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SUSTAINABLE
ENERGY FOR ALL

Green Mini Grids Market Development Programme

Jeff Felten

Consultant, SE4ALL Africa Hub - AfDB

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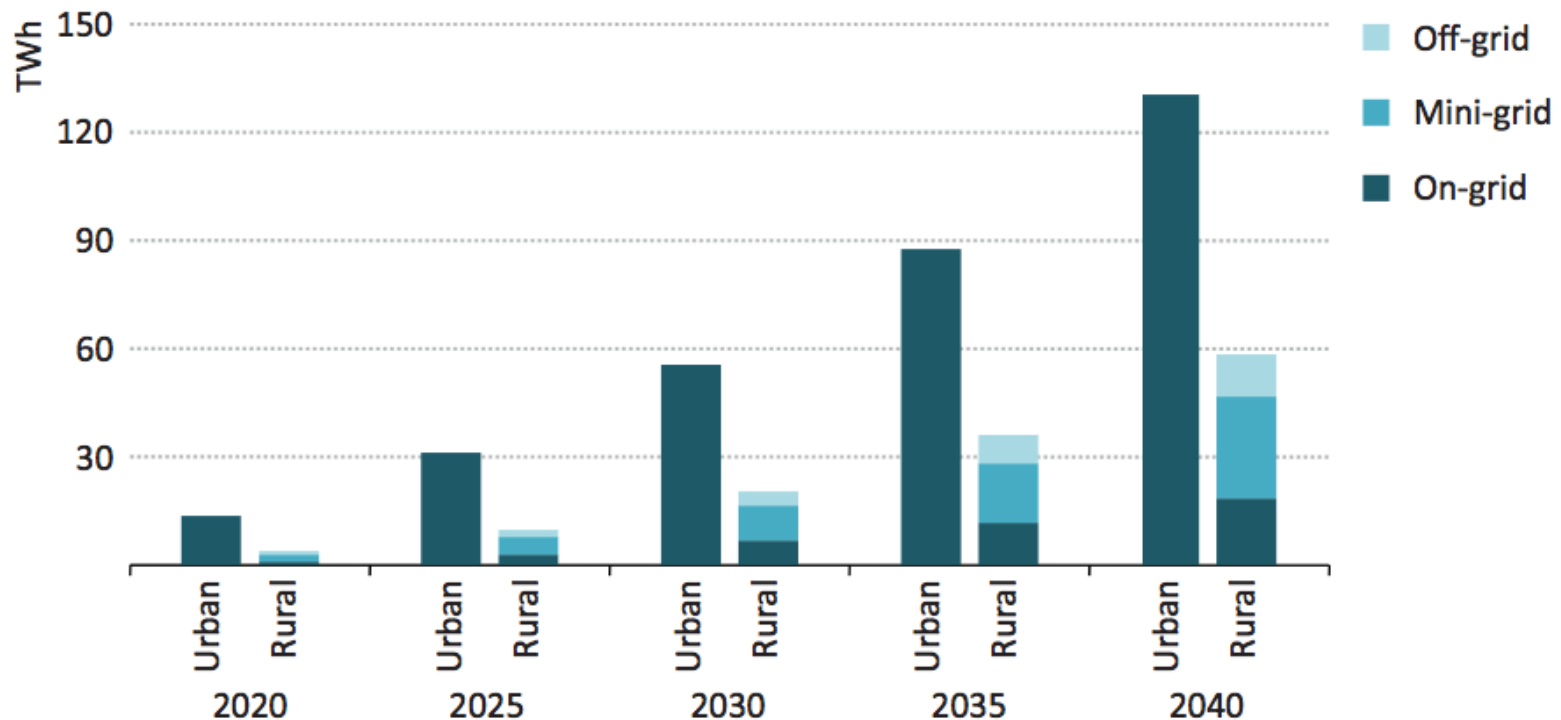
Sustainable Energy for All (SE4All)

The first objective of SE4All is to achieve universal access to modern energy (power) by 2030.

645 million out of the 1.1 billion Africans, nearly 60%, don't have access to electricity. And half of those come from only six countries.

For the 645 million powerless Africans to achieve universal access to electricity, Africa will need 800 new power plants with a capacity of 200 MW each, transmission and distribution for 130 million new connections, 350,000 mini grids with 150 connections each, and 22.5 million newly installed isolated solar systems.

By 2040 – 70% of new rural demand in SSA will be from off-grid and mini grids...



Source IEA, 2014



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Green Mini Grid Challenges

- Profitability, sustainability and therefore financing;
- Measuring a market and designing an appropriate technical response;
- Limited business acumen of some potential mini grid developers;
- Regulation, technical and safety standards;
- Energy sector policies non-conducive to private for-profit ventures;
- The potential arrival of and connection to the main grid;
- Building, operating and maintaining the mini grid;
- Marketing, customer satisfaction and ensuring reliable revenue;
- Theft and risk mitigation, including local currency depreciation;
- Few best practices and business models for replication.



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GMG Market Development Program

- Part of DfID's Green Mini-Grids Africa Program that also includes
 - programs for Kenya and Tanzania,
 - GMG policy development through SEFA,
 - Action Learning and Exchange component being implemented by ESMAP at the World Bank.
- A mix of **internal staff and advisory services**.
- Designed via a **consultative process** with SE4ALL stakeholders, the HIO participants, experts and practitioners.
- **Multi – phased**: to assure greater degree of flexibility to adapt to the changing landscape, closer coordination with partners and gradual take-off in parallel with increasing internal implementation capacity.
- **Phase 1** to end in first half of 2016, Phase 2 being prepared



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MDP objectives

Removing or reducing market barriers and strengthening the ecosystem for the scaling-up of GMGs investments in Sub-Saharan Africa

How?

- Promoting a pan-African network of expertise on Green Mini Grids;
- Ensuring coherence with SE4ALL Action Agendas and Investment Prospectuses;
- Strengthening capacity of developers to develop / operationalize GMGs business models;
- Engaging project financiers and supporting the development of suitable financial solutions;
- Promoting a sound policy and regulatory environment;
- Providing an interface with leading sector participants and groups (including the HIO Secretariat, development partners, private sector industry associations and civil society organization).



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Market Development Programme

Barriers / Business Lines

Barriers Identified

1. Early stage market fragmentation
2. Lack of proven commercial business models
3. Inadequate regulation, policy gaps or uncertainty
4. Human skills, institutional capacity issues and lack of standardization
5. Lack of access to affordable longer term finance

Business Lines

1. Market Intelligence
2. Business Development Support
3. Policy and Regulatory Support
4. Quality Assurance
5. Access to Finance



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Partners / Beneficiaries

- **Project Developers** including community or private developers, Public Private Partnerships (PPP).
- **Customers/Communities** including **Anchor clients** (e.g. telecoms), **Businesses** (e.g. local MSMEs), and **Community customers** (i.e. households and public services).
- **Governments, Regional Institutions, Public Sector, Public institutions** including public utilities, rural electrification agencies, local institutions involved in the preparation of laws, regulations, codes and standards for quality assurance, legal frameworks.
- **Business/ Industry Associations** involved in supporting and representing their members through advocacy, research, networking and events.
- **Financial Institutions** involved in the provision of risk, equity and debt capital for GMG projects, as well as risk-mitigation instruments. This includes private investors, local commercial banks, development finance institutions and governments.



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1. Market Intelligence

OBJECTIVE:

Foster the ability of project developers and energy planners in identifying market solutions for decentralized provision of energy services.

PARTNERS:

Project Developers, Public Entities

ACTIVITIES:

First Implementation Phase:

1 - An evaluation of the methodologies and best practices available for assessing GMG potential on national levels. 2 - The creation of an opportunity assessment methodology in order to generate comparable data across countries; 3 - The publication of country-level analysis on mini-grid market opportunities, initially focusing on 5 countries in Sub-Saharan Africa that are prioritising GMGs (Burkina Faso, Mali, DRC, Ethiopia and Mozambique).

STATUS: The program has contracted with a consortium made up of Carbon Trust, UNEP and ECREEE and they have evaluated existing methodologies, proposed a new hybrid methodology that will provide mapping of physical and non-physical data via a web-based platform, and conducted the first study in Mozambique

Subsequent Implementation phases:

Applying the new methodology to Ethiopia, DRC, Burkina Faso and Mali



2. Business Development Support

OBJECTIVE:

Support project developers for project identification, preparation and financial closure.

PARTNERS:

Project Developers, Customers/Communities

ACTIVITIES:

First Implementation Phase:

- 1- Gap Analysis identifying key challenges for GMG project development or scaling
- 2- Helpdesk Design including a framework for prioritizing GMG developers applying for support
- 3- Off-the shelf knowledge products on a website and relative to themes requested by project developers
- 4- Personalized Business Development Support, either conducted through short term desk support or long term tailored support including field missions.

STATUS:

Gap analysis complete. Helpdesk to be launched next week in Nairobi (www.greenminigrid.se4all-africa.org)

Subsequent Implementation phases:

Populate further the Helpdesk and begin providing technical assistance



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3. Policy and Regulatory Support

OBJECTIVE:

Reinforce regional support and political backing, provide regional policy reference.

PARTNERS:

Government, RECs, African Union

ACTIVITIES:

First Implementation Phase:

Development of a GMG Africa Strategy containing a set of principles on GMGs to be adopted by the AU. The objective is to raise the profile of GMGs amongst African Governments and provide a strategic framework and impetus to the scale-up of GMGs in Africa.

STATUS:

Currently drafting a set of common GMG principles and actions, to be adopted by the AU's energy ministers in November.



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4. Quality Assurance

OBJECTIVE:

Reinforce standardization and quality control.

PARTNERS:

Regulators and Industry associations; RECs, Rural Energy Agencies

ACTIVITIES:

This Business Line did not start immediately. Will start in GMG MDP Phase 2 and build upon the Global LEAP's Quality Assurance Framework.

Quality Assurance Framework:

- The Global Lighting and Energy Access Partnership (Global LEAP) has completed development of a mini-grids quality assurance framework
- Categorizes mini-grids into tiers relative to the quality of services provided
- The new mini grid quality assurance framework also includes a reporting mechanism, which GMG developers can use – amongst other uses – to demonstrate their business model and track record to financiers
- Phase two of the GMG MDP will introduce the QAF in selected countries



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5. Access to Finance

OBJECTIVE:

This business line is focused on overcoming the dearth of competitive and adequate financing options for GMG projects.

PARTNERS:

Financial Institutions, Project Developers

ACTIVITIES: First Implementation Phase:

1. A supply-side scoping, including review and analysis of existing public and private funding and technical assistance facilities operating in the energy access domain in Sub-Saharan Africa, their terms, and their limitations;
2. A demand-side analysis, including financial simulations of different project types, mini-grid financing needs and potential returns, and a collection of case studies;
3. Expert and stakeholder interviews on a Financial Intermediation/Support Initiative for GMGs, and initial recommendations on such initiative.

STATUS: The GMG MDP has contracted “Innovation Energie Développement” (IED) to implement the Access to Finance Program component. IED is finalizing the GMG financing supply/demand study and conducting a series of case studies.

Subsequent Implementation phases

TBD, depending on the outcomes of the first phase.

Thank you!



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Contact:

Dr. Daniel-Alexander Schroth
d.schroth@afdb.org

Mr. João Duarte Cunha
j.cunha@afdb.org

Mr. Jeff Michael Felten
j.felten@afdb.org



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