

# Africa-EU Renewable Energy Cooperation Programme

Creating opportunities for renewable energy



# Fact File

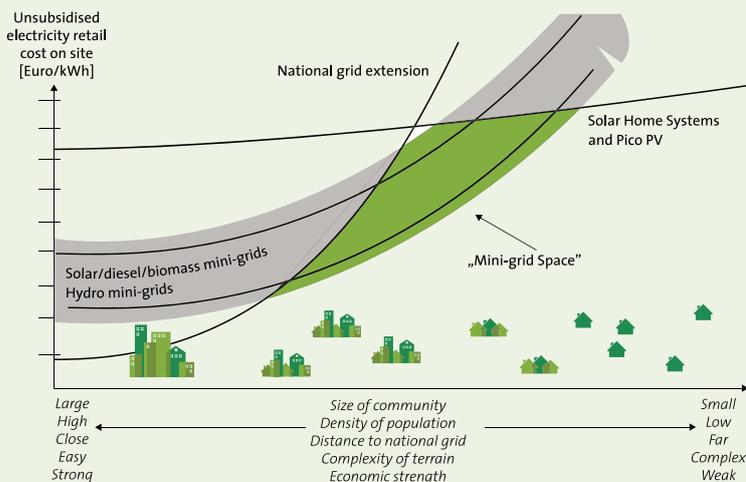
## THE MINI-GRID POLICY TOOLKIT

### Background

Renewable and hybrid energy mini-grids have emerged as a game changer for rapid, cost-effective and high-quality electrification in rural Africa. The IEA estimates that mini-grid and off-grid systems will provide electricity to 70 % of those gaining access in Sub Saharan rural areas by 2040.

Mini-grids involve small-scale electricity generation (10 kW to 10 MW) which serves a limited number of consumers via a distribution grid that can operate in isolation from the national transmission networks. Mini-grid systems are a viable solution for rural electrification, whenever the costs of mini-grid deployment are lower than those for the extension of the national grid or for stand-alone systems (see figure below).

The benefits are manifold: Mini-grids can be installed relatively quickly and create additional private sector growth through contracting of local firms for construction, operation and maintenance. Furthermore, they can be deployed flexibly, since different locally available natural resources can be used for electricity generation or combined into hybrid solutions. Mini-grids can be deployed through four operator models in which mini-grids



Illustrating the "mini-grid space" (Inensus)



### PROJECT OVERVIEW

**Project partners** ARE and REN21

**Term** December 2012 – August 2014

are owned, operated and maintained by a utility, a private company, a community or in a hybrid setup respectively.

Senegal, Tanzania and Kenya are examples of countries that have successfully developed a policy and regulatory framework for the expansion of mini-grids with positive outcomes. Nevertheless, in most African countries, scale-up beyond a few pilot projects remains rare due to the lack of an enabling environment.

In order to provide guidance on developing sustainable mini-grid policies in Africa, the EUEI PDF, the Alliance for Rural Electrification and REN21 have developed the Mini-grid Policy Toolkit, in the framework of the Africa-EU Renewable Energy Cooperation Programme (RECP). The toolkit is the result of a consultative and multilateral process involving stakeholders from the private sector, governments, civil society and academia.

### Objectives

The Mini-grid Policy Toolkit is primarily written for policy-makers with the objective of enabling scale-up of mini-grids beyond a few pilot projects. In addition, the information contained in this Toolkit is also relevant for other stakeholders, including development partners and donor agencies seeking to support and advocate mini-grid policies.

The aim of this publication is to improve the understanding about mini-grids, the stakeholders of the mini-grid sector and the options for a supportive mini-grid policy and regulatory frame-





work. A well-designed implementation strategy for mini-grids as well as the respective regulatory framework encompassing socio-economic, policy, regulatory, economic and financing considerations are the key to achieving successful mini-grid roll-outs.

### The Toolkit

The Mini-grid Policy Toolkit presents different electrification options for rural areas, the benefits of mini-grids, the four operator models for mini-grids, insights into the economics and financing aspects of mini-grids, as well as an overview of relevant stakeholders.

The Toolkit pioneers a vertical analysis of all aspects required for a sound mini-grids policy and regulatory framework. It breaks down the framework to specific policy instruments such as energy and electricity policy, economic and fiscal policy, licenses and contract regulations, financial support schemes as well as technical assistance and splits them into “essential” and “supportive”.

The Toolkit also opens up the discussion of mini-grids deployment for rural electrification from a business point of view: it clearly links the different operator models and the respective financial issues and required policies and regulations. It thereby sheds light on the specific requirements for deploying the operator models, and provides hands-on guidance on how to meet them. Furthermore, it provides guidance for the process of designing and implementing mini-grid policy and the regulation framework, sources and links for further reading as well as case studies illustrating practical experiences.

### Results

The outcomes of the Mini-grid Policy Toolkit project are a flagship publication – available in a web version as well as in hard copies in English and French that are widely distributed – a website (<http://minigridpolicytoolkit.euei-pdf.org>) and two stakeholder workshops that were held in September 2013 in Arusha, Tanzania and March 2014 in Cotonou, Benin. Several institutions and associations have already appreciated the added value of the Toolkit for their work and highlighted the importance of having Toolkit that provides step-by-step guidance in the basics of rural electrification through the use of mini-grids.

### Feedback

*“The Mini-Grid Policy Toolkit provides much-needed orientation and guidance for policymakers and assists in shaping the policies needed to effectively promote mini-grid deployment.”*

Baba Moussa Aboubakari, Director of Infrastructure & Energy, African Union Commission

*“In 2014, the Rural Energy Agency in Tanzania has already granted funds to 20 private renewable energy mini-grid projects. The Toolkit will help us very much in our work!”*

Matthew Matimbwi, Engineer, Tanzania Renewable Energy Association

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