GENERATING SUCCESS

How Flexible Grant Financing Builds Sustainable Companies

EEP Africa

NDF Nordic Development Fund

Cover:
Jaza Energy has deployed a network of solar energy hubs across Tanzania that offer affordable and powerful rechargeable battery packs to low-income customers. Each hub is operated by young women from the local community, called Jaza Stars.

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Austrian Development Agency

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NDF Nordic Development Fund

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SupaMoto biomass pellets are produced in Zambia out of waste sawdust from sustainable pine and eucalyptus plantations. The company's Copperbelt pellet factory has capacity to produce 15,000 tonnes per year.

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ACKNOWLEDGEMENTS

This report is based on lessons learned from the portfolio of the Energy and Environment Partnership Trust Fund (EEP Africa). The main research and analysis for this report was conducted by Chris Browne, with support from Morgan Walker and substantive input from Jussi Viding, Maggie Knorr and Tracy Dolan.

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EXECUTIVE SUMMARY

Grant financing has a critical role to play in the development of the clean energy sector in Africa. However, the sector will only reach the scale needed to achieve a real energy transition with follow-on investment. It is therefore vital that grant funds be used to build sustainable companies that provide products and services fit for the market and are able to attract customers and investors. Based on the EEP Africa portfolio of companies and partners, and the fund's decade-long experience in the sector, this report examines how grant financing can be deployed to generate long-term success.

DEFINING SUCCESS

An important first step is mapping the stakeholders impacted by a grant-funded project and identifying how each group defines success (see table below). A grant programme should aim for a holistic view of success that understands and positively affects all stakeholders: Developers, End Users, Donors, Investors and Industry. Traditional grant financing has often had a top-down approach, with the Criteria for Success of the Donor taking precedence over other interests and considerations. This report argues for a more progressive approach that places the Developer at the centre of the paradigm and prioritises the needs of the End Users.

MEASURING SUCCESS

The results of grant-funded projects are usually measured in terms of high-level outcomes that can miss the true impact of the financing provided. A key finding of this research is that the way success is measured needs to be expanded and metrics need to be grounded in the context of the project and operating environment.

Indicators connected to national or global goals, such as the Sustainable Development Goals (SDGs), are useful for projects attempting to scale a proven model (*Scaling* phase). However, these indicators are less effective at capturing important outcomes for Developers that are testing new products or markets (*Development* phase). A comparison of the ratio between the average outcomes for companies in these two phases shows that Scaling projects produced results 3-18 times higher than those in the Development phase (see table on next page).

Funders that support early-stage projects and start-up companies should be aware that the impact of their grants may not be demonstrated by such metrics alone, and therefore need to measure success through different lenses that are more appropriate for what happens in the Development phase.

Table: Criteria for Success by Stakeholder

END USERS	DONORS	DEVELOPER	INVESTORS	INDUSTRY & GOVERNMENT
Fit for purpose	Demonstrated outcomes and impact	Hypothesis proven	Scalability	Market stimulation
Improved quality of life	Value for money	Closed lines of enquiry	Return on investment	Learnings
Affordability and availability	Learnings and visibility	Company maturity		
Reliability and sustainability		Case for investment		

Table: Scaling Projects Produce Higher Outcomes than Development Projects

Indicators related to SDGs	Outcomes ratio*
Energy related expenditures saved per year	17.9
People with enhanced energy access	10.2
Clean energy generated per year	5.2
Direct jobs created	3.6
Mobilised climate finance	3.3
CO_2e emissions reduced/avoided	6.8

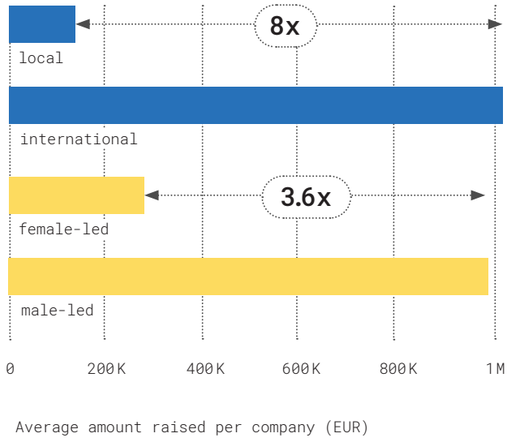
*Ratio of average outcomes between Scaling and Development projects

This report argues that the success of grant financing should be measured not only by contribution to the SDGs or a linear progression along fixed contract milestones, but also by the value the business brings to its End Users, the commercial progression and investment readiness of the Developer, and the learnings generated for the company and the broader Industry.

MAKING SUCCESS

Building on this analysis, the report offers recommendations for how to better structure grant financing to foster success. The overarching theme of the recommendations is flexibility. Developing the right product and model to fit a unique and challenging market takes time and space to test and learn. Companies across the board need flexible financing structures that allow them to adapt their approach in response to what they learn on the ground, and adjust to constantly changing external factors surrounding their business.

Figure: Fundraising Bias



Flexible and targeted support is especially important for local and women-led companies, which face significantly higher barriers to commercialisation. Within the analysed portfolio, women-led companies raised, on average, 3.6 times less follow-on investment than companies led by men, and local companies raised 8 times less than international companies (see figure below). This disparity reveals the biases against such entrepreneurs and the missed investment opportunities in the sector.

Grant financing must be designed with the interests of all stakeholders in mind, measured with the appropriate tools and approaches, and implemented with the flexibility needed to address and overcome changing market challenges. Achieving this will enhance the ecosystem of sustainable businesses that can grow to scale and advance a just and inclusive energy transition across Africa.

Recommendations

Use grant financing to de-risk the development of commercially viable products and business models:

Developers should use grant financing to find the right fit between product, model and market, and to build their own capacity and networks. A grant should be seen as 'learning money' to de-risk the period when companies need to test the viability of their model in order to achieve proof of concept or early scale-up, and attract follow-on investors. Grants also provide companies with the breathing space to identify and address operational weaknesses, and to network and learn from others in the sector.

Allow Developers to pivot in response to grant-enabled learnings or changes in market conditions:

Grant providers should adapt their approach and funding requirements based on analysis of the status and challenges within their respective markets, making locally-informed investment decisions with staff from those same markets. Developers should be empowered to develop a business model that works best for the future growth of their company, and be offered support services that are tailored to their needs. Pivoting is an essential part of business development, and Developers must be given the freedom to adapt their approach as they learn more about their evolving market.

Facilitate efficient, open and continuous communication between Funders and Developers:

The grant selection process should be as short as possible, to minimise the chance of significant changes in a company or market between application and implementation. Once started, there should be open and continuous collaboration between Funders and Developers to enable an effective and timely flow of information on grant-related actions like project modifications or disbursements. Funders can facilitate this by limiting the number of projects managed by each grant manager.

Take a holistic view of success and monitor broader value created by the grant:

Grant financing for the private sector should be aimed at achieving sustainable impact through the development of viable companies and functioning markets. Results monitoring and reporting should take a wider view of success by holistically understanding where value is being created in terms of commercial progression, market stimulation, and grant-enabled learnings.

Foster long-term relationships with grantees:

Relationships with Developers should continue beyond the grant contract period. Development of a commercially viable company in a challenging market takes time, and true impact will not be realised until several years after the grant period. Developers benefit significantly from continued support, such as peer networking opportunities and investment facilitation, that maintains and builds upon the successes realised during their grant project. Funders also benefit from a continued relationship as it allows them to understand longer-term impact on Developers and the market through data collection from past grantees.

Build a more inclusive sector by directing support to local and women-led businesses:

More grant funding should be directed to local companies and Developers that are led by or target women and marginalised groups. In order to reach and support such companies, grant terms and processes must be aligned with the local context. Data collection at all stages of the process should be disaggregated by gender and other relevant sub-categories, and funding can be complimented by mentorship, targeted networking activities and enhanced investment readiness training.

INTRODUCTION

The Energy and Environment Partnership Trust Fund (EEP Africa) has been investing in early-stage clean energy organisations in Southern and East Africa since 2010. Over this period, there have been huge changes in the region in terms of levels of investment and diversity of business models attempting to address the profound issue of energy poverty.

This study is a review of what can be learnt from data collected and relationships formed over a decade of experience, to understand how grant funding can best support impact driven businesses.

EEP Africa's core mandate is to invest in early-stage companies that are piloting or deploying clean energy technologies and business models. Since its inception, the fund has invested over EUR 52 million in 238 organisations, covering 15 countries and 10 clean energy technologies. EEP Africa has established its market niche as its willingness to take risks and invest in early-stage and unproven products, services, and markets. An evaluation of the fund's impact, conducted in 2020, confirmed its core value is its focus on supporting companies to achieve proof of concept and attract follow-on investment.

Beyond the impact on the entities in which it invests, arguably more powerful are the lessons that can be brought to the wider sector, informing and improving initiatives across the continent. This research looks to leverage the wealth of EEP Africa's experience with early-stage companies, to try to understand what has worked and what can be done better. It finds that more can be done to enable all stakeholders in the sector to understand each other and delivers learnings to those across the industry on how to make grant financing more effective.

Build Back Better and Greener

This work comes with the backdrop of the damage caused by the ongoing COVID-19 pandemic. This global crisis has hit the global economy hard, but hardest hit are the poorest communities. In late 2020, the World Bank estimatesd that the combined impact of climate change and the damage done by COVID-19 will push 132 million more people into poverty. The international community is rallying to build back better and greener, pushing for renewable and climate-resilient solutions to play a leading role in economic recovery and inclusive sustainable development.

This report consists of three main chapters, structured around the idea of success for a grant-funded company: defining success, measuring success, and making success.

The first chapter develops, on a conceptual level, what success means from the perspective of different stakeholders. The aim is to show the reader where impact is felt most strongly, from different viewpoints, and to bridge the existing gap in understanding between stakeholders that this research has identified. The second chapter grounds these concepts in experiences from the EEP Africa portfolio. It motivates why traditional indicators miss a large part of the impact that grant funding has on companies and suggests other ways to measure success that can be used to complete that picture.

Investing in Projects or Companies?

In traditional forms of grant financing, funding is dispersed for work carried out under a fixed-length contract – a 'project'. A more progressive view is to look at a grant as just a part of the financing required for a company to develop and grow. While this report refers to the administrative scope of a grant as the project, EEP Africa understands that it is investing in companies whose objectives continue after the grant has finished. Its financing is structured to enable this by giving flexibility for businesses to adapt to a changing market and providing support in investment and business development with more long-term goals in mind.

Zembo's electric motorcycles and network of solar charging stations are revolutionising the boda boda taxi market in Uganda.

The final chapter describes what EEP Africa has learnt throughout its history about how to structure grant financing in a more flexible way, and what kinds of complementary support are beneficial. It does this by bringing in feedback from different stakeholders, highlighting the challenges companies face from rigid forms of grant financing, and providing advice on what can be done to apply these learnings.

DEFINING SUCCESS

In order to understand how grant funding can produce successful companies, 'success' must itself be defined. This section discusses the idea of success, in a conceptual way, through the lens of different stakeholders, built upon a significant period of consultation. The reason for looking through these different perspectives is because success has a different meaning for each stakeholder, and a grant project must therefore meet the needs and expectations of multiple stakeholders in order to be truly 'successful'.

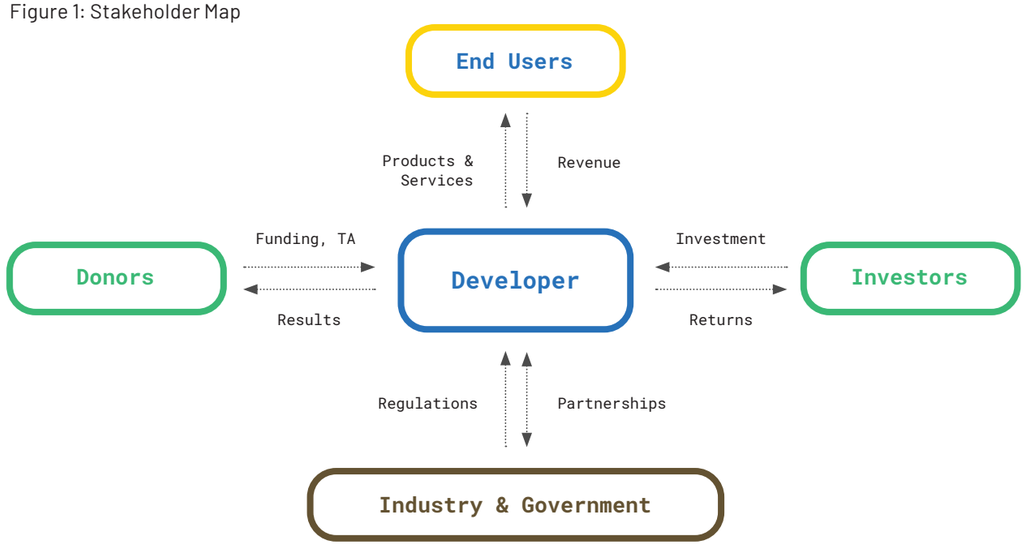
Take a simplified example of a grant-funded project delivering solar home systems to members of a community. A community member (the End User of the solar home system) might see a successful project as one that provides a quality and affordable product, for the Developer it could be that they prove their model produces reliable sales, while the Donor might measure success by the number of people being provided access to energy. All of these criteria matter. They are linked in some ways, but need to be balanced against each other and understood as distinct objectives for the project.

The first step for determining a project's Criteria for Success is to map the stakeholders that surround it. With that mapping, it is then possible to identify different success criteria for each group. In later sections of the report, these concepts will be developed into frameworks that help both Donors and Developers measure and create success in grant projects.

STAKEHOLDER MAPPING

The traditional model of grant financing is top-down, from the Donor, and prescriptive. The stakeholder map used in this analysis (Figure 1) represents a more modern paradigm, espoused by EEP Africa and others, that puts the Developer at the centre. From this perspective, financing is provided by Donors and Investors to enable a Developer to produce and deliver products and services to End Users. The Developer also interacts with the larger clean energy Industry, operating within the framework of government regulations and industry norms, and helping to shape the environment through shared learnings, partnerships, and market stimulation.

Figure 1: Stakeholder Map



Jaza Stars and battery packs inside the Titye solar charging hub in Kigoma, Tanzania.

SUCCESS BY STAKEHOLDER

Based on this mapping, Criteria for Success were developed for each stakeholder through a series of focus groups and interviews with EEP Africa partners and portfolio companies (see Annex I for details).

End User

End Users are the linchpin in a company's success but have traditionally had the least power or influence. Whether or not they act as a beneficiary (receiving a product or service at a discounted rate) or as a pure customer (purchasing a product or service in a transaction that reflects the true cost), it does not change the Criteria for Success.

Interviews with over 1,500 End Users, combined with perspectives from Developers with highly customer-focussed models show that End Users approach energy access solutions based on three questions:

Does it work?

Products must work for the End User; they must be fit for purpose. In order to be truly successful, Developers need to devote sufficient time and resources to understanding the needs of End Users and developing a product that meets those needs. In fact, the Developers interviewed for this research cited this as a key benefit of grant funding – it allows them the space to test and take risks to find this fit.

Does it help me?

This encompasses two elements. Products in impact-driven business usually aim to improve the End User's quality of life, such as through increased income opportunities, reduced time needed for tasks, improved health, or access to education. An important part of the Criteria for Success, then, is the extent to which a Developer can facilitate the quality-of-life improvements that the End User values. This last point, relating to measuring impact by what an End User values, is important and is discussed in later sections.

Secondary to this, and somewhat linked, is a softer element relating to improvements in social standing. Owning a product or accessing a service can provide social capital for the End User. However, these same social or cultural forces can be a barrier to adoption of a product if alternatives carry a higher social value.

Where Impact is Felt

Given that this study follows only impact-driven businesses, special focus should be placed on achieving success where the most direct impact is felt: the End User. Too often, other stakeholders, more removed from the ground level, make assumptions about the needs or preferences of End Users without consulting them. This has resulted in products being distributed that are not appropriate for the local context. This can be especially detrimental for women, who are often impacted the most by a lack of energy access. Women should be considered as a key End User group, with products, services and financing designed to meet their needs and interests, which may differ from those of men.

The idea that 'the customer is always right' is not a new concept in business but perhaps the development world is only just catching up to this approach. In order for any business to succeed, to become commercially sustainable, the product or services on offer must effectively meet the needs of the customer.

Criteria for Success: End Users

- **Fit for purpose**: The product or service works for the End User, effectively meeting their needs.
- **Improved quality of life**: The product or service offers an improved quality of life, such as increased income, saved money/time, improved health/education, or meets an aspirational social or cultural goal.
- **Affordability**: The product or service is affordable.
- **Availability**: The product or service is locally and easily accessed, including at the time/season when it is needed.
- **Reliability**: The product or service works consistently and reliably under local conditions.
- **Sustainability**: The provider of the product or service will remain in the market and continue to offer auxiliary products and services (after-sales support, replacement parts, complementary systems or appliances, expansion kits, etc.).

In some contexts, for example, owning a large and loud generator is a symbol of status, as it represents the ability to purchase an expensive system. Not only must products be designed to fulfil an aspirational need for the End User, Developers must also take time to understand and overcome the existing social standards that may compete with their business.

End User Interviews

These criteria are supported by data collected from End Users. In 2020, EEP Africa interviewed 1,556 End Users across three Developers: Absolute Energy in Uganda, SupaMoto in Zambia, and Zonful Energy in Zimbabwe. They were asked to provide their reason for purchasing the company's product or service, and what they value in it over existing solutions. Approximately 80% of End Users cite reasons relating to **fit-for-purpose** and **reliability**, while around 62% cited improvements to **quality of life** and 61% **accessibility** and **affordability**.

60 Decibels interviewed over 25,000 off-grid energy customers to determine what impacts are most important to them. The resulting study, called ***Why Off-Grid Energy Matters***, presents the top three most important positive changes felt by customers of the same technologies as in the EEP Africa research (mini-grids, clean cooking and solar home systems). Among these, 76% are related to **quality of life**, with the remaining 24% related to **accessibility**.

Can I buy and use it?

This third point relates to how accessible the product is: financially, geographically, at the right time, and for the long-term. Products and services must be affordable. Developers report that most of their customers have a limited ability to pay for energy products and services, and many customers are highly price conscious as a result. End Users customise their purchases towards the lowest expenditure that still meets their energy needs, but too many still incur high levels of debt to buy energy products. Along with affordability, End Users value a product or service that can be accessed nearby and when it is needed, that is easy to adopt, and that works reliably over a long period of time.

Finally, End Users need to trust that a Developer will be there two or more years down the line. Investing in a new product comes with a certain level of risk. Users have to change habits, re-budget, or rearrange other aspects of their life. Products and services with no prospect of future sustainability may be enticing at first, but will ultimately disappoint and further damage the trust between End Users and Developers – including those that may enter the market in future.

In the research for this study, Developers reported focusing on all of these Criteria but emphasised that the needs of Users change significantly in different contexts. When understanding success, therefore, one must understand the preferences of their local End Users (as well as differing preferences among specific End User groups, such as women) and focus on the most appropriate Criteria for that context.

Developer

When this research began, there was an expectation that the Criteria for Success of Developers would change as the business matured, but this is not what came out during the focus groups and interviews. In fact, Developers from start-ups to the most mature companies reported using grant financing for the same reasons, and agreed on the Criteria that indicate a successful project.

At all levels of maturity, grant funding is a capital injection that gives companies the space to take the risks required to test and scale. It is used for two distinct purposes: model and product development, or scaling up proven concepts and operations. In the former, Developers attempt to answer hypotheses relating to how their product and business model can best fit to the current market or open a new market segment. In the latter, the hypotheses are related to whether their proven model can work in other communities and operating environments. In either case, companies are testing something, and the outcomes of this test define the Criteria for Success.

It is important to recognise that, while a grant-funded project is a distinct and time-bound set of activities, it is part of a continuum that is the development of a business. Businesses are constantly learning about their market and tweaking their model in response. Some clean energy markets and technologies are less developed or more challenging than others. It must be recognised that not every grant project will produce a fully-formed, scalable business model – some markets are just not ready to support commercial viability – and that outcome does not make the grant a failure as long as something is learned in the process.

"We'd been studying PAYGo for about a year. We were a bit scared it would be a flavour of the week kind of thing. To be really honest, EEP made it possible to start because it's a capital-intensive business model. We could not have done what we did in year one without EEP. It was a really important grant."

Arnoud de Vroomen, CEO, SolarWorks!

Criteria for Success: Developers

- **Hypotheses proven**: The outcomes have shown what works and the direction for growth.
- **Closed lines of enquiry**: The outcomes have shown what does not work (this could be the entire product or business model, or just aspects of it), enabling the company to pivot in a new direction.
- **Company maturity**: The company has learned about itself and its market, becoming more mature as an organisation.
- **Case for investment**: The company is ready for future investment, and may have already secured follow-on financing.

At the end of a grant period, the Developer should have reached an outcome to the relevant hypotheses. These can be formulated as:

- **Yes**: They have proven what they set out to prove. The product or business model has worked and they are ready to scale that concept or grow their business in a different way. These are the most obvious successes, but are rare.
- **Partially**: Some aspects have been shown to work, while some need further improvement. Many grant-funded projects fall into this category. Ideally, going forward, they will have a clear idea of what needs to be changed and how.
- **No**: The proposed product or business model is not worth pursuing. This could be considered a failure, but it is a result that still has value. In these cases, they can confidently close a line of enquiry and will have learnt something crucial about themselves, their product, service, or market.

Developers see success as realising any one of these outcomes: knowing what works, what does not work, and what they need to do next. These learnings guide future iterations of their own business and can inform other Developers and stakeholders who come into the space.

With these outcomes, and in some way a combination of them all, comes another marker of success: company maturity. Given that grant support is often directed at companies during the crucial, early stage of development, it is hoped that the funding creates, as one Developer expressed it, "an inflection point in [the company's] growth."

The final success criterion identified by Developers is their business case and investment readiness. This is linked to the others, but looks specifically at their ability to attract follow-on financing. For some Developers, the target is already commercial debt or equity financing, but for many early-stage companies a more realistic goal will be concessional or blended financing. The investment can be in any form; the crucial factor is that the grant project put them in a better position to secure it.

Feedback from Developers

What works: Many Developers interviewed for this study said the most beneficial grants were those that allowed them to direct the way that they address the customers' needs, as they understood them. These companies developed sustainable revenues or found more funding, and were able to provide continuity of service to their customers after the grant finished.

What does not work: Developers also shared their experience with grant requirements that caused them to structure an intervention in a way that went against their core business model. One interviewee had to deliver the product via a mechanism that it had already found to be unsustainable. Ultimately this project was a failure because, once the grant finished, it was not possible for the company to continue operating in that way.

Donors

Out of all the stakeholders in the grant-funding ecosystem, the Donor potentially has the greatest power. They are the source of funding and can set requirements on how it may be dispersed. Because of this dynamic, there is a risk that a Developer will prioritise the Donor's Criteria for Success at the expense of other stakeholder priorities, including their own. This can have an unintended negative impact on the long-term development of the business. In order to avoid conflicting priorities, those who provide grants need to fully understand other stakeholder interests and the market landscape.

Many grant providers are themselves beholden to the source of their funds: the public. They must show demonstrable outcomes and impact from the financing, something that can be measured, explained, and compared to what has been invested. Given the nature of early-stage projects, showing all of these can be challenging, as the true impact of many clean energy projects cannot be fully calculated until several years after the grant funding period has ended.

Donors also have a larger purpose – in this case to accelerate a just and inclusive clean energy transition beyond what can be achieved in a single project. As a stakeholder with visibility and influence across industries and geographies, with access to the outputs of a range of organisations and interventions, Donors have a platform for impact beyond just their own investments. Collecting data from across their portfolio and sharing key lessons can have a multiplier effect on generated impact by breaking down the same barriers in other markets. It is in their interest to invest in projects that bring learnings for the sector and visibility to their broader goals.

Criteria for Success: Donors

- **Demonstrated outcomes and impact**: The change brought about by the introduction of donor funding. Outcomes measured by numeric indicators and impact described through narrative.
- **Value for money**: Efficient use of funds. Value generated for Developers (leveraged investment from other financiers) and End Users (social return on investment).
- **Learnings and visibility**: Project and portfolio-level learnings that can be shared effectively. Visibility created for the Donor and their cause.

Gigawatt Global developed a 7.5 MW solar plant in Burundi, the first grid-connected solar development by an independent power producer in the country.

Investors

One of the core goals of grant funding for the private sector is to crowd-in investors and catalyse follow-on financing. Companies cannot build sustainable operations solely on grants. Developers interviewed in this research all acknowledge that the only way to scale up nationally or internationally is by securing larger-scale, commercially-oriented investment.

Compared to grant funding, however, commercial investment requires a financial return in exchange for the upfront capital. Some Investors are impact-focused and will accept lower returns along with demonstrated impact. However, even in this case, the bottom line is still a strong priority — not least because they recognise profitability as a key to sustainable impact. As such, Investors are generally risk-averse, only providing financing to companies they believe can be a commercial success.

Investors agreed that grants themselves do not make a company investable, but the progression made by a company through a grant-funded project can take it to a place where it is investment ready. The awarding of a grant also goes some way towards validating a company in the eyes of an investor, as it will have passed the grant provider's due diligence processes. The grant also allows the company to establish a track record that sends a positive signal to investors and helps attract capital.

"We received the EEP Africa grant in 2016. In 2017, we were able to attract debt from a crowdfunding platform. In 2018, EDP came in as a strategic investor — in it for the long haul. We could not have reached the size needed to attract them without the EEP grant. We now have more than 15 million euros in debt facilities."

Arnoud de Vroomen, CEO, SolarWorks!

Criteria for Success: Investors

- **Scalability**: Visible growth pipeline, strong strategic story and team, solid financial projections, risk-adjusted profitability, and replicability.
- **Return on investment**: Good potential for financial return on investment in the medium- to long-term; impact investors also consider the potential for social and climate returns.

Catalytic Financing

In the past 10 years, Developers supported by EEP Africa have collectively raised EUR 150 million of additional investment during the course of their projects. This is triple the total amount of grant funding provided and excludes financing raised after the grant ended. For projects funded in recent years, when EEP Africa focused exclusively on financing for-profit ventures, the level of investment increases to 3.5 times the grant amount.

While one Donor cannot claim responsibility for all additional fundraising, the Developers and Investors interviewed for this report confirm that the growth shown by companies in the EEP Africa portfolio is clear evidence that grants and accompanying support play a significant role in making early-stage companies more attractive to Investors.

"It creates opportunities for other investors to come on board. In our case, a lot of people have shown interest because of the grant that we received from EEP Africa."

Sharon Yeti, Co-founder and CEO, Powerlive Zimbabwe

"At the time, we had an investor looking at taking an equity position. The project with EEP helped secure that investment. Since the EEP project began, we've raised 1.7 million euros... EEP has been a huge catalyst for us."

Lara van Druten, CEO, The Waste Transformers

"EEP came in and de-risked our business. Now we have been able to raise quite a bit of money. We have raised debt from the Off-Grid Energy Fund. If we had not got EEP, OGEF would not really have looked at us for debt finance... I went to banks before too. They said it was too risky. Now that EEP finances me, the banks are always at my door."

William Ponela, CEO, Zonful Energy

"[EEP Africa has] played a role in demonstrating business models and technologies. They enabled the proof of concept behind certain transactions. If a company with EEP financing lands on my desk, it makes the lead more serious."

Investor interview

Industry

The Industry is an important group to consider; after all, no Developer or Donor operates in a vacuum. On the positive side, a Developer can learn from similar models in other regions or develop partnerships with complementary companies. On the negative side, strong competition can derail a company's model, even if it would have worked otherwise. Industry associations and networks such as the African Minigrid Developers Association (AMDA), GOGLA, the Alliance for Rural Electrification (ARE), and the Clean Cooking Alliance (CCA) can spread learnings, create useful networks, and influence regulators.

As well as private sector associations, Governments have a strong interest in understanding innovative models and successful companies in their country in order to inform regulation and policy frameworks. There are many policy levers that affect companies, either sector-specific or economy-wide, among these are: regulation and licensing policies, taxes and import duties, regulation on overseas investment, energy, or agricultural development, and laws for credit provision and consumer protection. When Developers come up against challenges with any of these, that is crucial information for Governments if they hope to create an enabling market in their country.

Industry Associations

During the past decade, many Developers have created or joined national, regional and sectoral associations. When faced with common challenges in the operating environment, companies have more leverage to lobby for favourable regulatory and policy frameworks when they act in unison.

For example, AMDA was established in 2018 as the first trade association for private utilities developing renewable, localised power grids in Africa. Its mission is to ensure that mini-grids are utilised effectively by governments and donors and that the policy and financing environment supports radical scale of mini-grids to help end energy poverty. The association currently has 31 members across 15 countries. Five of AMDA's founding members – Ensol, E.On Off-Grid Solutions (formerly Rafiki Power), Husk Power, PowerGen and REDAVIA – were recipients of EEP Africa funding, showing that associations like AMDA have a clear stake in the deployment and outcomes of grant financing.

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REDAVIA has developed a solar power leasing model for C&I and SME clients in Kenya and Ghana. Building on a successful grant project, EEP Africa provided follow-on debt financing for scale up of the model.

Criteria for Success: Industry

- **Market Stimulation**: Investor interest, enabling regulatory environments, new and field-tested models, technologies, partnerships, suppliers and distribution channels.
- **Learnings**: Innovation, new business models, identification and mitigation of risks/barriers, peer-to-peer networking.

The research for this study identified two Criteria that the Industry looks for as a successful outcome of a grant-funded project. The first is market stimulation, the extent to which a company opens up a new market or succeeds in reaching a new customer segment. Potential partners, suppliers, competitors, and existing stakeholders, such as Government, all look at the development of grant-funded projects to see where new opportunities and prospects may emerge that can pave the way for broader market growth

The second successful outcome for the Industry is what can be learned. Energy development in low-income regions is incredibly challenging, and many of those challenges, like the low income of potential End Users, are faced across the board. The Industry as a whole can gain a lot from the successes and failures of a grant-funded business.

Market Drivers

Two recipients of EEP Africa support are major drivers for the penetration of pay-as-you-go (PAYG) solar home systems (SHS) in their countries: Zonful Energy in Zimbabwe and Yellow in Malawi.

Both companies used their deep knowledge of the local context, combined with learnings from PAYG models pioneered in other parts of the continent, to deploy this distribution and payment model with spectacular success. Since starting their projects, in 2019 and 2020 respectively, their success in stimulating the SHS market in their countries is evidenced by the number of people they have reached (over 65,000 between them) and the significant investment that followed their grant (EUR 20 million for Yellow alone).

MEASURING SUCCESS

Now that the Criteria for Success have been established for each stakeholder (Figure 2), this chapter will discuss whether and how success can be practically measured. Significant attention will be placed on measuring success from the point of view of the Donor, as the main provider of grants, and the Developer, as the direct beneficiary of the grant. Data from EEP Africa's portfolio will be used to explain and motivate the use of these methodologies.

Figure 2: Criteria for Success

END USERS	DONORS	DEVELOPER	INVESTORS	INDUSTRY & GOVERNMENT
Fit for purpose Improved quality of life Affordability and availability Reliability and sustainability	Demonstrated outcomes and impact Value for money Learnings and visibility	Hypothesis proven Closed lines of enquiry Company maturity Case for investment	Scalability Return on investment	Market stimulation Learnings

DEVELOPMENT IMPACT

Donors are the main financiers of development projects and therefore their Criteria for Success often take precedence. When measuring the success of private sector-led projects with traditional development indicators, however, the Criteria of the Developer and other stakeholders can be missed. This section will advocate for the importance of including broader measures of success.

Measuring impact is a field of study that is constantly evolving. Typical numeric measures of impact are outcomes that contribute towards the global Sustainable Development Goals (SDGs). The SDGs provide a standardised set of objectives that align all activities, from small projects to multinational programmes, toward a universal aim.

Key indicators that have been used to demonstrate SDG-related outcomes from EEP Africa's portfolio are shown in Table 1, along with the results achieved for each indicator since 2010.

This high-level visibility on portfolio results is incredibly important. However, a top-down approach can miss nuances and impact at the ground level. In order to use this to inform future grant making, it is important to understand which types of companies and projects contributed to these figures, and how the true impact of grants for early-stage companies can be missed when relying solely on this type of data.

Table 1: Outcome Indicators

	Indicator	Unit	Value
SDG 1	Energy-related expenditures saved per year	EUR	94,442,313
SDG 7	People with enhanced energy access	Number of people	5,049,273
SDG 7	Clean energy generated per year	GWh/year	289
SDG 8	Direct jobs created	Number of jobs	10,051
SDG 13	Mobilised climate finance	EUR	154,993,019
SDG 13	CO_2e emissions reduced or avoided	Tonnes of CO_2e	1,530,471

Outcomes by project maturity

As discussed earlier, regardless of the maturity level of the business itself, companies have two main uses for grant funding: testing and scaling up. For start-ups, the project may constitute their entire business model. For more mature companies, it may be just one aspect of their business, such as piloting a new product or entering a new market (see Figure 3).

The difference between the two uses of the grant can be described as the project's maturity: **Development** or **Scaling**. To demonstrate what can be missed, the average results per company for the outcome indicators are calculated for both phases of maturity. Table 2 (next page) compares these averages and the ratio between Scaling and Development projects.

Figure 3: Project Maturity

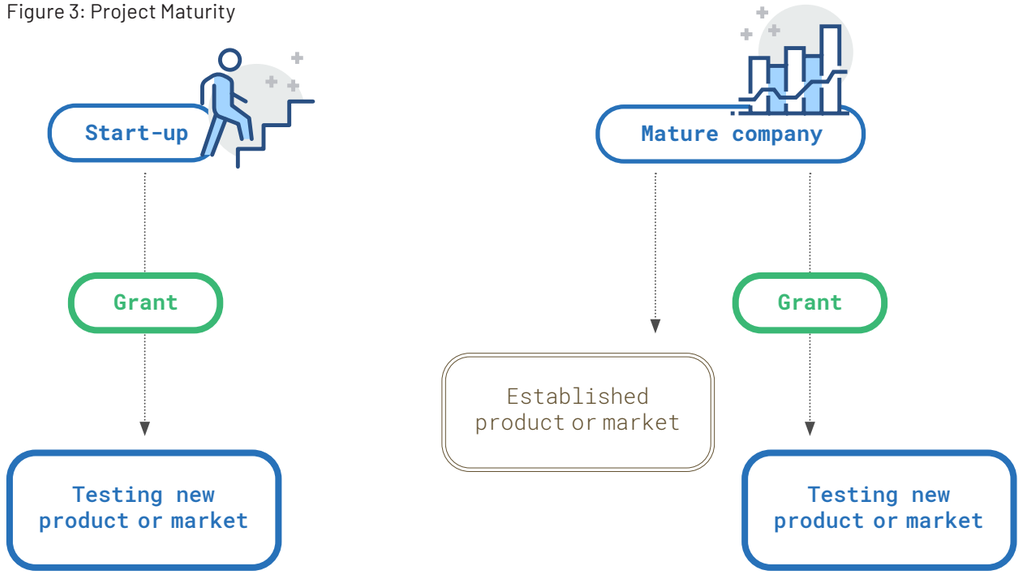


Table 2: Outcome Ratio by SDG Contribution

Indicator	Unit	Average result		
		Development	Scaling	Ratio
Energy-related expenditures saved per year	EUR	71,728	1,280,817	17.9
People with enhanced energy access	Number of people	6,166	62,883	10.2
Clean energy generated per year	GWh/year	0.6	3	5.2
Direct jobs created	Number of jobs	26	93	3.6
Mobilised climate finance	EUR	415,820	1,386,541	3.3
CO_2e emissions reduced or avoided	Tonnes of CO_2e	2,555	17,415	6.8

There is a clear difference in the recorded outcomes between the two levels. **The results of projects in the *Scaling* phase are 3-18 times higher than those in the *Development* phase**. For two thirds of them, the difference is at least five times more.

This dramatic gap is not surprising since projects that are attempting to achieve scale will reach more customers, make more sales, and attract more investment. If success is measured purely by this quantitative impact, by the scale of contribution to the SDGs, then it should be obvious that Development projects will be seen as far less successful.

However, this assessment does not take into account the Criteria for Success of other stakeholders and may not be a fair measurement for early-stage companies in challenging markets. As will be discussed, there are measures of success that focus on other stakeholders, such as what the End User values and the commercial progress of the Developer.

Value for money

The argument for a more holistic definition of success is reinforced when looking at the value for money. Some grants, such as results-based financing, are contingent on Developers providing a certain level of outcome for every unit of currency invested. These have their place in the financing ecosystem and work particularly well for companies already operating at scale in a well-tested market, or targeting a narrow range of products and services. However, when applied to earlier-stage projects and businesses in untested or frontier markets, these results do not necessarily measure the true value of the grant. Anecdotally, Developers reported seeing entire businesses collapse because of the application of results-based financing in the wrong context.

When looking at the impact results per euro EEP Africa has invested, Table 3, the same pattern appears, with Scaling projects vastly outperforming those in the Development phase.

The ratios here are a bit lower, when compared to raw results, because Scaling projects typically receive larger grants and so their outcomes are spread over a larger investment. This reduction does not change the story, however. Scaling projects provide between two and 10 times the value for money than Development projects. If grants are disbursed only as results are produced, or if a bidding process is set up to require a certain value for money, there is a high risk of project failure in contexts that are untested and require a Development phase project.

It is not that requiring impact and value for money is wrong; the challenge comes when what constitutes impact and value is too narrowly defined. In order to capture the true success of early-stage projects — projects seeking to enter new markets or trial new products — it is reasonable to measure high-level, SDG-focused outcomes, but one must also look past them. The definition of impact and value must be expanded to include the Criteria for Success of other stakeholders.

Table 3: Outcome Ratio by Euro Invested

Indicator	Unit	Result per € invested		
		Development	Scaling	Ratio
Energy-related expenditures saved per year	EUR	0.37	3.90	10.6
People with enhanced energy access	Number per EUR 1,000 invested	31.78	191.69	6.0
Clean energy generated per year	kWh/year	3.03	9.26	3.1
Direct jobs created	Number per EUR 100,000 invested	13.26	28.32	2.1
Mobilised climate finance	EUR	2.14	4.23	2.0
CO_2e emissions reduced or avoided	kg CO_2e	13.17	53.09	4.0

INDIVIDUALISED SUCCESS

During the research for this study, Developers spoke about the disconnect between what they see as their impact and what they are being asked to measure by some grant providers. Particularly those in the Development phase felt disadvantaged by what one Developer referred to as a 'myopic focus on outcomes.' They recognised the value in measuring overall outcomes, but also advocated for measuring results on the individual, End User, level. Doing this enables comparison between business models of any scale.

In addition, it is necessary to understand and aim for targets that the End Users themselves value. Not doing this may lead to measuring and valuing the wrong things, which can result in outcomes that cause unintended and unrecorded negative impacts. A focus on what the End Users want reduces the risk of creating a solution at one level that simply shifts the problem elsewhere, or locking a household or community into suboptimal improvements.

The success of a project can be understood by benchmarking the business against the End Users' Criteria for Success defined earlier. Two aspects should be considered for each Criterion: the extent to which the End Users value it and how well it is being fulfilled by the Developer's product or service. The first provides intelligence and gives an indication of what End Users care most about when accessing the product or service. The second indicates success, showing Developers and other stakeholders where End Users feel the project is succeeding and where it is falling short.

Measuring individualised impact accurately does not necessarily require a rigorous, time-consuming and costly field study. Shorter customer surveys, when used effectively, can provide valuable data, and the sample size required is not as burdensome as might be expected.[1] For example, even when the customer-base numbers in the thousands, the required sample size is less than 300 (see Table 4, next page).

[1] 60 decibels, 2022. Direct interview with Kat Harrison, Director.

Value to the End User

In primary data collected by EEP Africa, reasons for purchases vary depending on the context and type of product. For example, only 10% of mini-grid customers cited affordability as a reason for connecting, implying that quality of life improvements (cited by 79%) were more important or at least worth the cost. Cookstove customers, on the other hand, were more focused on affordability, with 60% of customers citing this as a reason they purchased the product, and considered accessibility less important, with only 32% giving this as a main reason.

Among organisations that specialise in understanding the impact of development projects, there is a growing trend of framing the impact on End Users from the perspective of those End Users. Social Value International is a global network of impact-focused organisations that are pushing for a user-centred way to count value. The key idea in their Principles of Social Value is mirrored in the findings of this research: that impact, or value, must be informed by stakeholder preferences. The lean data approach of 60 Decibels, mentioned earlier, also hinges upon measuring impact in terms of what End Users find important.

Table 4: Sample Size for End User Surveys

Population size	Sample size*
50	43
500	177
5,000	259
50,000	271
500,000	273
5,000,000	273
50,000,000	273

*Sample size required to achieve 90% confidence level with 5% margin of error

It is important, however, to ensure that assessments are designed to minimise biases and are conducted in a robust and ethical way. Interviewers must avoid leading questions and be trained on how to engage with End Users. When interviewers work for the Developer, such as an in-house customer call centre, End Users may not answer honestly and the collected data can inflate or distort impact results. In many cases, it may be more efficient and more effective to hire a specialist third-party to carry out the assessment.

Grant providers and Developers should consider allocating resources to high-quality data collection on End Users, at both the company and portfolio level. This could be for in-house capacity building or funding for third-party services. Given the primacy of the End User in impact-focused work and that, in many cases, End Users themselves are not appropriately consulted, this is a vital aspect that must be prioritised.

COMMERCIAL SUCCESS

One of the main goals of grant funding for the private sector is development of the company itself. Therefore, early-stage success can be better measured by tracking both the progression of the project and progression of the business. An important element in both trajectories is acknowledging challenges and making course corrections along the way.

Contract Progression

At the start of a grant contract, a Developer will have key objectives and a plan to achieve those. For many grant funders this plan is split into contract milestones, with funds released in tranches according to a predetermined reporting and payment schedule. Progression through these milestones can give some indication of the success of the company, but deviations from the plan are also illuminating and informative. These often indicate that one of the Developers' Criteria for Success has been achieved, either **hypotheses proven** or **closed line of enquiry**.

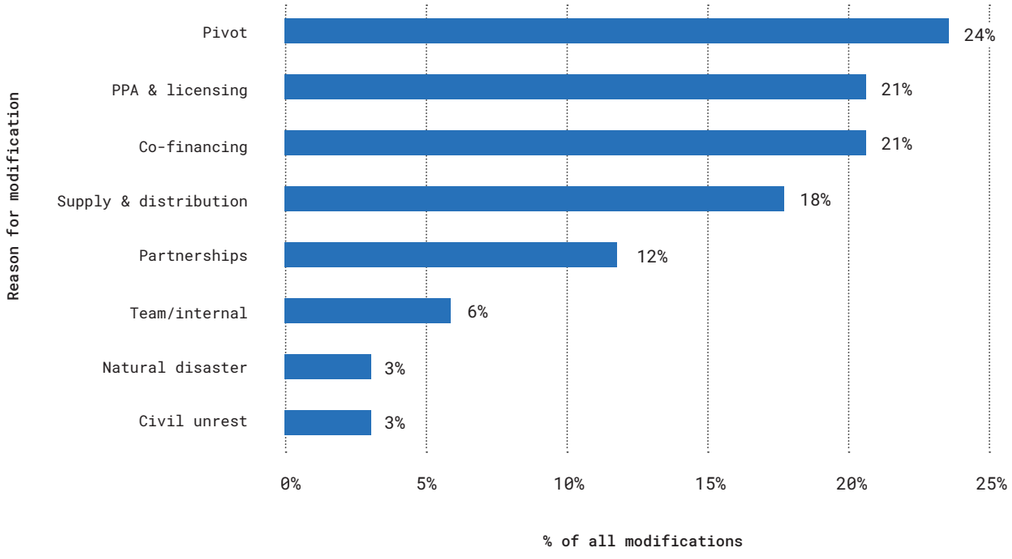
For grants targeting early-stage companies, therefore, flexibility needs to be built into their contracts. Quite often, things do not go according to plan. The market changes or does not behave as anticipated; there are supply, customs, or regulatory issues; external unseen forces, like a global pandemic, completely change the landscape. It is vital that this kind of grant financing is structured to allow for reasonable changes in the terms of the outcomes and disbursements as challenges – and lessons learned – present themselves.

Since 2018, nearly 70% of projects in the EEP Africa portfolio have had at least one modification to the contract annexes in terms of project targets, timeline, and/or budget. Although COVID-19 was the most common reason cited, the effects of the pandemic accounted for less than half of all modification requests.

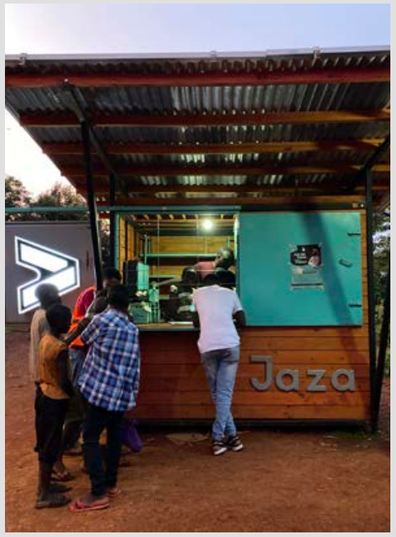
Figure 4 shows the other main reasons for modifications. Almost one quarter of Developers needed to adapt the project after learning something important — to make a market-driven pivot. Issues such as delays when obtaining a power purchase agreement (PPA) or licences, challenges securing co-financing, and supply or distribution issues, were factors in around 20% of modifications. All of these issues if recorded and understood correctly, can carry significant learnings for the sector.

Examples from the EEP Africa portfolio demonstrate the diversity of reasons for modifications during the contract and the need for flexibility.

Figure 4: Project Modifications



Examples of modifications in the EEP Africa portolio:



Developer
Jaza Energy

Modification
Project targets

Grant period
2019-2021

Reason
Pivot

Background
Jaza Energy installs solar energy hubs in last-mile communities that provide battery rental and recharging services. The original project target was the deployment of 60 new hubs, each serving 100 households, in Tanzania. During implementation, however, the company learned that 300 households could be served by each hub. The project target was reduced to 34 new hubs and some funds earmarked for hubs were used to procure more batteries. Increasing battery inventory at each hub, rather than rapidly deploying more hubs, greatly improved unit economics, increasing profits and reducing hub level payback from 54 to 24 months. With this modification, the grant enabled Jaza to reach more customers and make its model more sustainable.

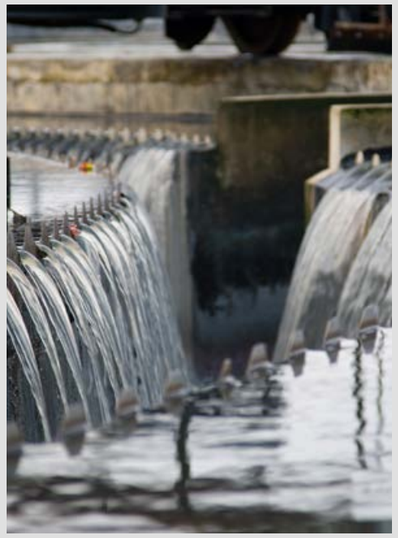
Developer
Songa Energy

Modification
Extension

Grant period
2019-ongoing

Reason
PPA & licensing

Background
Songa Energy is developing a 1.5 MW run-of-river hydropower plant in Burundi. The project was delayed for nearly two years while awaiting approval from the Government of Burundi and a power purchase agreement with the public utility REGIDESO. These were finally secured by April 2021, one month after the original end date of the grant. Based on regular communications and monitoring of the situation, however, the contract had been extended and Songa is able to utilise the grant funds to move the development forward. The new end date is June 2023.



Developer
Talbot

Modification
Extension

Grant period
2019-ongoing

Reason
Partnerships

Background
Talbot is developing a wastewater-to-energy plant in South Africa. At the start of their project, the company had a signed an off-taker agreement with a consumer goods producer. However, this partner ran into financial troubles and was eventually bought by another organisation. The situation caused major delays in implementation, but ultimately has been positive for the project as the new partner is in a stronger financial position. An extension of the grant contract has enabled Talbot to manage the evolution of this key relationship without the risk of losing its grant funding.

Commercial Progression

Beyond a flexible set of contract milestones, success should be measured against a fixed set of commercial targets. These are standard commercial milestones that a Developer typically needs to achieve when developing a product or business model and when scaling. This progress roughly corresponds to the **hypotheses proven** Criterion and changes depending on the maturity of the project; a typical scale-up project has different commercial milestones than a pilot.

Measuring Company Maturity

EEP Africa defines the levels of company maturity as follows (see Annex II for methodology):

1. **Start-up**: Company has established itself as a legal entity and is piloting and adjusting their product/service and business model with real customers.
2. **Commercialisation**: Company has proven their model and customer demand and is generating some revenue. They are now attempting to fully commercialise it in their tested market.
3. **Scale-up**: Company has a proven sales record in their market and is attempting to scale up these sales in new markets, geographies, or customer segments, or with new product lines.
4. **Mature**: Company has a proven set of products/services and sales record in multiple markets and may even be reliably profitable.

A company's progress through these milestones can be tracked and offers an indication of how successful the grant has been. It is important to remember, though, that this kind of milestone tracking cannot be used to directly compare companies. Progression is highly nuanced and just because one company progresses faster, it does not necessarily mean that it has done better – it might just have come up against fewer external barriers. When looking at individual companies, therefore, commercial progress should be considered within the appropriate context.

The value of these indicators to a Donor or grant provider is at the portfolio level. When aggregated, they can demonstrate the value of investments by showing the status of the portfolio at the start of the projects, compared to the commercial milestones achieved by the end.

As well as progress in particular areas of their business, Developers hope to see significant development in their company as a whole. This can be understood by tracking the company's maturity throughout a project, and reinforcing the idea that early-stage grants are used to support a company beyond the contract period. If it goes well, a Developer could progress into a higher maturity stage over the course of a project.

VAC Solar is establishing solar hubs and a distribution network for rental battery packs in Uganda.

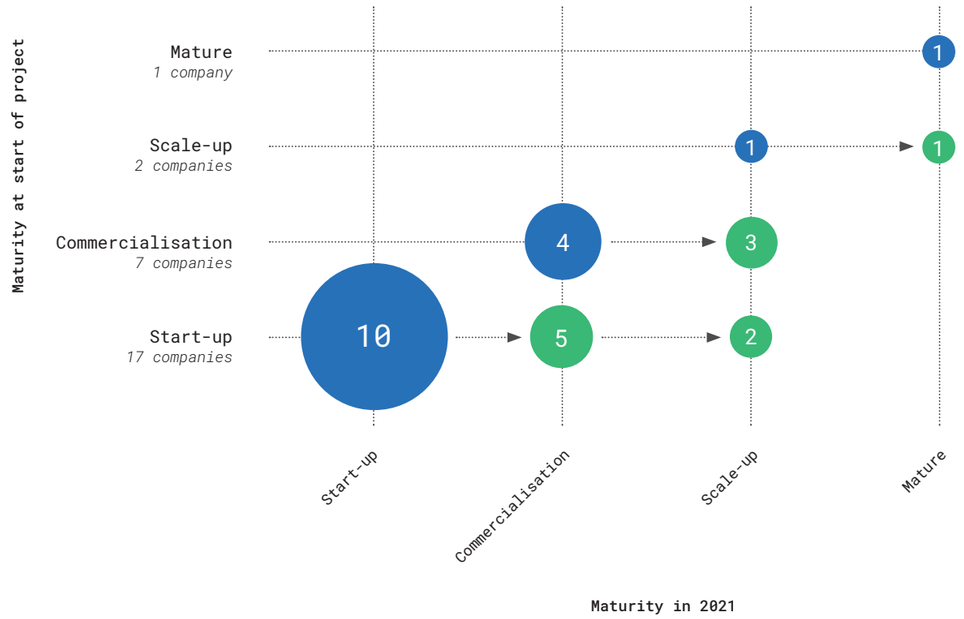
This is particularly true for a Start-up, where the project may be their entire business and progression from the Development phase into the Scaling phase equates to a significant improvement in business profitability and sustainability.

The relevance of company maturity is shown when looking at the EEP Africa portfolio. The maturity level of Developers in the current portfolio was appraised when their projects started in 2019 or 2020; they were then asked to assess their maturity stage in a 2021 portfolio survey. Of those who responded to the survey (two-thirds of the active portfolio), 59% were at the same maturity stage and 41% had progressed to a higher stage. Two of the Developers had progressed by two stages, from Start-up to Scale-up (Figure 5).

Attribution

The extent to which a company's progress can be attributed to the grant they received is a complex issue. Companies often have multiple donors as well as operations outside of their grant-funded projects. To understand this, a question in the 2021 survey asked: "In relation to this change in maturity stage, to what extent has EEP Africa contributed to your progress?" In response, 78% said that EEP Africa's support either *directly* or *significantly* contributed to the progress they had made. The remaining 22% said that it had *partly* contributed. No developer reported that the support had no contribution. This kind of analysis can be done across any portfolio of grant-funded companies to understand how they have progressed as a whole, and the extent to which the grant funding made that happen.

Figure 5: Company Maturity



Grant-enabled Learnings

Within a portfolio of early-stage projects, there are bound to be companies that make little progress from the perspective of the commercial measures described above. However, these projects may achieve a different measure of success: **closed lines of enquiry**. A project that does not succeed according to traditional metrics, or requires a significant pivot midway, is still valuable for the company and the industry if it provides data and lessons about what does not work.

Every time a company pivots, this comes with, and is usually because of, a significant learning. Through this research, it became clear that a metric should be defined to count such instances of grant-enabled learnings. It is important for funders to better track these so that they can record the number of times a grant has allowed a company to learn something significant, change their model, and improve.

Being quite subjective, it is important to define what kinds of learnings are significant enough to be counted. A suitable definition, based on the research for this study, is a learning that would not have been gained without the activities under a grant and that changes the way an organisation approaches their business, product, or market, providing a major step forward.

As with all evaluation activities, it is the role of the grant provider to measure indicators responsibly, to report only impact that is credible, and thus robustly and fairly define what constitutes a grant-enabled learning. To provide additional context, it may be useful to categorise learnings relating to an internal or external issue, with further sub-categorisations like team or technology for internal, and customer or regulation for external. The most important context, however, is narrative.

Grant-enabled learnings from the EEP Africa portfolio:

Company
D.Light

Category
External: Customer

Grant period
2014 – 2016

Learning
Solar home systems (SHSs) are preferred over solar lanterns in Kenya.

Background & result
D.Light intended to use grant funding to scale-up solar lantern sales in Kenya. During the course of the project, the company found there was a significant demand from End Users for higher power systems. In response, D.Light launched a pay-as-you-go SHS line in 2015 and sold 275,000 systems by the end of the project period. The grant gave D.Light the space to learn how to most effectively scale-up and address the needs of its market.

Company
Emerging Cooking Solutions

Category
Internal: Technology

Learning
Smart technology used in SHS can be applied to cookstoves.

Grant period
2012 – 2013, 2019 – ongoing

Background & result
Emerging Cooking Solutions (ECS) produces bio-waste cooking pellets and stoves in Zambia under the brand name SupaMoto. While testing the market, the company found that the price of a Tier 4 stove was too high for many households, despite cost savings when switching from charcoal to pellets. To address this, ECS adapted MimiMoto cookstoves into smart stoves that can be controlled remotely and integrated with a PAYGo model. This enables low-income customers to pay over time and the company can turn off the stove if the customer defaults. The remote monitoring feature also allows ECS to collect hard data on usage in real time, opening possibilities for higher financing from carbon offsets. Based on this success, ECS is now developing its own line of internet-connected cookstoves for households.

Company
REDAVIA

Category
Internal: Team

Grant period
2015 – 2017

Learning
An in-country sales team is essential for a B2B solar business model.

Background & result
REDAVIA was piloting solar solutions for off-grid industrial sites in Tanzania, but needed to diversify to industries in on-grid areas in order to scale up. The project aimed to test a solar leasing model for SMEs to avoid high up-front costs and long off-taker agreements, and encourage on-grid companies experiencing power outages to switch to renewable energy. Solar installations were placed at two on-grid businesses, an agroforestry sawmill and a poultry farm. Although both those firms ended up faceing financial challenges, REDAVIA learned valuable insights about what kind of team and sales approach is needed to for solar leasing. The company is now successfully scaling up its model in Kenya and Ghana.

"We learned a lot about the sales process, risk management and market conditions. The lessons learned from this project eventually led us to re-focus our geographical scope and develop local sales teams in Ghana and Kenya. That's how we've reached the product-market fit we are scaling up now. This experience was essential to our current path to success."

Erwin Spolders, CEO, REDAVIA

INVESTABILITY

Another measure of success that should also be strongly considered is a Developer's ability to attract investment during or after the grant. Investors set a high bar for their financing because they need to be profitable. An important goal of grant funding for the private sector is to help companies reach this bar – to become investment ready and secure follow-on financing.

Investment Landscape

As a first step to understanding what is needed for a company to become investable, it is important to understand the wide range of investment vehicles in the market. Early-stage companies generally carry higher risk than more developed companies so the most important consideration is the Investor's risk appetite.

The risk tolerance of an Investor is strongly affected by the amount of impact financing it has. The more a fund is backed by impact-focused money, the more patient and risk tolerant it typically is. It is typical, therefore, for early-stage companies to move from grant funding to some kind of concessional or blended finance vehicle. Some commercial investors, such as venture capitalists, also have a high-risk appetite, but they look to balance this with high returns. Such investment is rare in this sector as the potential for very high returns is much lower than in other markets.

Risk appetite usually dictates the size of investments offered (the ticket size) and the maturity of the target companies. Small ticket Investors typically offer debt financing between EUR 10,000-500,000, often as co-financing for grants. These Investors occupy an early-stage space, funding Developers' commercialisation after successful pilots and purchasing stock to scale.

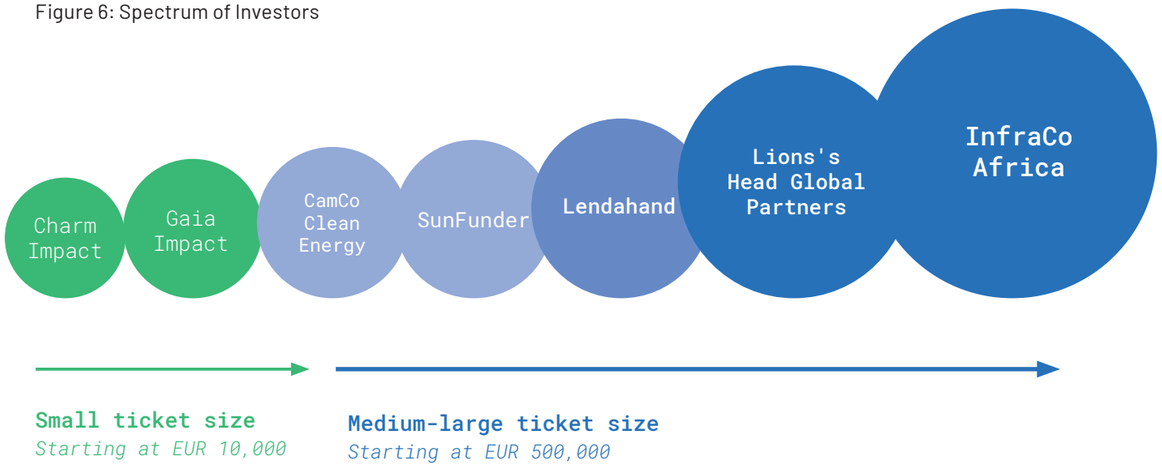
Above this level are medium-large ticket Investors, typically investing EUR 500,000 and above in the form of equity and/or debt. These Investors look for more mature companies and demand a lower risk profile. Only businesses with a proven track record and projects in the Scaling phase are considered. Established companies that used grant funding for just one aspect of their business, or some start-ups that grew rapidly during the grant period, may reach the level of business development and scale needed to attract this kind of investment.

The diversity amongst Investors is very challenging for Developers to navigate. One of the objectives of this research, therefore, is to simplify the picture by finding commonality in the approach of all Investors – the end goal being to provide Donors and Developers with a checklist that will allow them to assess how ready a company is for follow-on investment.

Investors Active in the African Clean Energy Sector

EEP Africa conducted a mapping and analysis of 86 Investors (26 small and 60 medium-large ticket) that are active in the African clean energy sector. Both groups offer debt and equity financing, and about 20% also provide some form of grants or soft loans. GET.invest also maintains a public funding database of 100+ financing instruments for clean energy projects and companies in Sub-Saharan Africa. Some examples of key investors in the sector, representing varying levels of financing, are listed in Figure 6 below.

Figure 6: Spectrum of Investors



"[EEP Africa focuses] on a part of the development stage where there is a real shortage of funding. Their grants replace early-stage equity funding, which is hard to find right now. This is the type of funding that allows companies to get out of the starting block."

Stakeholder interview

Investment Readiness

The Criteria for Success identified for Investors, potential for scalability and return on investment, both make a subjective assessment of the future and are therefore difficult for a Developer or Donor to measure in the present. Each Investor carries out rigorous due diligence and draws upon a wealth of experience before deciding whether a company meets these Criteria. However, the Investors consulted for this research did provide insight into what companies generally need to have in place in order to be considered for investment. The checklist in Table 5 can be used by Donors, Developers, and Industry alike to measure success in terms of investability.

Table 5: Investment Readiness Checklist

	Small ticket size	Medium-large ticket size
Typical investment	EUR 10,000 – 500,000	EUR 500,000 +
Business model	• Completed pilot(s), product has been tested in their market • Business model proven: demonstrated customer demand, basic unit economics are positive, track record over at least a year • Sales are growing	• Commercial sites established (more than pilots) • Established, functioning model and proven sales record • Track record of revenue growth • Business is profitable or has a clear path to profitability in 1-3 years • Must be sustainable without grants

Team experience & capacity	• Experience:
	  • Managing funds (e.g. grants)
	  • Personnel management
	  • Project management
	• Built a working sales team
	• Finance function in place, using at least a basic financial model
	• Well-structured customer, sales, supply chain data tracking (beyond Excel)
	• Audited accounts
		• Strong teams:
		  • Experienced leadership
		  • Personnel & project management
		  • Finance function, including evidence-based financial model
		  • Credit and risk management
		  • Governance systems
		• Customer, sales, supply chain data tracking
		• Audited accounts

External	Good reference from grant manager or other investors (not required, but helps)	

Overwhelmingly, the feedback from Investors is that it is well-organised and well-documented evidence that sells a business to them. Promotional materials and pitch decks carry little weight if they are not supported by concrete data. All elements of this checklist must be backed up by hard evidence to be considered part of the case for investment. Examples of the kinds of data that should be available for Investors are sales, cash flow, supplier, personnel, customer, accounts, and investment records.

Based on this, it is possible to design indicative metrics for grant managers to assess and monitor Developers' investment readiness. While it may not be accurate on an individual company level, such metrics may be good enough for monitoring at portfolio level. Simplistically, such an indicator could be the presence of a number of investment-related materials:

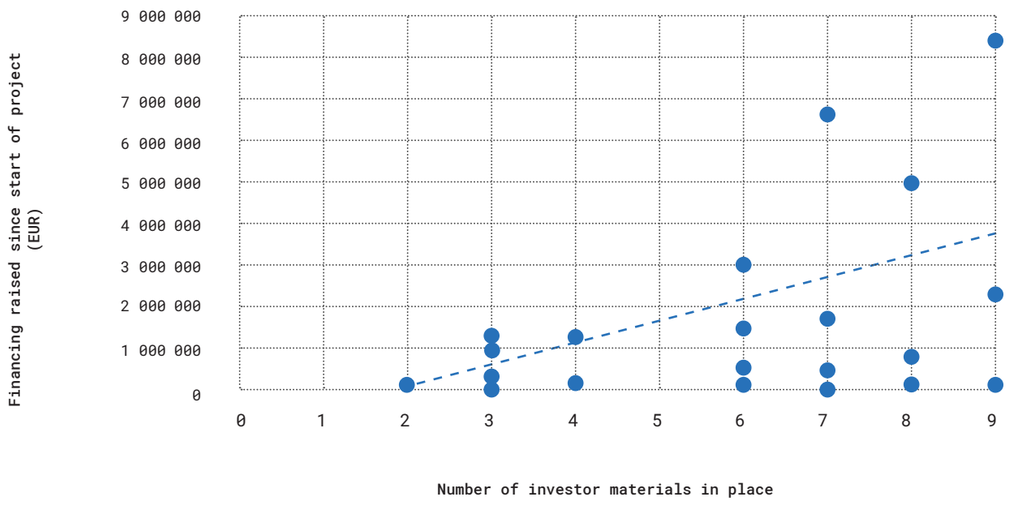
- Business plan, including 5-year scaling plan
- Financial model, including revenue and cash flow projections
- Budget for at least the next 12 months
- Market, competitor, and risk analysis
- Marketing strategy
- Pitch deck
- Timeline for when investment will be required
- Professionally audited Financial statements
- Company valuation

The investment readiness checklist describes what Investors are looking for in a company, so understanding across the portfolio how many items are being checked off from this list could be a simple indication of progression in this area. When combined with the extra context of narrative, this can help build a holistic picture of success that includes the Criteria identified for Investors.

Remember that Investors require high-quality evidence of a company's achievements. These materials should meet the same standard. They must be complete and provide real insight into the business' operations. For example, a market, competitor, and risk analysis should be thorough enough to be of value to the potential investor and clearly demonstrate the opportunities and challenges facing the company.

In the EEP Africa portfolio, 31 Developers were asked which of these investment-related materials they had in place. It could be assumed that a Developer that fulfils more of these simplified metrics would have a higher chance of securing further investment. The data supports this idea (Figure 7). There is a clear positive correlation between Developers with more materials in place and the amount of co-financing or other investment (grants, debt or equity) secured since the start of the project.

Figure 7: Investment Readiness Metric



Metrics Need Context

Although the positive correlation is clear, the metric alone clearly does not provide the whole story. Some Developers with eight or nine materials in place received very low amounts of investment. An understanding of the context can indicate reasons why some received so little investment.

Operating in unstable countries or frontier markets limits interest from commercial Investors and restricts opportunities. If the technology is very new, a company's business case may need to be stronger than those with more established technologies before attracting Investors. Local and women-led companies may not have the connections or networking opportunities to meet Investors – a particular challenge that is discussed more later.

Some sectors, especially, struggle with a lack of Investor interest or uneven distribution of resources. Over the past decade, EEP Africa has funded more than 50 clean cooking projects in 13 countries, and yet the clean cooking sector remains heavily grant dependent. The development impact of clean cooking has been clearly documented by the World Bank, Clean Cooking Alliance and other industry stakeholders, and companies in the sector have developed increasingly efficient solutions and business models. In recent years, this has led to an increase in financing but private investment is still a fraction of the level required.

According to the 2021 *Energizing Finance* report, public funding accounted for 50% of total financing for clean cooking access and most private finance (nearly 80%) went to biogas, ethanol and LPG, which are still very small parts of the overall sector. Capital flows are also concentrated in a small group of leading companies. The 2021 *Clean Cooking Industry Snapshot* reported USD 70 million raised by the companies it tracks in 2019; of this, over 80% went to just 10 companies and the top four companies accounted for 56% of the total. This example shows how Developers can be at the mercy of much larger market forces when it comes to availability of investment.

Are Early-stage Companies Investable?

Portfolio data and consultations with Investors have shown that securing commercial investment is within reach for some grant-funded, early-stage companies. Developers funded by EEP Africa are required to secure 30% of the total project budget in co-financing, but one-third of the grantees succeeded in raising investments far greater than the grant amount.

Some examples of companies successful in fundraising:

PowerGen, a mini-grid company funded in 2016-2017, raised nearly EUR 3.8 million during that period, with at least half of that directly because of project activities.

Zembo, an e-mobility start-up funded in 2019-2021, secured double its grant in co-financing during the project and then an additional EUR 3 million a few months after the grant ended.

Jaza Energy, a solar hub and battery rental company funded in 2020-2021, raised USD 2.85 million in equity, debt and grants during the project period.

As noted earlier, the solar home system companies **Yellow** and **SolarWorks!** have both been extremely successful, each raising more than EUR 10 million during their projects.

LEARNINGS

In its Criteria for Success, the Industry greatly values the lessons generated by a grant-funded project – whether or not the company itself becomes commercially viable. Measuring success from this perspective comes down to understanding the type of information released, engagement with this information, and feedback on what has been the most useful.

The objective of all kinds of knowledge sharing is to provide stakeholders in the sector with information that they can use to affect positive change in their business, market, or portfolio. When measuring success in knowledge sharing, it is not enough for a grant provider to simply count the number of publications created or events held. Engagement and value must also be measured. This feedback should be used to identify what is most effective and modify or replace activities that are not.

Feedback collected for this study reveals that the most useful type of knowledge for Developers is about the market landscape. Partly this is to understand their competition, but more often it is to understand how similar organisations are approaching the same technologies and challenges. Market intelligence also helps government agencies and donors design programmes appropriate to the local context and helps companies identify potential partners already operating in the region or sector.

Perhaps even more valuable than written materials are opportunities for Developers and other project stakeholders to meet and discuss. Both online and in-person events rate highly in feedback. During the focus groups carried out for this study, Developers consistently reported on the high value of one-to-one connections. Events that forge connections within a portfolio are a relatively simple and effective way for Donors to support companies, foster collaboration and understand different perspectives. EEP Africa uses its annual Knowledge Exchange Forum (or virtual Knowledge Week) to share lessons learned from within its portfolio, collect input from partners on key trends in the sector, and stimulate contact Developers and other stakeholders.

Market Intelligence

EEP Africa produces several types of publications that share market knowledge and raise the visibility of its portfolio companies. These include: market reports based on data collected during calls for proposals and annual surveys of the funded portfolio; in-depth studies, such as this one, that offer analysis and lessons learned around a broad theme; portfolio booklets providing details about incoming grantees, many of which are at the cutting edge of clean energy development in the region; case studies and sector briefs that look more closely at a specific company or technology.

"EEP's mini-grid study was one of the first studies with real data from the industry due to them being one of the few to have several years of mini-grid data through their portfolio. I believe they included a categorisation of business models, which no one else had done."

Stakeholder interview

"When EEP Africa suggested one of the other grantees to get in touch with us to see if our technology could be used by them in their project, it actually led to a project that we're doing now."

Bas Berends, Chief Partnership Officer, OffGridBox

Donors also need to coordinate with each other and build linkages across their portfolios. When Donors (or other financiers) operate in isolation, funding can become skewed towards the same group of companies and new or less well-known enterprises are shut out of the pipeline. Sharing knowledge and data through networks such as the Efficiency for Access coalition, Household Solar Funders Group, SADC Energy Thematic Group, or country-specific donor coordination groups is an important way to build a more inclusive energy transition.

Beyond grant portfolios, there are many events sponsored by Industry associations and other stakeholders that reach a wider audience and can influence policy development or financing flows. Large-scale sector events, such as the Sustainable Energy for All Forum, Global Off-Grid Solar Forum, and Enlit Africa (formerly African Utility Week) offer immensely valuable content and networking opportunities for Donors and Developers alike.

The reach of these activities should be monitored and feedback collected from participants. Tracking which entities registered, which attended and which aspects/sessions they found most useful is needed to understand the value of the event and identify the outcome of any connections made.

<
OffGridBox deploys containerised solar hubs that provide rechargeable battery packs and purified water in Rwanda.

MARKET STIMULATION

Market stimulation can be both indirect and direct, and both types are very hard to quantify. Indirect stimulation includes activities that start as a result of the project, but are not necessarily a core part of that grant or project. Examples of this could be a local supplier stocking a new kind of product or a complementary (or competing) technology. Direct stimulation generally takes one of two forms: pipeline development or market opening.

The first way to stimulate the market is by strengthening pipeline development through investment facilitation. In an earlier chapter, this study looked at metrics of investability. Beyond this, however, is the need to bring Investors and Developers together. Donors with portfolios of companies that are investment ready, or on the verge of being investment ready, have a critical role to play in facilitating these conversations and connections; this is discussed further in the next chapter.

The second type of direct stimulation is when a project is doing something completely novel in an area that will create a new market, or significantly develop an existing market or underserved market segment such as women. When grant-funded companies successfully pioneer new technologies and business models, this can change the game in their respective markets. These successes can be celebrated in written and video case studies and through industry awards, such as the African Power & Energy Elites, AFSIA Solar Awards, Ashden Awards, and EEP Africa Project of the Year.

Examples of market openings from the EEP Africa portfolio:

Developer
Gigawatt Global

Grant period
2015-2016

Stimulation
First independent energy Developer in a new market

Background
In Burundi's highly undeveloped energy market, with 92% of the population living without electricity, Gigawatt Global used its EEP Africa grant to carry out a feasibility study for a 7.5 MW grid-connected solar plant that would increase the country's installed capacity by 15%. This study was a success, resulting in a 25-year power purchase agreement (PPA) with the Government of Burundi and making Gigawatt the first non-diesel, independent power producer (IPP) in the country. The plant reached financial close in 2020 and was commissioned in 2021.

Gigawatt pioneered independent energy development in Burundi, and this has paved the way for others to enter the space. Songa Energy, a hydropower company in Burundi that is a current EEP Africa grantee, has highlighted the importance of Gigawatt's success for other clean energy developers in the country. Songa secured its own PPA with the Government of Burundi in 2021 and the African Development Bank has identified significant untapped potential for further energy development in the country.[2]

Developer
Vitalite

Grant period
2015-2017

Stimulation
First company to introduce a new technology in the national market

Background
Vitalite is a local company that aims to make renewable energy accessible and affordable for all households in Zambia. The project with EEP Africa was to scale up sales of solar home systems (SHSs). In order to do this, Vitalite became the first company in Zambia to offer a fully integrated pay-as-you-go (PAYG) model. This was achieved by creating the first technology partnership between an energy service company and the leading mobile provider, Airtel Zambia. As a trailblazer for this model, the integration process took more than a year to complete. Moving from cash to mobile money also required significant effort and training by the company to overcome the behaviour-change barrier.

By the end of the project, Vitalite had expanded into five provinces, electrified over 1,000 households, and secured results-based financing for market expansion. This success has helped open the market for SHS development in the country. According to a 2019 nationwide survey, 40% of households now own a solar product.[3] Lighting Global rates Zambia fourth among African countries in terms of their PAYG market attractiveness index,[4] with a score of 80 out of 100.

[2] AfDB, 2020. Burundi - Power Generation Master Plan in Burundi - Enabling Environment - SEFA Appraisal Report

[3] Africa Clean Energy Technical Assistance Facility, 2021. Stand Alone Solar (SAS) Market Update: Zambia

[4] Lighting Global, 2020. Pay-As-You-Go Market Attractiveness Index 2019

MAKING SUCCESS

The original objective of this report focused on measuring the success of grant funding for private sector companies in order to understand which kinds of projects were most successful and why. While talking to Developers and other stakeholders, the researchers also uncovered challenges in the grant funding ecosystem that are damaging to sustainable business outcomes.

This section explores what grant funding can do for a Developer and some of the conflicts in priorities that can undermine effective use of the grant. It also suggests solutions for how to deliver grant financing in a way that maximises a Developer's chance of long-term sustainability and advances a more inclusive energy transition.

STRATEGIC USE OF GRANT FINANCING

De-risking

Grant financing for private companies is primarily used to de-risk a project — to give Developers space to find what works and what does not work.

For projects in the Development phase, a grant is 'learning money'" to find a fit between product, model and market. It gives the company freedom to test and innovate, without the pressure of immediately paying back an Investor. This allows Developers to remain true to an impact-focused mission — as one Developer put it, "true to our DNA." The company can develop a model that is both viable and that meets the needs of the End Users and delivers impact, without the pressure of having to deliver immediate financial returns.

In the Scaling phase, grant funding is the capital injection required to kickstart growth. There is still a significant amount of testing that happens when scaling a business model, especially in the diverse and challenging markets that Developers operate in across Africa. In these projects, a grant gives Developers the space to prove that their model can achieve real commercial scale and is ready for more significant funding.

From the perspective of an Investor, grants improve the investability of a business by helping them understand and mitigate risks. Before providing financing, Investors want to see which risks a Developer has already experienced, understood and dealt with as the business has developed, and which are still unknown. Grants are an effective mechanism for companies to experience and manage risks, making their profile clearer and more attractive to commercial Investors.

Another benefit highlighted by Developers is credibility. Being awarded funding, especially by a well-recognised funder, provides external validation for the company. It gives them credibility amongst their peers and an automatic level of trust, which facilitates partnerships. This credibility extends to the Government. Local companies, in particular, reported that being awarded international funding gave them a seat at the table when obtaining regulatory approval or advocating for better policies. This credibility can also mean an easier route to obtaining funding from other Investors.

> "Once you have an international grant institution that has gone through a due diligence process, it lends a lot of credibility to your organisation. People were more willing to engage with us."
>
> Developer interview

Capacity Building

Perhaps most importantly, grant funding gives companies space to breathe. Many Developers commented on the stress and mental health challenges faced by early-stage business owners, and how secured funding frees Developers from worrying about surviving and allows them to focus on growing.

Developers are usually resource constrained, both in time and capital. They have operational priorities that mean they are either unable to build their internal capacity or are distracted from doing so. A common reason for project failure is that Developers grow beyond what their small team can handle. When structured in the right way, grants can enable companies to invest in themselves and their partners through targeted recruitment, enhanced training, or community development. Remember that a key measure of success for Investors is a competent and experienced team. Grant funding can help companies build effective teams and implement strategies that may not have immediate benefits but will have lasting impact long after the grant is completed.

Feedback from stakeholders during this research highlights the importance of one area where Developers should focus internal growth: building a robust data management function. This is both financial and commercial data about the business, and other data linked to impact. Donors often have strict reporting requirements that demand a significant amount of data collection. A Developer with good data management will find this process much less burdensome. Moreover, Investors — the key to a company achieving real scale — require clear data and evidence about the business' financial health before deciding to invest.

Beyond what the Developer can do for itself, Donors often provide some level of business development support (BDS) along with grants. These can be trainings, investment facilitation, capacity building or other advisory and consultancy services (technical or commercial). Especially for start-ups and other early-stage Developers, which often are over-burdened and under-resourced, this support is extremely valuable.

Value of Data Collection

Tiny Totos supports a network of child day-care centres in Nairobi, with the aim of increasing the centres' profits while improving services and childcare outcomes. It does this by building synergies among low-income providers in the market and offering training and access to 'child wellness' products, such as clean cookstoves. Through their project, Tiny Totos implemented a financial data collection system that profiled the credit worthiness of working mothers based on their childcare payment history. The parents were set up with credit lines for cookstoves based on this analysis, and the financing, distribution and payment collection was organised through the day-care centres.

Grant funding allowed Tiny Totos to hire an experienced data manager at the start of this effort. Without such an addition to their team, the company would not have had the capacity to implement the initiative effectively. The result is that this approach has proven to be very successful, with the data-driven customer profiling leading to very low default rates (less than 5%) on their product sales.

"We could track customer data and segment them based on the regularity of childcare attendance: full-time, part-time, and unpredictable. We wanted to see if we can use attendance rates as collateral for customer financing."

Emma Caddy, CEO, Tiny Totos

It is important that a company's needs are assessed early in the process, perhaps even during the full proposal stage, so that support can be provided when it is most needed. Too often, issues are not identified until after the first or second milestone in the grant contract, when significant time and resources have already been expended. Donors should assess organisational weaknesses or barriers to business development as early as possible, and incorporate targeted support into the first stages of implementation. This is when the business model is most malleable and ensures that funding is used as effectively as possible. BDS is also more effective when it is provided with flexibility and consistency, not as a pre-determined, one-off assignment.

"The companies EEP Africa supports are unique and innovative, and we require bespoke TA to meet our specific needs."

Aaron Leopold, CEO, EnerGrow

A key message from this research is that BDS must target the actual needs of the Developer in order to be effective. Some Developers reported receiving BDS that did not further them as a business and consumed time and money that could have been put to better use. Companies with strong and experienced teams may also have less need for technical assistance, so BDS resources should be directed elsewhere in the portfolio. When appropriate, the company can be asked to cost-share the assistance as having 'skin in the game' has been found to make the Developer more accountable for the outcomes.

Networking

Being part of a network of grantees is a powerful resource that is often untapped by Developers. The benefits of making connections with other businesses have already been discussed. A grant provider can use their position to encourage and facilitate networking within its portfolio but, equally, the Developer should be proactive in forging connections with fellow companies.

One area of networking and support that is universally appreciated, by Developers and Investors alike, is investment facilitation. The best assurance that a company can continue to operate after a grant is for it to have secured follow-on funding. As noted earlier, however, there is often a mismatch between the perceptions of Investors and Developers.

On the one side, Developers reported that there is limited private funding available to them and, on the other side, Investors said there are too few investable companies. A grant provider can bridge this gap by helping Developers understand what they need to do in order to be more attractive to Investors, and by helping Investors understand where Developers are in the highly nuanced markets and business models seen in this sector. They are in an excellent position to play this matching role, identifying Developers who are ready for and are seeking investment, and then linking them to relevant Investors.

Beyond support for individual companies or portfolios of companies, Donors can play a wider role in influencing the Industry. Grant providers are in a unique position to understand the issues and collective challenges facing Developers. They also sit at the level of other key stakeholders, such as Government, Industry associations, Investor groups and other Donors. In this position, they can be the voice of the Developer, influencing other stakeholders who themselves have significant influence in how clean energy markets in Africa are shaped.

Investment Facilitation

Investor Forums are effective for introducing a group of companies to investors, and are highly valued by participants on both sides of the table. In addition to EEP Africa's series of Investor Forums, some of the other recurring events in the sector are the Shell Foundation Investor Day, Clean Cooking Investment Forum, ARE Energy Access Investment Forum, and Unlocking Solar Capital Africa. Smaller investor workshops, with just one donor and a handful of relevant companies, are also a good structure for pipeline development.

The best investment facilitation events include several elements: an invitee list that includes companies aligned with the ticket size and priorities of the Investors; pitch decks that have been reviewed and improved through advance consultations with the companies; tailored one-to-one matchmaking sessions; guidelines or recommendations for follow up meetings; and time for more ad hoc networking and social interaction.

"I highly value the convening power of EEP Africa, and we like participating in those [Investor Forums]. EEP is one of the better, most action-oriented, in the way it presents grantees to investors without too much distraction."

Stakeholder interview

FLEXIBLE FINANCING: A NECESSITY

Sustainability from Commercial Viability

Grant funding is never intended to last indefinitely. In order to achieve sustainable impact, the solution implemented during a project must be viable after the grant period ends. Outside of humanitarian and disaster recovery, where the focus is solely to provide immediate relief, sustainability must be built into the model. In any context where the intervention is creating, changing, or replacing some kind of market, a commercial, revenue-generating element should be present.

Grants can fund the development of companies or support specific interventions. In either case, the objective should be to create a sustainable market within the community. This market-oriented approach goes against a traditional development approach of targeting an intervention at specific outcomes. Instead, it targets a market-driver, the Developer, that can deliver those outcomes in a more sustainable way.

In a business-model-focused approach, the Developer is at the core of the market system, which the grant funding is being used to create. After receiving the funding, the Developer is given the space and support to define and adapt their approach. In a traditional, top-down approach, however, the Developer is just an implementor selected from many. In this case, Developers are often held to a contractually binding brief, designed by the Donor, in which they had little input and over which they have little control. Providing grants that do not help companies develop a commercially-viable proposition can make them dependent on repeated grant funding to operate. This alludes to the most significant structural challenge faced by Developers that is rooted in the traditional approach to development: inflexibility.

By far the most important issue for Developers when talking about the role of grant funding was this flexibility. It was mentioned in every focus group conducted for this study and sits at the centre of most Developers' frustrations with grant processes. They are crying out for funding that is flexible enough to cope with the challenging and ever-changing environments they face. This section will address the inflexibility and suggest solutions.

Flexibility in Implementation

As touched upon already, many traditional grant projects are top-down. That is to say that the need and requirements for the intervention are pre-defined before a Developer is brought on board to implement the project. Unless the Developer is already in this local market, it is very unlikely that it will know from the outset what will work. During the tendering process, a Developer will give a best guess for how to implement a model, perhaps with ideas about sustainability, but, as this report has reinforced many times, it will usually not work as initially planned.

Developers reported being part of grant projects where the implementation plan was fixed, sometimes a year in advance, before the company had set foot on the ground. There are examples where the Donor placed requirements on the Developer's model for administrative reasons – because the intervention had to be delivered in a particular way to fulfil some high-level requirements — even though these restrictions negatively impacted project implementation. Other inflexibilities in bureaucratic processes have stopped Developers from accessing funding and, in extreme cases, even ended in the company's bankruptcy.

The way to avoid this, first and foremost, is to recognise that no implementation is a fixed process. Flexibility to change the model must be integrated into the financing mechanism. This points to a collaborative approach, where the Donor and Developer work together to determine the best implementation strategy, building in flexibility for when, inevitably, there is a need to adapt. The Donor must empower the Developer in this process, and provide timely and targeted business development support that meets the Developer's actual needs.

"For example, a multi-year project and there's no pivoting. There's no flexibility and everything is down to the letter of the bureaucracy... [It] makes it really difficult, especially with how fast paced this industry is moving and growing and technology changing."

Judith Walker, COO, African Clean Energy

Recommendations:

- **Market-informed calls:** Grant providers have a responsibility to understand the market before setting the requirements for funding. They should engage with potential grantees, and other stakeholders, to understand the state of particular markets and use this to inform where and how grant funding should be directed.
- **Locally-informed investment decisions:** Local investment officers are better able to understand the context and challenges in a market, and are crucial for identifying innovative and workable business models.
- **Developer-led approach to implementation:** Developers should be empowered to define how they approach the market. Companies should propose solutions based on their own market knowledge, and backed up by evidence and sound rationale, and be supported by a skilled and experienced grant management team.
- **Timely and targeted support:** Donors should assess the needs of Developers early in the process and provide targeted support. This can include consulting with other stakeholders in the due diligence process before awarding a grant, enabling some aspects of business development support to be built into the first few milestones.
- **Allow change:** Developers need space to test ideas and then be allowed to pivot the project, within reason, if their approach is not working.

Flexibility in Communications

Many grant processes have lengthy timelines for application, contracting, disbursements, and reporting. Even when there are good reasons for protracted processes, Developers often feel out of the loop and these activities take valuable time away from running business operations. When processes are not adequately explained, expectations may not be aligned and payment of grant funds can also be delayed. This can seriously disrupt the Developer's cash flow.

Developers reported that the relationship with some grant providers can be very one-way. This ties back to the difference between top-down funding and collaborative funding. In some programmes and funds, individual grant managers are responsible for dozens or even hundreds of grantees. They do not have the time or interest to engage with Developers on a meaningful level. This is somewhat understandable for funders responsible for vast sums of money and required to deliver maximum value at minimum cost. However, the money that is saved by a grant provider in hiring fewer staff could quite easily be lost in wasted grant value because of unresolved challenges in the projects.

This relationship between the Developer and grant manager is very different in collaborative funds, such as EEP Africa. Overwhelming feedback from the focus groups in this research showed that a strong Donor-Developer relationship facilitates the trust and flexibility that companies require. When grant managers deeply understand the projects and the challenges, it is possible to know why a company is struggling and to identify the appropriate and reasonable steps that can be taken to support them.

Recommendations:

- **Timely processing and communication:** The grant selection process should be as short as possible. If a year or more passes between the proposal and first disbursement, it is likely that significant changes may have occurred in the market environment. Internal delays, especially in grant disbursements, should be avoided as much as possible to protect a Developer's cash flow.
- **Funder-Developer collaboration:** The relationship needs to be mutual and two-way. Funders should have experienced staff who can assist Developers by monitoring and reviewing project progress, and providing links to relevant business development support.
- **Limited number of grants per manager:** Keep the number of companies managed by one person small enough for active and informed engagement with the Developer.

Flexibility in Outcomes

Developers report that, in some cases, there is an over-focus on key performance indicators (KPIs), or project outcomes. Developers understand the value of measuring project outcomes against international metrics and standards; however, this focus on outcomes should not eclipse what is happening and what is possible on the ground. This is linked to a previous point, where some projects are designed without a complete understanding of the local context. These can result in projects with unrealistic targets, or ones that require unachievable levels of outcome per unit of capital invested.

This is damaging in two ways. The first is that linking funding to targets, that may be based on misunderstanding the market, means that Developers are at risk of being left without access to their funds when targets are not met. If projects stall, Developers can suffer financially because KPIs have not been fulfilled, incorrectly leading to the idea that this project was a failure. A mechanism must be included for targets to be changed to reflect a new reality and to include grant-enabled learnings as achieved outcomes.

The second way this can be damaging is projects that target value for money — such as a certain number of units dispersed per EUR 1,000 invested — may incentivise companies to cut or reduce commercial aspects of the model to meet cost targets. While this works for the grant, it undercuts companies offering products at commercial rates and undermines the development of a sustainable economy around the intended impact.

Recommendations:

- **Aim to develop markets:** Where possible, grant programmes should aim for sustainable impact through investment in commercial solutions, not aim for the specific outcomes themselves.
- **Expand the view of value:** Grant monitoring should use indicators beyond traditional impact-based outcomes, and recognise that, in a market development context, value is also generated through commercial progression of companies, grant-enabled learnings, and market stimulation.

Flexibility in Relationship Length

Developers want longer relationships with grant providers. After two or three years of working together, competent Developers build a level of trust with the funder. As reported by Developers for this study, in many cases the relationship just ends when the grant period finishes. This lack of continuity disadvantages both sides: the Developer loses access to support and the grant provider loses access to a successful company that can produce results, and whose development needs they already understand.

A challenge in this regard is with follow-on financing. Developers said there is a missed opportunity for companies that prove their worth during an initial grant project. The relationship and level of trust that is built up over that period puts the funder in a unique position to make an informed decision about whether to provide further financing. Many funders are limited by the investment tools at their disposal. If they can only offer grants through open competitions, then providing other forms of follow-on financing is not possible. In this case carrying out investment facilitation or developing a referral scheme to other financiers is the only solution available.

Funders are aware of the 'missing middle' financing challenge that Developers face. Especially for those with very early-stage Development projects, it can be difficult to secure further funding to continue commercialising their product and scaling up. One option is repayable grants (or soft loans) for capital expenditures by companies with a demonstrated business model or for feasibility studies on projects that expect to reach financial close. This is being used by some funders, such as DOEN Foundation, and is currently being piloted by EEP Africa. It is important that any follow-on financing from Donors truly addresses a gap in the market, and does not displace financing that could have been raised elsewhere.

Finally, there is a misconception that a company taking multiple grants is a negative sign or an indication of weakness in the company or business model. There should be acknowledgement that commercialisation takes longer than a standard grant agreement. Some of the companies in this sector are operating in extremely challenging markets, where viable solutions are found only after years of testing. There are some companies with non-viable business models that are using grant funding to survive. However, having multiple grants on its own should not be seen as a negative, especially if the grants are commercially-focused.

> "The grant gets you to the right position. Then what you need is actually soft debt. When you have a repayable grant, it gives you the time to get to a critical mass, from which you could then go on to debt or equity finance, and at the moment there isn't much to bridge that gap."
>
> Anthony Dunnet, Co-founder and Managing Director, VAC Solar (part of the EEP Africa repayable grant pilot)

Especially in these cases, but also true for any early-stage company, the full impact of a grant is not visible until years after the contract has finished. Funders are encouraged to maintain a relationship with Developers over the long-term in order to collect longer term data and measure this impact. This can be low-effort, such as short surveys at set intervals after the grant contract has been completed.

Recommendations:

- **Offer continued opportunities for Developers:** The level of interaction and support can be reduced but should not disappear. Examples could be inviting past Developers to speak at events, join networking groups, contribute to research (such as this study), and meet with investment partners.
- **Provide follow-on financing to trusted Developers:** If possible, provide repayable grants or other kinds of soft financing to Developers that have proven their worth over the initial grant period. Those with limited financing vehicles can put a focus on referrals and investment facilitation activities.
- **Donor and Investor collaboration:** Foster coordination and alignment among Donors and Investors with different types of financing to streamline follow-on financing processes. This could include harmonising due diligence and reporting or developing referral agreements, such as right of first refusal, with Investors at the next stage of business development.
- **Acknowledge that commercialisation takes time:** Grant providers should structure financing and project expectations with a realistic timeframe in mind. The end result of a grant contract is rarely a fully commercially-viable business, and further grants may be required before commercial investors are willing to step in.
- **Measure long term impact:** Collect data from Developers a number of years after the end of their contract to understand the long-term impact of a grant. For example, the grant contract could stipulate that a Developer provide a small number of metrics on business growth (see Annex II for indicators of company maturity) for five years after the project.

DIVERSIFICATION OF THE SECTOR

This report strongly encourages the equitable inclusion of women, local entrepreneurs and others from traditionally overlooked communities in the leadership team, and at all levels of, a clean energy company. Staff from the local community bring a deeper understanding of, and connection to, customer needs, and including women at the heart of business operations has been shown to improve business outcomes such as sales, productivity, decision-making ability, and customer acquisition and retention.[5] Diversity enables companies to develop solutions that better meet the needs of End Users, which should be a priority for any impact-driven business.

Diversity Cuts Both Ways

While the focus of inclusion is on opening opportunities for underrepresented groups, it should be noted that diversity cuts both ways. One EEP Africa entrepreneur built a successful team made up entirely of local women. The company has achieved a lot with this model, but also recognises there can be downsides to focusing on just one demographic. The founder herself suggested that a more diverse team, comprising a broader range of genders, nationalities and backgrounds, might have helped the company problem-solve more effectively and grow faster. When addressing the specific challenges faced by marginalised communities, stakeholders should foster an inclusive approach that does not exclude any one group in favour of another.

With a goal of advancing a more just and inclusive energy transition, some Donors and Investors are increasing their focus on companies owned or led by women and local entrepreneurs. In the current EEP Africa portfolio, 34% of companies are women-led and 42% are local companies (see Annex II for definitions). In 2021, the proportion of companies onboarded that are considered local was 62%.

A key finding of this study is that diverse companies are, in many ways, losing out to more traditional (international, male-dominated) companies, rather than benefitting from their inclusive approach. These businesses face unique challenges, beyond the general barriers for sustainable energy companies in Africa, and so require extra attention. The following sections will explore some of the challenges faced by local and women-led companies and make recommendations for how these can be overcome.

Securing Investment

In the research for this study, both local and women-led companies reported facing additional barriers when fundraising. Data from the EEP Africa portfolio confirms this, showing a staggering difference between these Developers and those that are led by internationals or men (Figure 8). Women-led companies raised, on average, 3.6 times less funding than their male-led counterparts. As discussed later, anecdotal evidence from female entrepreneurs interviewed during this research point to this being a result of gender biases in the male-dominated environment surrounding a Developer — including the clean energy Industry, Investor community, and Government bodies.

Local companies fared even worse, raising eight times less than international companies. Both Investors and Developers interviewed for this research highlighted a large gap in the availability of financing for local companies. International companies have better access to international money markets, where more financing is available and at lower interest rates. With less access to early-stage funding, and less experience obtaining funding, fewer local companies can complete the market testing and scaling that is required for sustainable operations, which perpetuates this cycle of investment in international Developers.

Research by Acumen[6] found significant barriers for local businesses over internationals. They report that typical Investor business plans and financial models are not always applicable to the African business context. They need to be reworked in order to fit local companies in this market.

An important note is that this is not connected to the maturity of projects, which this study already showed has a significant effect on the amount of investment a company can raise. The massive disparity affects local Developers across the board, even when comparing projects only in the Development or the Scaling phase. More needs to be done to tip the balance and achieve equitable investment opportunities for local and women-led companies.

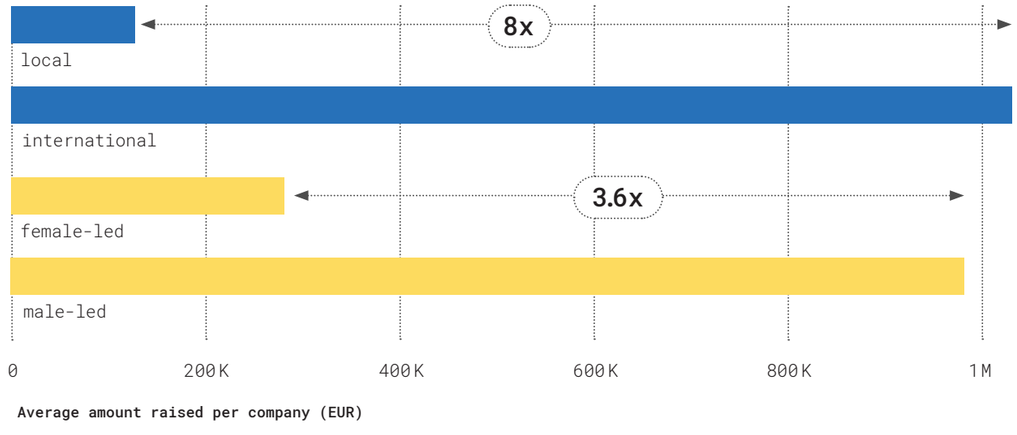
One way to help level the playing field is through grants. There is clear interest from Investors to invest in local companies, but Developers need to achieve a certain level of operations before they are investment ready. Grant funding offers a proving ground for local companies and helps lift more of them to the level of commercially-oriented investment.

Women and local business leaders both highlight the importance of business development support, particularly around investment facilitation. As groups that have historic challenges obtaining investment, a grant provider can do a lot to build capacity in the companies and bring them to the attention of Investors.

Recommendations:

- Provide greater commercially-focused grant funding to Developers that are local and women-led, as well as companies that take a gender-forward approach or target a marginalised customer segment.
- Widen the circle of opportunity by offering flexible grant terms and investment vehicles that acknowledge the needs and capacity of companies that are women-led or local.
- Support traditionally overlooked Developers in obtaining other funding through targeted investment facilitation activities.
- Align Investor due diligence processes and valuation tools with the local business context and recruit Investor staff from the countries where investments are being targeted.

Figure 8: Fundraising Bias



[5] Value for Women, Shell Foundation, 2018. A Business-First Approach to Gender Inclusion: How to Think About Gender Inclusion in Small and Medium Enterprise Operations

[6] Acumen, 2021. Direct interview with Sarah Bieber, Head of Energy Partnerships; published findings forthcoming.

The Only Woman in the Room

Some of the challenges faced by women entrepreneurs come from participating in a sector and investment climate that are still male dominated. Female entrepreneurs report that this is an international issue, and it can place women on the back foot, with more to prove from the outset than their male counterparts.

Women leaders interviewed in this research often find themselves as the only woman in the room. This poses challenges when connecting to and working with other businesses, and reduces their influence in discussions with other stakeholders in the sector. Male-dominated Government ministries, Investors and Developers often create gender-blind energy policies, financing vehicles, products and services because not enough women were part of the design. This results in unmet needs for the End User and a distorted valuation of investment opportunities.

Biases also exist around the role of women in work, including in which jobs they are expected, or not expected, to be in. Certain areas of clean energy businesses – particularly technical and manufacturing roles – are perceived to be male based on cultural or social standards. This may reduce the likelihood that a woman would even apply for certain jobs and women in these positions report being given less credibility, with their input sometimes dismissed. On top of this there is limited awareness among women about the opportunities available, resulting in fewer women developing the skills needed for these jobs. Stakeholders in the sector are aware of this, and many Developers are implementing gender-positive recruitment and employment strategies. However, there is much to be done and more women are needed at all levels, including middle management.

This is not just a problem in terms of social development; it also negatively impacts business outcomes. Gender-balanced teams are associated with increased revenue and higher returns on investments. A study by the International Labor Organisation, for example, found that 60% of firms agree that gender diversity improved their business, and the majority of companies saw increases of 10-15% in growth. This is supported by research in the clean energy sector specifically, such as EEP Africa's own gender study conducted in 2018. All stakeholders need to move beyond a 'women as beneficiary' narrative and ensure that women are well-represented in every part of the energy value chain.

Recommendations:

- Apply a gender lens to all Donor and Investor origination, evaluation and selection decisions. Include specialists in gender lens investing in portfolio design and support activities, especially for grant providers new to the space.
- Identify and provide funding to companies with a gender-positive and inclusive approach to recruitment and companies that prioritise diversity at all levels of management.
- Disaggregate a wide array of collected data by gender so that indicators can be used to show initial gender imbalances and the resulting improvements after initiatives have been implemented.
- Develop Industry partnerships with universities, women's networks, and SME incubators to facilitate a pipeline of women engineers and business leaders.
- Support mentorship programmes, networking opportunities and investment readiness training for women-led businesses.

WAY FORWARD

This report looks at all the stakeholders surrounding a grant project to better understand their interests and Criteria for Success. The strongest message that came out of this research is that funding and support for companies developing new ideas in untested markets must be designed as flexible financing.

The more traditional style of grantmaking, which is often prescriptive and top-down, is found to be limiting, and sometimes even damaging, to the companies being funded. Distributing funding only upon reaching predefined targets or outcomes has a role in the financing ecosystem, but it does not work for those in testing or early stages of scaling. Distributing funding only upon reaching predefined targets or outcomes has a role in the financing ecosystem, but it does not work for those in testing or early stages of scaling. The sector must be flexible to different outcomes, allow companies to have a say in how funds are used based on their strong contextual understanding, and give companies space to adapt their approach when more is learnt about their product or market.

It is recommended that all practitioners carry a holistic view of success, taking into account the Criteria of all stakeholders identified during this research. Only in this way can the full success of grant-funded projects be truly appreciated. A significant part of this is the recommendation to look beyond high-level, numeric indicators and measure the progression of companies themselves. This includes recognising where the grant has allowed a company to fail in such a way that has brought fresh understanding to their business and to the sector.

A key issue for companies receiving this kind of funding is obtaining the follow-on investment required to reach real scale. It was found that grants themselves do not make a company investable, however, they can give them an extra level of credibility. More importantly, though, grants enable companies to reach the stage where investors are ready to come in. Grants should be structured to allow companies to build the in-house capacity and data management systems that Investors are looking for. Grant providers should bring Investors and Developers together, matching those targeting specific technologies, sectors, company maturity.

Effective financing of companies can only happen when project funding is viewed as part of the broader development continuum of a company or market. The recommendations in this report are intended to help stakeholders understand each other and collectively achieve success.

ANNEXES

ANNEX I: DEVELOPING THE CRITERIA FOR SUCCESS

The Criteria for Success for each stakeholder group were developed through a two-step process during 2021:

Ideation: An initial set of Criteria was developed in a brainstorming session among 15 EEP Africa team members and affiliated experts. Collectively, this group has substantial experience in the clean energy sector in Africa and specific expertise in energy project development, fund and grant management, business development support, investment facilitation, monitoring and evaluation, networking and knowledge sharing.

Validation: This initial set of Criteria was validated by representatives of different stakeholders through 10 focus group discussions, as well as individual interviews. A total of 33 individuals representing 22 Developers, three donors and four investors participated in this analysis.

Developers (EEP Africa Portfolio Companies):

African Clean Energy, Agsol, Burn Manufacturing, Celfre Energy, Emerging Cooking Solutions, ENdep, EnerGrow, Ensol Tanzania, Green Bio Energy, Greenlight Planet, Jaza Energy, Livelyhoods, Meshpower, Mukuru Clean Stoves, OffGridBox, Pamoja Cleantech, Powerlive Zimbabwe, SokoFresh, UGASTOVE, VAC Solar, Vitalite, Yellow.

Investors/Donors

Austrian Development Agency, Camco Clean Energy, Charm Impact, Lendahand, Lion's Head Global Partners, Ministry for Foreign Affairs of Finland, Nordic Development Fund.

Additional input came from research conducted as part of an impact assessment of the fund in mid-2020. This included a series of interviews with 32 Developers and 27 other stakeholders (Donors, Investors, Industry associations and Government).

The perspective of End Users was understood through data collected from 1,556 customers of three EEP Africa Developers: Absolute Energy, SupaMoto and Zonful Energy. End Users were asked to give their reason for choosing the product offered by the Developer. These reasons related to quality-of-life improvements, whether the product meets their needs (i.e. fit for purpose), because of its accessibility, or because of its affordability. The learnings from this were further validated through a focus group with Developers that have particularly customer-centric business models, as well as research from 60 Decibels.

Peer review: The Criteria for Success and full drafts of this report were shared with partners in the sector for peer review. Substantive input was provided during this process that helped shape and further develop key sections of the analysis. Contributors to this phase included experts from Acumen, Catalyst Off-Grid Advisors, Energy 4 Impact, GET.invest, 60 Decibels, and Value for Women.

ANNEX II: METHODOLOGIES

Project Maturity

EEP Africa has five categories of projects. For this analysis, these have been grouped into two stages of project maturity: Development and Scaling.

Development encompasses Feasibility, Pilot and Demonstration projects:

- **Feasibility:** Analysis and evaluation to determine a project's technological, commercial, social, environmental, and economic viability.
- **Pilot:** Testing of a product, service, and business or delivery model for the first time or in a new market.
- **Demonstration:** Implementing a tested product/service or technology in an actual market context to establish evidence that it is a viable concept and could be applied elsewhere in similar circumstances.

Scaling encompasses Replication and Scale-up projects:

- **Replication:** A project that has proven the viability of its technology and the sustainability of its business model in one market and is now looking for support to take the model to another market.
- **Scale-up:** A project that has a high probability of reaching commercial viability with 'bridging finance' from EEP.

Company Maturity

EEP Africa has developed a framework to classify Developers into maturity stages based on nine characteristics that change as a company grows (see Table 6 on next page). This framework is based on benchmarks[9] from the sector, combined with practical experience from within the EEP Africa portfolio.

The maturity of a Developer is determined as the highest level for which at least five characteristics have been achieved. Each company has its own path to becoming a mature organisation. These paths can vary significantly, affected by their market, decisions of the leadership, financing opportunities, and many other factors. This threshold of five is applied to give some flexibility for companies to develop in nuanced ways, allowing for companies to progress further in some characteristics and less in others.

[9] International Finance Corporation, accessed in 2021, IFC's Definitions of Targeted Sectors. Powering Agriculture, 2020, Access to Financing for Early-Stage Innovators in the Clean Energy-Agriculture Nexus. Wood Mackenzie, 2019, Strategic investments in off-grid energy access: Scaling the utility of the future at the last mile.

Table 6: Characteristics of Company Maturity

Characteristic	Start-up	Commercialisation	Scale-up	Mature
Years of operation	0 – 3	3 - 5	5 - 7	8 +
Number of staff	< 10	10 - 49	50 - 99	100 +
Profitability	Negative	Negative	Approaching break-even	Profitable
Revenue	< €100,000	€100,000 - €1m	€1m - €3m	€3m +
Total assets	< €100,000	€100,000 - €1m	€1m - €3m	€3m +
Funds raised	< €500,000	€500,000 - €1m	€1m - €3m	€3m +
Funding stage	Founding capital	Seed capital	Series A	Series B
Funding source	Mostly owner, sweat equity, founder equity/loans, and grants	Mostly owner, plus 1 or 2 equity investments and grants	Mostly equity and debt funding	Mostly commercial equity and debt funding
Financial statements	No annual statement or statutory audit	Annual statement, no statutory audit	Annual statement and statutory audit	3 years of annual statements and statutory audits

Company Leadership

EEP Africa categorises a company as being women-led or local according to the following definitions:

- **Woman-led:** CEO or COO is a woman; in some cases, such as an international company with heavily decentralised leadership, a Developer is considered women-led if the primary decision maker for the project is a woman (regardless of her official job title).
- **Local:** Registered in the project country and the CEO or founder is a national of, and originates from, that country.

ANNEX III: ABOUT EEP AFRICA

The Energy and Environment Partnership Trust Fund (EEP Africa) is a multi-donor financing facility providing early-stage grant and catalytic financing to innovative clean energy projects, technologies and business models. Since 2010, EEP Africa has invested EUR 56 million in 274 projects implemented in 15 countries across Southern and East Africa

EEP Africa is guided by a vision for a climate resilient, zero-carbon future. The fund invests in private-sector-led clean energy projects that support sustainable green growth and contribute to achievement of the Paris Climate Agreement and the Sustainable Development Goals (SDGs). Funded projects follow a local ownership approach, aligning to the national development planning of the country of operations, including the Nationally Determined Contributions (NDCs). Additionally, they should adhere to the cross-cutting objectives, such as gender equality and poverty reduction, to ensure a just and inclusive clean energy transition.

Key aspects of EEP Africa's approach:

- **Market-led calls:** The fund invests in companies through open calls for proposals that are technology agnostic and eligible for any business model promoting clean energy access, development and investment. Two of the recent calls had themes (gender in 2019 and productive use of energy in 2020) that were based on market-driven analysis of financing gaps in the sector.
- **Early-stage support:** Financing is targeted towards start-ups (66% of current portfolio) and impact-driven companies that are piloting or testing new technologies, business models and markets. The focus is on enabling entrepreneurs to achieve proof of concept and scale up innovative approaches that bring clean energy to off-grid and marginalised communities.
- **Inclusive development:** The fund has strengthened its focus on funding for women-led and local companies, which now constitute 34% and 42% of the portfolio respectively. All companies are encouraged to adopt a gender progressive approach to recruitment and employment, as well as to create income opportunities for women and youth in the local communities.
- **Sustainable impact:** Grants are intended to support the development of companies that will continue beyond the project contract. The goal is to foster sustainable businesses that will grow and attract commercial financing. To that end, companies are encouraged to be realistic when defining their anticipated outputs and impact in order to create a business model that overcomes market barriers without distorting the local market.
- **Market stimulation:** The fund collaborates closely with investors and other funds to facilitate investment in the sector and improve the structure of financing vehicles available to early-stage companies. Lessons learned from the portfolio are shared with companies, donors, investors, government bodies and other stakeholders to help build open and viable clean energy economies in the region.

EEP Africa was initially launched by the Ministry for Foreign Affairs of Finland, with financing also from the Austrian Development Agency and UK Department for International Development. Since 2018, it has been hosted and managed by the Nordic Development Fund (NDF) with funding from Austria, Finland and NDF. The Swiss Agency for Development and Cooperation joined as new funder in late 2021.

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