

# Investor Position Paper: Unlocking Private Capital for Mini-Grids in Africa

Mini-grids have immense potential to accelerate electrification in Africa. Mini-grids are self-sufficient electricity grids that serve households and businesses isolated from or integrated with the main grid. The International Energy Agency's (IEA) latest geospatial analysis shows that to achieve universal electrification, mini-grids are the cheapest technology for connecting 290 million people living without power, two-thirds of whom live in sub-Saharan Africa. However, mini-grids have not yet attracted the private investment required to achieve this outcome.

We believe that for mini-grids to attract private investment, they require consistent, reliable, and rapidly deployable Results-Based Financing (RBF) programs. This paper was prepared by the signatory investors to present a unified message of support for these RBF programs to donors.

As a group, we the undersigned investors endorse the following three messages below.

## **1. We believe mini-grids have a role to play in achieving universal electrification in Africa**

We believe that mini-grids have a role to play in achieving universal electrification in Africa. Mini-grids are typically the least-cost option for people who live far enough from the main grid that extension costs are higher than installing local generation and storage capacity, but in a location densely populated enough to support the fixed costs of building the mini-grid infrastructure. For example, in McKinsey's Brighter Africa report the benchmark cost for rural grid connections is \$2,300 per connection, whereas rural mini-grids serving 100+ connections are typically around \$1,000. Moreover, mini-grids can power larger electricity loads like grain mills, water pumps, and power tools that support local economic development.

2. We can provide every type of capital required for mini-grid financing

*Funding requirements over the lifetime of a mini-grid* →

Uses		Corporate Operations	Construction	Long-Term Project Ownership
Sources	Equity			
	Debt			

The table above shows that the signatory investors can provide all types of capital for immediate mini-grid financing needs. We cover both equity and debt for corporate operations, construction, and long-term project ownership.

We can be the matching private capital that donor and government-backed mini-grid subsidy programs need in Africa.

3. To provide this capital effectively, we must be matched by Results Based Financing (RBF) programs:

However, for us to invest, we need to see improvements. Most importantly we need (i) enabling regulation and (ii) viable economics. There is good forward progress on (i) and (ii) in some markets within Africa. There are jurisdictions with sufficiently enabling regulation to allow investment. However, currently the economics of investing in the vast majority of rural mini-grids are not *viable without subsidization through Results Based Financing*.

This is not surprising. Rural electrification has always required subsidy. The economics of rural electrification require subsidy because rural electrification serves 1) remote, dispersed customers with higher costs to connect, and 2) rural households and businesses with much lower incomes than in cities. Revenues from rural customers typically do not cover the costs to universally connect them.

## Unlocking Private Capital for Mini-Grids in Africa

*We therefore strongly encourage donors and governments to support effective RBF programs that subsidize rural connections.*

RBFs may not be required forever. It's true that the new technologies and business models emerging from private sector off-grid companies are improving the economics of rural electrification. It is also true that achieving universal electrification today is therefore going to require less subsidy than at any time previously. For example, under President Roosevelt the United States issued 0.3% of US GDP annually —or \$18 billion in 2018 dollars—on government subsidized loans for rural electrification. The amount of subsidy required will further reduce as off-grid technology costs decrease with scale.

But, today, subsidy is required. And it is required to reach scale. Other infrastructure sectors like solar PV and onshore + offshore wind have shown how effective market-stimulating policies such as subsidy can be in attracting private investors, driving down costs, and scaling to achieve their objectives. In 2000, 1.3GW of solar was operating globally, and solar PV panels cost \$3 per Watt. Less than 20 years later, we now have over 400GW operating globally and modules cost less than \$0.4 per Watt. In the case of renewable subsidies the objective was to reduce carbon emissions to prevent climate change. In the case of RBF connection subsidies it is to achieve SDG7 – universal electrification by 2030, delivering the benefits associated with electrification: job creation, economic development, and improved education and healthcare. We are ready to be the private capital needed to invest alongside those RBF subsidies. And we believe those subsidies will decline over time as the business model and technology continues to improve with scale, just as they did for wind and solar.

### **We stand ready to engage with donors and governments on the design of those RBFs**

We believe mini-grids have a role to play in achieving universal electrification, and we have the types of capital needed for mini-grid financing alongside well-designed RBFs. We stand ready to work with donors and governments to help design effective RBF programs that will unlock our capital.

Signatories to this paper shown below.

#### **Investor Signatories**

Acumen  
Blue Haven Initiative  
Ceniarth  
CrossBoundary Energy Access  
DOB Equity  
Engie – PowerCorner  
Hoegh Capital Partners  
KawiSafi Ventures  
Renewable Energy Performance Platform (REPP)  
Responsability

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SunFunder

Triodos Investment Management



**responsAbility**

**CROSSBOUNDARY  
ENERGY ACCESS**

**BLUEHAVEN  
INITIATIVE**

**dwb equity**



**ceniARTH**

**HÖEGH CAPITAL PARTNERS**