



Managing Entity for a financing program aiming at
the promotion of private initiatives in green mini-grids
improving access to electricity in Kenya



European Union Africa
Infrastructure Trust Fund



GREEN MINI GRID
FACILITY | KENYA

PTAP N°18

Concept note 1
Launch & Grow
Productive Use
Accelerator

January 2021



In association with



PTAP N°18

Concept note 1: Launch & Grow Productive Use Accelerator

January 2021

Contract reference: Delegation Agreement N° CKE 1110 01
JOUE / 2016/S 073-127745
AFD / ACH-2016-027

IED reference: 2016/018/ Managing Entity Kenya

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	Version 1	Version 2	Version 3
Prepared on	November 6, 2020	December 24, 2021	January 13, 2021
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1 Summary

The following concept addresses a need for funding paired with investment readiness business support to catalyze the productive use of energy (PUE) and mini grid sectors of Sub-Saharan Africa. Specifically, it addresses key pain points uncovered in GMG's interviews of over 50 sector stakeholders. Ultimately, a need remains to advance early stage companies to become attractive commercial investments to existing investors, by demonstrating traction and a profitable business model. Interested investors such as SunFunder, KawiSafi and others can only invest in companies with a proven track record, strong unit economics, a healthy product/service offering that is not too narrowly focused to inhibit scale, strong internal capacity to grow and implement and a path to profitability. Alternatively, new funds must be created to fill this patient capital gap, and focus on a longer 10 year investment horizon.

Our solution focuses on the needs of the African mini grid and PUE sector, with a geographic focus on solutions relevant to East Africa. **Concept: Launch & Grow Productive Use Accelerator** leverages a venture studio model and the power of early-stage, risk tolerant equity and convertible note investors to signal the confidence needed to attract other investors, paired with business support to further de-risk investments. **The model** offers greater funding and senior expertise in areas of finance, operations, last mile distribution, agriculture and consumer financing including paygo to early stage PUE companies.

Productive Use Funding & Investment Landscape

PUE Pathway to Profitability & Commercial Investment: Available Support & Gaps

Beyond the types and stages of funding offered, programmatic focus leaves gaps in investment-readiness and scalable, profitable results. Many programs focus on early-stage R&D, and not the path to commercialization and scale, which requires business technical assistance paired with blended capital, and even early commercial capital to signal confidence to other commercial investors.



Existing mini grids and PUE funding sources and gaps:

- More traction – in revenue generation and scale of PUE- or funding guarantees (e.g. from development programmes or public capital facilities) are needed to attract commercial investors
- Most PUE actors will require capital of \$300,000 to \$1M to achieve a scalable, financially sustainable PUE-integrated model. A funding gap between early pilots and commercial scale exists with pilots grant funding often structured between \$150K and \$300K.
- Progressive early funders and venture studios including Factor[e] and VentureBuilder offer early capital and technical assistance to scale early startups, yet both have gaps in their investment criteria that leave PUE companies behind.
- Powering Agriculture was a rare initiative focused on win-win agriculture-energy solutions, providing larger sized grants of \$500k+ to drive catalytic results; GMG Kenya has also provided larger grants in this range for mini grid connections. Yet, Powering Agriculture ended in 2019, and GMG Kenya will wind down in 2021, leaving a much smaller pool of catalytic funding.
- SunFunder and several consulting firms (Open Capital, I-DEV) have provided pro bono or TA grant-funded support to PUE companies in financial modeling, financial structuring

and investment readiness; however, providing high quality support to make deals investible is not sustainable on a pro bono basis, and limited if from one-off TA grants

- PFAN and GET.Invest only provide investment readiness support for companies that generate over \$250,000 in revenue and see larger capital raises over \$500K.
- POP Hub and its successor PREO offer a promising blended model of up to €250,000 in support to build strong PUE partnership models, paired with technical assistance. Yet, this program has limited bandwidth and budget to support a broad range of actors and could benefit from additional funds and programmatic support to take companies to investible business traction.

Our solution also considers these early findings:

- **Household Appliances are not a solution on their own, leaving a gap in daytime demand and shortfall in total consumption gain.** Household appliances (e.g. TVs, radios) can raise revenues and energy consumption in the short-term by 2x, yet after 5-11 months, consumption drops to 18%-25% above baseline levels; introduction of credit has minimal effect of 1-2% increase in driving shift to daytime consumption (CB Labs)
- **PUE appliances are better suited to address energy demand management issues of the MGD sector, and drive meaningful revenue and profitability.** A grain miller consumes 50x more energy than a typical customer, and exclusively during the daytime, while Electric Pressure Cookers (EPCs) can drive up energy consumption by 20%, and egg hatchery equipment (21% increase), based on pilots with MECs and Powerhive. JUMEME reports that 7 community mills drive more energy demand than 250 households. (CB Labs, JUMEME)
- **PUE Business Lines Can Be the Cash Cow to Sustain Mini-Grid Models.** JUMEME's ancillary fish freezing & trading business, which consumes 10% of overall electricity produced, generates revenues equivalent to all other electricity sales! WeConnex built an aquaculture model to fund affordable access to clean water, and is seeking to integrate clean energy services next. (CB Labs, WeConnex)
- **Energy Efficient PUE Equipment can increase overall energy demand by 20-30% on a sustained month-over-month basis with large daytime increases.** (CB Labs, CLASP)
- **Promising PUE Companies Exist but Need Greater Resources to Scale.** Energrow, Agsol, MECs, SunCulture, InspiraFarms and China Impact Ventures are among the companies cited as promising, scalable solutions to PUE, based on early pilots. Other models in Southern Africa and beyond pose opportunity for expansion into the region but will need the capital and tactical support for successful entry. Meanwhile, home solar asset financing companies could extend their expertise to PUE and mini grid applications, applying existing expertise and lessons learned to a more nascent PUE sector. (Various interviews)
- **A strong development finance or private sector business approach to rural electrification is needed until stronger government-led solutions are developed.** Until efficient, well-funded government programs that blend viable tariffs with subsidies, or clear long-term policies are in place, such as the US's Electric Home and Farm Authority (EHFA) solution, development led solutions are needed to advance the PUE and mini grid sector past a critical

early-stage tipping point that will attract investors and prove a path to profitability investors demand. (Factor[e], various)

MGD and PUE actors would also benefit from:

1. **Financial incentives and financial/business support to prioritize resilient and scalable models and partnerships** – between energy startups, consumer financing, agriculture and other strong partner sectors
2. **Actionable tools and resources** to guide partnership, group business model structuring that integrates unique business lines and Profit & Loss Statements
3. **Investment readiness and capital raise support** to help early stage, pre-seed companies to Series A companies fund growth in consumer financing, last mile distribution and productive use

2 Accelerating Productive Use and Mini Grid Investments

Concept: Launch & Grow Productive Use Accelerator

This model leverages for-profit and non-profit venture studio and accelerator best practices to build an investment and business support model to fill the range of early-stage resources needed to catalyze Africa's early PUE innovators forward. In the GMG Webinar hosted on December 10, 2020, this concept received the highest number of audience votes and was recognized as a timely critical solution needed to catalyze the African PUE and mini grid sector forward.

Our Solution Targets 3 Critical Needs:

1. **Larger 'ticket-size' risk-tolerant, flexible and patient capital** to catalyze early startups, partnerships and joint ventures for PUE solutions that effectively boost financial viability of rural electrification models and stimulate rural household incomes.
2. **Longer-term financial/business tactical support** for promising PUE actors and opportunities to boost internal capacity and navigate complex business models with different revenue streams
3. **Ecosystem priming** that provides support to align with commercial investors' interests and investment criteria

Objective:

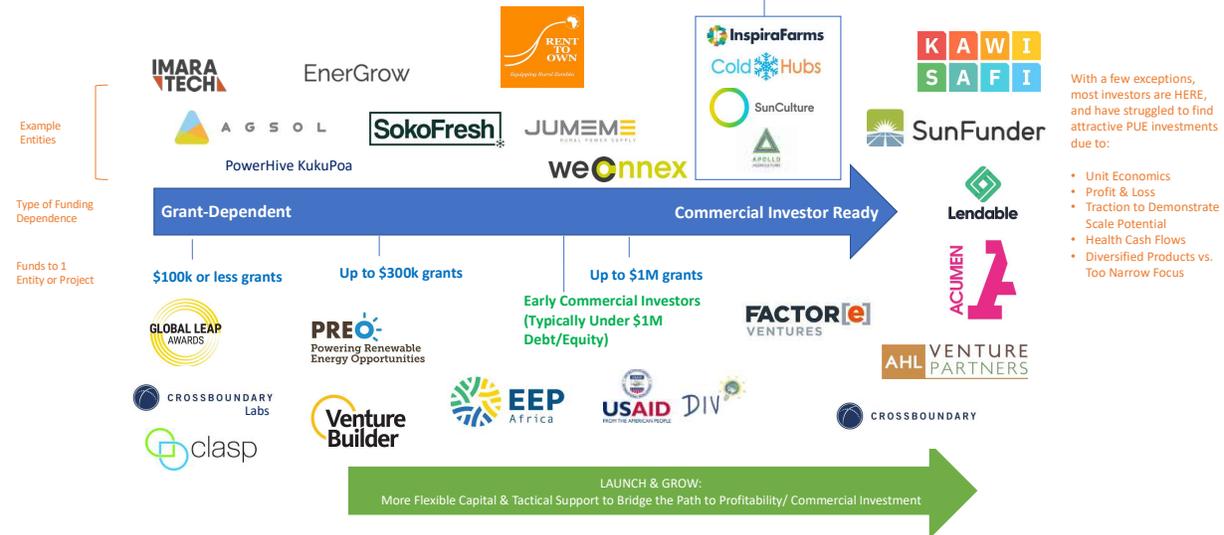
- Build a broader pipeline of future investible PUE companies
- Catalyze and accelerate existing partnerships, joint ventures and companies to become commercially-investible by filling a key investment/funding, management bandwidth

and expertise gap

Acceleration to Bridge the Gap Between Pilot Grants to Commercial Investment

Examples of funders, investors and startups relevant to the PUE sector and the ongoing gaps to connect startups to commercial investors.

Rural agriculture solutions have gained more traction with investors, yet not for initiatives that align with mini grid communities or rural enterprise.



Core Activities:

This model leverages the appeal of a financial returns-minded business accelerator model such as Founders Factory Africa, Factor[e] or VentureBuilder, yet pairs it with lessons learned from notable development models such as the Clean Cooking Alliance, POP Hub and PREO. It is complementary as it can provide co-investment and de-risking non-repayable venture grants to increase the total pool of funding a company (or PUE partnership or joint venture) requires to gain the data, traction and resources needed to attract commercial investors. While PREO can fund up to €250,000 per Partnerships Initiative in cohorts of 5 projects, the proposed facility poses the opportunity to increase total capital and support to a PREO project, or focus on other companies beyond PREO’s portfolio to strengthen a broader pool of PUE actors.

In-house TA and selected parties will be focused on advances through support in:

- Business Growth Expertise
- Cross-Sector Collaborations
- PUE Business Model Design
- Financial Modeling and Credit Risk Management
- Agricultural, Healthcare and Other Sector Expertise in Complementary Sectors
- Rural Enterprise & Business Development Expertise

Existing PUE initiatives of the mini grid developers will require additional grant or debt funding paired with a healthy longer-term period of tactical support. This program offers such a solution

to scale up early pilots or productive use business lines. Alternatively, as most developers would prefer to partner with third parties- such as dedicated PUE equipment suppliers, agribusinesses and other innovators- this model allows for such new models to be incubated from concept or early development phase, again, receiving the necessary capital (and type of capital most relevant) as well as tactical support to strengthen a lean startup internal team.

The Launch & Grow Productive Use Accelerator Model: Key Features

Venture Studio Support:



Ecosystem Enabling:

Up to \$500, 000 Pre-Seed (Grant, Debt, Equity) – New Concepts/ Entrants

- Home solar financing spin out
- Bank or MFI spin out rural financing/distribution
- Agribusiness build-up along mini grid sites

TA grants to support government, associations

- Help government to write and integrate global policy language/ best practices

Up to \$1M Early Growth (Grant, Debt, Equity) – Pilot to Scale & Commercialization

- Global Leap, CB Labs post-pilot
- PREO, EEP, VentureBuilder co-investment

In-House Tactical Team – Finance, Operations, Partnerships (1 – 1.5 years)

Lead Investor Role – to attract commercial investors

TA Grants – to hire industry, finance experts

Sample Budget

Details of this model are subject to further analysis; however, we propose the necessary funding and budget might consist of the following. The Ecosystem Enabling budget is an additional pool of capital separate from the core programmatic budget.

Annual Budget: \$6.2M (\$18.6M 3-Years)

- \$4M investible and grant capital
- \$1.5M technical assistance support
- \$700,000 operating budget and internal oversights
- Suggested Program Period: Minimum of 3 years, and ideally 5 years or more to provide adequate longer-term tactical support

Ecosystem Enabler Budget: \$3M (over 3-Years)

Assumptions:

- Average of \$400,000 cash grant per company, in 2-3 tranches for PUE activities and business model strengthening
- Average technical support on finance, strategy provided by a contracted partner such as SunFunder or pre-approved consulting partners valued at \$150,000 per company
- Average of 10 initiatives supported per year for an average of 1-1.5 years
- Dedicated internal mid- to senior portfolio team of 5 to coordinate with partners, develop pipeline, conduct due diligence and serve as project managers, provide in-house financial and business generalist support, coordinate logistics, ensure quality control; plus 1-2 junior, contracted or internal administrative and reporting
- Other administrative fees
- Ecosystem Enabler Fund and budget will be disbursed as needed over the life of program

Note: Additional analysis will shine light on suggested budget, and ultimately budget will be determined by interested funders. However, we've provided some suggested figures to be further analyzed.

Logistics & Next Steps

Implementing Partners (Interested):

The following parties provided input in developing these concepts, and have expressed interest to realize them.

- SunFunder (Support in screening and selection of future investible companies to enter program, and then financial technical assistance to build stronger financial models and the path to profitability investors will need to see)
- Factor[e] Ventures (Not defined, but similar advisory capabilities as above, providing an investor perspective)
- I-DEV Africa (I-DEV Africa is available and willing to help further develop and implement the model)
- CLASP (Product technical due diligence and screening, as well as follow-on technical assistance)

Other Relevant Partners:

- **Industry Associations and Pilot Programs:** These parties, such as AMDA to PREO, will be critical to support sourcing of potential companies/initiatives admitted into the program.

- **Funders:** Funders will be needed to support further design and implementation of a final program.
- **Corporate Partners:** Energy and agriculture corporations might benefit from investment into this model, as a means of gaining greater insights into the PUE market and de-risking equity investments into the region.
- **Investors.** Other investors interested in PUE relevant sectors from agriculture to mini grids and last mile distribution can be valuable partners to identify interesting, early stage companies or companies in other markets that would be beneficial to scale and accelerate under the proposed solution. They can also provide the investor perspective to strengthen company models to align with their investment criteria.

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