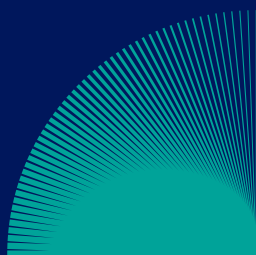




Achieving Social Impacts in the Energy Access Sector

Lessons from EnDev's SIINC Pilot Project
in Kenya

Partners and Purpose



The Swiss Agency for Development and Cooperation (SDC)

is the agency for international cooperation of the Swiss Federal Department of Foreign Affairs (FDFA). The SDC is responsible for the overall coordination with other federal authorities of development and aims to alleviate need and poverty around the world, to foster respect for human rights, to promote democracy and to conserve the environment. The SDC commissioned the Energising Development Programme with the implementation of a Social Impact Incentives (SIINC) pilot in the off-grid energy sector.

Energising Development (EnDev)

is a strategic partnership of likeminded donors and partners to support access to modern energy. The driving forces behind EnDev are Germany, the Netherlands, Norway and Switzerland. Access to modern energy is a prerequisite for social and economic development. EnDev works in more than 20 countries around the globe. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Netherlands Enterprise Agency (RVO) coordinate the programme on a global level.

Roots of Impact

is a manager of catalytic capital and pioneer in Impact-Linked Finance, aligning capital with incentives to drive change for people and the planet. It collaborates closely with public funders and impact investors across the globe to scale high-performing enterprises and innovations with strong potential for impact. Roots of Impact acts as an external advisor for EnDev to support the design and implementation of the SIINC pilot.

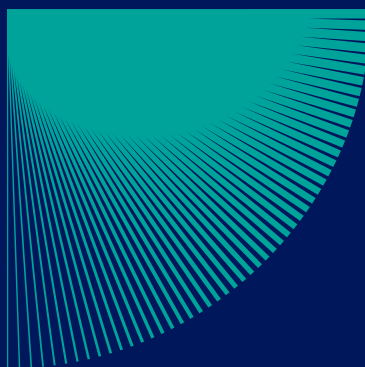


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Acronyms and Abbreviations

AI	Artificial intelligence
DSRC	Debt service ratio coverage
EnDev	Energising Development
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOGLEA	Global Off-Grid Lighting Association
HY	Half-year
ICS	Improved cookstoves
IOT	Internet of Things
KPI	Key performance indicators
LNOB	Leave-no-one-behind
MSMEs	Micro-, small- and medium-sized enterprises
OGS	Off-grid solar
PUE	Productive use of energy
RBF	Results-based financing
RRP	Recommended retail price
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SHS	Solar home system
SIINC	Social Impact Incentives
TA	Technical assistance
VSE	Village Social Entrepreneurs

Foreword by the Swiss Agency for Development and Cooperation (SDC)

Over the past years, result-based financing (RBF) has become increasingly popular among development agencies for funding infrastructure and services in least developed countries. RBFs are innovative and effective as payments are directly linked to the achievements of pre-agreed results rather than the completion of activities in projects. However, conventional RBFs have limitations, as they typically reward companies for direct output without taking into account the larger impact they have created.

The SDC takes an active part in constantly contributing to the further development of RBF schemes so that they deliver positive social impacts for the world's most poor, vulnerable or otherwise marginalized segments of society. The SDC has realized early on that RBF projects run the risk of leaving these populations behind, unless they explicitly include set conditions to target pro-poor market segments. Therefore, the SDC together with Roots of Impact have co-developed an RBF scheme that rewards enterprises for achieving social impacts. These so-called SIINCs (Social Impact Incentives) aim to improve the investability of impact-oriented private enterprises by rewarding the positive impacts they generate. Through diverse implementing partners a series of no less than 40 SIINC transactions have been conducted in diverse sectors, including health, water and sanitation, education and employment, and agriculture.

Against the background of SGD 7, which calls for climate friendly and socially just energy transitions, there is an urgent need to find new ways to mobilize big amount of funding in order to provide energy access to billions of people while at the same time substantially increase the share of renewables in the energy mix. SDC has made it a priority to bring development cooperation and private financiers together in the clean energy sector and

realized that SIINC may be a key instrument to fill a financing gap that currently prevents private investors to provide financing at scale. Therefore, SDC has commissioned the multi-donor partnership Energising Development (EnDev), to implement a SIINC pilot in Kenya's off-grid energy sector. The pilot from Kenya featured in this report provides two successful and promising examples for the SIINC approach in this sector. The pilot consequently served as a model for a new collaboration between the SDC and the KfW Development Bank, which rewards green mini-grids and stand-alone, off-grid energy companies for reaching out to poor rural households and enterprises in sub-Saharan Africa through the deployment of PUE (Productive Use of Energy) equipment at scale.

The report at hand lets the different actors involved in our SIINC pilot in Kenya speak and share their experiences. It provides insights and challenges from the project implementation, as well as reflections on ways ahead particularly for scaling and is thus highly valuable for replication and further development of the SIINC scheme. We are pleased to present this learning report and hope that it contributes to a fruitful ongoing discussion about a new generation of RBFs.



Janine Kuriger
Head of Section Climate, Disaster Risk Reduction
and
Environment (CDE)
Swiss Agency for Development and Cooperation
(SDC)

Executive Summary

In order to identify learnings and gain experience for scaling, EnDev – as an international flagship programme for providing energy access – piloted an innovative RBF project in Kenya. This so-called SIINC approach rewards enterprises for achieving social impact – instead of pure sales figures. The aim is thus to leverage funds to catalyse private investment in underserved markets to generate impact. This report showcases that such an approach is a promising way forward, as we need scalable approaches given the energy access situation worldwide.

In essence, the SIINC pilot could proof the concept: Eventually, both participating companies could, for the most part, achieve more profound social impacts – for example, they could improve the customers' perceived quality of life. Alongside practical lessons for future implementation (such as the importance of a thoughtful selection of the participating companies or the value of detailed result reports for the companies), this publication provides recommendations to consider when going for scale. These include:

- **Be aware that impact takes time – to prepare for, to achieve and to measure.** Ideally, a SIINC runs longer than the Kenyan SIINC pilot project: three to five years will allow impacts to unfold even more.
- From the outset **make sure to be crowding in impact investors.** Their engagement helps to improve long-term sustainability.
- **Choose simple, but relevant impact metrics** from a pre-defined impact matrix for the business model at hand. Make sure to consult companies to have your impact metrics reflect realities.
- Go beyond individual price negotiations and instead **develop a more standardised incentive structure** for a generic business model of the market you are targeting.
- **Find an adequate pay-out schedule.** A staggered incentive model is a compromise for a SIINC at scale.
- **Make use of cost reduction potentials** by increasing ticket sizes, reducing transaction costs, and by digitalising application and verification processes.
- **Add-on packages of technical assistance (TA)** is crucial when targeting early-stage companies that can make use of external help on business strategies and access to capital.



1 Introduction

1.1 SIINC in the energy access sector

With 733 million people without access to electricity and 2.4 billion people without access to clean cooking in 2020, there is a major gap to reaching Sustainable Development Goal (SDG) 7 (affordable and clean energy) by 2030 (IEA et al., 2022). Despite large investment needs, public financial flows to developing countries in support of clean energy decreased by 23-25% in the years 2018-2019 in comparison to previous years, falling to 10.9 billion USD in 2019 (UN, 2022). Thus, at the COP26 in 2021, strong commitments were made to use scarce public funding to leverage much needed private investments.

When zooming into the off-grid solar (OGS) sector, private investments are growing: yearly investment volumes reached 457 million USD in 2021. However, most of the private sector capital flows to seven companies which operate at scale, focussing on established East African markets. The industry association GOGLA estimates that we risk leaving 298 million people behind, who are without access to electricity and live in nascent OGS markets where there is little commercial activity (World Bank et al., 2022). For these less commercially attractive market segments, public leverage of private investments is more urgent, but also more challenging. A promising partnership for increasing access to this segment is between public donors and private impact investors who prioritise social impacts of energy access over short-term profits. With patient capital, i.e. money invested in entrepreneurs building companies and organizations which generate returns only in the long-term, this subgroup of investors can make a considerable contribution to supporting early-stage energy access companies to navigate through a difficult funding phase, in which they are too big for seed capital and too small for commercial capital (Acumen, 2018). Once these early-stage enterprises have established their

impact-focused business models and are ready to scale, more profit-orientated capital providers may come in. It is at this pivot point, where EnDev and its partners are testing a new results-based financing model called Social Impact Incentives (SIINC) that shows potential for leveraging private capital for providing energy access to customers from the population segments that are most vulnerable and marginalized.

SIINC is a financial instrument developed to align impact performance and investability of impact-oriented private enterprises by rewarding the positive social impacts they generate. SIINC was co-developed by the Swiss Agency for Development and Cooperation (SDC) and the advisory firm Roots of Impact in 2015¹. It is an results-based funding (RBF) mechanism that rewards social enterprises with incentive payments for achieving social outcomes. In comparison to other RBF models that pay on output achievements (e.g., sales of energy access products), SIINC incentive payments are made contingent on indicators at the 'outcome-level'. These may include measurable changes in beneficiaries' lives such as improved livelihoods, improved quality of life, financial savings, or income-generating opportunities. By focusing on such outcomes, and not outputs alone, this approach provides an insight into who is reached, and how important, transformative, or valuable energy access is to those that are being reached. By making RBF incentive payments contingent on these parameters, a stronger focus and prioritization of positive effects on beneficiaries' lives is encouraged; and energy enterprises are stimulated to pursue social outcomes.

¹ For an in-depth introduction about the SIINC concept, please refer to the report: [Acumen/Roots of Impact/SDC \(2018\): Blueprint for an outcomes fund in off-grid clean energy. Pushing the boundaries of high impact businesses with next generation Results-Based Finance.](#)

As an innovative blended finance approach that utilises public funds to catalyse private investment in underserved markets, the concept aligns the interest of three groups: impact enterprises, donors, as well as investors. Enterprises benefit from additional revenues which improve their profitability and attract investments to scale their operations, allowing them to further expand their social impact. For donors and implementers, SIINC combines the advantages of an RBF approach (paying for results, not inputs) and helps to leverage private sector investments. Further, the SIINC's overall target of reaching out to underserved communities (vulnerable and/or remote) is well aligned with typical donor targets of contributing to the SDGs while adhering to the principle of leaving-no-one-behind (LNOB)².

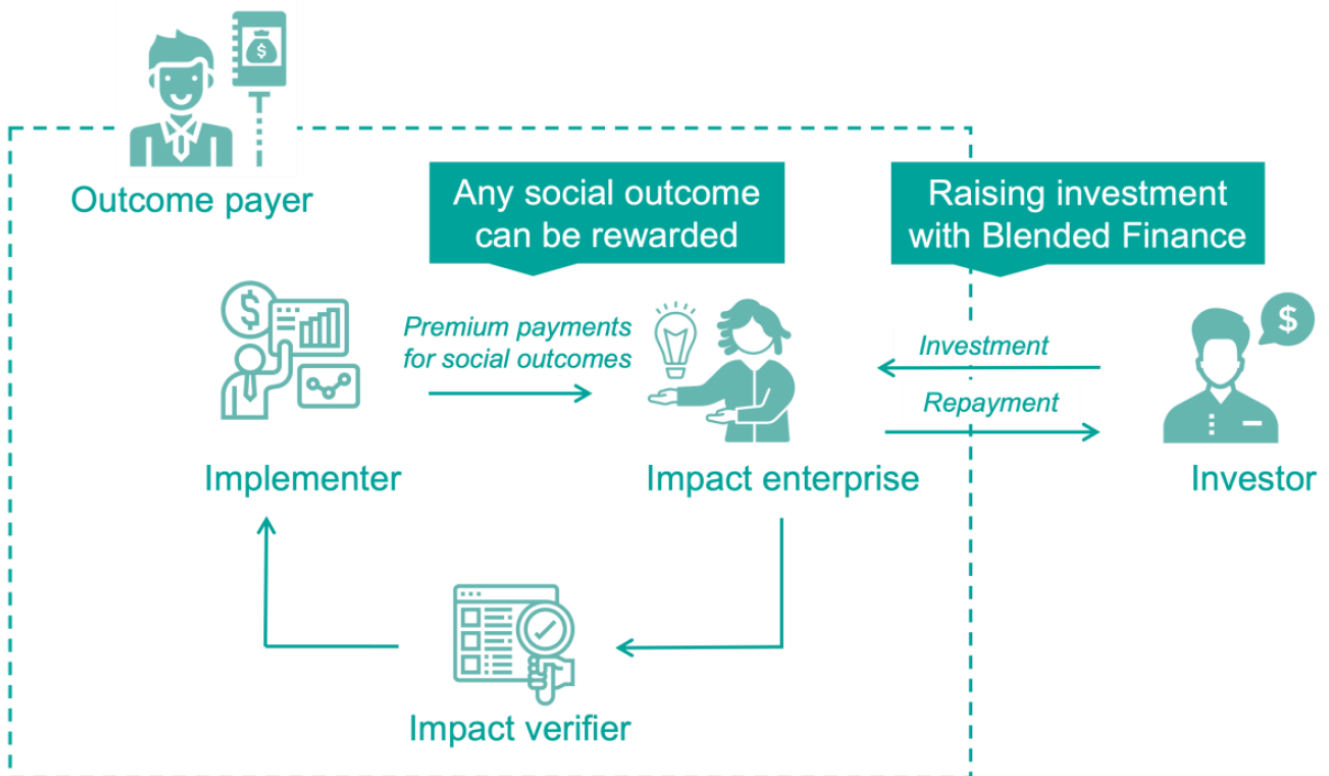
² Leave-no-one-behind (LNOB) is the commitment of all UN Member States in relation to the SDGs and strives to eradicate poverty in all its forms, end discrimination and exclusion, and reduce the inequalities and vulnerabilities that leave people behind; see UN (2016): Shared Framework on Leaving No One Behind: Equality and Non-Discrimination at the Heart of Sustainable Development. LNOB refers to vulnerable segments of societies that are deprived due to their socio-economic, gender, or other characteristics.

In the context of development cooperation, a SIINC transaction typically involves the following stakeholders (see figure 1 below):

- **The outcome payer** (i.e., the donor), who provides the funding to pay for the additional outcomes generated by the impact enterprise;
- **The implementer**, who designs and structures the transaction, manages administrative procedures, and co-ordinates between the outcome payer, impact enterprise, and verifier to ensure quality implementation of the SIINC;
- **The impact enterprise**, which gets paid premiums for additional positive social outcomes;
- **The impact verifier**, who measures the extent to which outcomes were achieved by the enterprise as planned; and
- **The investor**, who benefits indirectly from outcome payments, which serve as additional income for the investee and thereby improve cashflows and optimise their impact model.

Figure 1

SIINC stakeholders



1.2 EnDev's SIINC pilot in Kenya

Project's overall objective.

The SDC commissioned EnDev to pilot a selection of SIINC transactions in the off-grid energy sector in Africa. The key objective of EnDev's pilot project in Kenya was to test a standardised SIINC approach as an impact-oriented RBF model for the off-grid energy sector and to gain experience for scaling the approach. In this context, the pilot aimed to test and establish working processes and generate lessons learnt for expanding the use of SIINC.

Choice of Kenya.

Kenya was chosen as the host country for the SIINC pilot project due to its relatively well-developed, investment-ready off-grid energy sector. While the Kenyan market for off-grid solar products is the largest in Africa, still nearly 30% of the population living in remote areas lacks access to electricity and about 59% do not have access to a modern form of cooking energy (USAID and Power Africa, 2019). Many of the big solar off-grid players, able to attract the bulk of investments, operate in Kenya. However, they tend to focus on the better off-households, and the market still struggles to serve regions with higher rates of (extreme) poverty. Thus, Kenya offers good preconditions for testing the standardised SIINC model in the energy access sector. While the SIINC approach is no silver-bullet solution that can be implemented one-to-one in other countries, we assume that the concept can be applied with the necessary adaptations in similar contexts.

Key stakeholders. Being the initiator of the SIINC concept for an energy access fund, Roots of Impact advised EnDev on design, set-up, and implementation of the Kenyan pilot project. The team

of EnDev Kenya was responsible for company selection, contracting, and in-country management. The company 60 Decibels, specialised on impact measurement, conducted baselines and follow-up studies of the companies' social impacts. Two companies were selected in a competitive selection process and delivered results (see case studies on p. 12 for details):

- Deevabits Green Energy, a distributor of solar PV products for households and productive use focusing on low-income customers; and
- Bidhaa Sasa, a last-mile distributor of small solar systems and cookstoves serving rural women living in lower-income areas.

Social Impacts.

To allow for joint learning, the pilot project was open for companies' suggestions on which energy access technologies to deploy. Likewise, the project followed an open, bottom-up approach to enable companies to propose those impacts which suited their individual social business case the best. The selected companies chose to target customers below the poverty line as well as customers accessing energy products and services for the first time.

Project timeline.

Initiated in late 2019, the project's inception phase focused on developing the SIINC design and specified the social impact by coming up with a draft impact model and matrix. In the preparatory phase, companies were selected, and the impact matrix was further detailed to reflect companies' business models and social impacts. The implementation phase started in October 2021 and run for 12 months (compare figure 2 below).

Timeline and elements of the SIINC pilot process

Figure 2



1.3 About this report

Objective.

This report is intended for energy access practitioners, enterprises, and development partners keen to learn more about SIINC and its potential in the energy access sector. It reviews experiences made and lessons learnt from EnDev’s pilot in Kenya. The main objectives of the Kenyan pilot project were to learn about potentials and pitfalls when applying a standardized SIINC concept in the energy access sector, and to develop recommendations for upscaling. While the Kenyan pilot was able to conclude two transactions within one year, which do not necessarily allow for general conclusions, the project was able to test working processes and identified learnings for future SIINC replication, be they on pilot level or at a larger scale.

Report methodology.

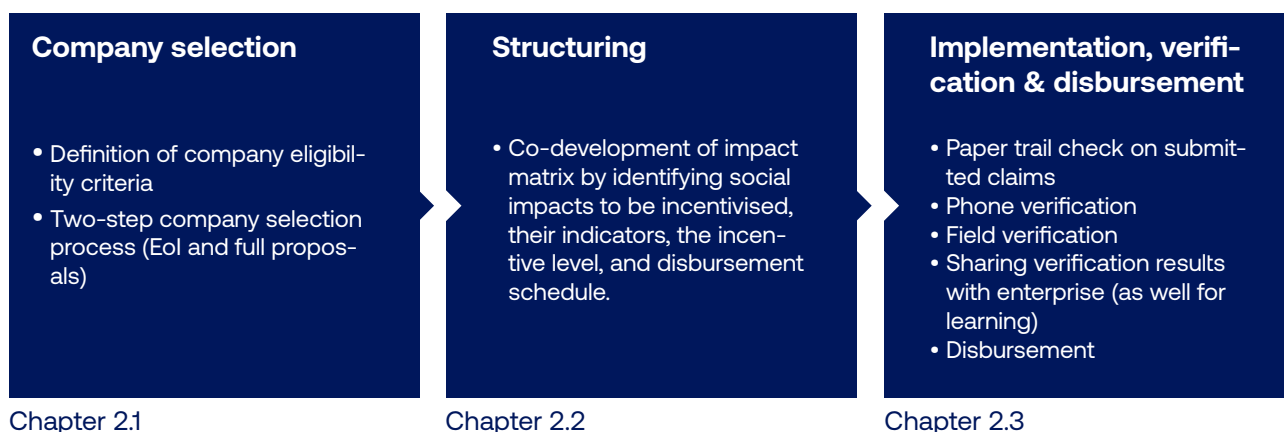
This report is based on a desktop review of SIINC procedures and results of the Kenyan pilot project. It is enriched by insights and comments shared by key stakeholders of the pilot project in a series of interviews. The interviews were conducted with representatives of enterprises that had closed contracts with GIZ (Bidhaa Sasa and Deevabits), representatives of the firm Roots of Impact, the implementer GIZ/EnDev, the verifier 60 Decibels, and an impact investor supporting one of the participating SIINC enterprises.

Structure.

This report is arranged as follows:

- **Chapter 2** analyses experience made and draws lessons learnt from the different implementation phases of the SIINC project: how to engage and select companies, how to work out the SIINC incentives for each impact selected, and how to verify results (see table 1 below). This chapter also includes companies’ perspectives on these issues and their individual take-aways.
- **Chapter 3** summarises the results of the SIINC pilot in Kenya in terms of changed business practices, social impacts reached and investments attracted.
- **Chapter 4** takes a step back and evaluates the SIINC pilot from different angles. It summarises the rationale for a standardized approach in the energy access sector, discusses SIINC as an outcome-orientated RBF variant in EnDev’s RBF toolbox, and closes with key points to consider when scaling SIINC.

Table 1 **Typical SIINC implementation phases**



2 The pilot implementation

2.1 Engaging and selecting companies

Whom to target.

The idea of SIINC is to target enterprises which are interested to change or strengthen their business approach towards achieving social impacts. These enterprises should be investment-ready to take in capital from investors who focus on social impact investments. The objective is to deepen impacts that go beyond the sale of energy access products (outputs).

Target companies with a social mission, namely the ones attaining lasting effects on beneficiaries' livelihoods. This may mean raising incomes, reducing energy costs, or targeting female customers and vulnerable groups applying the principle of leaving no one behind.

How to select companies.

In the Kenyan pilot, companies were selected following a two-phase competitive tender process. In the first phase, EnDev advertised the approach, invited for webinars and asked companies to express their interest; in the second phase, EnDev asked companies to submit full proposals detailing out their business model, target customer groups, and social impacts. As SIINC was a new concept, it was crucial to provide sufficient information to enable the companies to understand the concept and assess whether the approach matches their individual business models.

The pilot started technology-agnostic and was open to off-grid energy access technologies from mini-grids, productive use of energy (PUE), to solar PV and clean cooking. The interest was high: 50 companies requested the tender documents; eventually 11 companies submitted the so-called Expressions of Interest. Due to the nature of being a pilot with limited scope and scale, two compa-

nies participated in the endeavour to proof the standardised concept of SIINC: Deevabits Green Energy and Bidhaa Sasa. Both companies offer off-grid energy solutions and have a focus on social impacts inbuilt into their business model (see case studies below).

Within the SIINC model, special attention was given to the following key elements of company proposals:

- 1 **Additionality**, or how the SIINC transaction makes a difference, considering both social impact additionality (impact that would otherwise not have been created) as well as potential financial additionality (accessing third-party investment that would otherwise not have been available).
- 2 **Impact scalability**, or how the SIINC transaction supports the scalability of their impacts.
- 3 **Transparency of impact**, or how their impact indicators are measurable, trackable, transparent, and attributable to the enterprise's actions on the ground.
- 4 **Impact sustainability**, or how the relatively short-term support provided by the SIINC leads to long-term shifts in the organisational model, ensuring that the impact created will be continued post-intervention.
- 5 **Impact risk**, or how factors that may prevent the generation of the desired positive impacts are identified and – to the extent possible – mitigated.

Use the tender process and standardized application templates to check and rate companies' suitability.





Deevabits Green Energy

Established in 2016, Deevabits Green Energy's mission is to improve energy access to the rural poor by empowering women and youth with economic opportunities. The company is a distributor of solar PV products for household and productive use working with a PAYG model to allow for payment in instalments. With 24 employees, the company has reached about 23,200 customers and generated a revenue of roughly EUR 490,000 in 2020.

Business model. At the heart of Deevabits Green Energy's last-mile distribution network are the Village Solar Entrepreneurs (VSEs), which are locally known people (60% women) who are recruited to promote products through women's groups, in schools, chief meetings, markets, and through their individual networks. These village-level agents sell and install solar products and offer after-sales service.

The company's **growth strategy** as proposed for the SIINC pilot focused on making their customer portfolio more inclusive, thus delivering *additional social impacts*. This entails increasing sales for households living below the national poverty line, customers accessing solar products for the first time, and targeting women-led micro, small and medium-sized enterprises (MSMEs) which use energy productively. Focusing on social impact generation would allow them to reach out to social impact investors, while SIINC payouts would improve cash flows and raise their debt service ratio coverage (DSRC), thus making the company more attractive for investments (*financial additionality*). Expanding their portfolio to low-income customers while keeping an attractive DSRC would allow the company to scale operations and deliver more social impacts (*impact scalability*). Their sales and customer management software in combination with the specific customer surveys would ensure *impact transparency*. The company was positive about delivering social impacts even after project closure (*impact sustainability*) as SIINC should help to establish sales and distributions structures in remote rural areas. Finally, potential *impact risks* such as high customer defaults and low customer satisfaction should be mitigated by attractive payment plans and well-trained sales agents.



Bidhaa Sasa

Bidhaa Sasa – which means “Products now!” in Swahili – is a last-mile distributor of small solar systems and cookstoves. Since 2015 the company explicitly targets rural women living in lower-income areas.

Bidhaa Sasa's **business model** takes the needs and aspirations of rural women as the starting point. Living in remote areas they often do neither have access to quality products nor options to accessible customer loans. To overcome these barriers, Bidhaa Sasa employs a woman-to-woman direct sales model in which nano-credits are offered to groups of clients without preconditions or collateral, leveraging their social cohesion. Thanks to this model the company was able to sell products to about 100,000 customers over the last six years, and 73% of the company's clientele were women. With 130 employees, the company generated a revenue of approximately EUR 1.5 million in 2020.

The company's **growth strategy** as proposed for the SIINC pilot focused on increasing sales of solar and cooking products for vulnerable households, thus delivering *additional social impacts*. The company would target more households living below the national poverty line and getting access to modern energy products and services for the first time. SIINC payouts would improve the company's cash flows and make it more attractive for investments (*financial additionality*). The SIINC support would also help to prove Bidhaa Sasa's women-centred business model, enabling them to scale operations and impacts alike (*impact scalability*). Their existing customer relation management software in combination with specific customer surveys should ensure *impact transparency*. Maintaining low-income customers as clients and as repeat clients for other products should ensure *impact sustainability*. Potential *impact risks* such as high default risks should be mitigated by relying on Bidhaa Sasa's women-focused sales model and adapted payment plans.





Companies' motivation to participate in SIINC.

When asked about their initial motivation to participate in SIINC, companies explained that they decided to submit proposals because they thought of SIINC as an innovative concept that focuses on impacts while most investors and first-generation RBFs are mainly occupied with sales figures. The companies perceived their focus on women, and on lower-income and remote households to be their competitive advantage vis-à-vis the large solar PAYG³ market players. Thus, they welcomed the opportunity to get their focus on deep impact rewarded. Besides the financial support, they also applied to improve their own understanding of the on-the-ground impacts of their companies.

2.2 Co-designing the SIINC incentives

Which impact metrics to choose.

SIINC belongs to EnDev's second generation RBF schemes as it tests an innovative approach of reaching out to vulnerable customers while deepening impacts on livelihoods (for details see 4.2). The SIINC pilot did so by using an impact matrix. This included targets for a few key performance indicators (KPIs) for a company's customer portfolio on which the company needed to improve its impact performance to be eligible for payments. These KPIs may be, e.g., the poverty level of serviced customers, the percentage of customers gaining first time access to modern energy services, the percentage of female users of PUE products, customers confirming energy costs savings, and customers reporting quality of life improvements. Only if the company can show a shift towards deeper impacts for its whole customer portfolio, it receives the full incentive amount. SIINC is – under ideal conditions – offering a more systematic and transparent incentive structure than its predecessors providing top-up incentives.

Give priority to impact metrics which are relevant for companies and investors.

How to develop the impact matrix.

The crux is how to come up with an impact matrix that is standardized but is adaptable to individual companies and their specific social impact approach. In the Kenyan pilot, EnDev used a co-development process for choosing the most appropriate metrics. Initially it asked enterprises to suggest impacts and accompanying indicators in their proposals. This approach was in general advantageous for enterprises participating in SIINC as they are the ones most knowledgeable about how to define the impacts of their business model and about strategies to achieve greater impacts. If incentives are tied to impact indicators which are tailor-made to their business models, enterprises and their investors can expect the highest added value. While all companies in the pilot wanted to broaden their outreach to lower-income customers, their indicators were very diverse due to the enterprises' different business models. As one objective of the pilot was to gather experience in standardising the SIINC approach, the team proposed a set of metrics for the impact matrix, containing factors such as targeting of poor customers and female micro entrepreneurs, but also impacts in perceived quality of life, energy savings and income generation. Of these, companies could choose the ones most appropriate for their business model.

Engage companies in a co-development process to ensure suitability of matrix to their business models.

“I prefer a very customized approach to incentive setting. It allows smaller companies to participate that may still be in the early stages. Otherwise, the big guys can take it all, as they do in other RBFs.”

David Wanjau, Founder & CEO of Deevabits Green Energy

³ Pay-as-you-go (PAYG) refers to a payment plan often offered for clients to pay for their solar home systems with one down payment and several monthly or weekly instalments. PAYG increases affordability of solar products by requiring smaller payments which are more adopted to the customers' income availability, but PAYG increases overall product prices as companies factor in capital costs (see also Energypedia explanation of PAYG).



Lesson learnt

One take-away on engaging with these companies is that the SIINC approach attracted mainly enterprises that were already on a pathway towards deep social impacts but were still looking for getting rewarded for realising this. They were early-stage companies, which had been able to draw in impact investors before but were still looking to attract funding aligned with their social mission. They hoped SIINC would improve their cashflows by delivering deep impacts, while the companies also hoped to use it to gain more data on their social impacts achieved and thereby improve their narrative on their impact-orientated business models for future investors. The established PAYG companies aiming at large sales volumes in the Kenyan market did not express an interest in SIINC. This might be due to their access to funding sources with large ticket sizes, and due to their sales-focussed business approach.

How to measure success.

As payments depend on whether an impact target has been reached, reliable impact measurement is the centrepiece of a SIINC. The challenge consists of coming up with SMART⁴ indicators that are at once robust and reliable, but also cost-efficient to report and verify, feasible to use in the local context, and of value to the companies. In a SIINC approach, especially if going for scale, one needs to find a good compromise between compensating all companies in the same manner for the same achievements and between acknowledging their differences in business model and maturity.

⁴ SMART stands for indicators that are Specific, Measurable, Achievable, Relevant and Time-bound.

“The impact metrics should be neither too complex nor ‘one fits all’. Really important is to first understand the needs of the market. Then prioritise one to two impacts that are affecting the target groups.”

Walter Kipruto, Senior Advisor EnDev Kenya

As mentioned before, the SIINC pilot in Kenya used an impact matrix to define most relevant incentive metrics and to assess the degree to which impacts were achieved (see figure 3 below).

Simplified impact matrix with indicative baseline, target and results values

Figure 3

Impact	Indicator	Weighting factor	Baseline	Target	Result	Score	Impact score
Poor inclusivity	% of customers below poverty line based on lean data surveys	30%	30%	50%	45%	75%	23%
First time access	% of customers reporting first access to energy product or service purchased	30%	35%	65%	60%	83%	25%
Energy cost savings at end user level	% of customers experiencing decreased energy spending for HH	20%	15%	30%	40%	100%	20%
Quality of life	% of customers seeing quality of life improvement	20%	60%	70%	80%	100%	20%
Total score							88%

Note: For the sake of simplicity and safeguarding companies' confidentiality, this table only gives a simplified and generic version of the impact matrix used in the Kenyan pilot.



For each impact indicator, a baseline and a target value were defined, building a sliding scale of 0 to 100% of target achievement. If all impacts were achieved as targeted the enterprise would reach an impact score of 100% and receive the maximum incentive amount. If an enterprise would not be able to achieve the maximum impact score, the incentive pay-out would be reduced accordingly.

Use standardised indicators and adjust these to enterprises' needs with company-specific targets.

How much to pay.

As with all RBF interventions, the incentive needs to be attractive enough for companies to take up risks and costs to go the additional mile towards more impacts. At the same time, it should be sufficiently modest to avoid windfall gains, market distortions, and wasting public resources. In Kenya, the incentive amount for each enterprise was calculated by multiplying the impact score achieved with a predefined incentive per product sold. The maximum level of solar and stove product incentive was set at 20% of the recommended retail price (RRP) while the incentive for productive use systems was set at maximum 25% of the RRP due to more efforts in marketing PUE and the greater expected socio-economic impacts of PUE.

Choose incentive levels reflecting companies' costs and impacts.

When to disburse incentives.

Given the enterprises' need for working capital and the short implementation period of the SIINC pilot, the priority was kept on pay-outs close to point of sales. If these are verified on a biannual basis, companies can at least expect first payments after six to eight months. Thus, SIINC indicators for outcome achievement included household characteristics that could be measured not long after point-of-sale: the targeting of low-income households (measured via the Lean Data approach asking for proxy indicators on poverty levels), providing first time access to energy products, and targeting women PUE entrepreneurs. In addition, 60 Decibels asked customers for their subjective assessment of livelihood improvements ("Has your quality of life changed because of product x?") and energy costs savings ("Has your average weekly spending on energy changed?"). In the Kenyan pilot, incentives were paid in one batch (100% pay-out) after impact verification. Alternatively, one could disburse parts of the incentives later based on a verification of more long-term outcomes to enhance sustainability, or one could pay on early milestones to help companies pre-finance investments (see chapter 4.3, paragraph (6) for a discussion).

Proxy indicators can help to gauge impacts even close to point of sale, thereby enabling a quick incentive payment to companies.



Companies' perception of the structuring process.

When asked for their feedback on the SIINC approach, especially the structuring process for working out the relevant SIINC metrics of the impact matrix, both companies very much appreciated it as a learning exercise. However, both also voiced concerns about the length of the process. That was mainly due to:

- A diligent assessment process of proposals. Data on companies' financial situation, past and present sales, customer portfolios, and business models were required to confirm eligibility.
- A co-development of the final impact matrix and its metrics which took time as companies first needed to develop their own understanding of the impact matrix before they could enter negotiations. Webinars and additional information on the SIINC model provided enabled companies to step by step understand this new approach. Nevertheless, it was a learning process to gain deep understanding of the incentive calculation formula.
- Due to the pilot character, there were no 1:1 comparable SIINC examples available from the off-grid energy access sector and both sides had to ensure that modalities for payment were crystal clear before signing contracts.



Lesson learnt

A lesson learnt on working with an impact matrix is that an ambitious undertaking such as first-time creating and paying based on an impact matrix requires more time and efforts on all sides to get to a common understanding and a contractual agreement than simply paying for products sold. The pilot accomplished the shift from individually negotiated and structured SIINC transactions towards a more standardised approach. While there is a learning curve and one can expect processes to speed up for SIINC successor projects, the SIINC approach works best in markets in which companies already have a basic RBF understanding and ideally own RBF experience. The process could be shortened by co-developing a standardised impact matrix in consultations with the private sector of a target market. The actual deal structuring would then consist of agreeing on enterprises' individual indicators selected from the matrix, with company-specific baselines and targets (see also chapter 4.3. on key points for scaling).

2.3 Verifying results

Besides incentive design, verification is a core process in any RBF project. If you get paid for what you have achieved, it is crucial to measure and verify the claimed result correctly. The first premise is that companies need to have full understanding for what they get paid for. This includes knowing which results they are expected to deliver, which data they need to submit, how the verification is organised, and how the final disbursement amount is calculated. The second premise is a well-organised and transparent verification process and schedule. RBF projects usually employ independent third-party verifiers (specialised consultants or companies) that use paper, phone, and field verification methods on a sample of customers to check whether companies delivered as they claimed. Once results are verified, disbursement follows. If there are ambiguities (e.g., companies submitting incomplete data sets as core and ancillary data requirements were not clear), these need to be rectified, or companies risk losing parts or full amount of their incentive disbursement.⁵

Verification in the SIINC pilot project.

The same rigorous verification rational and process was applied in the SIINC pilot – with some modifications. It consisted of the following steps:

- 1 **Claim submission by companies:** Companies submitted results claims twice in the 12-months pilot project period; once after six months, and then again after 12 months.
- 2 **Paper check:** The EnDev team with support of an external auditing firm conducted a first paper check on the plausibility of the submitted data (product sales and customer data) and

checked on potential errors such as duplicate sales or data gaps.

- 3 **Phone verification:** An independent third party – in this case the company 60 Decibels – conducted data verification by directly contacting a sample of customers for checking if products were sold and impacts achieved. In concrete terms this meant standardized phone interviews. For this purpose, 60 Decibels used its established **Lean Data methodology**⁶, slightly adapted to the SIINC requirements. Their questions were referring to e.g., customers' satisfaction with the product and the companies' services; quality of life improvements; energy cost savings; changes in income due to product usage; challenges with product and product usage; and questions addressing proxy indicators for poverty. In each of the two SIINC verification rounds, 60 Decibels interviewed a representative sample of each company's customer portfolio.
- 4 **Local verification:** A local consultant reviewed the data and complemented the process with phone interviews. The EnDev team did spot checks in the field to cross-check on results.
- 5 **Disbursement:** Once the three-step verification process could confirm companies' results claims, incentives were calculated based on the verified results.

Verification needs to strike a balance between being reliable and cost-efficient; ideally it should provide new insights for companies to improve their business strategies.

⁵ For more insights on how to do verification in RBF projects, please refer to [EnDev \(2021\): Value for Money or Waste of Time? EnDev's Results-Based Financing Facility – Lessons from 7 Years of applying RBF in Energy Access Markets.](#)

⁶ Lean Data is a fast, customer-centric approach to measure the effects that products or services have on their customers. Initially launched by Acumen in 2019, Lean Data was spun off to create a social enterprise called 60 Decibels. The methodology is characterized by standardized phone surveys that produce rich customer insights directly from end users. Lean Data surveys have been performed on more than 100+ off-grid energy companies which allowed to create sector-wide benchmarks to impact performance, enabling enterprises to understand their impact relative to their industry peers. These benchmarks were used to determine the initial SIINC incentive structure.





Companies' perception of the verification process.

When asked for their experience with the SIINC verification process, both companies appreciated learnings and data made available due to the process, but also challenged the length of the process until they were paid. By chance the companies were familiar with the lean data approach from using it before. They acknowledged its general outset on getting to understand customers' perceptions and product satisfaction. However, they suggested improvements of some indicators used, e.g., changing the indicators on 'quality of life improvements' (attribution gap between getting access to energy and quality of life improvements was perceived as too large) and the 'weekly energy savings in currency figures' (sometimes customers cannot put price tags on their energy savings). Despite these specific issues, companies appreciated that the verification exercise provided them qualitative and quantitative data on the impacts they had achieved.

“This project helps us to quantify. We do know about impacts, have beneficiaries' anecdotes, but normally we do not have sufficient evidence.”

Walter Kipruto, Senior Advisor EnDev Kenya

A highlight for the companies, and the one impact investor interviewed, were the **60 Decibels results reports**. These included not only the figures verified for each impact indicator but also provided information on customer satisfaction with product and after-sales services. In addition, they also gave companies ideas on how to further improve business strategies. Another feature of the lean data reports was the benchmarking exercise in which 60 Decibels used available industry performance benchmarks from the East African off-grid market to compare it to the individual company's performance, thereby raising motivation to do better.

“SIINC has been an interesting journey. It helped us to learn about our work, the impacts we bring to rural areas.”

David Wanjau, Founder & CEO of Deevabits Green Energy

Lesson learnt

A lesson learnt on the verification system is that a good balance needs to be found in verification efforts and results. While the three-step verification system (paper, phone, field) used in the pilot project required a lot of effort and time from all stakeholders, it also delivered useful insights for companies' strategies and management practises. The findings from the verification process not only enabled EnDev to put a check on outcome indicators achieved and thus trigger disbursements: The most striking result of the verification effort – at least for companies – was learning on what impacts they were delivering in the field, getting to know customers' perceptions on products and services, and comparing their own performance vis-à-vis the performance of peers of the East African energy access market. All this data was packaged in 60 Decibels results reports, which companies shared among their teams, and forwarded to potential investors. While the reports are not SIINC-specific, they were a much-appreciated feature of the verification process.



3 Key results of the SIINC pilot

In terms of social impacts achieved, the two companies Bidhaa Sasa and Deevabits Green Energy could deliver solid results despite the limited pilot implementation period of 12 months and the repercussions of Covid-19 pandemic. Both managed to shift their customer portfolio towards customer segments which otherwise would not have been served. Compared to the baseline study conducted by 60 Decibels, both companies were able to achieve the following aggregated results:

- The usage of solar, ICS, and PUE products led to a perceived improvement of the **quality of life**. It is remarkable that the vast majority of customers reported quality of life improvements for all product segments of the two companies. All values achieved were better than the 60 Decibels benchmark values of other companies selling in the region.
- One company could strongly increase its **out-reach to low-income households** (customers living below the Kenyan poverty line of 3.20 USD), for the other company, the so-called inclusivity ratio has remained reasonably constant.
- On the parameter “proportion of **customers having first time access** to solar and ICS products”, one company was able to improve its baseline. The other company started with figures already above the 60 Decibels regional benchmark and struggled to maintain this performance during Covid-19 times.
- Due to the social impacts of productive use products (especially on income generation and women empowerment), one company decided to take up this new product segment. Starting from a zero baseline before SIINC participation, the company was able to reach out to many **female customers** who were using the products for income generation. Further, the majority of customers, female and male, were able to **increase their incomes** thanks to the productive use products.
- With regard to **energy spendings**, both companies could improve their results compared to the

baseline. The majority of customers reported a decrease in their average weekly energy spendings.

The companies achieved these results by adjusting their value proposition, e.g., by adding smaller and more affordable products. They invested in expanding the pool of last mile sales agents and company staff, stepping-up and expanding marketing outreach, establishing logistics and distribution channels, as well as developing and introducing flexible payment plans to reflect the ability to pay of lower income clients.

“The effects of the incentives are that we extend benefits to lower-income customers.”

David Wanjau, Founder & CEO of Deevabits Green Energy

Apart from deepening the social impacts achieved for their customer portfolio, the companies were able to report steady sales of solar products, improved cookstoves, and PUE; at least maintaining or even increasing their sales levels compared to the baseline. These figures must be assessed against the backdrop of several unforeseeable external effects and impacts on the overall market situation such as the ongoing repercussions of the Covid-19 pandemic, and national political and economic uncertainties, e.g., a high inflation rate in Kenya. These negatively impacted the Kenyan energy access market, especially the purchasing power of low-income households.⁷ Companies that were originally on a growth path struggled to maintain pre-Covid-19 sales levels. The companies’ ability to maintain sales levels, continue to

⁷ The off-grid market situation in Kenya saw a drop in sales volumes for the second half of 2021 by 21% compared to the first half of 2021.

go for deeper impacts, and even to close a deal with an impact investor in turbulent times is thus a relative success.

Challenges.

The results of the customer surveys by 60 Decibels also revealed that there are partial problems with after-sales services of the two companies. Here, SIINC was also able to contribute to the subsequent improvement of these services (e.g. via improved after-sales-services informing on warranty and customer service options via text messages).



Companies' take-aways from SIINC.

When asked about their most important take-aways from the SIINC participation, the two companies highlighted the following benefits.

SIINC enabled them to **shift their business models towards deeper impact**. The additional funds of SIINC helped them to offer longer payment-plans which enabled the poorer customer segment to purchase a product which was not affordable before. SIINC also made them go for a broader geographical scope, setting up sales structures in additional Kenyan counties.

“It is good to make companies to think about more than just sales.”

Walter Kipruto, Senior Advisor EnDev Kenya

SIINC improved their **knowledge about their social impacts on customers**. While both companies were assuming to have social impacts on the ground, they struggled to quantify their achievements. SIINC impact measurements helped them to upgrade their narrative for impact investors and other supporters with detailed and verified impact data. The **results reports**, which were compiled by 60 Decibels after each verification round, were thus very much welcomed by the companies. The reports helped them to understand how

“Due to the SIINC pilot project we scaled to a few more counties. In a two to three year-long project, the effect would have been crazy, we could have entered many more counties!”

David Wanjau, Founder & CEO of Deevabits Green Energy

customers perceive their products and services, to quantify impacts, and to improve their impact story. They were shared with existing and potential investors; one interviewed impact investors confirmed the added value of the reports.

SIINC helped both companies to **draw in additional capital from altogether four impact investors**. One company described SIINC participation as having a catalytic effect. It convinced their traditional impact investor to increase its ticket size tenfold because the company had been able to show evidence for their impacts. In addition, the investor saw the SIINC revenues as a de-risking factor for their loan, increasing the investor's confidence in the company's performance. The other company linked the new investment contracts to the SIINC objective of reaching deeper in rural areas to low-income women. SIINC could demonstrate that working with local female leaders is a scalable system.

“The SIINC had a catalytic effect. We spoke to our impact investor, and they gave us a non-interest loan ten times higher than the last time.”

David Wanjau, Founder & CEO of Deevabits Green Energy

Lesson learnt

A lesson learnt on SIINC-induced impacts is that SIINC has the potential to lead to a lasting, sustainable change. Even in the one-year pilot, it triggered companies to shift towards a deeper impact business model. The monetary incentives of SIINC ensured improved cash flows allowing for innovation and investments into new payment models and sales structures. The innovativeness in the SIINC model, however, also lies in its ambition for an exit strategy that ensures that the change towards deeper impact lasts because the initial support can enable enterprises to achieve economies of scale quickly and to make impactful business activities sustainable. Both is attractive to impact investors who may come in with additional capital. Another exit strategy may exist in bringing public funders on board by demonstrating value for money with a SIINC. In sum, SIINC can deliver sustainable energy access for vulnerable groups by aligning public and private actors' support for enterprises striving for social impacts.



4 Discussion and outlook

The overall objective of the SIINC pilot in Kenya was to test a standardised concept in the off-grid energy access sector, to analyse implementation experience for lessons learnt, and to deduce recommendations on upscaling the approach. This chapter reviews experience with a standardised SIINC model as employed in Kenya (see sub-chapter 4.1), compares SIINC to other types of RBFs (see sub-chapter 4.2), and concludes with recommendations for upscaling the approach (see sub-chapter 4.3).

4.1 Standardisation as a new feature of the SIINC model

For the first time, a **standardised SIINC model was applied in the off-grid energy access sector**. The energy access sector itself is promising for SIINC as it hosts many enterprises which strive to deliver impactful products and services for their customers. Being often equipped with a social mission, many of these enterprises strive for addressing vulnerable customer groups such as households with little purchasing power, often living in remote locations. The enterprises' focus on social impacts makes them the ideal target group for SIINC. In addition, business models of energy access companies follow similar patterns of capital raising, product sourcing, distribution channels, payment schemes, quality assurance, and customer relation management. Moreover, the theory of change for off-grid energy solutions is quite homogeneous across the industry. This allows for a standardisation of the SIINC approach to which most energy access companies can agree to. Further, many impact investors have turned to the energy access sector, due to its impact promise, its business models which have become profitable and scalable, and because energy access markets in many countries are very dynamic and show a sound growth potential.

In addition, the SIINC was applied **using a common impact matrix for several companies instead of individually negotiated transactions**.

This was achieved using a co-development process of working out the impact measurement fitting all participants. While sometimes challenging, as everybody learned along the way, this first step towards standardisation is an important milestone towards making the SIINC model ready for upscaling. The standardized impact matrix is an effective tool for creating transparency and achieving efficiency gains for recurring transactions in the sector. It strikes a compromise between standardisation as a means to reduce transaction costs and individual negotiations acknowledging enterprise-level particularities.

“Investors tend to compare actual sales with a baseline number, but they never have such a complicated formular. They do not go that deep.”

David Wanjau, Founder & CEO of Deevabits Green Energy

For the first time, the SIINC model was **adopted by a public implementing agency that works in the field of technical cooperation**. This transition made a number of adjustments necessary to accommodate different sets of mandates and operational objectives (e.g., GIZ aims at capacity development in partner countries), and detailed organisational rules of conduct (e.g., procurement rules). In particular, EnDev's focus on market development for energy access products and services made it paramount to target not only one company. By supporting many companies, market competition is increased and usually service quality and price-performance ratio gets improved. Thus, the individual transaction approach often used by investors needed to be transferred into



“Impacts matter to all, but follow a different logic: for investors short to medium term profitability of social investments are key while development cooperation focuses on medium to long-term sector transformation. SIINC strives to bring these two together.”

Barbara Richard, Team Leader EnDev HQ

a more standardised approach that is suitable to many companies, yields many transactions while lowering managerial costs, and has potential to scale.

EnDev’s ambition to gauge deep impacts at the beneficiary level refocussed the impact matrix towards livelihood improvements. For future SIINC implementations, one should ask oneself which impacts are the most relevant ones, and for whom: Is reaching out to poor households enough or do we need to see income and livelihood improvements? Which level of detail and which degree of robustness in measurement is needed by impact investors, by enterprises, and by international development agencies? There is a trade-off between an easy-to-implement standardised impact matrix and company-specific impact matrix which need to be negotiated case-by-case (compare chapter 4.3).

4.2 What is new about SIINC compared to other RBFs

Since 2013, EnDev has been successfully developing energy access markets through projects using RBF mechanisms (see figure 3 below). Implementing the SIINC pilot in Kenya was thus another milestone in [EnDev’s learning journey on RBF approaches](#). While EnDev had tested first generation RBFs at length in its RBF facility⁸, the SIINC approach promises to be radically different in its shift from output to outcome-incentives and tapping private sector investment. In this context, this sub-chapter discusses the SIINC approach in comparison to other RBF 2.0 models for:

- achieving social impacts for vulnerable customers, and
- measuring and incentivising achievements further down the results chain.

8 EnDev (2021): [Transforming energy access markets with Results-based Financing. Lessons from 7 years of implementation under EnDev’s RBF Facility financed by UK Aid.](#)

There is a shift towards LNOB within EnDev’s 2nd generation RBFs.

While the initial RBF focus on sales was helpful for accelerating nascent markets, the situation has changed as today’s energy access markets have become more mature in many countries. The success story of the seven well-funded solar PAYG companies⁹ shows that simply subsidising sales would no longer add value to markets, but risks creating windfall profits. Even today’s mature markets, however, are still leaving poor or otherwise underserved market segments unattended. RBF approaches thus need to become more focussed on rewarding additionality, in terms of companies serving vulnerable households that would not be served otherwise, ensuring that no one is left behind.

SIINC fits this new LNOB focus.

With its focus on rewarding social impacts for vulnerable households, SIINC is an innovative 2nd generation RBF scheme. While RBF approaches of the first generation relied on economies of scale to bring down product prices, or on other development partners to keep up subsidizing products, the SIINC has the potential to deliver on sustainability of impacts. It is meant to enable enterprises to tap into more commercial investments while delivering sustainable deep impact for vulnerable groups.

“There are many RBF programmes that just incentivise product sales. SIINC is much more ambitious. It helps to spend donor money with more impact and unleash the true potential of high-impact enterprises.”

Bjoern Struwer, Founder and CEO of Roots of Impact

How to nudge companies towards targeting vulnerable customers – comparing SIINC to other pro-poor RBF approaches.

In EnDev’s current RBF portfolio, there are different approaches for incentivising private sector delivery of energy access to vulnerable customers:

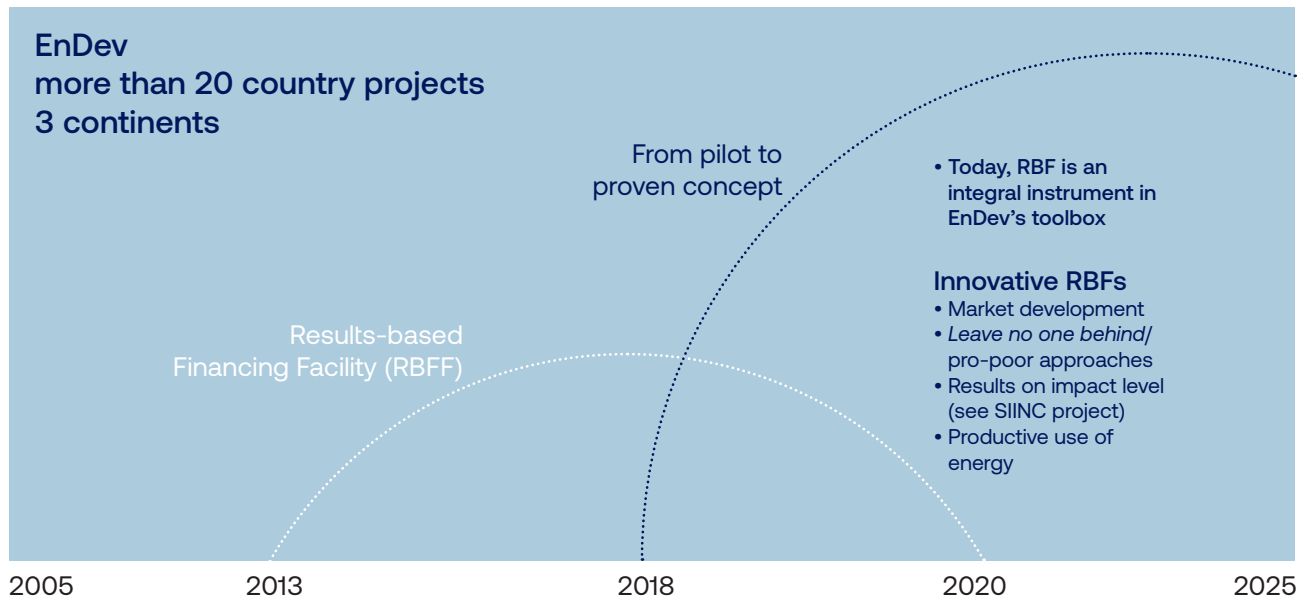
- Using a demand-side subsidy approach is one way of reaching the vulnerable customers with good quality energy access products, i.e., using

9 The latest [Off-Grid Solar Market Trends Report 2022: State of the Sector](#) (published by World Bank, GOGLA, the Efficiency for Access Coalition, and Open Capital Advisors) highlights that seven PAYG solar companies (d.light, Sun King, Bboxx, Engie Energy Access, Lumos, M-Kopa, and Zola Electric) were able to draw in 72% of the total investments flowing to GOGLA-associates in 2021 with the remaining 26% shared between another 150 businesses.



Figure 4

EnDev's RBF Journey



RBF incentives as buy-down grants. These are transferred to eligible customers, e.g., via vouchers or mobile money, to reduce the retail prices, thus closing the affordability gap. The [Rwandan pro-poor RBF scheme](#) is a classic example for an end-user subsidy scheme with an explicit buy-down grant that worked with eligibility criteria to reach out to vulnerable customers: only sales to households which belonged to the poorest national household categories were eligible. In addition, the incentive levels were structured degressively: sales to the poorest received the highest incentive level; medium-income households received only a modest subsidy; while better-off households were not eligible as customers. Due to the complexity of the targeting, demand-side subsidy approaches are characterised by comparatively high transaction costs.

- Supply-side RBF approaches can also be designed to explicitly target vulnerable customers. A common approach within EnDev is to offer top-up incentives for sales that are targeting vulnerable groups. For example, [EnDev Mozambique](#) is offering a GenderPlus incentive for sales to vulnerable women and a RemotePlus incentive for sales in remote and less attractive markets. Similar top-up incentives for customers living in remote areas are offered by [EnDev Tanzania](#) and [EnDev Uganda](#). While supply-side subsidies benefit from lower transaction costs, they might not reach vulnerable customers as comprehensively as demand side subsidies, limiting the desired impacts.

The SIINC approach, in comparison, enhances socially targeted supply side subsidies by focusing directly on the desired impacts. Rather than simply incentivising companies to target vulnerable customers, it aims to shift enterprises' business

models towards becoming social-impact orientated in the long-term. Eventually they could scale their business models by attracting capital from social impact investors.

Outlook: Raising ambitions – defining and measuring impacts further down the results chain towards long-term, aggregated impacts.

The distinguishing feature of SIINC in comparison to earlier sales-based RBF approaches is its impact focus and its incentive disbursements being tied to outcome achievements. But is that the end of the story or can SIINC become even more ambitious in terms of impact tracking at a more aggregated level? How far down the results chain can one reward outcomes or even impacts while not neglecting the companies' urgent need for investments?

For this debate, it is helpful to reflect on SIINC's position in the RBF landscape. EnDev's different RBF types evolved along the market development history of off-grid energy access products and have followed a respective learning curve (see figure 4 below):

- RBF projects of the first round of EnDev's RBF facility were *output-focused*, rewarding sales only, but also requiring companies to offer warranties and adhere to product quality standards (e.g. VeraSol).
- RBF projects of round two and three of EnDev's RBF facility experimented with tying the incentive partially to other aspects than sales, namely results (e.g., provision of consumer credits, product maintenance, research & development achievements) that support the *outcome* of sustainable energy access.



- EnDev’s RBF projects of the second generation (no longer under a separate RBF Facility but mainstreamed in EnDev country approaches) aim for social *impacts* such as income generation and livelihood improvements for vulnerable groups by providing incentives for low-income or remote customers.

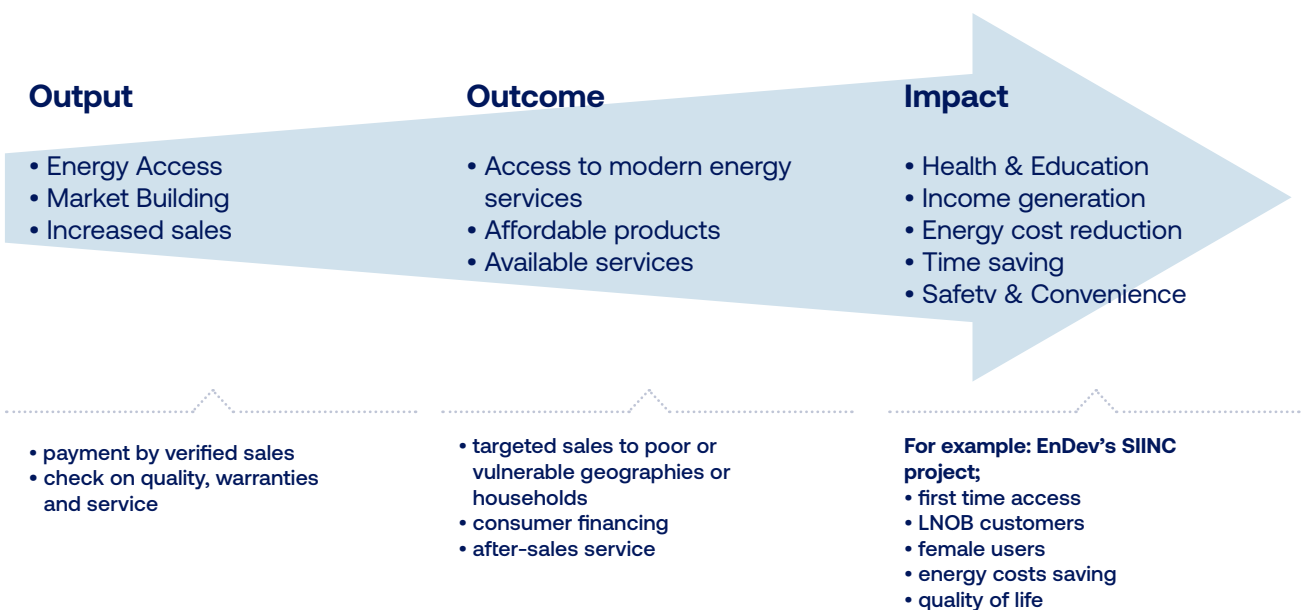
The outcome-orientation of SIINC and the lean data approach of compiling data on customer satisfaction, product use, and income generation are already major milestones towards rewarding social impacts not sales in comparison to RBF 1.0 approaches. While EnDev is keen to keep testing out how far down the results chain one can mea-

sure and reward change, one needs to be careful not to overstretch ambitions: whatever is incentivised in RBF schemes must stay attributable to the respective enterprise; otherwise, windfall profits¹⁰ or unjustified losses could occur. While we see a lot of progress in moving down the results chain from outputs to more aggregated impacts, there will be a point at which paying companies for impacts makes no longer sense due to the attribution gap.

¹⁰ In economics, windfall profits are understood as an unexpected rise in profits because of favourable circumstances, e.g. regulatory changes, subsidies or unexpected demand and price fluctuations.

From outputs to outcomes in EnDev’s RBF projects

Figure 5



4.3 Looking ahead: Key aspects for scaling SIINC

The need to go for scale.

The Kenyan SIINC pilot is bridging the experience of SIINC projects which relied on individual SIINC transactions and the ambition to scale SIINC. This section discusses the implications for scaling which can be directly derived from the experience made with the Kenyan SIINC pilot project.

1. Impact takes time - to prepare for, to achieve and to measure.

The SIINC pilot has once more confirmed that RBFs, but especially an outcome-focused SI-

“The preconditions for SIINC are promising: companies with RBF experience and an orientation on social impacts meet new lean and digital options for impact verification.”

Barbara Richard, Team Leader EnDev HQ

INC, requires sufficient time to deliver results. As a rule of thumb one can say that a minimum of six months is required for the inception and design phase; the implementation period should at least



cover three years, preferably five years, to allow planning security for the enterprises and to keep SIINC design and set-up costs proportional to the incentive and implementation budget. Sufficient time helps to come up with a well-thought through design, a communication and advertisement strategy that ensures a big enough pool of interested companies, and to develop a meaningful impact matrix and to conduct baseline surveys. It is recommended to plan in flexibility for the preparation but also implementation phase. An **adaptive project management** is key to react flexibly on external events that can severely impact enterprises' ability to deliver.

Last but not least, as with all development programmes, a **phase out and exit strategy** needs to be considered right from the beginning. For the off-grid solar markets, the goal is to set up long-lasting business models which can offer products at affordable prices even after subsidy phase-out. The SIINC ambition to crowd in impact investors with patient capital is promising for keeping up the momentum for deeper and sustainable impacts even after a programme's end.

“The key thing is how do you exit SIINC? How do you make a lasting impact on the ground? Which companies are willing and able to continue their deep impact focus?”

Rocio Perez-Ochoa, Co-founder and Director of Bidhaa Sasa

2. Simple, but relevant impact metrics.

Which impacts to incentivise is the core question of any SIINC. Within the tripartite setting of a SIINC, impacts need to be relevant for enterprises, investors, and donors. The Kenyan pilot used a broad approach, incorporating impacts in relation to poverty, energy access, gender, and income generation. These were chosen in close collaboration with the companies so that they were the most relevant ones for their business models. When working together with two companies only, this approach is feasible and promises to get closest to companies' needs. However, a more standardized approach is a necessary compromise for a scaled SIINC addressing hundreds of potential investees. Luckily, one does not start anew when discussing impacts in the energy access sector. EnDev itself has contributed much to this discussion with its renown outcome-monitoring system. The off-grid solar sector's industry association, GOGLA, has compiled the [Standardized Impact Matrix for the Off-Grid Solar Energy Sector](#). This comprises social impacts such as economic activity, income gener-

ation, energy spending and financial inclusion. Even better, its fourth version is now aligned with the IRIS core matrix set on clean energy access.¹¹

“The first step is done with proving SIINC is adaptable to the off-grid sector in Africa – the next step will be to go for scale and build a strong alliance with social impact investors.”

Barbara Richard, Team Leader EnDev HQ

3. Standardised incentive structure for each generic business model.

The Kenyan SIINC pilot reduced individual negotiations by pre-defining a standardised incentive structure for impacts created. A full standardization is only possible if off-grid enterprises in a particular region would have comparable business models, similar cost structures, and target groups. This was the case in the Kenya pilot project but cannot be assumed for a SIINC at scale that would have to deal with very different countries and contexts. For a scaled version of SIINC as a market development approach, it is advisable to develop a standardised impact matrix for generic business models selling certain products (e.g., SHS, ICS, PUE) to particular customer segments (e.g., living in remote places) in specific market conditions (e.g., in an pioneering market in country). The deal structuring consists then of agreeing on enterprises' individual indicators selected from the matrix, with company-specific baselines and targets; one might even add company specific weightings. This approach is more efficient for SIINC programmes aiming at scale as it requires less individual negotiation and increases comparability, while treating all involved companies working in comparable market settings equally. It allows for a standardised verification process for all participants as the same indicators are used to feed the calculation of

“If we go for sector wide SIINC approaches, we can considerably lower transaction costs and make use of comparable business models.”

Bjoern Struwer, Founder and CEO of Roots of Impact

¹¹ IRIS is an initiative of the Global Impact Investing Network (GIIN) and enable users to estimate the impacts of different categories of off-grid technology (from solar lanterns to large solar home systems) while accounting for regional differences, where necessary.



incentives. Finally, it permits to report aggregated impacts of the same kind to the donor and the public.

4. The appropriate price finding mechanism depends on market maturity.

There are two basic price finding mechanisms available to determine the maximum incentive level per product sold: either a review of cost structures of enterprises' business by the implementer or using an auctioning approach to get competitive bids for the incentive level from the companies themselves. For the former, the implementer should use market intelligence, combined with information from stakeholder consultations, to identify the viability gap for the company and estimate the necessary incentive level to make the business case profitable. In mature markets and with experience on both sides – the implementers', but especially the companies' – an auction model should be the preferred price finding mechanism, with companies bidding for the incentive level per impact generated that fits their internal cost structures. Two conditions have to be given for using auctions: the impacts to be awarded need to be clearly defined, companies must be able to put a price tag on these, and a sufficient number of companies need to participate to create a situation of competition. Usually there is a learning curve from auction to auction: Over time, companies, investors, and implementers will iteratively learn how to price social impacts in the energy access sector. A challenge of this approach is that large, established companies usually benefit because they can generate economies of scale. This could create adverse effects with regard to the goal of developing the market and promoting competition.

5. Easy-to-implement but robust verification system.

A balance needs to be achieved between easy-to-measure impacts, which nevertheless can be measured robustly (so that measurement outcomes are reliable, additional and attributable) and which are relevant to all stakeholders: companies, donors, and impact investors. An impact measurement approach needs to be able to offer a compromise solution which is sufficiently robust, useful

“Many impacts such as health improvements depend on so much more than just stoves. But there are impacts, for example from PUE, which are measurable within a one to two year timeframe.”

Walter Kipruto, Senior Advisor EnDev Kenya

for all stakeholders, and affordable. Ideally, global and regional industry benchmarks are available for assessing a company's performance. In addition to phone surveys, one might need to add field checks in which technical experts can also inspect installation quality if going beyond solar standalone products.

“Remote sensors give you passive data, so-called ‘what data’. We work on the ‘why’. You cannot answer all data on impacts with ‘what data’. We gather data on the richness on what customers experience, what they most value.”

Kat Harrison, Director of Impact at 60 Decibels

Another option of enriching data on impacts is using IoT (Internet of Things). Usage rates can reveal something about social impacts, as the type of use (for productive, educational, or recreational purposes) can be inferred from the time of use. However, when it comes to impact, the hours of use per day alone are not sufficient to assess the impact on improving living conditions. Talking to beneficiaries in person or over the phone usually adds quality to impact measurement. There are also cost and feasibility considerations, not to speak of privacy issues, when using tracking devices with lighting, cooking and PUE devices (for a discussion in relation to cooking, see MECS and Energy4Impact, 2021). For a scaled version of SIINC, ethically sound remote usage tracking may complement the collection of users' experience by phone interviews, but only if the costs of doing do not impede LNOB customers' access to affordable products.

6. Define an adequate pay-out schedule.

SIINC projects come with investments, i.e., enterprises and investors can introduce the cash flows accordingly and plan the liquidity. To further improve cash flows, companies wish for RBF incentives as soon as possible after point of sale to improve cash flows. However, of course, donors would like to see (and pay) for more than just sales, ideally livelihood improvements down the line of energy access (such as energy costs savings, increase in income, or even improvements in health, education, women empowerment, and agricultural productivity). So where to strike a good compromise? One option for a SIINC model at scale could be to **stagger incentive payments** (sometimes also referred to as an incentive split or bonus payments). A common approach is to pay 80% on sales and reserve the 20% of the



total incentives for payments on good after-sales services, or outcomes, impacts or sustainability achieved that get measured much later than the point of sale. If outcomes (e.g., additional income) take precedence over outputs (e.g., product sales), the proportions could also be changed accordingly (e.g., 40% for sales and 60% for measured outcomes). An incentive split approach could also be adapted if one wants to reward more long-term impacts, which might be verified 12 months or 24 months after point of sale. One lesson learnt is that rewarding impacts further down the results chain requires implementation periods of at least three to four years as impacts need time to evolve.¹²

“The easiest way to reduce transaction cost in relation to the overall budget is focusing on higher ticket sizes. It’s a question of priorities.”

Bjoern Stuewer, Founder and CEO of Roots of Impact

7. Make use of cost-reduction potentials.

One option to bring down transaction costs is to increase ticket sizes. This works if the companies targeted are ready with their business model, their customer portfolio, and team to absorb larger capital amounts for larger impact promises.

Also, digitalisation promises to reduce costs dramatically while enabling data collection and analysis of unprecedented scale, promising many insights in business dynamics and strategies. Digitalisation may help to scale SIINC on several dimensions:

- to streamline application and company selection process;
- to automate verification and disbursement process;
- to conduct analytics on aggregated project- or fund-level impacts;
- to inform implementers project management.

In practice, this can mean anything from sending electronic documents by email, to uploading documents to web-based platforms, to engaging with artificial intelligence (AI) in Q&A sessions. The appropriate form of digitalisation depends a lot on the donors’ requirements and the applicants’ ca-

pacities and needs. If donor requirements are very complex or applicants are inexperienced, technical advisory and an easy-to-reach contact person are crucial to support enterprises in refining their SIINC intervention strategies.

8. Add-on packages on TA and close alignment with impact investors.

As SIINC is often targeting early-stage companies, it usually takes more than just financial support to support enterprises shift to the path of deep impact. On top of offering SIINC payments, the implementer should add a technical assistance package that supports companies with business development services and technical advisory on products as well as impact measurement and management. As impact investors are one of the key stakeholders in a SIINC set-up, any SIINC model should be aligned with their interests right from the design phase. To strengthen the links between early-stage enterprises and impact investors, another support package should be matchmaking services by the implementer, e.g., referring the SIINC company to potential impact investors, organising B2B events, and providing financial advice to companies to get investment ready.

In conclusion, the Kenyan pilot has generated several learnings that help to improve and scale up the SIINC approach. These should be taken up and tested on a broader scale in other countries for other off-grid business models. As a pioneer in the field of RBF within the sector, EnDev will continue pushing the boundaries of RBF approaches. While SIINC cannot be the only instrument, it can certainly help bring us one step closer to reaching SDG 7 by unlocking the full potential of high-impact businesses and mobilising much-needed private capital.

¹² This observation is in line with EnDev’s experience: RBF projects need a minimum implementation period of three years, ideally more, for RBF design, set-up of implementation structures, and for allowing sufficient time for results delivery and market development. [Compare EnDev \(2021\): Transforming energy access markets with Results-based Financing. Lessons from 7 years of implementation under EnDev’s RBF Facility financed by UK Aid.](#), p.18.



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