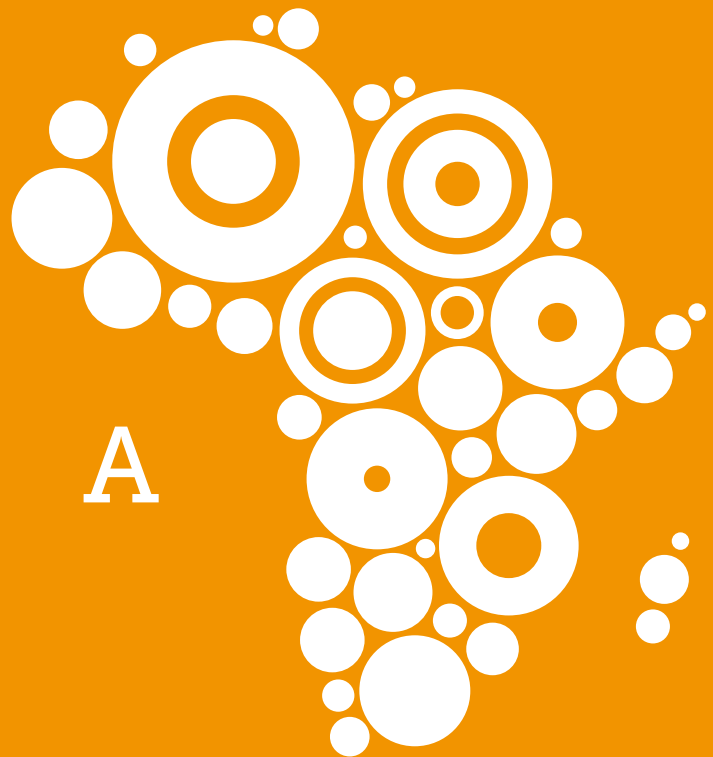


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**Africa Mini-grid Developers Association (AMDA)  
SMART RBF Program Recommendation**

## Background:

More than 600 million people in Africa, largely living in rural areas, do not have access to power. The dominant means of providing them power is through grid connections. Due to the high costs (\$1,500 - \$2,000<sup>+1</sup> for someone living >4km from the grid) to connect them, governments and donors typically subsidise main grid connections by 85-100%<sup>2</sup> of the capex.

For governments and donors aiming to connect rural citizens, mini-grids offer a more cost effective means of building AC power systems that can support grid-like energy services, with connection costs of \$1,000 per connection and lower, depending on the size and location. Rapid deployment of high-impact, future-proof mini-grid electrification projects would be possible if a straightforward, repeatable, funding mechanism existed to support such projects in the same way as many main grid connections are supported by bilateral donors.

Results Based Financing (RBF) programs have attempted in the past to provide funding for mini-grids, but many of them have struggled to disburse the funding effectively. AMDA's members have participated in many of these programs and collated their experience of what has worked and what has not worked into a policy recommendation. AMDA welcomes donor collaboration in developing a new **SMART RBF** program for Results Based Financing programs for mini-grids across Africa. The **SMART RBF** is meant to be **Simple, Measurable, Africa-wide, Repeatable, and Timely**.

AMDA believes that the **SMART RBF** program can catalyze the mini-grid sector in Africa similar to the way in which solar (which grew from 1.6 GW installed in 2001 to 100 GW installed in 2012) grew in Europe and the United States through simple, clear, repeatable subsidy programs such as the ITC program in the US (which is still running today) and the Feed-in-Tariff program in Germany (which has been developed further and is still running). These programs gave developers and investors the confidence to invest and build at scale. Enabled by these subsidies, solar industry costs came down by more than 70% over the course of a decade. The solar subsidy programs succeeded in catalyzing a solar energy revolution because they were simple, easily measurable, and repeatable - just like AMDA's proposed **SMART RBF**.

## Program Recommendation:

AMDA's **SMART RBF** is designed to be **Simple, Measurable, Africa-wide, Repeatable, and Timely**. Together these elements should allow quick and efficient disbursement of funding to support mini-grid developers connecting rural customers at scale, and truly catalyze the mini-grid industry in Africa. With a trusted and reliable RBF program, commercial investors can come into the sector with confidence, finally unlocking the private sector capital that is essential to the sector.

<sup>1</sup> McKinsey's Brighter Africa report

<sup>2</sup> Brazil's Luz para Todos (Light for All) program in 2003, 85% of capital costs for expanding rural connections were covered by federal and state governments. In the late 1990s in South Africa, the government decided to fund the capital cost of the electrification program entirely through fiscus, through the National Electrification Fund.

From 2001, this covered the entire cost of the capital connection

AMDA has provided recommendation on specific program criteria in the table below:

<b>Subsidy Amount</b>	<p>Fixed amount per connection, benchmarked to the subsidy that public utility is receiving in target country.</p>
<b>Mode of Funding</b>	<p>Disbursed to project developer/owner upon commissioning of the project and verification of connections (truly “results based”). No up-front disbursements.</p> <p>Funding discernments will take place quarterly commiserate with the connections that have been realized in the prior quarter.</p>
<b>Criteria for Qualifying for Funding</b>	<p>Connections completed with service levels, safety, and quality up to pre-agreed standards, which will be no less than national standards of the country in which a project is being undertaken. Many standards already exist, and new ones are being developed specific to micro-grids by several institutions.</p>
<b>Verification Procedure</b>	<p>Benchmarked to public utility connection verification procedures. If no such benchmarks exist, engineering reports validating connections are a sufficient standard. Meter serial numbers and first-month usage data could also be used for validation.</p> <p>The <b>SMART RBF</b> program will normally not be required to inspect every connection directly, but will undertake routine audits and occasional spot checks to ensure developer compliance. The program will have a zero tolerance policy for any developers who have been convicted of deliberately attempting to falsify connections, and those developers will be disqualified from future use of the program and may be required to return funding.</p>
<b>Project Due Diligence</b>	<p>Developers will need to pre-qualify in order to access the <b>SMART RBF</b> (Annex A)</p>
<b>Developer Due Diligence to Qualify for Program</b>	<p>Basic checklist to ensure company legitimacy, upon which SMART RBF program provides something similar to a Letter of No Objection for the developer.</p>
<b>Mode of Project Selection for Funding</b>	<p>First come first serve.</p>
<b>Prioritizing Developer Earmarks in the Case of Over-subscription</b>	<p>Maximum of [5]% of program funds to any one developer, unless the rest of the funding is not earmarked within 12 months from program launch.</p> <p>Maximum of [30]% of program funds to any one country, unless the rest of the program funding is not earmarked within 12 months of program launch.</p>

<b>Technical Standards</b>	<p>To qualify for RBF, distribution networks must be built up to a quality standard that will enable future commercial growth at the sites. These technical standards need to be defined and clearly referenced by the RBF program.</p>
<b>Tariff Pricing</b>	<p>Qualification for the <b>SMART RBF</b> and disbursement of funds are NOT linked to any electricity tariff cap but that the tariff shall be subject to regulation under the respective national laws and regulations?</p>
<b>Mode of Developers “Earmarking” Funding in Advance</b>	<p>This is only important if funding in the program is insufficient to cover all potential projects, in order to give project investors confidence that the <b>SMART RBF</b> funding will be available if results criteria are met upon commissioning. To earmark funding, developers would (a) submit a list of sites to be developed, (b) submit number of connection estimates which can be used to manage RBF pipeline/budget, (c) submit an MOU or letter between the developer and the community for each site targeted for development, and (d) submit a bond of 10% of the projected SMART RBF value to be received.</p> <p>Upon review, the <b>SMART RBF</b> program will provide a letter to the developer stating that a certain amount of funding has been earmarked for their project for a period of 3 years, after which it will be released back to the general pool of capital. Note that a developer can still receive the <b>SMART RBF</b> funding after year 3, but only if there is sufficient money in the program that has not already been reserved by other developers. Developers will also need to meet interim ‘progress criteria’ in order to maintain qualification.</p> <p>Also note that the letter from the program reserving funds for the developer does not obligate the program to disburse the funds - the project still must meet all criteria for results-based disbursement.</p>

## Conclusion:

AMDA’s **SMART RBF** program will enable increased efficacy of donor funds to address the rural electrification crisis while ensuring the delivery of high quality projects. AMDA stands ready to work alongside donors to refine the **SMART RBF** model and help to raise capital behind the program to ensure that sufficient subsidy is available to connect 600m unelectrified Africans to energy while building the energy system of the future.

## Annex A

### Pre-Qualification:

In order to qualify for **SMART RBF** funding an application would need to have deployed & currently operating at least one AC micro-grid providing at least 20 hours per day of energy access. Ensuring existing operations ensures that the prospective applicant has viable technological and operational capacity.

Prospective applicants would need to provide documentation from an approved 3<sup>rd</sup> party in order to apply for **SMART RBF** funding. Thereby reducing the due diligence required by the financing facility while ensuring that every applicant has a viable product that address the need to increase energy access and connections for rural consumers.

Verification for existing operations should be conducted by a third party.

- Due diligence firm (financing facility to provide list of approved firms)
- Membership in an association that ensures operational capacity as a prerequisite to membership

Pre-Qualification would not guarantee funding from the facility but would ensure that the fund is only accessible to developers who have proven capacity for developing mini-grids at scale.

## Annex B

### Qualification for Earmarking Funds:

The facility should be managed by a reputable financing institution (AfDB), not by governments as the fund is intended to finance projects across Africa. The risk of earmarked funds being depleted due to mismanagement of the funds is a serious risk for developers and it is important to ensure that earmarked funds will be accessible to developers once projects are completed.

Once an applicant has been completed the qualification (see Annex A) and is approved for the **SMART RBF** the financing facility would sign a contract with each respective developer. The Contract would specify the funds earmarked for the developer as well as the timeline to complete the project and the mechanisms with which funding would be returned to the facility if the project was not completed within the given timeline. Additionally the contract would stipulate that the financing facility would be liable to pay out funds for completed projects even in the case where the fund was depleted before the project was completed and verified (within the timeline of the contract).

Once funds are earmarked for a given project and a contract has been signed earmarked funds should be seen as allocated funding and not as part of the available funding facility. It is the responsibility of the financing institution to ensure that the fund is managed properly and that it can meet the terms of each contract signed.

Approval for earmarking funds for the SMART RBF would only be granted if a developer is

- applying for funds in a country that meets the criteria in Annex D
- has a legal entity in the country
- can provide documentation that the site has been secured through the existing legal mechanism within the country context

Funds would only be released to the developer

- if they are compliant with all of the licensing requirements of the government in which they operate

## Annex C

### Capacity Building

The rapid deployment of mini-grids in order to see connections to off-grid, rural consumers scale and the need to create space and build capacity for local developers to compete for mini-grid projects are equally important, but distinct. The difference in funding allocation and type should be reflected in different funding tools for two different kinds of projects with different indicators and objectives.

The **SMART RBF** is a financing mechanism that is intended to deploy rapidly with the objective of scaling mini-grids in a number of country contexts, thereby radically increasing the number of electrical connections to rural populations. This fund is not designed to facilitate projects that are proof of concept projects or provide seed funding for new developers.

A new fund should be established to address the separate but equally important goal of increasing local capacity to deploy and operate mini-grids. This fund would be smaller and only available for developers that were in the early stages of operations.

The Capacity Building fund would provide initial financing that would be available to the developer at the beginning of the project. These funds would not be structured in the same way as the **SMART RBF**. Instead funds would be available incrementally as the developer reached project milestones and would provide Technical Assistance to new developers. Developers that complete projects from a capacity building grant and are able to show connections for rural customers would be eligible for the **SMART RBF**.


## Annex D

### Country Regulatory Framework & the SMART RBF

RBF fund structure and mechanics will vary based on the target country, but will be set up to ensure alignment with local government

The SMART RBF is intended to rapidly deploy funding for Mini-grids in order to scale the number of AC connections for rural and off-grid customers. Scalability is only possible if the legislation and regulatory framework within any given country context is sufficiently robust enough to allow for mini-grid deployment and integration.

Therefore the SMART RBF fund should only be available in countries:

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- A decorative icon consisting of a cluster of interlocking gears of various sizes and colors (white, grey, blue, green) arranged in a roughly circular pattern.
- that have a mini-grid regulatory framework
  - with clear licensing guidelines for Private Mini-grids
  - with Grid integration guidelines and processes

The Donor organizations that contribute the SMART RBF fund should work with recipient governments to ensure that a mini-grid framework exists before SMART RBF funding for mini-grids is available for a given country.



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