

MINI-GRIDS PARTNERSHIP

STRATEGIC PLAN: 2018-2019

The Mini-Grids Partnership brings together mini-grids financiers, developers, policymakers and facilitators, sharing information and ideas and shaping policy and markets toward the clean energy mini-grid movement.

BACKGROUND

Clean energy mini-grids hold promise for rural electrification

As of 2014, some 1 billion people globally still lived without access to electricity – 80% of those people were living in just 20 countries, all of them in Sub-Saharan Africa (SSA) and Asia.¹ It is estimated that 645 million Africans, nearly 60% of the continent’s population, do not have access to electricity.² Sixty percent of businesses in SSA cite access to reliable power as a major constraint to their growth, and power outages are estimated to cost countries 1-2% of their GDP annually. India has the largest national energy access deficit and is by far the most populous country facing an electrification challenge. In Southeast Asia, although the number of people without access to electricity has declined by two-thirds since 2000, 120 million people, or 20% of the population, are still living without electricity.

For a significant portion of these people, clean energy mini-grids (CEMGs)³ will be the least-cost option for reliable electricity access compared with the two main alternatives: grid extension and stand-alone systems (such as solar home systems). According to the International Energy Agency’s (IEA) 2017 World Energy Outlook Special Report: From Poverty to Prosperity, decentralized systems – including off-grid technologies and mini-grids – will make up nearly three-quarters of the additional connections to meet universal electricity access by 2030. Nearly all of these connections will be powered by renewables as a result of falling costs, technological advancements and more efficient appliances.

Investor and development community interest in CEMGs has risen over the past decade. For instance, in 2016 the African Development Bank (AfDB) approved the establishment of a US\$ 500 million Facility for Energy Inclusion, a debt fund targeting off-grid projects, mini-grids and small grid-connected IPPs; the Scaling-Up Renewable Energy Program (SREP), managed by a number of DFIs including the World Bank and regional development banks, has committed US\$ 51.1 million in Asia, US\$ 127.4 in Africa, and US\$ 29 million in Latin America & the Caribbean, and much of this targeting mini-grids; The Rockefeller Foundation has committed US \$75 million to its Smart Power for Rural Development program in India; the

¹ Sources: International Energy Agency (IEA) and the World Bank. 2017. “Progress Towards Sustainable Energy: Global Tracking Framework 2017” (April), World Bank, Washington, DC. IEA (2016), “World Energy Outlook 2016”, International Energy Agency, Paris.

² Half of those, or 325 million, come from only six countries; Nigeria, Democratic Republic of Congo, Ethiopia, Kenya, Uganda and Tanzania. “African Development Bank Group Strategy for the New Deal on Energy for Africa 2016-2025”, May 2016.

³ Although a range of sizes and system types exist within “mini-grids”, the Mini-Grids Partnership seeks an inclusive definition that simply differentiates the sector from stand-alone household systems and grid-extension approaches.

UK's Department for International Development (DFID) has allocated £75 million to its Green Mini-Grids Africa program; and Power Africa's Beyond the Grid initiative has worked with partners to commit investments over US\$ 1 billion into off-grid solutions, including micro-grids. Additionally, in April 2016, the World Bank set up a Global Facility on Mini-Grids to support pre-investment activities, technical assistance and global knowledge sharing. Several impact venture capital firms— including the Acumen Fund, Vulcan and Energy Access Ventures are aiming for substantial equity investment in the space. More recently, the Micro-Grid Investment Accelerator has been launched by Allotrope Partners with the backing of Facebook and Microsoft and aims to mobilize US\$ 50 million of investment for mini-grids in India, Indonesia and East Africa. Even national utilities and established energy players like Caterpillar, EDP, Enel, Engie E.ON, First Solar, and others (many represented by the Alliance for Rural Electrification) have made strategic investments in mini-grids in the developing world, taking advantage of decreasing PV and storage costs. Manufacturers producing smart meters, software, and payment technology have made similarly dramatic progress in the past few years.

However, despite these advances and the well-acknowledged global potential, a sustainable market for mini-grids has still not materialized. Investors are still unwilling to commit finance at the scale required and there seems to be continued doubt over the future for mini-grid applications in developing countries. Additionally, many countries have yet to develop mini-grid policy frameworks conducive to private investment, for example by imposing uniform national tariffs that are not cost-reflective, or by maintaining complicated and redundant licensing requirements.

What is holding back clean energy mini-grid development?

While the potential of CEMGs is high, current market penetration, even in the most promising markets, is below 1 percent. There remain many important barriers to the scaling-up of commercial energy access ventures:

- **Policy, Legal and Regulatory:** Unclear levels of policy commitment to and the lack of regulatory frameworks for CEMGs are an issue, as well as possible changes in electrification plans, regulatory requirements and incentives. The inability to charge cost-reflective tariffs is a key barrier, as is uncertainty over whether and when the grid will arrive, and what options are available to avoid stranded assets when the grid does arrive.
- **Business Models:** Fundamental operational challenges in serving remote and low-income markets (accessibility, reliable income streams, maintenance) make it difficult to operate mini-grids on a commercial basis, particularly in the absence of adequate support and de-risking mechanisms. Part of this is due to the distance between residential and commercial users, which is often too great to provide a cost-effective service for both. Initially low or unpredictable demand for power in rural areas makes it difficult to identify suitable sites for mini-grid systems and size the systems properly thus exacerbating the situation.
- **Access to Financing:** Venture capital investments (excluding impact investments) are rare because investors perceive the mini-grid market as being too risky and small-scale. Market rate debt is prohibitively expensive and access to project financing is limited. Private banks and investors have little experience/exposure to CEMGs, leading them to place high-risk premiums on mini-grid investments due to the uncertainty. Furthermore, DFI debt financing is typically inaccessible for investments below US\$ 10 million. The deployment of concessionary finance to de-risk projects is frequently stymied by the absence of other forms of finance.

- **Local Capacity and Talent:** There is a lack of relevant technical and commercial skills to scale-up operations and financing. Furthermore, with regulatory, resource and financial situations varying between projects, mini-grid types and countries (most clean energy mini-grids are currently bespoke), the implementation of mini-grid projects often requires external and expensive specialists.
- **Market Maturity:** Due to the early stage nature of the market, there is a lack of transparent and reliable data to guide decisions (demographics, urbanization, ability-to-pay, regulation, potential local partners). The market is also fragmented and uncoordinated, leading to inefficiencies and delays.

No single, global initiative exists to provide the coordinated support needed to scale-up clean energy mini-grids

There are several membership- and network-based initiatives/organizations that are related in some way to mini-grids. These include the Alliance for Rural Electrification, the CLEAN Network, the Energy Access Practitioner Network, Power for All, and the African Mini-Grid Developers Association. However, none of them are capable to provide the scope of tailored support needed by developers, operators, customers, investors, financiers and supporters of CEMGs at a global-level. In fact, the Mini-Grids Partnership (MGP) brings together these networks around the focus of unlocking the barriers to mini-grid development.

Similarly, there are several programs and resources focused on mini-grids, including the AfDB's Green Mini-Grid Market Development Programme (MDP), which is part of the DFID Green Mini-Grids Africa Programme. However, these focus on Africa specifically and certain types of support. For example, the MDP directly targets the operationalization of mini-grids on the ground through technical assistance, policy reform and finance in Africa; the Programme does not generally focus on networking with the large group of global sector stakeholders, has limited access to lessons learned from other regions, and does not always have the clout to lobby governments and financiers for sector reforms and support. The World Bank's Global Facility on Mini Grids does work directly with governments and does facilitate networking and knowledge sharing among global sector stakeholders, and so the MGP will seek to complement the facility by helping to disseminate proven practices and other learnings and link the facility to other initiatives and stakeholders.

MINI-GRIDS PARTNERSHIP

About

The Mini-Grids Partnership is a voluntary partnership of leading mini-grid stakeholders – from both the public and private sector - that seeks to accelerate the development and deployment of CEMGs through the exchange of information and ideas and by shaping policy and markets to unlock the potential of widespread mini-grid electrification.

Goal and Workstreams

The Mini-Grids Partnership's goal is to reduce the above-mentioned barriers and thereby create a more mature and thriving clean energy mini-grids sector. *Building such a sector entails a wide range of activities that can be prohibitively expensive for any one stakeholder to undertake individually, and are best suited*

for a collaborative process involving a variety of stakeholders and related skills. To help achieve its goal, the MGP will:

- Champion the sector and help shape policy for public and private sector mini-grid development
- Coordinate sector knowledge and action
- Broker partnerships
- Support finance and de-risking mechanisms, business models and opportunities
- Promote international standards and quality assurance frameworks

If successful, the MGP will have helped pave the way for increased financing/funding for CEMGs.

1. Champion the Sector and Help Shape Policy for Public and Private Sector Mini-grid Development:

While many governments and their development partners have begun to appreciate the role of mini-grids in rural electrification (and in some cases, have made substantial progress), there are many other stakeholders that show very limited commitment and preparedness to take action. Governments' efforts in creating a favorable policy and regulatory environment for mini-grids are supported by a wide range of actors, including development banks and agencies providing technical assistance, research and academia, as well as industry representatives, including individual companies.

The MGP will advance clean energy mini-grids on national and international agendas by:

- Increasing the availability of information and the level of understanding on mini-grids (especially their role and benefits) amongst policy-makers.
- Advising governments of the potential benefits from effective policy, sharing experience from other countries and suggesting how this can be effectively tailored to local conditions.
- Advocating for national and local governments to create a favorable policy and regulatory environment for mini-grids (thereby achieving a level playing field for mini-grid developers and utilities), especially on matters related to:
 - The appropriate role of mini-grids in energy sector planning
 - Public procurement and tender procedures
 - Provisions for private involvement in mini-grid development
 - Grid connection options for mini-grids
 - Mini-grid tariffs (differentiated versus nationally uniform/cross-subsidized tariffs)

Targeted Beneficiaries | Policy-makers within governments (Rural Energy Agencies, Ministries of Energy) and their development partners (DFIs, consultancies)

2. Coordinate Sector Knowledge and Action: As new and improved technologies emerge, decentralized power becomes more useful, and interest in mini-grids grows, increasing the information exchange and knowledge sharing between actors and MGP members becomes critical for cost-effective market development. The MGP views knowledge sharing as a necessary means to streamline collective efforts, and to further public-private partnerships. Increasingly, many mini-grid actors have been pursuing programs, publishing reports, organizing events, and mobilizing around developing the sector. Our partners' combined and shared experiences can help to improve the approaches adopted in the future and advance the expansion of the mini-grid sector.

The MGP will coordinate sector knowledge and action by:

- Creating agreement and knowledge of key concepts, techniques, technologies, and approaches, as well as data and information gaps. Doing so will support improved performance across the clean energy mini-grids sector
- Easing the availability of information, including research, events, and tools by providing a central platform for mini-grid information.
- Bringing together the stakeholders on a regular basis to ensure that activities and research efforts are shared and not being duplicated.

Targeted Beneficiaries | Members of the Mini-Grids Partnership

3. Broker Partnerships: With a wide variety of actors currently engaged in promoting and developing mini-grids, facilitating partnerships and promoting synergies becomes crucial for moving the sector forward in a cohesive manner. Establishing linkages with other parts of the energy access ecosystem, especially off-grid stakeholders and utilities, is also important as countries take more of an integrated approach to energy planning. This involves actively monitoring technological innovations, new developers entering the market, sources of funding, technical assistance and other support, with a view to linking stakeholders to one another.

The MGP will build and support partnerships by:

- Developing a landscape of the sector – collecting and collating data to map and categorize actors (updating and building on past work in this area).
- Facilitate presentations to membership where donor, private sector and government actors can present their organizations and initiatives.
- Maintaining a database on mini-grids, including information on key performance indicators (developer, technology, business model, financial model, number of connections, etc.).
- Providing a platform for interested actors to engage with one another.
- Creating linkages with other stakeholders and initiatives from the broader energy access ecosystem (e.g. GOGLA, Association of Power Utilities of Africa, Electrification Accelerator under development by SEforALL).
- Facilitating in-person networking opportunities.

Targeted Beneficiaries | Members of the Mini-Grids Partnership, funders (impact investors, fund managers, banks/ DFIs), governments and their development partners

4. Support Finance and De-risking Mechanisms, Business Models and Opportunities: Grants, equity and debt all have critical roles to play in mini-grid finance. Available grant resources, though already important, still need to grow further to meet the sector’s ambitions, and these grant resources need good projects and commercial matching funds to be disbursed. Many impact, development finance and commercial investors still perceive the mini-grid market as being too risky. Market rate debt adjusted to perceived risk is prohibitively expensive, with short tenures and access to project financing (as opposed to corporate or balance sheet finance) is limited. Private banks and investors have little sector experience/exposure to CEMGs, and relying solely on development finance institutions is unsustainable. Results-based bonuses – to support household connection costs – are only available in a small number of countries.

The MGP will advocate for increased investment by:

- Raising awareness amongst public and private sector financiers regarding success stories, continued challenges and opportunities. Target specific awareness raising actions towards the commercial banking sector.
- Improving data and benchmarks on funding requirements and supporting the creation of new instruments providing CEMG grant, equity and debt finance.
- Promote market development programmes, sector research, and visibility events.
- Mobilizing donor contributions to a pan-African RBF facility.

Targeted Beneficiaries | Funders (DFIs, commercial banks)

5. Promote International Standards and Quality Assurance Frameworks: As countries work to achieve sustainable energy for all, electrification plans are taking an all-encompassing strategy, combining main grid, mini-grid and off-grid approaches. Issues with integration of technology (including interconnection of mini-grids to main grids), design, operations and management further complicate mini-grid deployment. For mini-grids to reach scale, the concerns with technical development, service quality and consumer safety need to be addressed.

The Partnership will promote standards and quality assurance frameworks by:

- Actively promoting and disseminating quality assurance frameworks such as the mini-grid Quality Assurance Framework produced by DoE/NREL, and most aggressively in target countries where the mini-grid sector is beginning to gain traction.
- Educate mini-grid developers and policymakers on the need for standards and promote policy adoption.
- Facilitate exchanges between mini-grid developers and government on technical and technological approaches and concerns, with the aim of achieving mutual understanding and agreements.
- Encourage the promulgation of mini-grid standards by international and national standards organizations.

Targeted Beneficiaries | Mini-grid developers, government policy-makers

Value Proposition

The MGP uses the collective experience of its members and its unique relationship with leading development partners (e.g. Sustainable Energy for All, international development banks, government policy-makers, technology and mini-grid developers) to create a more conducive environment for CEMG sector growth.

The History of the MGP: Past and Present

In recognition of the important contribution that CEMGs can make towards achieving universal energy access, the SEforALL initiative designated CEMGs as one of a few “High Impact Opportunities” (HIOs); i.e. categories of action identified as having significant potential to advance the three objectives of SEforALL (related to energy efficiency, renewable energy use and energy access). The Clean Energy Mini-Grids HIO was launched at the first SEforALL Forum in June 2014 by the UN Foundation and the Alliance for Rural Electrification. Since the HIO’s inception, and in addition to the ongoing activities of individual organizations involved with mini-grids and their related accomplishments, the HIO has:

- Recruited over 250 members, representing a range of stakeholders engaged in the clean energy mini-grids sector
- Established a Steering Committee comprised of 12 leading organizations/institutions engaged in supporting CEMGs globally
- Mapped CEMG support providers and programmes
- Advocated for CEMGs by supporting and organizing thematic sessions at high-level events worldwide (e.g. Annual ARE Energy Access Investment Forum, SE4All Annual Conferences, Bangalore workshop; ECOWAS Forum; Financing 4 Development (Addis); SAIREC 2015; Vienna Energy Forum and WFES (Abu Dhabi))
- Included mini-grids in the UN Foundation’s Energy Access Practitioner Network Investment Directory
- Issued quarterly CEMG newsletters

For a full list of mini-grid accomplishments, please see the annual reports from [2014](#) and [2015](#).

In 2017, to align itself with SEforALL’s new strategic plan and partnership framework, the HIO re-named itself the Mini-Grids Partnership and is exploring becoming an official ‘Accelerator’ of SEforALL.⁴

Approach

The MGP Strategic Plan 2018-19 is designed to be modular, allowing for growth as resources become available.

The MGP’s five workstreams will be carried out in phases, with emphasis initially given to the first three workstreams: (i) Championing the sector and helping shape policy; (ii) Coordinating sector knowledge and action; and (iii) Broker partnerships. These workstreams can be initiated (or continued) with few resources in addition to a core operating budget. Additional resources mobilized will be used to strengthen the group’s communications and IT tools, for example its website and databases.

Following this initial phase of work (which is expected to last at least 1 year), the MGP will re-evaluate its strategy, including broadening its scope to include the remaining two workstreams: (iv) Supporting finance and de-risking mechanisms, business models and opportunities; and (v) Promoting international

⁴ SEforALL Accelerators are one of the few ways in SEforALL partners with other stakeholders. They are groupings of partners that use the SEforALL umbrella to advance a set of shared priorities. Becoming an Accelerator requires having a partnership agreement with SEforALL that lays out the focus and desired results of the partnership.

standards and quality assurance frameworks. To this end, the MGP will undertake a stakeholder consultation process at the end of year 1 on possible areas of future MGP intervention.

To ensure it is adding value to other existing mini-grid-related initiatives, the MGP will use the following screening criteria to guide its involvement in specific activities:

- An activity initiated by the group will in no way duplicate activities of other sector stakeholders, to be validated by the Steering Committee.
- An activity initiated by the group should be one best undertaken by a variety of stakeholders through a collaborative process or one that provides a public good to multiple stakeholders.
- The MGP will not engage in unfunded mandates; all initiated activities must have corresponding financial resources or an agreed-upon pro bono arrangement.
- An activity initiated must fit logically into one of the group's five workstreams, to be validated by the Steering Committee.

Governance

The MGP is a collection of like-minded, mini-grid stakeholders working together to create a more conducive environment for CEMG development. It is recognized that the MGP is not working in isolation and its efforts are intended to enhance or complement ongoing work rather than to duplicate existing activities or programs. To this end, the MGP seeks to be an “umbrella” group that can bridge discrete but related stakeholders and initiatives, from both the public and private sector.

The Partnership's governance structure consists of:

- **Steering Committee:** The Steering Committee provides strategic guidance and oversight to the Partnership's operations. The Committee is made up of 15 organizations⁵, with representation from funders/financiers, government, industry and other enablers⁶. The committee meets periodically to conduct the business of the Partnership and provides frequent technical and operational advisory support. The Committee is headed by a Chair (with term-limits). The Chair is a non-remunerative voluntary position selected from members of the Steering Committee.
- **Secretariat:** The Partnership's Secretariat fulfills the Partnership's central administrative duties, including managing/coordinating the Partnership's membership, organizing the Executive and Steering Committee, facilitating communications between the Partnership's members and Executive and Steering Committees and helping commission/coordinate the Partnership's various activities, including its working groups. The Secretariat will be led by a senior focal person dedicated (at least 50% of his/her time) to the Partnership and responsible for overall senior-level leadership, co-ordination, sector promotion, stakeholder interaction, and attracting members and funding. This includes representing the Partnership at events, cultivating relationships with members and partners and working with the Secretariat to ensure the Partnership delivers on its

⁵ AfDB, SEforALL, GIZ, Power for All, World Bank, EU Energy Initiative, African Mini-grid Association, DFID, SNV, IRENA, Rockefeller Foundation, USAID, CLUB-ER, ARE, UNF

⁶ Enablers refer to vocal advocates and supporters of the mini-grid sector, who may not be represented by the categories of funders, government and/or industry.

workplan. The UN Foundation and the Alliance for Rural Electrification share the responsibility of being the Partnership's Secretariat.⁷

- **Executive Committee:** The Executive Committee is be made up of the Secretariat and the Chair of the Steering Committee. The Executive Committee drives and oversee progress on the Partnership's strategy and work plan, and acts on behalf of the Steering Committee to facilitate business decisions.
- **Members (Community of Practice):** Membership is open to all organizations that wish to collaborate on increasing modern energy access through the development and deployment of clean energy mini-grids.

More details on governance guidelines are enclosed in Annex I.

Working Groups

Under the coordination of the Secretariat, the Partnership will host a series of thematic working groups. These groups will be demand-driven and focused on tangible outputs and deliverables. Groups may emerge from discussions between the Steering Committee members. The Secretariat will participate in the working groups to support organizing regular calls/meetings, as necessary, and ensure that the outcomes from these groups are communicated across the MGP, and across various groups, wherever applicable. Example groups include finance/funding, market intelligence (state of market report), training, technology, and policy.

⁷ The reason for this arrangement is that these two organizations link to the wider delivery, practitioner and business networks, with complementary geographical coverage and presence.

2018-2019 Workplan

The following plan outlines the principal activities in which the MGP – particularly its Secretariat - will be engaged over a two-year period. Note that this workplan will be updated in Q4 of 2018 to provide greater detail of 2019 activities:

Workstream	2018	2019
1. Champion the Sector and Help Shape Policy for Public and Private Sector Mini-grid Development		
Heightened awareness among energy access stakeholders of the role, challenges and opportunities presented by clean energy mini-grids	<ul style="list-style-type: none"> Document and disseminate mini-grid success stories with new case studies (Lead: ARE) and webinars (minimum 3) (Lead: UNF) Support the creation and dissemination of key sector deliverables (e.g. Guidebook for Mini-Grid Regulators, GMG Africa Strategy, etc) (Lead: UNF and ARE) Grow MGP membership (Lead: all SC members) 	<ul style="list-style-type: none"> Document and disseminate mini-grid success stories with new case studies (Lead: ARE) and webinars (Lead: UNF) Support two in-country workshops (Lead: ARE) Grow MGP membership (Lead: all SC members)
2. Coordinate Sector Knowledge and Action		
Effective communication methods and tools ensure partners' exchange of knowledge and ideas	<ul style="list-style-type: none"> Create content and publish industry newsletters (between 4-6) (Lead: UNF) Develop and launch new MGP website, linking to other partner sites as necessary (Lead: UNF) Facilitate working groups (Lead: UNF with support from ARE) Provide regular updates to membership through emails and conference calls⁸ (Lead: UNF) 	<ul style="list-style-type: none"> Create content, and publish industry newsletters (between 4-6) (Lead: UNF) Maintain MGP website (Lead: UNF) Facilitate working groups (Lead: UNF with support from ARE) Provide regular updates to membership through emails and conference calls⁹ (Lead: UNF) Hold annual in-person Steering Committee meeting (Lead: UNF)

⁸ Some of the activities in the workplan are ongoing and funded through 2018. These include the creation of the newsletter, organizing and conducting regular calls for the Steering Committee members, and managing the list-serv.

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	<ul style="list-style-type: none"> • Hold annual in-person Steering Committee meeting (Lead: UNF) 	
3. Broker Partnerships		
Vertical linkages and sector integration replaces sector fragmentation	<ul style="list-style-type: none"> • Create and maintain database of mini-grid actors (to be potentially housed in the new MGP website), building on existing/ongoing efforts (e.g. AEEP/SE4All Africa Hub mapping, Power Africa toolbox, etc) (Lead: UNF) • Host networking/matchmaking events for MGP membership (minimum 1 event) (Lead: UNF with support from ARE) 	<ul style="list-style-type: none"> • Maintain database of mini-grid actors (Lead: UNF) • Facilitate introductory presentations of sector actors to membership (Lead: UNF) • Update and maintain TEA-commissioned mini-grids database, including information on key performance indicators (developer, technology, business model, financial model, number of connections, etc.) (Lead: UNF) • Host networking/matchmaking events for MGP membership (minimum 2 events) (Lead: UNF with support from ARE)
4. Support Finance and De-risking Mechanisms, Business Models and Opportunities		
Increased capital of diverse forms is invested into the CEMG sector		<ul style="list-style-type: none"> • Draft and disseminate to commercial banks and other financial institutions mini-grid success stories • Map and categorize CEMG relevant financial instruments; Create and maintain database of CEMG financial instruments • Mobilize donor contributions to pan-African RBF fund • Draft and disseminate to commercial banks and other financial institutions information relative to market development programmes, sector research and events • Work with SEforALL to commission and disseminate the financing needs of mini-grids developers

5. Promote International Standards and Quality Assurance Frameworks

Mini-grids Quality Assurance Framework is introduced into new countries

- Draft summary/user friendly version of DoE/NREL mini-grids QAF
- Disseminate summary version of QAF
- In collaboration with DoE/NREL, conduct QAF launch event in Nigeria and Zambia
- Document and disseminate information relative to the introduction of the QAF in Nigeria and Zambia
- Report to membership on technological innovations in the sector