



Why localisation matters for financing off-grid energy

Results-Based Financing and creating a pathway to access investments



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Disclaimer

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Introduction

Results-Based Financing (RBF) is increasingly seen as a useful instrument to de-risk commercial investment and stimulate private sector engagement for the delivery of results in challenging markets. Successfully tested and fine-tuned in the distributed renewable energy (DRE) sector since 2014 in several countries, RBF mechanisms are now ready for replication and further scaling. To ensure efficiencies in implementing larger RBF initiatives, remote management of multi-country initiatives is tempting. However, this might lead to excluding local players and potentially distorting local market dynamics. This is a call for a balanced approach, with local embedding of RBF and investment facilities to ensure inclusion of local companies, buy-in at a national level, and -ultimately- systems change to ensure longer-term sustainability.

Background

With 770 million people globally not having access to electricity, of which 75% living in Sub-Saharan Africa, we are still far away from the goal to achieve universal access to energy. According to the International Energy Agency (IEA), [distributed renewable energy solutions are the least-cost way to provide power](#) to more than half of the global population gaining access by 2030. This is especially the case in remote rural areas in African countries, where small-scale solar photovoltaic (PV) stand-alone systems and mini-grids offer a viable solution to provide energy access.

Despite this potential, according to Sustainable Energy for All's (SEforALL) Energising Finance research, [investment in off-grid solutions was only 1.2 percent of the total finance for electricity](#) tracked among the 20 countries worldwide with the highest access deficits. On a positive note, the effects of the Covid-19 pandemic have not been as acute as feared. [Investments in the off-grid solar sector remained stable in 2020](#), even increased slightly compared to 2019. Although investment volumes have been consistent for the past 5 years, at around USD 300 million annually, the amount of [funding addressed to off-grid companies needs to grow at least twofold](#) per year to achieve universal energy access in 2030. At least half of this funding is expected in the form of (public) subsidies, to unlock commercial finance and reach the poorest people. Exciting new developments are underway, [including the historic \\$ 1 billion initiative](#) launched by IKEA Foundation and Rockefeller Foundation to catalyse investments in distributed renewable energy, the single-largest DRE initiative to date.

Unlocking private capital through Results-Based Financing (RBF)

[Results-Based Financing \(RBF\)](#) has gained increased recognition over the past few years as a valuable instrument for donors and development partners to de-risk commercial investment and incentivise the engagement of companies offering distributed renewable energy (DRE) solutions in hard-to-reach markets, delivering energy access to those who need it most. The key feature of RBF is payment upon delivery, with the private sector expected to take the full risk until the delivery of the

contracted results. RBF payments are only made after successful verification of energy access connections delivered by the companies. This makes RBF [less distortionary than other incentive programmes](#), producing better results for a lower expected cost, while leveraging private sector investment and enhancing financial as well as impact returns.

After initial scepticism and doubts around potential market distortion, [RBF was embraced by the private sector](#) as a key mechanism to accelerate additional investment and scale up energy access. Leading [investors encouraged further donor commitment to RBF schemes](#) - particularly for mini-grids- to unlock the private capital needed to achieve universal energy access. Also, [SEforALL adopted RBF](#) as the key mechanism to put the world on track to achieve universal electrification and clean cooking access.

Trends, opportunities and risks

While the first successful RBF schemes were developed and rolled out at a country level, we increasingly see a move to larger, multi-country RBF facilities. With RBF instruments reaching further scale, steps were made in terms of centralised fund management and ICT innovations to increase efficiency in RBF operations. We recognise the importance of these steps to achieve the required scale to significantly contribute to universal energy access.

At the same time, remote management of these support mechanisms – often from Europe or the US – comes with the risk of RBF funds excluding local innovation. With decisions taken far away from where the actual investments are needed, it might lead to insufficient

responsiveness to local market dynamics and largely subsidising international companies that are already well-capitalised. Ultimately, remote design and management of RBF facilities can lead to supporting only the lowest hanging fruit in energy markets and failing to build market systems with the inclusion of local players and vulnerable consumers. We, therefore, call for a balanced approach, with local embedding of RBF and investment facilities to ensure longer-term sustainability.

A call for localisation of RBF mechanisms

Why is local embedding of market support mechanisms like RBF so important? Below we give a first outline of arguments and invite practitioners to join this debate. We grouped our arguments along three main pillars, on why local embedding of RBF is critical to ensure:

- inclusion of local companies,
- national level ownership and enabling environment conditions,
- systems change.

Inclusion of local companies

When designed well, RBF can be a useful instrument to unlock market barriers constraining private sector delivery of modern energy services to isolated communities, and de-risk and leverage commercial investment, as confirmed by [research from the World Resources Institute](#). However, if RBF only rewards well-established commercial players for business activities they would anyhow have done, it loses its purpose. If successful, RBF stimulates new business

initiatives to underserved and vulnerable consumer market segments while crowding in additional capital to stimulate activity that otherwise would not have happened.

RBF intends to build a broader ecosystem of players with different products and offerings, stimulating competition to have tailored products and services in place for customers, at an affordable price. If we truly want to achieve universal energy access, we need more companies delivering those services, and we particularly need local companies to be part of this – companies that tend to be product agnostic and adjust their business offerings to local needs, and whose management capacity is dedicated to responding to local dynamics.

If only a few companies are subsidised through RBF that are already capable of operating at scale, the additionality of such an intervention is questionable. Moreover, it can lead to market distortion and monopoly creation at the expense of smaller – often local – companies. Rather than stimulating local market development from the bottom up, such RBF initiatives risk taking a top-down approach to market development that can jeopardise local business drive and innovation capacity.

Capacity building within local companies

Local companies have a very hard time accessing the investment required for their sustained growth. RBF programmes can enhance their additionality and sustainability by identifying promising local companies, helping them create a track record and increasing their investment readiness. Different companies have different needs and will require tailored business development support in terms of financial

Investment gaps of early stage & local companies

Local companies often require both smaller loans (sub-\$ 500k) and accompanying investment-readiness support. The resultant high transaction costs make them unviable for commercial lenders to consider. Between 2018-2020 SunFunder, in partnership with IKEA Foundation which subsidised part of those transaction costs, was able to work with 10+ earlier-stage companies and refer 30+ companies to other investors or investment-readiness advisors.

The main lessons learned were that: (1) There is a lack of “high quality” third-party business advisory and other services to help build the investment readiness of small, earlier stage and/or local businesses; (2) consistent with findings by the World Resources Institute, “[entrepreneurial support services should be provided by early-stage investors themselves](#)”; and (3) investment readiness takes time (2-4 years) and there is a need to accelerate this timeline.

The investment-readiness support SunFunder has identified that is particularly needed by local companies to absorb growth investments and scale up their activities are:

1. Capital raise structuring and funding options
2. Cash flow planning
3. Unit economics and financial modelling
4. Accounting support and training to create high quality financial reports
5. Legal support to help understand loan documentation and training on covenants
6. End-user data and portfolio health analysis

In addition, non-financial gaps exist that are important to build a track record:

1. Market scoping, R&D, product-market fit
2. Business plan review and refinement including understanding viable growth pathway, succession planning and articulation of distribution strategy
3. Reporting best practices, including ESG and impact methodology and measurement
4. Human resources (team building & training)

Paired with RBF grants to de-risk commercial investment, investment-readiness support to local companies will contribute to an inclusive growth of the off-grid energy market, and the scaling needed to achieve universal energy access.

management, business planning, marketing, technological innovation, amongst others. Working alongside companies to further build their capacity, will in the end contribute to pipeline development for investors, diversification of investment portfolios, risk reduction and potential for impact at scale.

Technical assistance and capacity building for local companies requires local presence in those markets. Investors themselves can be best positioned to identify gaps and provide targeted investment-readiness support (see box on page 7). Capacity building will demand more than online, centralised training or knowledge exchange events. It needs personalised follow-up and on-the-job coaching of businesses, based on a solid understanding of the local market context. It requires an adaptive approach from fund managers to encourage participation of local companies in RBF and other financing facilities, with tailoring of fund design, eligibility criteria, financing conditions, tools and templates to be used, as well as practical guidance to build up the capacity of local SMEs to effectively engage in these facilities.

Local market knowledge to reach marginalised communities

Local off-grid energy companies play an important role in reaching populations currently overlooked by the larger pay-as-you-go solar players, and also act as important distribution partners for product manufacturers. While not all of them will scale as their leading multinational peers have done, most of

them are already profitable and need to accelerate their track record to be able to access the capital required to grow. RBF can be a critical instrument to support them.

Examples of such RBF mechanisms which triggered engagement of dozens of companies, including many local players, are the Kenya and Tanzania RBF windows which SNV managed as part of the broader EnDev RBF portfolio funded by UK Aid¹. In Kenya alone through these RBF facilities, [1.6 million people gained access](#) to cleaner energy solutions and 4,678 new jobs were created along the solar and cookstoves value chains, with at least 40% of these jobs going to women. The RBF for solar systems was supported by a second project targeting capacity building in last-mile distribution channels.



Company staff showcasing a PAYGo solar home systems in Tanzania *[Picture: Martijn Veen, SNV]*

In [Tanzania](#), the RBF scheme worked with 11 off-grid solar companies to deliver solar home systems in remote parts of the country not reached by these companies before. As a result, 390,000

¹ From 2013 to 2020, the [Energising Development \(EnDev\)](#) programme piloted results-based financing (RBF) approaches to enhance energy access markets in Africa, Asia and Latin America, benefitting 5.8 million people with improved access to energy. The trajectory was closed with a number of [webinars](#) and publications, including EnDev's latest report with

a [summary of the initiatives supported by the RBF Facility](#). As part of this broader RBF Facility funded by UK Aid, SNV took part in the implementation of RBF schemes in Cambodia, Kenya, Laos, Tanzania, Uganda and Vietnam.

people gained access to electricity between 2014 and 2018, 1,256 new jobs were created, and a sustained presence of firms was achieved to continue delivering energy access in the years to come. The projects exceeded initial expectations and overshot their targets, which contributed to the approach being adopted by several donors and development partners, as well as further scale-up in Tanzania through the [Green Economic Recovery Fund](#). By now, the Tanzania solar RBF supported over 1.1 million people with access to clean energy services.

Supporting national-level ownership and enabling environment conditions

Ensuring universal access to energy is on top of the agenda of many national governments, with off-grid energy solutions increasingly being seen as a necessary element to achieve this goal. Governments play a critical role in ensuring enabling environment conditions to support the market development for distributed energy. This is particularly the case for the mini-grid sector, where companies depend on regulatory frameworks and conditions put forward by government authorities, including concessions, licensing, and tariffs, amongst others. Without having such basic conditions in place, or lack of stability in those, commercial investment and hence the deployment of RBF schemes is a risky business.

A good example is the FCDO-funded [BRILHO Energy Africa](#) programme in Mozambique, which includes a component on Policy Reform and Institutional Strengthening in addition to its US\$ 19 million Market Development Fund with early-stage grants, RBF and

technical assistance for decentralised renewable energy companies. Working with Mozambique's Ministry of Energy (MIREME), rural energy agency (FUNAE) and other critical stakeholders, BRILHO supported the development of the first mini-grid energy regulation for Mozambique that will provide the required framework of clear procedures and conditions for mini-grid business initiatives to be implemented in the country. The regulatory framework for mini-grid development in Mozambique was fast-tracked after BRILHO's first call for applications, in which mini-grid operators expressed interest to invest in Mozambique, indicating the urgent need to proceed with the articulation of policies and regulations.

Another example is the Government of Kenya (GoK), which seeks to close the energy access gap in underserved areas of the country through the US\$ 150 million [Kenya Off-Grid Solar Access Project \(KOSAP\)](#), supported by the World Bank. Central to KOSAP is an RBF facility paired with a debt facility, managed by SNV and SunFunder. As service providers to the GoK, SNV and SunFunder manage a US\$ 47 million facility including RBF and debt financing, both local currencies. Working closely together with government officials builds their capacity along the way, enabling them to manage such facilities effectively. Noteworthy is KOSAP's focus to not only impact 250,000 households with access to clean energy, but it's emphasis on encouraging the sustained growth of local and early-stage companies. To this end, working with SNV and SunFunder's local offices allows for closer engagement with emerging players, cost-efficient due diligence site visits, as well as incorporating investment-readiness and other capacity-building support for local businesses.

Local embedding of RBF and investment facilities: example from Tanzania

In the off-grid solar RBF managed by SNV with Tanzania's government-owned TIB Development Bank, as part of the global EnDev programme, the RBF incentives provided to solar companies acted as a contingent source of repayment that enabled SunFunder to include local companies in their loan portfolio, expanding their activities and, ultimately, the number of people who gained improved energy access.

Backed by RBF contracts, local solar companies managed to access commercial loans for the first time, initially in the range of US\$ 50k and 100k, to kickstart operations in remote parts of Tanzania. An example is ENSOL Ltd, currently one of the leading local solar companies in Tanzania. Unlike many other players in this sector, ENSOL is a 100% local company, founded, managed and operated by Tanzanians.

'Supported by FCDO's Results Based Financing (RBF) fund managed by SNV, we started offering Lighting Global approved products to rural customers through a network of SACCOS. The RBF allowed ENSOL to open an office in the Lake Zone and expand operations in that area significantly. ENSOL used the RBF to leverage debt financing. Furthermore, the RBF has allowed ENSOL to access larger-scale solar projects that required presence in this part of the country: a \$ 400,000 streetlights project in Kigoma and a \$ 100,000 solar water pumping project in Shinyanga Region. With the commercial operations we have been able to develop so far, we are confident to sustain our business in this part of the country in the future'. Prosper Magali, Co-Founder & Director, ENSOL Ltd.

The company's engagement in the RBF facility enabled them to start a new financing relationship with SunFunder. This was soon followed by further solar projects backed by additional SunFunder loans. Over the years, early-stage grants and RBF enabled ENSOL to build track record, fine-tune their business model and operations, expand their team and enter into new business areas. In some ways, the grant financing has been a necessary alternative to equity investment, which is scarce for many local businesses in Tanzania, in supporting the company's organic growth.

Over the course of several loans to ENSOL, SunFunder's investment team provided the company with instrumental investment-readiness support. These included building new financial models, improving the company's financial reporting, advising on human resources strategy and the profile of a new financial controller, and providing legal clinics to assist with financial and legal documentation. It proved to add significant value to have an active investor directly involved in providing this support, based on their in-depth view of the gaps in the local companies' investment readiness. While the increased transaction costs are often a bottleneck for investors to deliver this support directly, it provided an opportunity for better designed technical assistance and to leverage commercial investment in local firms.

In Tanzania, the RBF programme managed by SNV has seen other solar companies growing their businesses too and becoming ready for larger loans of USD 1-5 million and above. Within a few years, selected solar suppliers and their retailers had received nearly € 1.9 million in financial incentives, complemented by an additional € 13 million investment by those companies; a 1:7 investment leverage ratio. It led to a sustained private sector presence in those parts of the country, resulting in 36 new solar products available on the market, the creation of 1,256 new jobs, and 390,000 people with access to electricity. The Tanzania solar RBF played an important role in kickstarting and scaling the solar market to include remote areas of the country. By now, solar power has become a dominant electricity source in Tanzania, with 64.8% of rural households using electricity generated by solar devices.

[Systems Change case study: Igniting markets for solar energy in Tanzania](#)

Contributing to systems change

Beyond achieving concrete results in terms of energy access connections, RBF facilities can be ambitious and target systemic change: making sure that impact continues to be delivered and further scaled up after the RBF financing has come to an end. The aim is to achieve a sustained presence of distributed renewable energy (DRE) companies, with viable, scalable business models, continuing to deliver quality products and services; with governments putting in place stable, reliable regulatory frameworks and conditions that will allow further market growth; financial mechanisms that ensure affordability for end-users, leaving no-one behind; and fair local employment creating private-sector driven pathways for professional development of women and youth in the energy sector. This requires an ecosystem approach in which supply, demand and enabling environment conditions are considered in an integrated manner. Often, a stand-alone RBF mechanism to incentivise the supply side will not do the trick.

Exit strategy and RBF adjustments over time

Based on lessons learned in RBF mechanisms, evidence shows that it can be a useful tool to de-risk private sector engagement and scale-up into new markets, thereby increasing access to clean energy in off-grid communities. The starting point in any RBF design should be a detailed understanding of the local market context. This is to define if and how RBF incentives can make a difference by reducing certain market barriers in a manner that sets companies on a path towards commercial viability. RBF funds are generally a temporary

mechanism and should be designed with a clear exit strategy in mind, by gradually adjusting incentive levels over time. For example, with markets maturing and the density of sales increasing in certain parts of a country, incentive levels might be decreased in those areas, while maintaining higher incentive levels in more fragile markets, considering segments with challenges on ability and willingness to pay. To this end, SNV developed the [Vulnerability Access Index \(VAI\)](#), a tool to geographically differentiate RBF incentive levels based on socio-economic conditions and market maturity. The VAI tool so far has been applied in RBF mechanisms managed by SNV in Tanzania and Mozambique, with promising outcomes.

Beyond rewards for energy access, there is potential to gradually move towards outcome-based rewards, with incentives tied to higher energy service levels and impact at the customer level (e.g. increase of income, employment, productivity, gender equality, amongst others). As market dynamics vary between regions and change over time, RBF instruments need to be able to respond to this. Their design and operations need to accommodate private sector needs (e.g., quick payment terms and clear operating procedures) and be accessible to different types of companies (e.g. local and international, new ventures or established operators) to ensure a level playing field.

Needs for local partnerships and technical assistance

It has become apparent that successful RBF facilities do not work in isolation and require close collaboration with multiple stakeholders in both the energy and financial services sectors. The odds for



RBF holds great potential to scale up productive use of renewable energy (PURE) solutions, such as solar powered irrigation *[Picture: SunCulture]*

RBF success increase where certain preconditions are in place (e.g., regulatory frameworks, tax regimes, consumer awareness, mobile money access, etc.), as well as private sector capacity and potential to leverage pre-financing. In most markets, part of these conditions will be missing, or deficient, and hence complementary support, technical assistance and partnerships are needed to create them. These support measures differ per geography and hence require a localised approach to truly achieve systems change.

Conclusion

When designing new RBF mechanisms, let's indeed centralise what we can, to make RBF operations more efficient. Let's make optimal use of ICT innovations and centralised data management systems to simplify (verification) procedures and time investment both for fund managers and participating companies. Several platforms are currently available to further facilitate this development.

At the same time, let's do justice to the complexities of ensuring sustainable market development and systems change, which require localised solutions, inclusion, and special attention to the needs of local companies, and close coordination with government authorities. To achieve universal energy access, we need all hands-on deck.

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Martijn Veen is Global Head of Energy at SNV. Audrey Desiderato is Co-Founder and COO of SunFunder. Initially based out of Arusha, Tanzania, both have been closely involved in development of the off-grid solar sector since 2014. Collaboration between SNV and SunFunder continues until this day, amongst others in the World Bank funded Kenya Off-Grid Solar Access Project (KOSAP).

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Main picture on front page: Staff from a Savings and Credit Cooperative (SACCO) in rural Tanzania showcasing pico-solar PV systems provided by ENSOL Ltd., local company taking part in the UK Aid funded RBF facility in the Lake Zone of Tanzania. Building on this initial engagement of ENSOL in the Lake Zone, the company managed to scale up their operations, inclusive of solar-powered water pumping, street lighting and larger scale solar projects.

[Picture: Russell Watkins, FCDO]

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