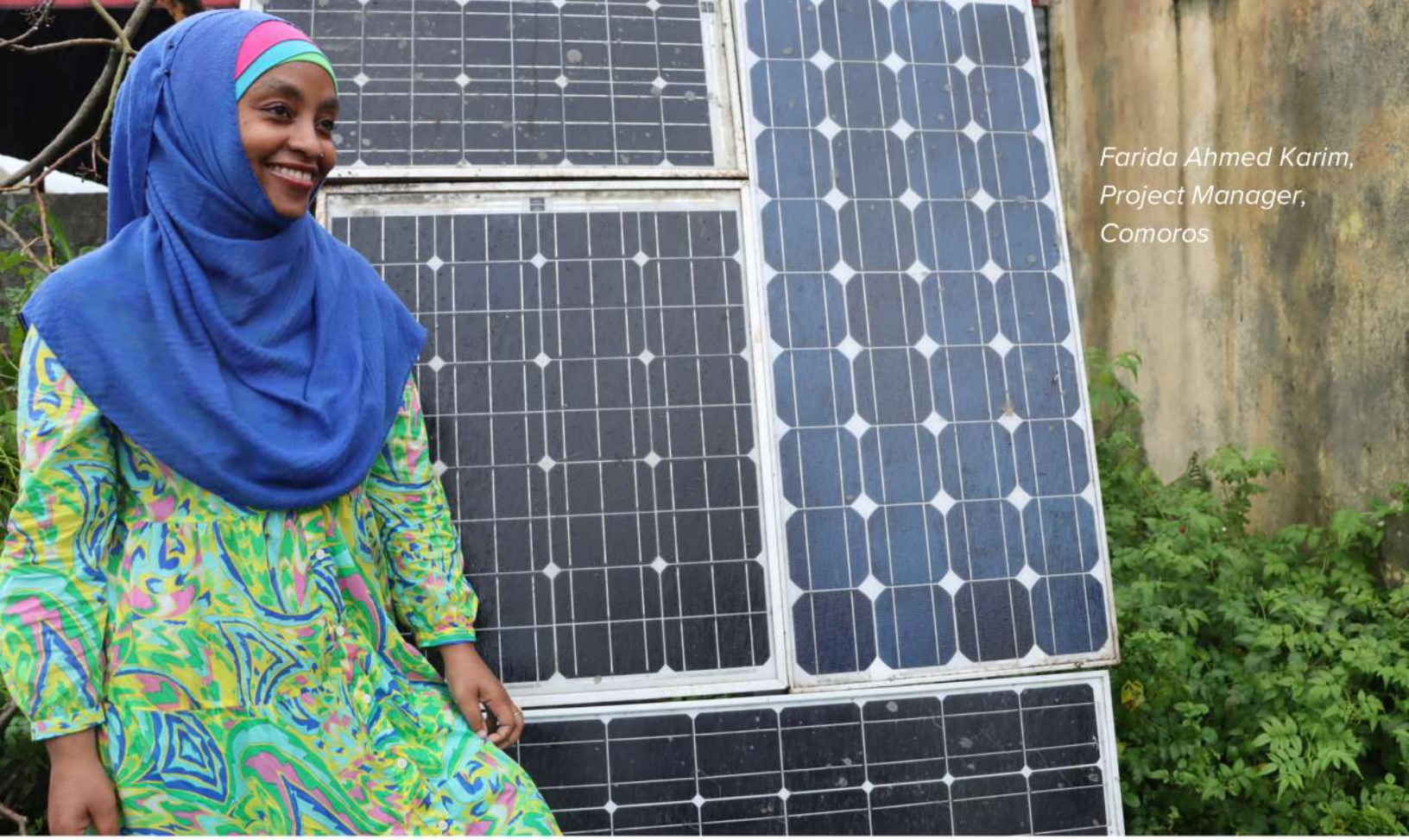


DIGITAL TOOLS AND SOLUTIONS FOR MINIGRID COST-REDUCTION

Digital technologies are essential for off-grid electrification, particularly in rural electrification planning, enabling minigrid operations through remote control and monitoring, digital payment collection, and cost-reduction opportunities, supporting the program's goal of enhancing minigrid commercial viability. To leverage on digital tools and solutions witin AMP, the regional project as well as all national projects include a component aimed at supporting data solutions and digitalization for minigrid cost reduction.

The regional project aims at standardizing data collection protocols across the program, with activities including the development of a Quality Assurance and Monitoring Framework (QAMF) and a data security and consumer protection framework. Both frameworks are expected to be finalized and disseminated to national projects early 2024. Further, and as an evolution from the design phase, it was acknowledged that prior to developing a digital strategy, national projects should conduct a digital readiness assessment (DRA) to comprehensively analyze the strengths and weaknesses of their mini-grid sector in relation with the use of digitalization and data. With support from the regional project, several national projects under implementation have started to conduct a DRA, whose outcomes are expected to feed into the development of the national and regional project digital strategies in 2024.

Work was also initiated in 2023 for the aggregation of data from all AMP minigrid pilots at regional level through a data management and monitoring platform. A market assessment of existing platforms was conducted and TORs for the pooled procurement of national and regional digital platforms were prepared by the regional project. The regional project team also extensively consulted partners to ensure a good coordination with existing initiatives on digital at regional and national levels. The procurement process for these platforms is expected to be launched in 2024.



Farida Ahmed Karim, Project Manager, Comoros

5. COUNTRY UPDATES

AMP includes 21 national projects, distributed into three rounds.

Nine out of eleven first round national projects (**Burkina Faso, Comoros, Djibouti, Ethiopia, Eswatini, Madagascar, Malawi, Nigeria, and Somalia**) have already started implementation, as well as one national project from the second round (Mauritania). The implementation progress and key achievements of these 10 national projects are presented in the next section.

The remaining 11 national projects are still in design or project initiation stage and are further described in Annex II.

4.1. BURKINA FASO

With an electrification access rate of less than 10% in rural areas, Burkina Faso faces challenges in meeting its population's growing demand for energy. The main electrification approach remains the extension of the national grid, which cannot be easily or rapidly deployed in many remote areas lacking access to electricity.
Off-grid electrification through renewable energy minigrids presents a key opportunity to address this challenge in rural communities, but obstacles persist to effectively deploy these solutions.

The AMP Burkina Faso project aims to promote solar-battery minigrids and introduce a new delivery model to encourage private sector investments in the minigrid sector. Another key objective is to demonstrate how the minigrids viability can be increased and their costs reduced through the promotion of productive use of electricity.

Country	Burkina Faso	
Implementation Modality	Full National Implementation Modality (Full NIM)	
Project Executing Entity(s)	Rural Electrification Agency (ABER)	
Implementation Start Date	22 August 2022	
Project Budget (USD)	GEF:	924,566
	UNDP TRAC:	800,000
	Total:	1,724,566
Additional co-financing not contributing to project results (USD)		103,693,243
Expected direct beneficiaries		11,033
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		14,383

Key achievements in 2023:

- A formal framework for national dialogue was established through the signing of Order n°383/MEMC/CAB of 02 October 2023. This order provides for regular (quarterly) statutory meetings of rural electrification stakeholders with an objective to identify and adopt a consensus model for the delivery of mini grids.
- The National Rural Electrification Strategy (SNER) 2024 - 2028 and its first action plan 2024 – 2026 were developed.
- A study trip to Mali was conducted to learn about their legal and regulatory framework, mini grid operating model, pricing, private sector involvement, etc.
- A training was provided to 30 local mini grid operators, including 11 women, on topics such as: (i) the legal framework applicable to rural electrification, (ii) mini grid pricing and (iii) the current model for managing electrical facilities in rural areas.
- Preliminary work was conducted on the minigrid pilots, in particular site missions to identify the beneficiary communities.

Next steps in 2024:

- The national dialogue will be operationalized in 2024 to establish a minigrid delivery model attractive to private sector investment, with the intention to demonstrate this delivery model through the AMP pilots.

- A diagnostic study will be initiated for the domestication of quality standards for solar mini-grid components and for the strengthening of the institutional capacities of national stakeholders involved in setting or reinforcing standards.

- Training of the regulator and other relevant authorities on the tariff tool methodology for minigrids developed by the African Forum for Utility Regulators (AFUR) will be organized. The tendering process for the pilot minigrids will be launched.

4.2. COMOROS

Comoros is one of Africa's smallest countries (archipelago) but with a relatively high electrification rate. However, the effective access to electricity for end-users (residential, commercial and social) is significantly lower due to various reasons (incl. frequent load shedding, high transmission losses, etc.). This challenging energy situation hampers the socioeconomic development of an already fragile country, especially in rural areas with vulnerable populations. The AMP national project de-risk private sector and community investments in the market for rural decentralized renewable energy access. This will be achieved through identifying suitable minigrid delivery model(s) and appropriate policies and regulations for a conducive renewable minigrid investments' environment, innovative business models with strengthened private sector and communities' participation, support to scaled-up financing solutions, and increased awareness, knowledge sharing and network opportunities.

Country	Comoros	
Implementation Modality	UNDP Country Office assisted National Implementation Modality (CO-assisted NIM)	
Project Executing Entity(s)	Directorate General for Energy, Mining and Water (DGEME) at Ministry of Economy, Investments and Energy	
Implementation Start Date	17 Nov 2023	
Project Budget (USD)	GEF: UNDP TRAC: Total:	1,269,863 400,000 1,669,863
Additional co-financing not contributing to project results (USD)		
Expected direct beneficiaries (incl. women)	3,042 (incl. 1,521 women)	
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))	11,951	

Key achievements in 2023:

- The project started implementation and the Project Manager was recruited in November 2023.
- The project held its inception workshop early 2024.

Next steps in 2024:

- The national dialogue and DREI study will be started in 2024, as well as a revision of the regulatory framework to make it more conducive to minigrids deployment.
- A feasibility study will be conducted on the proposed pilot sites, and the minigrid pilot plan developed before launching the tender.
- The project will also conduct a GIS analysis to identify communities eligible for isolated minigrid implementation (in addition to the pilot sites selected for AMP).

4.3. DJIBOUTI

According to the latest energy access data, about 65% of the population of Djibouti has access to electricity, but with sharp discrepancies between urban (73%) and rural (36%) areas . Furthermore, electricity tariffs in the country range from a social price of US$0.153/kWh (life-line tariff) to US$0.426/kWh and are considered to be among the highest in the world. The development challenge which the AMP Djibouti project aims to address is the need to increase the profitability of solar based mini-grid systems to encourage scaled-up private sector engagement, while maintaining affordable end-user tariffs.

To this end, the project aims to support the Government with advancing policies and regulations, including identifying minigrid delivery model(s) involving the private sector, with a range of complementary support on techno-economic analyses and capacity building of key stakeholders. The project will also implement pilot solar PV-batteries mini-grids to showcase the proposed model, design appropriate financing mechanisms and run an effective digitalization strategy.

Country	Djibouti	
Implementation Modality	UNDP Country Office assisted National Implementation Modality (CO-assisted NIM)	
Project Executing Entity(s)	Ministry of Urban Planning, Environment and Tourism (MUET)	
Implementation Start Date	23 Nov 2022	
Project Budget (USD)	GEF: UNDP TRAC: Total:	3,071,347 50,000 3,121,347
Additional co-financing not contributing to project results (USD)		15,840,000
Expected direct beneficiaries (incl. women)		19,146 (incl. 8,999 women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		39,717

Key achievements in 2023:

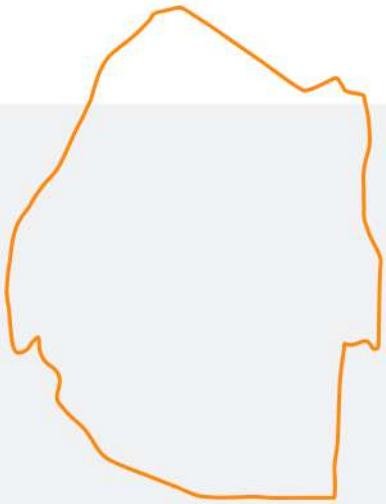
- Signature of an MOU between the Ministry of Environment (implementing partner) and the Ministry of Energy, to agree on the involvement of the latter in project implementation.
- Development of a feasibility study for the two planned minigrid pilots in Yoboki and Khor-Angar, including socio-economic studies in both villages.
- Preparation of the tender documents for the procurement of the minigrid pilots.

Next steps in 2024:

- Finalization of the minigrid pilot plan and social and environmental safeguards studies and implementation of the minigrid pilots as per the agreed plan.
- Preparation of an assessment on institutional capacity, and conduction of the DREI study and national dialogue on minigrid delivery models.
- Development of a mapping of relevant private sector actors and evaluation of their technical capacity to apply to minigrid tenders.
- Conduction of a workshop on lessons learnt from previous minigrid projects including the evaluation of the tariff structure applied to rural electrification projects.
- Partnership with the University of Djibouti on the development of relevant courses on minigrids.

4.4. ESWATINI

The Kingdom of Eswatini, a landlocked nation in Southern Africa, classified as a lower-middle-income country. The AMP project in Eswatini focuses on establishing RE minigrids, developing data and knowledge resources, and creating business models to attract private sector involvement. This aligns with Eswatini's renewable energy targets and its aim of achieving universal energy access, as outlined in the National Energy Policy (2018) and the Kingdom of Eswatini Energy Masterplan, 2034.



Country	Eswatini	
Implementation Modality	Full NIM	
Project Executing Entity(s)	Ministry of Natural Resources and Energy	
Implementation Start Date	12 Jul 2022	
Project Budget (USD)	GEF: UNDP TRAC: Total:	863,242 50,000 913,242
Additional co-financing not contributing to project results (USD)		9,374,228
Expected direct beneficiaries (incl. women)		459 (incl. 234 women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO_2e))		2,444

Key achievements in 2023:

- Signature of an MoU with three relevant partners which were identified at project initiation, i.e., Small Enterprise Development Companies (SEDCO), University of Eswatini (UNESWA), and the Renewable Energy Association of Eswatini (REAESWA).
- Development of the minigrid pilot plan (MPP) and engagement of specialists for gender and social and environmental safeguards.
- In preparation for the design and construction of the greenfield solar PV minigrid at Bulimeni, the project conducted a mapping of the households set to benefit from the project. The project, under the leadership of the partner SEDCO, also started to work on identifying suitable businesses to benefit from a productive use of electricity overlay at Mvundla (where an existing minigrid is already in operations) and Bulimeni.

Next steps in 2024:

- Development of a GIS mapping of potential areas suitable for minigrids in Eswatini.
- Conduction of the DREI study and national dialogue on minigrids delivery model.
- Finalization of the list of businesses for the PUE component of the pilot, completion of the financial modelling for the greenfield pilot project and initiation of the tender after approval of the minigrid pilot plan.

4.5. ETHIOPIA

Ethiopia faces the third highest electricity access deficit in Sub-Saharan Africa with an access rate of 51% in 2020. Despite concerted efforts by the Government and utilities to expand access, over 56 million people still lack electricity, primarily in rural areas. To address this challenge, Ethiopia's National Electrification Program (2019) sets ambitious targets for achieving universal electricity access by 2025, with 35% of new connections expected to utilize off-grid technology.

The programme emphasizes the pivotal role of minigrids and private sector participation, including cooperatives, in meeting these targets. The AMP Ethiopia project is actively dedicated to supporting these goals. It focuses on targeted interventions in policy and regulations, promoting minigrid deployment, fostering cooperative-led delivery models, enhancing financing with risk mitigation, and implementing digital strategies for efficient service delivery.

Country	Ethiopia	
Implementation Modality	Full NIM	
Project Executing Entity(s)	Ministry of Water, Irrigation, and Energy	
Implementation Start Date	22 Aug 2022	
Project Budget (USD)	GEF:	2,890,826
	UNDP TRAC:	300,000
	Total:	3,190,826
Additional co-financing not contributing to project results (USD)		13,473,751
Expected direct beneficiaries (incl. women)		31,625 (incl. 50% women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		16,836

Key achievements in 2023:

- In an effort to prepare for the national dialogue on cooperative-led minigrid delivery models and raise awareness on the project, a meeting with key stakeholders from the renewable energy sector was organized by the implementing partner, the Ministry of Water and Energy (MOWE).
- A capacity assessment of selected partners was conducted, and an implementation agency, the Ethiopian Electric Utility (EEU), identified to support MOWE in the implementation of the minigrid pilots. EEU, a semi-governmental entity, has been involved in various minigrids projects in Ethiopia including the Access to Distributed Electricity and Lighting in Ethiopia (ADELE) funded by the World Bank, thus bringing extensive experience to AMP.
- Meanwhile, MOWE also worked with the Ethiopian Federal Cooperation Commission to identify a short list of possible beneficiary cooperatives, based on selected criteria such as geographical balance, potential for PUE, accessibility, women leadership, etc.

Next steps in 2024:

- The national dialogue on minigrid delivery models as well as the DREI study and other key activities planned in the scope of the first project component on policy and regulation should start in 2024.
- Site visits will be conducted in the shortlisted sites for the minigrid pilots to further refine the selection and agree on the beneficiary cooperatives prior to working on the tender preparation.
- Activities on data and digital tools will also kick start in 2024, with the conduction of a digital readiness assessment informing the project digital strategy.

4.6. MADAGASCAR

Madagascar has a very low electrification rate (35%), disproportionately distributed between urban areas (72%) and rural areas (10%) . The Government of Madagascar, through its 2015 New Energy Policy (NEP) ambitiously aims to increase electrification to at least 70% by 2030 and plans for approximately 15% of households to be supplied by solar power.

In this regard, the AMP Madagascar project aims to address access to electricity at two levels: (1) upstream support for national policy implementation and (2) downstream efforts to increase people's access to electricity by creating and developing opportunities to improve their living conditions and economic activities.

Country	Madagascar	
Implementation Modality	DIM	
Project Executing Entity(s)	UNDP	
Implementation Start Date	1 Mar 2023	
Project Budget (USD)	UNDP TRAC: Total:	1,000,000 1,000,000
Additional co-financing not contributing to project results (USD)		0
Expected direct beneficiaries (incl. women)		2,630 (incl. 49% women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		7,404

Another USD 1 million AMP Madagascar project is funded and executed by AfDB and is still in design stage.

Key achievements in 2023:

- The procurement of 2 minigrid pilots was launched, to be implemented through an EPC model with delegation of the O&M to private operators already pre-selected by the government for the areas under consideration. These private operators are involved from the early stage of the construction and provide in-kind contribution amounting to around 20% of the CAPEX for the construction of the minigrids (for site preparation and connection costs).
- One hundred solar boxes of 2kW each were installed as pilots for productive use of electricity and/or the establishment of nanogrids.
- The Ministry of Energy was equipped with a digital tool (Entreprise Content Management) to facilitate the management of data and documents, including for minigrid programmes.
- A side event showcasing the energy programming of UNDP Madagascar including AMP was organized at COP28 in Dubai, and was also attended by other AMP national projects (Eswatini, Nigeria) present at the conference.
- The rural electrification agency (ADER) was supported by the project to attend a workshop on tariff setting in Abidjan.

Next steps in 2024:

- The 2 minigrid pilots will be installed by an international company and the O&M handed over to the local operators pre-selected by the rural electrification agency (ADER).
- The national dialogue on minigrid delivery models as well as the DREI study and other key activities planned in the scope of the first project component on policy and regulation will start in 2024.
- Further consultation is planned with AfDB to explore enhanced collaboration in the scope of the respective AMP initiatives implemented by both organizations in Madagascar.

4.7. MALAWI

Malawi is a small, landlocked country with an estimated population of 18.6 million (2019). Malawi has one of the lowest electrification rates with access to electricity at just 14%, and only 5% in rural areas. Least cost electricity planning shows grid electrification to be the dominant least cost electrification technology option for the country.

However, given the enormous backlog and realistic delivery timelines, implementing minigrids with the intention to ultimately integrate into the electricity grid provides an interim measure to accelerate access to modern energy.

The AMP national project in Malawi aligns directly with the objectives of the National Energy Policy, aiming to enhance accessibility to affordable, reliable, sustainable, efficient, and modern energy for all residents. The objectives include establishing policies to overcome investment barriers in renewable energy minigrids, implementing cost reduction models, and promoting market awareness.

Country	Malawi	
Implementation Modality	Full NIM	
Project Executing Entity(s)	Ministry of Energy	
Implementation Start Date	17 Aug 2022	
Project Budget (USD)	GEF UNDP TRAC: Total:	396,125 1,000,000 1,396,125
Additional co-financing not contributing to project results (USD)		2,344,395
Expected direct beneficiaries (incl. women)		763 (incl. 389 women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		1,068

Key achievements in 2023:

- A geospatial mapping of 32 potential mini-grid sites from the Rural Electrification Master Plan was conducted, focusing on areas at least 10km away from the grid, and identified over 300 SMSEs willing to connect to the grid or mini-grid once established.
- Existing pilot mini grids of Mthembanji and Kudembe serving 110 households were supported for business modelling, cooperative formation and gender mainstreaming, as a preparation to the PUE overlay planned in the scope of the project.
- A one stop information centre was re-established as an information clearing house for minigrids in Malawi, in partnership with the University of Malawi.
- The Renewable Energy Industries Association of Malawi was supported in the organization of a National Energy Conference which gathered over 200 participants, 30% of which were female.

Next steps in 2024:

- The DREI study initiated in 2023 will be continued and the national dialogue on minigrid delivery model conducted.
- The PUE overlay of the 2 existing minigrids in Mthembanji and Kudembe will be implemented in partnership with the University of Strathclyde, including the promotion of Productive Use of Energy · (PUE) equipment, provision of micro-financing for electrical appliances, and support for business modeling.
- Data and digital tools will be further promoted with the launch of the information clearing house, the development of the digital readiness assessment and project digital strategy in partnership with the University of Malawi and further work on the digital monitoring platform, building on what has already been established to monitor the performance of the existing pilot minigrids in the past years.

4.8. MAURITANIA

Energy access remains a key challenge in Mauritania where the electricity access rate in rural areas stands at less than 10%. In this context, the government has set up the Rural Electrification Program for Isolated Areas (PERZI), which is the project that is officially included as a 'third-party-funded' national project under AMP. The project aims to accelerate local economic development in Mauritania's most isolated communities by promoting access to electricity and energy-related productive services, including digital technologies, health services, and productive employment in agriculture and livestock farming. The project's objective is to create the conditions for integrated community development through sustainable energy access, particularly innovative off-grid electrification solutions such as solar-battery minigrids.

Country	Mauritania	
Implementation Modality	CO-assisted NIM	
Project Executing Entity(s)	Direction de l'Electricité et de la Maitrise de l'Energie (Department of Electricity and Energy Management) (DEME)	
Implementation Start Date	April 2023	
Project Budget (USD)	UNDP TRAC:	2,500,000
	Donor:	3,000,000
	Government co-financing:	12,000,000
	Total:	17,500,000
Additional co-financing (USD)	A total of 287,136,800 is expected to be mobilized by UNDP from other sources.	
Expected direct beneficiaries (incl. women)	9,254 people (incl. 4,795 women)	
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))	18,366	

Key achievements in 2023:

- The pre-feasibility studies for the electrification of 200 villages were completed, highlighting the potential users, the forecasted electricity demand and the optimal sites for the minigrid systems.
- Two pilot minigrids were completed, while the procurement of eight more has been initiated.
- A national workshop on minigrid delivery models was held with the participation of key stakeholders in the sector, in order to advance the national dialogue around the involvement of private sector in the financing and operations of minigrids in rural areas of Mauritania.

Next steps in 2024:

- The DREI study on solar-battery minigrids will be conducted in 2024.
- The implementation of pilot minigrids will continue, with an objective to complete 10 minigrids by the end of the year.
- Active involvement in the AMP Community of Practice to share experience and benefit from other countries' lessons learnt on minigrids implementation.

4.9. NIGERIA

In Nigeria, approximately 70 million persons lack access to electricity with the larger cohort found in rural areas. Nigeria has made significant strides in setting up a regulatory framework for enabling electrification of underserved communities using decentralized renewable energies, such as solar PV mini-grids. There is now a vibrant private sector value chain for developing solar PV mini-grids.

The AMP Nigeria project will contribute towards this goal in terms of supporting the integration of solar PV mini-grids in the agriculture value chain (i.e. productive energy uses). The commercially-oriented business model will be underpinned by cost reduction levers to increase the affordability of renewable electricity, including reducing financing and hardware costs through a derisking approach.

Country	Nigeria	
Implementation Modality	Full NIM	
Project Executing Entity(s)	Rural Electrification Agency (REA)	
Project Budget (USD)	GEF	5,905,046
	UNDP TRAC:	0
	Total:	5,905,046
Additional co-financing not contributing to project results (USD)		75,035,714
Expected direct beneficiaries (incl. women)		70,063 (incl. 34,559 women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		74,200

Key achievements in 2023:

- A market Intelligence and site selection study was performed, in order to select 20 potential pilot sites. To establish clear, objective criteria for site selection, a comprehensive set of parameters was developed, considering technical, environmental, social, and economic factors. Additionally, consultation was conducted at over 40 sites with local stakeholders to gather insight on specific site requirements.
- A comprehensive feasibility study was undertaken for the 20 selected pilot sites. This included data collection, energy audit, visual documentation, minigrid system design, benchmarking against industry standards, and financial modelling to determine the appropriate grant amount. An AMP Documentary was further completed to showcase the 20 sites across the six geopolitical zones in Nigeria through a storytelling approach (the documentary can be seen here.)
- The first stage of the AMP minigrid pilots tendering process, the prequalification stage, was successfully completed, leading to the selection of 25 minigrid developers eligible to apply to the incoming request for grant planned for 2024.
- An AMP Nigeria website and grant management platform were developed and updated. The AMP website provides detailed information on the programme as well as updates on key developments. The grant management platform is the E-tendering portal for the AMP Nigeria pilot tender which is currently ongoing.
- The Financial Advisory Committee (FAC) was inaugurated to provide technical support and guidance to the implementation of the programme and the development of innovative financing schemes for scaling minigrid projects.

Next steps in 2024:

- Complete the tendering process for the 20 pilot minigrids and provide technical support to the selected developers to implement business models for productive energy uses in agriculture value chains, and to enhance their financial reporting capabilities.
- Extend the market intelligence study, GIS modelling and feasibility studies to additional sites to create a pipeline of investible assets.
- Further operationalize the FAC and provide capacity building of financial institutions to invest in low-carbon minigrids for productive energy uses.

4.10. SOMALIA

Somalia's energy accessibility is characterized by a low electrification rate of 35%, the absence of electricity grid infrastructure, and a predominant reliance on diesel mini-grid systems, which are owned and operated by private Electricity Service Providers (ESPs) and subject to notably high tariffs. The project strategy corresponds to the unique nature of the energy sector in Somalia, and the AMP's concentration on clean energy by focusing on digital transformation and institutionalization of ongoing initiatives to expand the adoption of solar PV technologies, and promote hybridization of existing diesel minigrid systems as a financially viable path to driving down tariffs and reducing GHG emissions in Somalia.

Country	Somalia	
Implementation Modality	DIM	
Project Executing Entity(s)	UNDP	
Implementation Start Date	13 Dec 2022	
Project Budget (USD)	GEF UNDP TRAC: Total:	3,276,147 750,000 4,026,147
Additional co-financing not contributing to project results (USD)		170,700,000
Expected direct beneficiaries (incl. women)		66,670 (Including 33,335 women)
Expected GHG emissions mitigated (metric tons of carbon dioxide equivalent (tCO2e))		29,500

Key achievements in 2023:

- An agreement was reached between the newly established Ministry of Environment and Climate Change and the Ministry of Energy and Water Resources on the respective roles and responsibilities in the implementation of the project.
- The national dialogue on minigrids delivery models and DREI study for solar PV-battery minigrids were successfully launched towards the end of 2023.
- Consultations have been initiated with Ministry of Energy and Water Resources and National Electricity Authority on the institutional setup for rural electrification.
- Existing training curriculums related to the design, O&M, and management of solar and hybrid mini-grids, including the ones developed with the support of International Labor Organization (ILO), NIS foundation and other international partners were reviewed to identify the gaps to be supported by the AMP project.

Next steps in 2024:

- Through the ongoing national dialogue, support prevailing private sector-led delivery model to be formalized and regulated. Further support the Ministry of Energy and regulator in reviewing existing policies and regulations and drafting new ones as needed.
- Finalize and disseminate the DREI report.
- Continue capacity building activities related to the development of public training programmes on minigrids, and to the establishment of quality standards.
- Conduct a feasibility study for the mini-grid pilots and develop the minigrid pilot plan.
- Conduct the digital readiness assessment and develop the project digital strategy.

VISION FOR 2024

LESSONS LEARNT

Key lessons learnt from the first stages of implementation:

- **Consider high financing barriers for minigrids.** Even in countries with a relatively advanced minigrid market, financing costs remain very high and local financing is difficult to mobilize. This de facto maintains a strong divide between the international developers who have the capacity to raise early-stage financing, and the national developers who don't. The project should seek to collaborate with partners to implement derisking mechanisms to address these risks from an early stage of project implementation.

- **Address high currency fluctuations.** Several AMP countries have experienced significant currency fluctuations in the recent past, which poses an important foreign exchange risk to minigrid developers, who are typically importing all equipment (solar panels, inverters, batteries) and making capital outlays upfront using hard currency. To minimize this risk, UNDP should provide flexibility in disbursing the grant in hard currency, or in disbursing the grant in local currency but keeping the USD value of the grant constant.

- **Identify early on responsible parties to support implementing partners.** When implementing partners have limited capacity to implement some of the project activities, it can be very challenging to quickly find responsible parties willing and able to support and to avoid delaying project activities. More consideration should be given at the project formulation stage in the identification of possible responsible parties, for instance through consultations with development partners or government agencies who have already been implementing minigrid projects in the country.

- **Conduct a structured onboarding process.** Applying a structured onboarding process from the onset of a national project implementation (as soon as a Project Manager has been recruited) has proven to be a very effective approach to lower the learning curve. This can also be repeated when a turnover happens in the project team, as could be observed in one AMP country in 2023.

- **Broaden the audience of the AMP Community of Practice for a higher level of engagement.** In order to address sector barriers, a holistic engagement with various stakeholders is needed and should be promoted within AMP, in particular through the AMP COP. While the COP audience was envisaged to be primarily composed of the national project teams and relevant government officers, it became apparent that other key stakeholders such as minigrid developers and investors needed to be engaged as well for the program to reach its expected results.

- **Increase standardization and accessibility of knowledge tools.** Despite the wealth of knowledge tools already developed by partners on renewable energy minigrids and available in the public domain, there is a clear need for targeted selection and dissemination across the national projects so they can find the relevant information and reap the benefits of these tools. An effort is also often needed to make these knowledge tools more accessible, for instance by turning an existing report into a webinar to distill the key information and allow for more interactions between the national projects and relevant experts.

- **Enhance the regional project capacity for tailored technical assistance**. While standardized knowledge tools and guidance are needed to provide an overall and coherent direction to the program, it is evident that national projects require significant technical assistance that is individualized and tailored to their country needs. The regional project funding dedicated to tailored technical assistance (Component 2) were limited, leading to the need to mobilize additional resources to increase the regional project's capacity to respond to these requests.

LESSONS LEARNT

- **Increase and structure consultations with partners.** While the AMP regional project had initially envisaged using existing platforms (such as the Minigrids Funders Group) to get technical advice on the program directions, it became clear during implementation that a dedicated platform was needed. It also became apparent that enhanced coordination with key program partners such as AfDB was necessary to maximize collaboration opportunities. Due to these considerations, the creation of a joint Technical Advisory Committee between AfDB AMAP and AMP is envisaged for 2024.

- **Ensure high flexibility and foster adaptive management in the programme.** The regional project management unit spent a significant amount of time revisiting the program strategy and objectives at the beginning of implementation to ensure relevance and to provide the most appropriate support to national projects. It will be important in the future to continue to foster adaptive management in order to be able to deploy the needed support from the regional to the national projects more rapidly.

- **Plan for the early recruitment of the national project management units.** Similarly, many national projects spent a lot of time in their initiation stage, particularly recruiting the project management units. A few national projects successfully managed to accelerate project initiation by launching the recruitment of the project manager and selecting the candidate at a very early stage, and finalizing the recruitment process once the project was officially launched.

- **Plan for a more realistic workplan for the minigrid pilots.** The planning stage for the minigrid pilots (including the development of the minigrid pilot plans) turned out to take significant time. This led to low delivery in the first two years of the national projects implementation as most pilots were expected to be already implemented during this period. In the future, it will be important to include a more realistic workplan in the project documents (or update the workplan during initiation stage) to avoid a seemingly poor project performance in the first years of project implementation.

- **Carefully assess the existing prevalent minigrid delivery models and possible levels of engagement of the private sector.** Most national project documents made the assumption that the CAPEX of the minigrid pilots would be cofinanced by the private sector. In a few AMP countries where the prevalent minigrid delivery model is government-led, the market may not allow at this stage for this co-investment. Rather, the private sector may take an enhanced role in the operations of the minigrids through AMP first, which may build their capacity and allow them to be eventually in a position to participate in more private sector led delivery models, should the government move into this direction.

WHAT'S TO COME

In 2024, the regional project as well as most first round national projects will reach their mid-term and conduct their independent mid-term review. With the acceleration of the implementation of these projects and new AMP national projects from the second round expected to be onboarded in 2024, the regional project will step up its support and its coordination and convening role, as further described below. The first incoming convening of the AMP COP in Lagos in May 2024 is further expected to boost engagement and greatly enhance AMP's reach and visibility.

This will be facilitated by additional funding mobilized by both RMI and UNDP to expand the capacity of the regional project, expected to be released in 2024. UNDP has mobilized USD 1.7 million additional funding for the AMP regional project in 2024 from Denmark and Luxembourg through a UNDP Funding Window opportunity. RMI has also mobilized close to USD 175,000 through a philanthropic gift, to be used as RMI co-financing to the project.

Partnerships initiated in 2023, such as the one with AfDB, will be strengthened in 2024, and a joint Technical Advisory Committee (TAC) between AMP and AfDB's Africa Mini-Grid Market Acceleration Programme (AMAP) will be created to provide a more systematic way for key technical partners involved in the minigrid sector to guide AMP and AMAP's implementation and ensure a greater level of synergy between both programs.

Lastly, and following the expression of interest of several countries to join AMP or expand their existing AMP project, UNDP will explore in 2024 the opportunity to develop a new round of GEF-funded AMP national projects as well as additional components for a the Regional Project as part of the GEF-8 cycle.

KNOWLEDGE TOOLS

Activities planned in 2024 on knowledge tools development are centred on enhancing the accessibility and usability of relevant minigrid resources to support national projects effectively. This includes updating the online content library with 5-10 new relevant products each quarter, informed by desk research and partner consultations. Additionally, there will be a consultation of the AMP community to gather feedback and improve the usability of the content library. To cater to French-speaking stakeholders, a French-speaking onboarding online course will be created on the AMP COP platform, complementing the existing English course. Furthermore, the summary/masterplan of regional project support will be further enhanced, providing links to relevant resources produced by the regional project for national projects. Key deliverables for 2024 include the completion and dissemination of several toolkits and guidance notes, such as the PUE Toolkit, Climate Resilience Toolkit, Community-centric Minigrid Toolkit and a further one on project preparation facilities. Additionally, insights briefs capturing lessons learned from national project implementation will be developed.

Through the Funding Window allocation, additional knowledge tools will be developed and disseminated including guidance notes on technical/quality standards for solar PV minigrids. Furthermore, capacity-building programs on minigrids for government officers, developers, and financiers will be standardized in partnership with relevant partners like AfDB and AFUR, building on a collaboration initiated in 2023.

TAILORED TECHNICAL AND OPERATIONAL ASSISTANCE TO NATIONAL PROJECT IMPLEMENTATION

With the acceleration of national projects' implementation and new AMP national projects expected to be onboarded in 2024, the regional project will step up its tailored technical and operational assistance. The database of international experts will be expanded to include at least 40 professionals proficient in various profiles and languages. The regional project will deploy international experts to provide tailored support to national projects across various thematic areas, including national dialogues, Derisking Renewable Energy Investment (DREI) studies, social and environmental safeguards and gender. The regional PMU will also continue the bilateral engagement with national projects, maintaining regular engagement through monthly update meetings and contributing to the inception workshops and onboarding of new national projects starting implementation.

The Funding Window allocation will allow to provide enhanced support by international experts to a larger number of outputs and national projects. Efforts to mainstream gender considerations within national projects will also be intensified, with the recruitment of a regional gender expert in charge of supporting the program. The regional project will also have the capacity to organize additional regional-level activities, such as advocacy for the adoption of regional quality standards on PV-battery minigrids and the harmonization of tariff-setting mechanisms.

COMMUNITIES OF PRACTICE

The initial steps taken in 2023 to establish the Community of Practice will be further enhanced and strengthened in 2024 to deepen the impact and effectiveness of the AMP COP. A primary focus will be on updating the COP strategy document to ensure that international and national minigrid developers, as well as investors and financiers, are central to its audience.

Communication engagement will be intensified through social media outreach, global event participation, and regular blog posts, newsletters, and community-focused stories. The upcoming in-person COP event in Lagos in May will be the central activity of the AMP COP in 2024 (see Box 3). Additionally, the regional project plans to organize two webinars or knowledge events per month to provide insights and foster collaboration within the AMP COP participants.

The Africa Minigrids Program (AMP) Community of Practice (CoP) fosters the development of minigrid expertise by connecting practitioners within a supportive network, helping them to exchange knowledge and navigate the complexities of project implementation. The community's objectives are achieved through dynamic in-person convenings that combine technical training and peer networking. These sessions are designed to enhance skills, deepen industry connections, and align strategies across national projects, ensuring ongoing collaboration and professional growth.

The first in-person convening of the Africa Minigrids Program (AMP) Community of Practice (CoP) is scheduled to take place alongside the Energy Access Investment Forum (EAIF) in Lagos, from May 20th to May 24th organized by the Alliance for Rural Electrification (ARE). This event will feature two full days of interactive sessions, providing a collaborative platform for AMP project implementers from 10 different countries. Hosting the AMP CoP event concurrently with the EAIF allows for an enhanced exchange of ideas and collaboration opportunities with key stakeholders from the private, public, and financial sectors. The co-location aims to facilitate connections, enhance skill sets and drive collaboration between AMP and diverse industry players, fostering growth and continuous professional development in the minigrid sector.

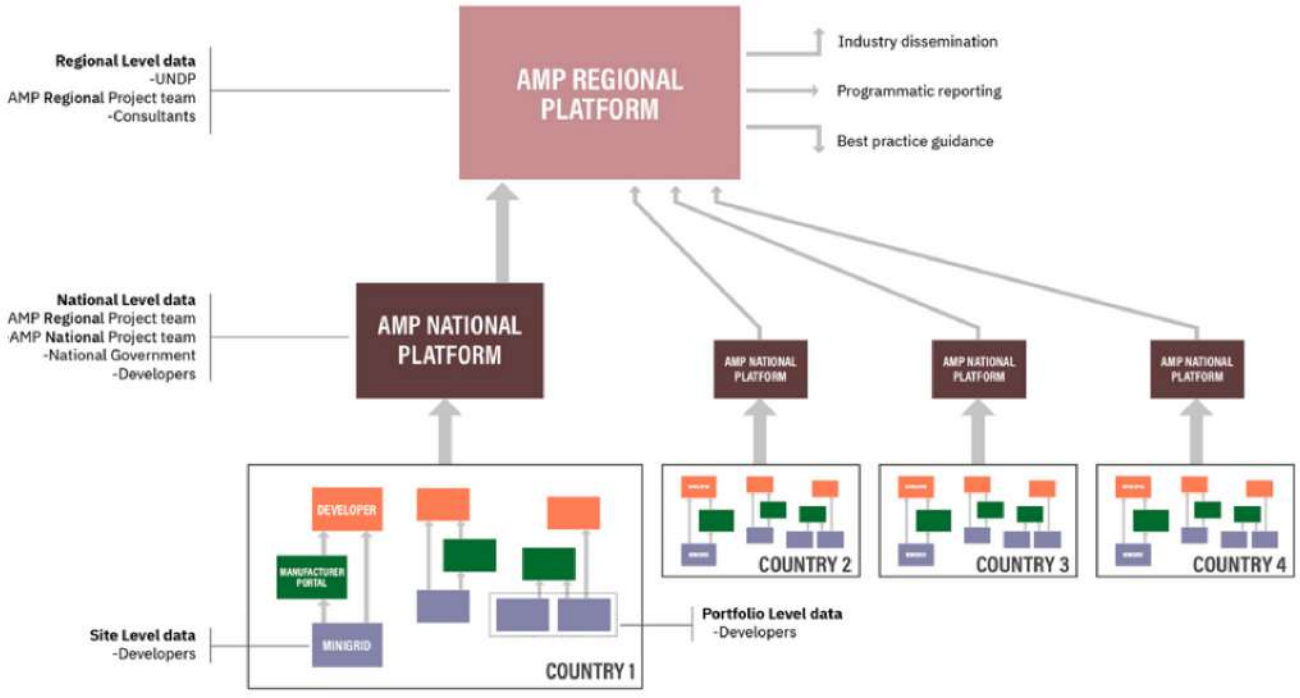
To further facilitate learning and knowledge exchange, more active engagement will take place throughout the year through the AMP COP platform. Targeted small group convenings – technical cohorts – will be formed to collaboratively address major challenges facing the minigrid sector and to disseminate their findings to the broader minigrid ecosystem. These technical cohorts will be supported by the regional project in particular RMI leading on this activity, through active moderation and engagement with the AMP COP members.

In line with fostering partnerships, the regional project will conduct a mapping exercise to identify potential partnership opportunities with other working groups and priorities within the minigrid sector. Efforts will be made to secure formal partnerships with 2-4 organizations, facilitating content creation, dissemination, and subject matter expertise around key AMP themes.

DIGITAL TOOLS AND SOLUTIONS FOR MINIGRID COST-REDUCTION

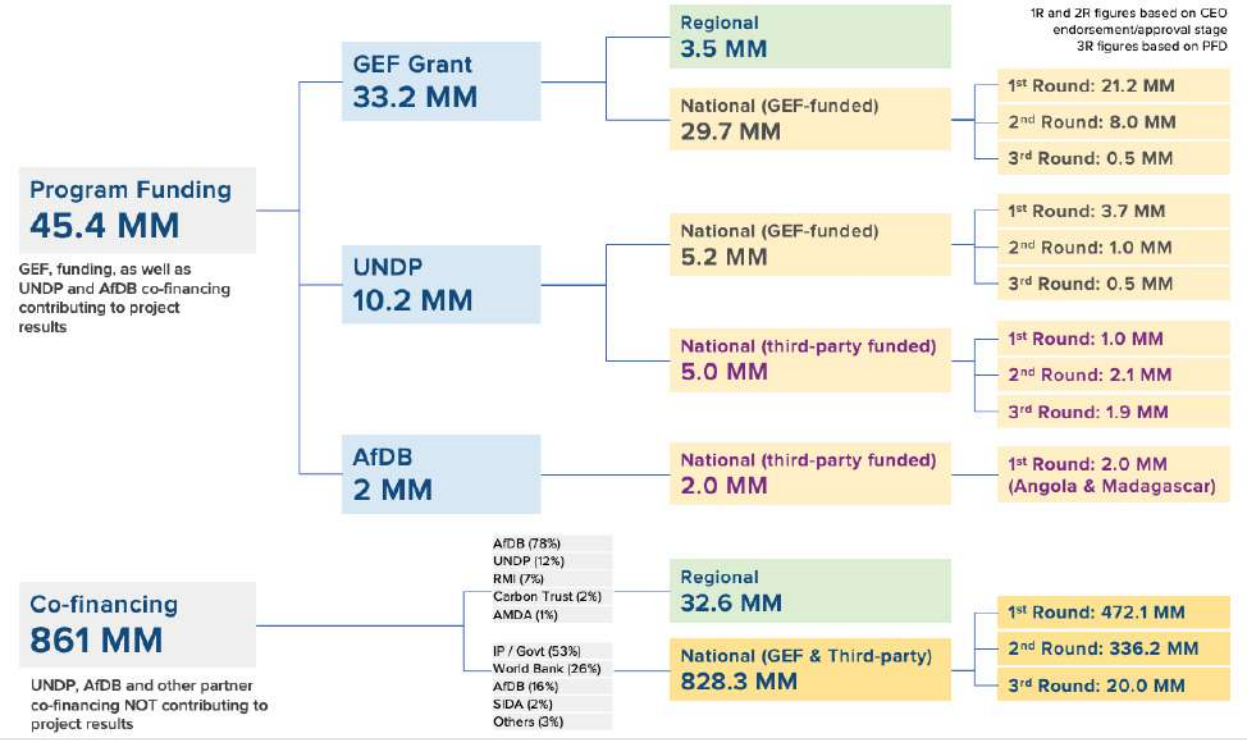
Guidance and toolkits related to data and digital tools – such as the guidance on Digital Readiness Assessment (DRA) and the digital toolkit – will be finalized and released in 2024. The regional project will also complete and disseminate the standardized frameworks the national projects should align with, such as the Quality Assurance and Monitoring Framework (QAMF). The national and regional digital platforms will be procured through a largely centralized approach, thus ensuring greater harmonization and compatibility across the program. Active partners consultations will continue to ensure these activities come in complement and synergy with existing interventions in the sector.

Simultaneously, dedicated support will be provided to national projects under implementation to quality assure their deliverables, including their digital readiness assessments and digital strategies.



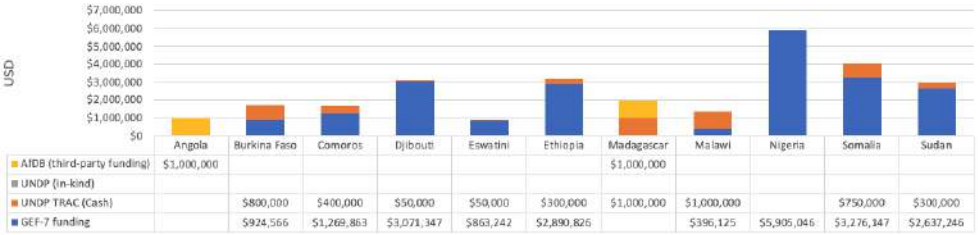
Annex I: Financials

PROGRAM FUNDING AND CO-FINANCING



AMP NATIONAL PROJECTS FUNDING

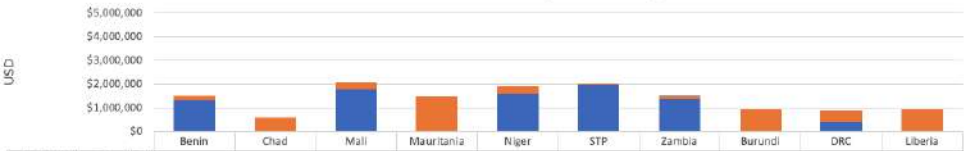
1st Round National Projects Funding



	Angola	Burkina Faso	Comoros	Djibouti	Eswatini	Ethiopia	Madagascar	Malawi	Nigeria	Somalia	Sudan
AfDB (third-party funding)	$1,000,000						$1,000,000				
UNDP (in-kind)											
UNDP TRAC (Cash)		$800,000	$400,000	$50,000	$50,000	$300,000	$1,000,000	$1,000,000		$750,000	$300,000
GEF-7 funding		$924,566	$1,269,863	$3,071,347	$863,242	$2,890,826		$396,125	$5,905,046	$3,276,147	$2,637,246

Average: 2.6 MM
Total: 28 MM
Min: 900,000(Eswatini)
Max: 5.9 MM (Nigeria)
2 third-party funded (Angola, Madagascar)

2nd & 3rd Round National Projects Funding



	Benin	Chad	Mali	Mauritania	Niger	STP	Zambia	Burundi	DRC	Liberia
AfDB (third-party funding)										
UNDP (in-kind)							$100,000			
UNDP TRAC (Cash)	$200,000	$600,000	$300,000	$1,500,000	$300,000	$50,000	$100,000	$950,000	$500,000	$950,000
GEF-7 funding	$1,326,147	$0	$1,784,476	$0	$1,601,376	$1,968,349	$1,363,947	$0	$408,716	$0

Average: 1.4 MM
Total: 14 MM
Min: 600,000 (Chad)
Max: 2 MM (Mali, STP)
4 third-party funded (Chad, Mauritania, Burundi, Liberia)

Annex II: National projects implementation status

Round	Country	Implementing Agency	Implementation Status	GEF Grant (US$)	UNDP Co-financing (US$)	Other Co-financing (US$)
1	**Angola****	*(Project executed by AfDB)*	Design stage	-	-	1,000,000 (AfDB)
1	**Burkina Faso**	Burkina Faso Rural Electrification Agency (ABER)	Under implementation	924,566	800,000	103,693,243
1	**Comoros**	Directorate General for Energy, Mining and Water (DGEME)	Under Implementation	1,269,863	400,000	41,759,603
1	**Djibouti**	Ministry of Urban Planning, Environment and Tourism (MUET)	Under Implementation	3,071,347	50,000	15,790,000
1	**Eswatini**	Ministry of Natural Resources and Energy (MNRE)	Under Implementation	863,242	50,000	19,374,228
1	**Ethiopia**	Ministry of Water, Irrigation, and Energy (MoWIE)	Under Implementation	2,890,826	300,000	13,473,751
1	**Madagascar****	UNDP - Madagascar	Under Implementation	-	1,000 000	1,000,000
1	**Madagascar****	*(Project executed by AfDB)*	Design stage	-	-	1,000,000 (AfDB)
1	**Malawi**	Ministry of Energy	Under Implementation	396,125	1,000,000	2,344,395
1	**Nigeria**	Rural Electrification Agency (REA)	Under Implementation	5,905,046	-	75,035,714
1	**Somalia**	UNDP - Somalia	Under Implementation	3,276,147	750,000	170,700,000
1	**Sudan**	Not Applicable	Not started	2,637,246	300,000	5,250,000

2	**Benin**	Ministry of Energy	Project initiation	1,326,147	200,000	33,000,000
2	**Chad****	Ministry of Energy	Design stage	-	600,000	-
2	**Mali**	Renewable Energy Agency (AER-Mali)	Project initiation	1,784,476	300,000	147,338,282
2	**Mauritania****	Ministry of Energy	Under implementation	-	2,500,000	15,000,000
2	**Niger**	Rural Electrification Agency (ANPER)	Not started	1,601,376	300,000	136,457,017
2	**Sao Tome e Principe**	Directorate-General Natural Resources and Energy (DGRNE)	Project initiation	1,968,349	50,000	6,088,210
2	**Zambia**	Rural Electrification Authority	Project initiation	1,363,947	100,000	13,450,000
3	**DRC**	Rural Electrification Agency (ANSER)	Project initiation	408,716	180,000	60,642,000
3	**Burundi****	Ministry of Energy	Design stage	-	1,000,000	61,048,000
3	**Liberia****	Rural and Renewable Energy Agency	Design stage	-	950,000	-

** Third-party funded projects.

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