BGFA
Beyond the Grid
Fund for Africa

FACILITY MANAGER:
NEFCO

Beyond the Grid Fund for Africa

ANNUAL RESULTS REPORT 2024

Photo: Farmer family in rural Lusaka
- Jason Mulikita for BGFA / Nefco

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FACILITY MANAGER:

NEFCO

PROJECT IMPLEMENTATION PARTNERS:

NIRAS | REEEP

FINANCIERS:

Sweden Sverige | Ministry of Foreign Affairs of Denmark Danida | german cooperation Deutsche Zusammenarbeit KfW | Norway Norad | Power Africa A U.S. Government-led Partnership

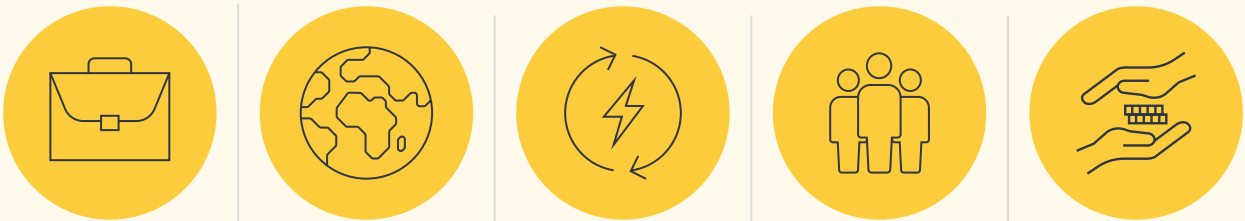
Introduction and key achievements

In 2022, global progress on delivering universal access to electricity reversed for the first time in two decades, with population growth outpacing efforts to expand electricity provision. As a result, 685 million people remained in energy poverty and, without action, 660 million could still lack electricity by 2030. This is both unacceptable and solvable. Off-grid solar offers a cost-effective solution to reach 40% of those still without power, particularly in rural, low-income and conflict-affected areas. It can also offer reliable energy to 1.6 billion people facing frequent outages, supporting businesses and daily life.

There are significant challenges to extending the grid to remote areas, making off-grid solutions like mini-grids and solar home systems a more viable option. Many companies are using mobile money and other payment systems to make clean energy more accessible, though the market remains risky for investors.

The Beyond the Grid Fund for Africa (BGFA) is addressing these challenges by supporting climate change mitigation, energy access and gender equality in its partner countries. By 2028, BGFA aims to establish up to 1.7 million energy connections, benefiting over 8.7 million people across six countries: Burkina Faso, the Democratic Republic of the Congo, Liberia, Mozambique, Uganda and Zambia.

Key achievements of BGFA 2019-2024



30
portfolio companies

6
Sub-Saharan African countries

610k
Energy service subscriptions delivered

3.15m
Impacted lives

€59m
Co-financing leveraged

Figure 1: Cumulative achievements of BGFA during 2019-2024

Executive Summary

BGFA continues to display the transformative power of results-based financing in the African off-grid solar sector. Despite challenges in 2024, BGFA advanced its mission to expand renewable energy access, showcasing the resilience and innovation of its investees. With affordability constraints and financing gaps, only 22% of unelectrified households could afford basic Tier 1 solar energy kits. Affordability is an even greater challenge in remote areas.

In 2024, BGFA achieved key milestones by contracting five new portfolio companies in the Democratic Republic of the Congo and Uganda, bringing the total to 30. These agreements aim to deliver over 1.7 million connections, benefiting over 8 million individuals mainly in peri-urban and rural areas. A record EUR 9.5 million was disbursed across five countries, connecting nearly 2 million beneficiaries in 2024 alone and raising the total to over 3.1 million people.

Nefco's role as implementer has been vital in managing and driving the programme's success. Donors – Denmark, Germany, Norway, Sweden and an in-kind support from the US – remain critical to achieving BGFA's objectives. This collaboration underpins efforts to illuminate a sustainable energy future for Africa.

Insights from the Lean Data report by 60 Decibels highlight that BGFA companies are providing much-needed energy products and services, often for the first time – 75% of customers did not have access to a similar proposition before BGFA companies reached them. BGFA intervention contributes significantly to climate resilience, with over half the customers (53%) feeling more prepared for potential climate shocks. BGFA investees have greatly improved quality of life, reduced energy spending and enhanced safety and security for customers. While rural reach can be increased, the portfolio performs well on gender and inclusivity indicators.

The institutional support programme, inspired by successes in Zambia through the Beyond the Grid Fund for Zambia (BGFZ) pilot programme, addresses regulatory barriers through Off-Grid Task Forces in all six BGFA countries. Reflecting on 2024, off-grid solar solutions are vital to achieving universal energy access, and additional efforts, including subsidies, are needed to bridge affordability gaps for the most vulnerable.

Photo: Visit to BGFA investee in Uganda in 2024 - NIRAS

A word from BGFA Chair

Adam Öjdahl
Chair, BGFA Steering Committee
Sida, Sweden

The Beyond the Grid Fund for Africa (BGFA) continues to exemplify the transformative power of results-based financing in the African off-grid solar sector. In 2024, despite significant challenges, BGFA advanced its mission to expand renewable energy access, showcasing the resilience and innovation of its investees.

The African off-grid solar industry faced affordability constraints and financing gaps in 2024: only 22% of unelectrified households can afford Tier 1 solar energy kits, with affordability being an even bigger challenge in remote and fragile areas, where costs can rise by 57%. BGFA's portfolio reflects these challenges, yet our targeted support has mobilised €1.21–€1.65 for every €1 of BGFA funding, depending on project maturity, with further growth expected[2].

In 2024, BGFA achieved key milestones. Five new portfolio companies were contracted in the Democratic Republic of the Congo and Uganda, bringing the total to 30. These agreements aim to deliver over 1.7 million connections, benefiting more than 8 million primarily rural individuals. A record €9.5 million was disbursed across five countries, with nearly 2 million beneficiaries connected in 2024 alone, raising the total to over 3.1 million people.

Nefco's role as implementer has been vital in managing and driving the programme's success. The contributions of our donors – Denmark, Germany, Norway, and Sweden – remain critical to achieving BGFA's objectives. This collaboration underpins our efforts to illuminate the path to a sustainable energy future for Africa.

BGFA's commitment to learning has driven impact. Insights from the Lean Data Insights Report on BGFA by 60 Decibels[3] highlight that:

- Investees are providing much needed energy products and services, often for the first time – 75% of customers did not have access to a similar value proposition before the BGFA companies reached them.
- BGFA intervention makes a significant contribution to climate resilience, with over half of customers (53%) feeling more prepared for potential future climate shocks.
- At an individual level, BGFA investees have greatly contributed to improved quality of life, reduced energy spending and improved safety and security for customers. Whilst there is room to increase rural reach, the portfolio performs well on gender and inclusivity indicators.

The institutional support programme, inspired by Zambia's successes, is now active in all six BGFA countries, addressing regulatory barriers through Off-Grid Task Forces.

As we reflect on 2024, it is evident that off-grid solar solutions are vital to achieving universal energy access. Additional efforts, including subsidies, are needed to bridge affordability gaps for the most vulnerable. BGFA remains committed to fostering innovation and partnerships, empowering communities and driving sustainable development.

1. Financial mobilisation and financing trends: The Beyond the Grid Fund for Africa case – BGFA
2. The study was based on the seven most advanced portfolio companies within BGFA, located in Liberia, Uganda and Zambia, with their results benchmarked against nine other BGFA companies surveyed under other programmes.

Reflection by the Fund Manager

Ash Sharma
Vice President, Special Funds at Nefco (until March 2025)

Photo: Jussi Ratilainen for Nefco

As outlined in the Off-Grid Solar Market Trends Report 2024, the African off-grid solar industry faced several significant challenges in the past year[4]. Chief amongst these were affordability constraints facing the poorest customers and continued financing gaps for energy service providers. As noted in last year's review, these were not unforeseen. The Beyond the Grid Fund for Africa has been working to address these challenges for several years.

The report highlights that globally not all households without access to electricity can afford Tier 1 solar energy kits with pay-as-you-go (PAYGo) financing. Affordability becomes even more of a challenge in remote and fragile, conflict-affected and vulnerable areas, where costs are higher. The cost of serving remote areas increases prices locally by an estimated 57%, further reducing access among these communities. BGFA outcomes and the experiences of portfolio companies align with these findings, which are manifest in the operational and financial performance of many of our investees. Likewise, in terms of financing gaps, despite growing investment (USD 1.2 billion in debt and equity from 2022–2023), access to financing remains a major barrier for small and mid-sized off-grid companies, and while public funding is increasing it remains short of the USD 3.6 billion needed annually to provide electricity access to 398 million people by 2030. Outside of the largest companies, many investees have experienced difficulties leveraging funding, particularly in small markets and when seeking smaller ticket sizes.

Even in these challenging times, BGFA has been diligently building its portfolio and focusing on disbursing both advance payments to smaller companies and results-based funding to the industry more widely. The most recent country-based Call for Proposals were closed out, and the portfolio will reach completion in 2025 with the addition of several productive use of energy investees in Mozambique.

Given the current affordability and financial challenges facing the industry, BGFA is focussed on expediting financial support to our investees. 2024 was a record year for disbursements, with EUR 9.5 million in funding paid out in five countries. The rate of connections delivered accelerated in 2024 as the portfolio approached its peak, with nearly 2 million beneficiaries reached. By end of 2024, BGFA had impacted the lives of over 3.1 million people in five countries, and we expect this to continue as we seek to further optimise the portfolio.

Regulatory and institutional barriers to adoption persist. The institutional programme of BGFA has been bolstered both in terms of financial resources and management. Inspired by the experiences of the Zambian programme, Off Grid Task Forces are now active in all six BGFA countries and are well positioned to support positive change on the ground. An impact paper that highlights valuable lessons learnt was produced and disseminated.

Off-grid solar electricity is a significant part of the solution with regard to addressing the pressing energy access needs in Africa. However, it is evident that additional support needs to be provided through subsidies to address the affordability gap currently facing the people who are hardest to reach. Results-based financing has proven to be an effective means to channel this.

Solar home systems and mini-grids provide the most cost-effective route to the rural populations who still need to be connected to electricity by 2030, the majority of whom are living on the lowest incomes and many in fragile, disaster-prone or conflict-affected regions. BGFA will continue to support innovative energy service providers to meet these needs.

4. https://mtr.esmap.org/

Recent challenges in the off-grid sector and a way forward

Kari Hämekoski
Fund Manager of BGFA

Photo: Jussi Ratilainen for Nefco

The BGFA programme has been under full implementation for more than three years since the first agreement was signed with the company Mobile Power on 4 January 2022 in Liberia. Implementation followed a swift development phase in collaboration with the Renewable Energy and Energy Efficiency Partnership (REEEP) after the initial funding agreement with Sida was signed in 2019. Over time, additional donors, including Denmark, Germany and Norway, joined the programme. Furthermore, the US has provided in-kind support activities via the Power Africa initiative. Now, after six years of implementation, BGFA has made notable progress while also gaining valuable insights. However, also challenges have emerged along the way.

Complex operating environment

Given Nefco's extensive experience in operating within complex business environments, including developing countries, certain obstacles were anticipated. To mitigate risks, a comprehensive external evaluation of applications was conducted, followed by rigorous due diligence before contract negotiations. These measures helped establish more realistic targets for companies and resulted in necessary contract modifications.

While BGFA's overall performance has been strong, the programme has encountered delays, difficulties and instances of underperformance among some companies – challenges that were expected. At the same time, certain companies have exceeded expectations, resulting in additional funding allocations. Within budget limitations, further financial support will be made available to high-performing companies.

Nefco's project managers, in collaboration with implementing partners, work closely with companies to provide continuous support. Contracts are amended as needed, including streamlined funding adjustments, ensuring that reallocated funds benefit better-performing companies.

Additional challenges have arisen in 2024. In Zambia, prolonged drought reduced farmers' incomes while simultaneously driving higher demand for solar home systems (SHS) due to the country's reliance on hydroelectric power. Water shortages in Kariba Dam have led to extended load shedding. Meanwhile, in Uganda, a good harvest has had a positive impact on SHS sales.

Low-quality products impacting the market negatively

BGFA upholds strict requirements for product quality and warranties, mandating Verasol certification and a minimum three-year warranty for solar products. Despite these standards, some companies have encountered product quality issues. In at least two cases, Energy Service Providers (ESPs) had to return defective products to suppliers, leading to significant implementation delays.

Beyond these individual cases, broader sector concerns have emerged. Evidence suggests that substandard products are being sold in markets by non-BGFA companies and other suppliers of non-quality-verified products, undermining the off-grid sector as a whole. To address this, BGFA actively supports the Off-Grid Task Forces in all programme countries, with product quality a key agenda item.

Photo: Kari Hämekoski, Nefco discussing with Sun King staff in Zambia - Jason Mulikita for BGFA/ Nefco

While healthy competition – an integral aspect of BGFA's design – may have posed challenges for some companies, it is expected to strengthen the sector's long-term sustainability. The programme has always considered the dynamics between smaller, typically local, enterprises and larger internationally backed firms. At present, smaller companies face difficulties securing sufficient co-financing, and discussions around potential acquisitions are ongoing. Projects may also need to be discontinued.

Finding the right balance between large companies vs small local companies

Many BGFA design elements, such as dedicated funding windows, have been specifically tailored to support small local companies, enabling them to compete separately from large firms. The scoring matrices used in the external, independent evaluation of BGFA applications have favoured local businesses, particularly those with last-mile distribution capabilities. Additionally, the ESS incentive levels for connections are often higher for these companies compared to larger ones.

However, BGFA is not intended to serve as an early-stage financier, with other instruments available for that purpose. The programme aims to strike a balance between achieving numerical targets and fostering long-term business development. While large companies can accelerate electrification at a faster pace, supporting local businesses remains essential for the sector's long-term sustainability. BGFA has a strong technical assistance component, particularly supporting smaller companies.

Maintaining healthy competition while securing the sector's future

While competition is encouraged, certain market distortions may pose risks to the sector's long-term success. To safeguard viability, BGFA has established market-based minimum subsidy levels for different connection types. Exceeding these levels could lead to over-subsidisation, ultimately undermining sustainability.

To maximise funding efficiency while maintaining healthy competition and ensuring the sector's future, better coordination among government stakeholders, financiers and donors is essential. Programmes should be designed to ensure that financial support is utilised as effectively as possible, considering the perspectives of all stakeholders and beneficiaries.

Mini-grids are comparable to infrastructure projects

In 2024, the first solar BGFA mini-grid projects neared completion, and commissioning took place in early 2025. However, nearly all mini-grid projects have faced significant delays and challenges, beyond those encountered in the course of SHS delivery.

While mini-grids and SHS projects are sometimes grouped together, they are fundamentally different – mini-grids share the complexities that are typical of infrastructure development. Given the high expectations for mini-grids in electrifying underserved areas, Nefco will publish an assessment in 2025, examining sector challenges as well as future options and directions.

Balancing policy enforcement with business support through technical assistance

Another key focus for BGFA has been the enforcement of policies and action plans. The programme seeks to strike a balance between stringent policy requirements for ESPs and the need to support core business operations and sales. A central solution is technical assistance (TA), which is provided based on a needs assessment. TA not only helps companies meet and maintain BGFA requirements but also enhances their ability to secure additional co-financing by establishing and upholding strong policies and action plans relevant to their operations.

Two areas of continuous development are gender and electronic waste management. Efforts are underway to further collaborate with national and international stakeholders to improve e-waste management practices.

The BGFA portfolio is divided among companies providing solar home systems, mini-grids, battery rental and productive use appliances (Figure 2). Looking ahead to 2025, a key area of interest will be monitoring the implementation of productive use activities and assessing their developmental impacts. As ESPs increasingly offer solutions aimed at productive use, these activities are expected to further drive economic benefits within the sector.

MINI-GRIDS

Energicity (LBR)
Equatorial Power (UGA)
NOA Energy Services (UGA)
Nuru (DRC)
Power Corner (ZMB)
Zambian Rising Sun (ZMB)
Zengamina (ZMB)

SOLAR HOME SYSTEMS

LAUNCH TO SCALE:
Altech (DRC)
ARESS (BF)
FINCA (BrightLife) (UGA)
LIB Solar (LBR)
Oolu (BF)
Qotto (BF)
RDG Collective (ZMB)
Vitalite (ZMB)
WidEnergy (ZMB)

DIRECT TO SCALE:
Bboxx (BF)
d.light (UGA & ZMB)
Easy Solar (LBR)
ENGIE Energy Access (UGA & ZMB)
Greenlight Planet (Sun King) (ZMB)

PRODUCTIVE USE OF ENERGY

Koolboks (UGA)
Solar Village (ZMB)
SunCulture (UGA)
Tulima Solar (UGA)
EasySolar (LBR)
LibSolar (LBR)
Qotto (BF)
RDG Collective (ZMB)

BATTERY RENTAL SERVICES

Mobile Power (DRC & LBR)
PoPo (UGA)

BURKINA FASO (BFA) | **DEMOCRATIC REPUBLIC OF THE CONGO** (DRC) | **LIBERIA** (LBR) | **UGANDA** (UGA) | **ZAMBIA** (ZMB)

Figure 2: Types of business models in the BGFA portfolio

Photo: Worker at the ENGIE Energy Access service center in Lusaka, Zambia - Jason Mulikita for BGFA / Nefco

BGFA's Theory of Change

Petra Mikkolainen
Senior Monitoring, Evaluation & Learning Manager

Photo: Jussi Ratilainen for Nefco

The **BGFA Theory of Change (ToC)** provides a framework for how the programme catalyses sustainable off-grid energy markets in Sub-Saharan Africa. It outlines the key activities, expected outcomes and long-term impact pathways to improve energy access, drive private sector participation and enhance socio-economic benefits.

Core pillars

BGFA operates through three primary pillars, complemented by a cross-cutting focus on communication and knowledge exchange:

1. Results-Based Financing (RBF): Approximately EUR 66 million at the end of 2024 in RBF incentives support Energy Service Providers (ESPs) to expand energy services.
2. Technical Assistance (TA): ESPs receive tailored support to strengthen business operations, compliance and impact strategies.
3. Institutional Strengthening: Policy engagement and market coordination efforts help address regulatory barriers and improve the enabling environment through Off-Grid Task Forces (OGTF).

Expected outcomes and impact

Through these interventions, BGFA aims to:

- Scale up firms' activities, enabling them to deliver clean energy solutions to underserved areas
- Facilitate co-financing to reduce business risks and attract further investment
- Improve regulatory conditions to foster market stability and long-term sustainability
- Support productive use of energy (PUE) to drive income-generating activities and local economic growth
- Reduce environmental impact by displacing fossil fuel-based alternatives and improving e-waste management.

Ultimately, the aim is to improve the quality of life of underserved populations, including other social and environmental benefits.

Key assumptions, risks and alternative scenarios

The ToC describes the best-case scenario, where all assumptions – such as the companies' ability to scale commercially, customers' willingness to pay and the availability of investment – hold true. However, in reality, country contexts vary, and many external factors influence outcomes. Risks such as financial market volatility, policy uncertainties and the potential dependency of sustainable companies on subsidies pose challenges to achieving impact.

Recognising these complexities, the **ToC document also explores alternative scenarios**, acknowledging that market transformation may not always follow a linear path. It considers factors such as policy backsliding, financial instability and evolving energy demand, providing a framework for adaptive management and strategic adjustments.

The accompanying **ToC figure** visually summarises these linkages, illustrating how BGFA's structured interventions contribute to lasting energy access solutions.

In 2025, BGFA is to conduct a comprehensive mid-term evaluation to assess its theory of change, using it as the foundation for the evaluation framework. The theory of change will be refined based on the evaluation findings. The current full version is available on BGFA's website.

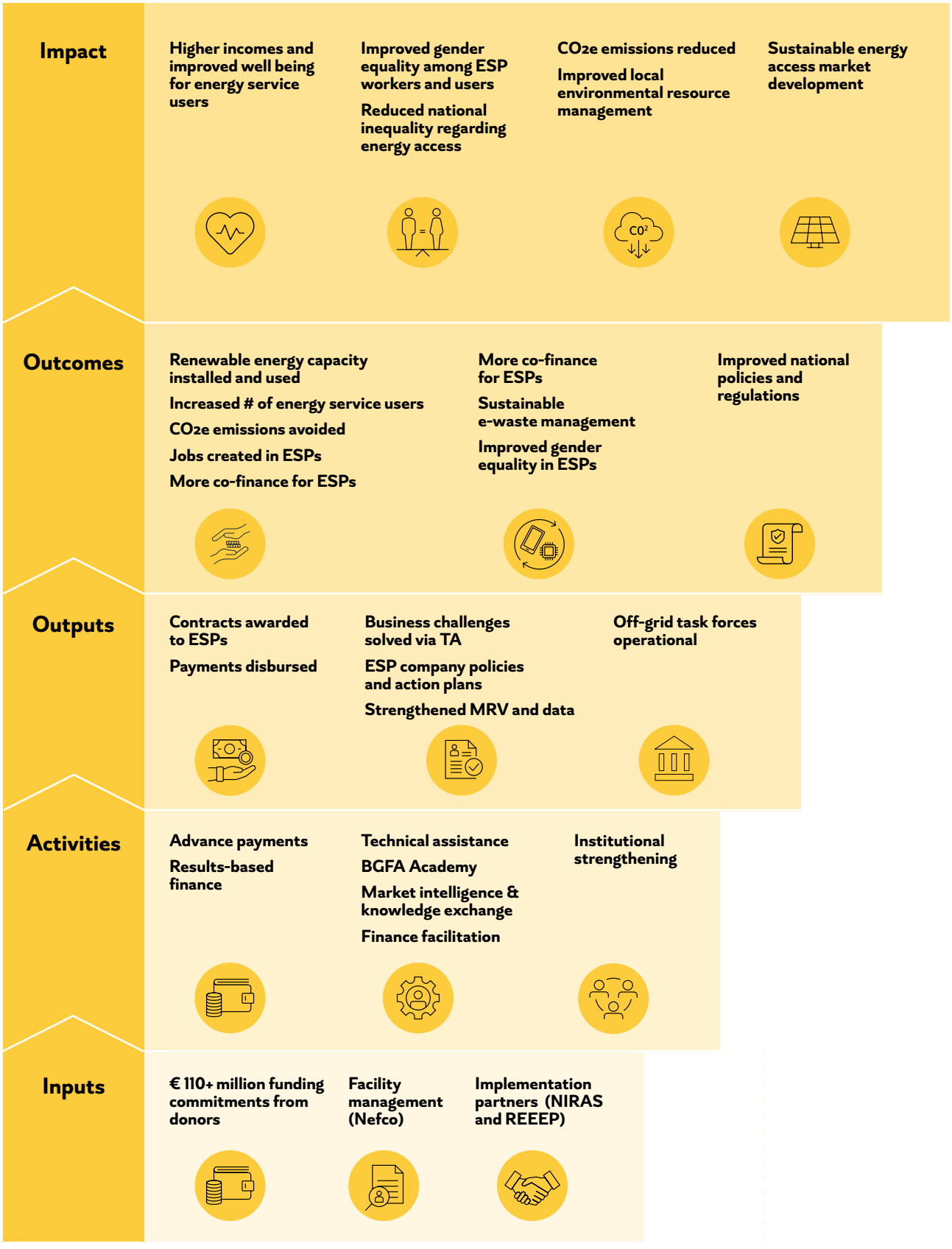


Figure 3: BGFA's summarised Theory of Change

Photo: Technical worker in Zambia - Jason Mulikita for BGFA / Nefco

Why results-based finance?

BGFA operates at the intersection of development cooperation and impact investing, supporting the green transition and advancing sustainable development across Sub-Saharan Africa.

Investee companies receive results-based payments, serving as a form of transitional finance designed for businesses operating in high-risk sectors and geographies. These payments are non-repayable but are disbursed only when the companies provide proof of selling solar energy systems and delivering the associated services to their customers. Results-based financing should not be confused with grants, which by definition are upfront payments for implementing activities. However, grant-based programmes also increasingly apply principles of results-based management.

A distinctive feature of results-based financing is that claimed sales must be checked before payments are released, with digital verification tools increasingly serving as the foundation of this process. Overall project progress is assessed concurrently. The process also includes measurements of positive social benefits at the household level and environmental impacts, such as avoided emissions. The approach aligns with impact investing principles.

Summary of results

Throughout 2024, several key milestones were achieved, continuing the positive trend seen in previous years of BGFA's operations. By the end of the year, the fund had improved the lives of over 3 million people, more than doubling the impact recorded by the end of 2023. Additionally, BGFA had disbursed nearly EUR 30 million in cumulative funding to portfolio companies.

BGFA monitoring, verification, and reporting process

Nefco ensures thorough and independent verification of the results claimed by energy service providers. The verification process includes multiple layers of scrutiny. Firstly, when a company submits a request for results-based payments to Nefco, an external team from NIRAS International Consulting reviews the request to ensure its accuracy and compliance with the contract. Secondly, companies undergo an annual review, involving an on-site visit and further assessment of the submitted information. The results obtained from these two steps are referred to as 'validated results' (represented as light green icons in this report).

Finally, a separate team of independent experts conduct sample-based verification, including telephone interviews, to confirm the reality of the reported results. This verification is carried out once or twice during project implementation. It provides the final result numbers for the key performance indicators (KPIs), known as 'verified results' (represented as dark green icons in this report).

High-level, approximate **fund-level targets** Estimated when BGFA was established

Expected results, also called **targets** Defined in the contracts between energy service providers and Nefco

Results that have undergone the first layer of **external validation**

Results that have undergone the final layer of **independent verification**

Table 1: Summary of BGFA's Key Performance Indicators (KPIs)

30
TOTAL PORTFOLIO COMPANIES
- **5 CONTRACTED IN 2024**

610,385
ENERGY SERVICE SUBSCRIPTIONS
- **369,680 ACHIEVED IN 2024**
- **210,681 ACHIEVED IN 2023**
- **30,024 ACHIEVED IN 2022**
- END-OF-PROJECT TARGET: 1.7M

99,9%
STANDALONE SOLAR SYSTEMS

1%
LESS THAN 1% CONNECTED TO MINI-GRIDS

1%
LESS THAN 1% PRODUCTIVE USE APPLIANCES

605,352
(99%) BY RESIDENTIAL CUSTOMERS

4,991
BUSINESSES BENEFITTED
- END-OF-PROJECT TARGET: 120,193

42
FOR THE PROVISION OF PUBLIC ESSs SERVICES

3.15M
IMPACTED LIVES
- END-OF-PROJECT TARGET: 8.7M

61
FULL-TIME JOBS (NET JOBS)
- END-OF-PROJECT TARGET: 7,995

12,752
SALES AGENT POSITIONS CREATED

€20.8M
DISBURSEMENTS MADE*
- **€9.9M ACHIEVED IN 2024**
- **€8.1M ACHIEVED IN 2023**
- **€2.8M ACHIEVED IN 2022**
- RESULTS-BASED FINANCE COMMITTED: €68M

€59M
CO-FINANCING LEVERAGED
- END-OF-PROJECT TARGET: €185.5M

65,837
TCO_2e AVOIDED**

9.3
MW INSTALLED**

25,668
MWh PRODUCED**

*Includes advance payments
**Conservative values

Photo: Shop owner in peri-urban area of Lusaka, Zambia - Lia Oker-Blom, Nefco

BGFA portfolio companies at the end of 2024

This section provides an overview of the BGFA portfolio companies as of the end of 2024. The accompanying table summarises the country, company name, technology used, results achieved and expected number of energy service subscriptions.

Table 2: BGFA portfolio companies at year end 2024

COUNTRY PROGRAMME	COMPANY	MAIN TECHNOLOGY	#ESS CUMULATIVE ACHIEVED %*	#ESS TARGET**
 **Burkina Faso**	Advens Bboxx	Standalone solar home systems	1.9%	91,750
	Oolu Solar	Standalone solar home systems	61 %	2,736
	ARESS	Standalone solar home systems	1.4 %	14,955
	Qotto	Standalone solar home systems	15.4 %	11,700
 **Democratic Republic of the Congo**	MPDRC (Mobile Power)	Solar battery sharing networks	3.9 %	69,000
	Alternative Energy Technologies Group	Standalone solar home systems	16.8%	55,700
	Nuru	Mini-grid	0%	10,524
 **Liberia**	Lib Solar	Standalone solar home systems	32 %	72,800
	Mobile Power	Solar battery sharing networks	33.6 %	9,361
	Easy Solar	Standalone solar home systems	3.9 %	9,155
	Energicity	Solar mini-grid	0 %	4,462

COUNTRY PROGRAMME	COMPANY	MAIN TECHNOLOGY	#ESS CUMULATIVE ACHIEVED %*	#ESS TARGET**
Uganda	POPO Universal Energy	Standalone solar home systems	0 %	15,675
	FINCA Plus (BrightLife)	Standalone solar home systems	8.8 %	97,132
	Tulima Solar	Standalone solar home systems	20.8 %	2,760
	D.light Design Uganda Limited	Standalone solar home systems	21.6 %	200,000
	ENGIE Energy Access Uganda (Fenix International)	Standalone solar home systems	81.5 %	249,600
	Koolboks	Productive Use of Energy	0%	3,300
	Equatorial Power	Solar mini-grid	0%	3,140
	NOA Energy Services Uganda	Solar mini-grid	0%	3,300
	SunCulture	Productive Use of Energy	1.1%	13,200
Zambia	Vitalite	Standalone solar home systems	15.9%	73,163
	RDG Collective	Standalone solar home systems	77.1%	25,697
	WidEnergy	Standalone solar home systems	4.7%	37,000
	SolarVillage	Standalone solar home systems	2.9 %	50,000
	Zengamina Power Limited	Small hydro mini-grid	20.3 %	2,600
	Power Corner Zambia	Solar mini-grid	0 %	3,212
	Zambian Rising Sun	Solar mini-grid	0 %	3,835
	Greenlight Planet (Sun King)	Standalone solar home systems	45.6 %	229,029
	Engie Energy Access Zambia	Standalone solar home systems	54.8%	295,668
	d.light Zambia	Standalone solar home systems	0 %	102,458
TOTAL NUMBER OF ENERGY SERVICE SUBSCRIPTIONS (ESS)				**1,762,912**

* In some cases, ESS established at the end of the year may already be reflected in the following year's portfolio report.
** ESSs vary by nature, and # of ESSs is not directly comparable. A mini-grid subscription can power small businesses whereas a solar home system typically provides electricity to meet basic household needs.

Photo: Woman farmer in Zambia - Jason Mulikita for BGFA / Nefco

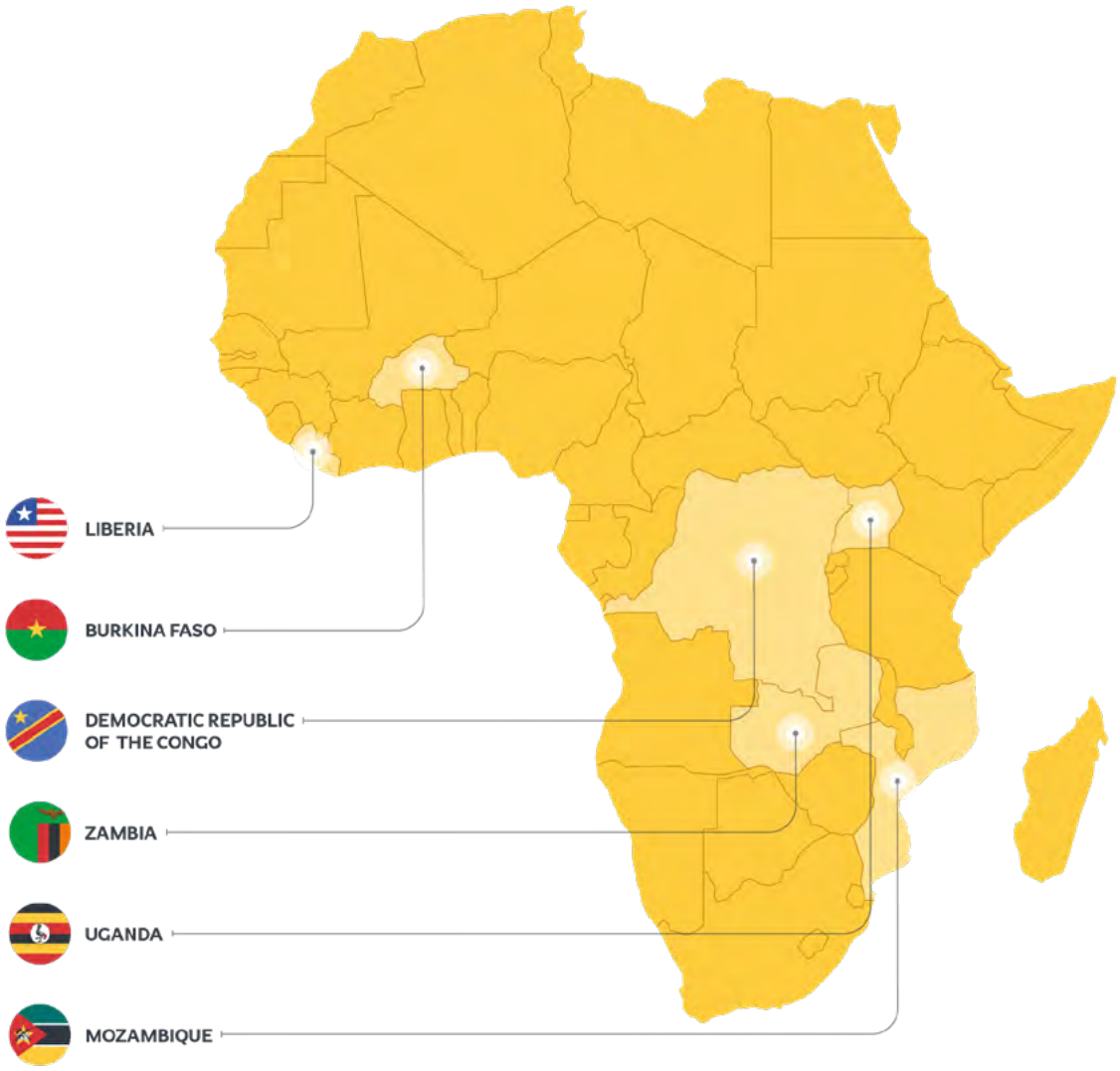


Figure 4: Map of all BGFA programme countries

Country overviews

Good progress has been made in all country programmes in terms of ESS performance and financing disbursed, especially in Uganda and Zambia, BGFA's largest programmes by allocated funding. Mozambique continues to represent a challenging market but following the launch of the productive use of energy call (BGFA6) there are currently several investments at the due diligence stage. The year 2024 saw an acceleration in reported energy access outcomes and a record year of disbursements to portfolio companies.

Burkina Faso

The application phase in Burkina Faso closed in 2023, and the portfolio consists of four investees – Bboxx, Oolu Solar (now Ignite Power), ARESS and Qotto – distributing and servicing solar home systems.

The security situation continued to be the main operational challenge in Burkina Faso, affecting the deployment of staff, whose safety can be at risk, as well as customers' ability to pay for solar systems, which are left behind when villages are abandoned and constitute an unrecoverable loss in account receivables. Rural customers in areas that are relatively safe often choose to save money, in preparation if they are forced to flee, rather than making a long-term investment in improving their livelihood through the purchase of a solar home system.

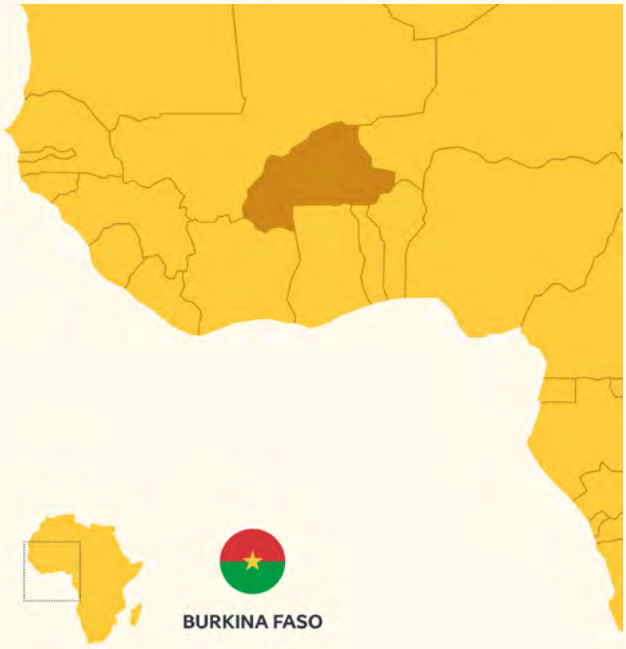


Figure 5: Burkina Faso

Table 3: Country-level KPI targets in Burkina Faso; results achieved in 2024 and cumulative results

KPI	ACHIEVED IN 2024*	CUMULATIVE ACHIEVED %	TARGET (EXPECTED AS IN CONTRACTS)
ESS	5,444	4%	121,141
# of people with access to electricity	28,065	4%	618,248
Funding committed			€6 million
Disbursements made %**			35%
Other cumulative results:			
Co-financing leveraged		€5.43 million	
% of ESSs in underserved areas***		100%	

*Externally validated results **Includes advance payments ***The entire country is considered an underserved area

Photo: Customer using Qotto SHS appliance in Burkina Faso - Qotto

"BGFA's financial support is enabling us to expand and scale our operations in hard-to-reach areas in Burkina Faso. It also gives us credibility with other financiers and partners, which helps to scale up our business activities."

Jean-Baptiste Lenoir
Co-founder and Chairman of Qotto.

QOTTO
BURKINA FASO

Providing access to electricity in hard-to-reach areas

Qotto BF SAS, a local subsidiary of French holding company Qotto SAS, was registered in Burkina Faso in 2018 and has proven experience delivering essential services in off-grid areas. The company was contracted under BGFA in spring 2023 with the aim of expanding operations across Burkina Faso by installing up to approx. 11,700 energy service connections through off-grid stand-alone solar home systems.

With BGFA financial and technical assistance provided during 2023 and 2024, Qotto has been able to strengthen its logistics, hire and train field agents and develop partnerships with local organisations to facilitate the distribution of solar home systems, including improvement of its PAYGo credit scoring and customer engagement.

The company has also implemented awareness-raising campaigns in rural communities in Burkina Faso, informing local people about the benefits of using off-grid solar home systems as well as the PAYGo payment system, which makes the products more affordable.

As a result of these increased efforts and activities, Qotto managed to establish some 1,800 sustainable energy connections (energy service systems – ESSs) by end of 2024, bringing light and electricity to approximately 9,000 people living across ten regions in Burkina Faso.

"We started using Qotto's solar home system a year ago and our life has completely changed. We have reliable sources of light every evening without interruptions, and we haven't needed to replace the battery even once. In the past, I had to change batteries every three months, which was both costly and inconvenient," comments **Sankandé Aziz**, a resident in Nadonon, a small village with fewer than 1,000 inhabitants, located 25 km from Sapouy in the south of Burkina Faso.

Photo: Jussi Ratilainen for Nefco

Aliona Fomenco
Investment Manager at Nefco

"Qotto is a good example of how BGFA can leverage financing for companies to expand their business into areas they otherwise wouldn't and provide access to off-grid energy solutions."

TARGETS

€1.2M
APPROX. IN COMMITTED BGFA FUNDING

11,700
ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

Democratic Republic of the Congo

Initial investments in the DRC were made in 2023, and the current portfolio consists of three investees deploying a combination of solar home systems, mini-grids and battery rental systems.

A further potential investment was at the due diligence stage as of the end of 2024.

The three investees, Altech, Nuru and Mobile Power, have the potential to reach over 659,000 beneficiaries and account for EUR 13 million in financial commitments. Moderate disbursements have been made to two companies.

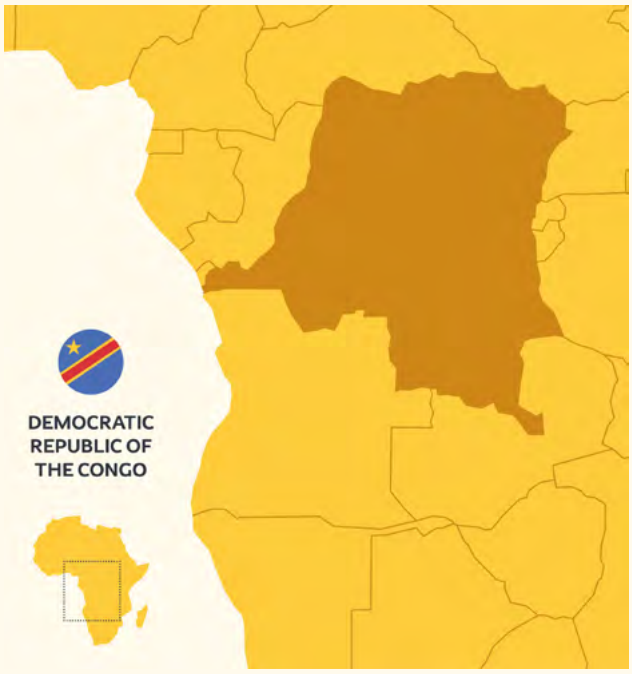


Figure 6: The Democratic Republic of the Congo (DRC)

Table 4: Country-level KPI targets in the DRC; results achieved in 2024 and cumulative results

KPI	ACHIEVED IN 2024*	CUMULATIVE ACHIEVED %	TARGET (EXPECTED AS IN CONTRACTS)
ESS	6,910	9%	134,224
# of people with access to electricity	35,932	9%	659,632
Funding committed			€13 million
Disbursements made %**			14%
Other cumulative results:			
Co-financing leveraged		€14 million	
% of ESSs in underserved areas***		34%	

*Externally validated results **Includes advance payments ***The entire country is considered an underserved area

MOPO
DRC

Battery rental: A convenient solution for both small businesses and households

The solar-powered pay-per-use battery technology company MOPO is providing clean energy solutions to low-income end-users and businesses in markets where access to electricity has been lagging for years. MOPO was founded in the UK in 2013 and has expanded both to Nigeria, DRC, Sierra Leone and Liberia, where it is scaling up its business activities with financial support from BGFA via MOPO's subsidiary in DRC and Liberia.

MOPO's business model is based on providing access to electricity through MOPO battery rentals to consumers in low-cost, time-based increments. The MOPO batteries are charged at solar powered MOPO hubs, and the company's inclusive payment options include cash and Mobile Money. The smaller MOPO50 batteries can be used for a wide variety of applications, for example to charge mobile phones, power external light bulbs, run TVs and meet household energy needs for up to 24 hours. Larger MOPOMax batteries can also replace generators and power electric motorbikes.

Since the start of its expansion into Liberia in August 2020, and with financial support received from BGFA in 2021, the company has been able to carry out over 26 million rentals spread across seven counties. MOPO hubs are operated by local agents from the communities. Implementing the same model, BGFA has also supported MOPO to scale up its operations in DRC, where it is quickly expanding.

Photo: Jussi Ratilainen for Nefco

Kari Hämekoski
Senior Programme Manager at Nefco

"MOPO has a unique battery rental business model. BGFA was apparently the first programme to recognise their business on par with solar home systems for providing connections. We are very pleased to see that BGFA's early support in Liberia helped MOPO scale up their business also in the DRC."

"Having successfully applied BGFA's initial investment to grow our renewable energy-focused battery rental business in Liberia, we are delighted to have received further support from BGFA to expand our operations in the DRC. Together, we are transforming power access for hundreds of thousands of people."

Chris Longbottom
CEO of Mobile Power

In DRC, along the side of a road in one of the neighbourhoods of Kikwit, the largest city in the Kwilu Province, Mr **René Atukabula Namwili** and Mrs **Huguette Katofu Ngalu** run a small shop. As small-scale entrepreneurs, the couple sells a large variety of household consumer goods.

Having previously run the shop without electricity, except for occasionally powering a radio using an old car battery, the battery rental service offered by MOPO has enabled the shop owners to invest in diversifying their electric devices, in turn leading to additional clientele and turnover for their business. As customers since April 2023, the shop owners currently rent three MOPO batteries a week. They learned about MOPO when the company set up a solar powered MOPO hub near to their shop.

"With the radio and the light on, we now attract some 40-50 customers a day and have seen our daily revenue increase by up to CDF 6000 (EUR 1.85)," Namwili explains. "You can return your empty MOPO battery and immediately take a full MOPO battery with you. It is much more convenient than bringing your car battery to a charging station and waiting for it to be fully charged," Ngalu comments.

TARGETS

€3M
IN COMMITTED FUNDING

69,000
ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

Liberia

The BGFA country portfolio in Liberia is technologically diverse, encompassing solar home systems, battery rental systems and a mini-grid developer.

The portfolio has been performing relatively well, and a further 12% of the allocated funding disbursed during 2024. The four investees – LIB Solar, Mobile Power, Easy Solar and Energicity Corp – have the potential to reach over 480,000 beneficiaries and account for EUR 5.5 million in financial commitments. Disbursements have now been made to all portfolio companies and 37% of committed funds have now been disbursed.

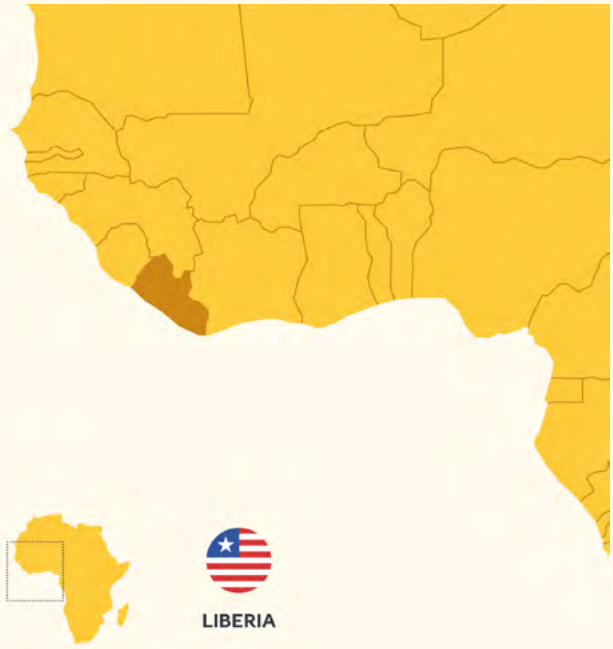


Figure 7: Liberia

Table 5: Country-level KPI targets in Liberia; results achieved in 2024 and cumulative results

KPI	ACHIEVED IN 2024*	CUMULATIVE ACHIEVED %	TARGET (EXPECTED AS IN CONTRACTS)
ESS	11,970	37%	957,78
# of people with access to electricity	61,287	37%	482,629
Funding committed			€5.5 million
Disbursements made %**			41%

Other cumulative results:

Co-financing leveraged	€11.7 million
% of ESSs in underserved areas***	54%

*Externally validated results **Includes advance payments ***The entire country is considered an underserved area

.

Photo: Commissioned mini-grid site in Farwhenta, Liberia - Aleksandra Reskalenko, Nefco

"Commissioning our first two mini-grids in Liberia in partnership with BGFA and the Liberian government has marked a significant milestone in our mission to bring clean, reliable and affordable energy to off-grid communities. The BGFA project demonstrates the power of innovative financing, technology and community-led development in bridging the energy gap and contributing to reducing energy poverty in Sub-Saharan Africa."

Nicole Poindexter
CEO and founder at Energicity

ENERGICITY
LIBERIA

First funded mini-grids are delivering electricity in Liberia

The first newly constructed mini-grids co-funded by BGFA are delivering electricity in rural northern Liberia. The mini-grids, developed and operated by Energicity, have the potential to provide up to 8,000 Liberians with access to electricity.

The mini-grids were constructed in 2024 and commissioned in early February 2025 in the communities of Totoquelleh and Farwhenta in Gbarpolu, in northern Liberia. Construction of the company's first sites in Liberia, the first completely new mini-grid sites commissioned in Sub-Saharan Africa with BGFA support, began in 2023. The two completed sites each have a total capacity of 26.88 kWp and distribute electricity to customers through ABC overhead line networks that can be easily expanded to meet growing community demand.

Energicity's mission is to provide affordable, reliable and scalable electricity solutions to rural communities in Benin, Liberia and Sierra Leone. An agreement with BGFA to develop business operations in Liberia was signed in May 2022 to support the company to develop and operate mini-grids to serve low-income customers in remote areas across the country. The aim is to develop up to 30 solar-based mini-grids in Liberia, relying on local materials and workers for the construction. Once in operation, the mini-grids will provide over 4,400 residential, commercial and institutional energy service connections.

Photo: Jussi Ratilainen for Nefco

Aleksandra Reskalenko
Programme Officer at Nefco

"It is fantastic to see that Energicity has come so far in Liberia with the support of BGFA funding and is now delivering electricity. Access to mini-grids will improve everyday life tremendously for the people living in these rural farming communities."

TARGETS

€1.34M
IN COMMITTED FUNDING

4,460
ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

Mozambique

A new funding round was launched in 2024 to support companies focused on providing productive use of energy (PUE) solutions across a range of fields, including agriculture. Example applications include solar water pumping and irrigation, food processing and distribution and e-mobility. PUE solutions linked to mini-grids are also eligible.

Private sector companies with experience of scaling PUE solutions in Mozambique or elsewhere in Sub-Saharan Africa were invited to apply for funding under a new Call for Proposals (BGFA6), jointly promoted by Associação Moçambicana de Energias Renováveis (AMER). The main goal of the funding round is to enable local energy service providers to accelerate their business growth in Mozambique and encourage international energy service providers to utilise the expertise and capacities of local market actors.

The total funding available is EUR 6.2 million, with the indicative individual contract size per energy service provider expected to be between EUR 1.0 and EUR 2.0 million. The new funding round is aimed at boosting energy access in rural and peri-urban areas; as a result, the municipality of Maputo and the municipality of Matola are excluded from BGFA6 financing. The Call received a moderate response.

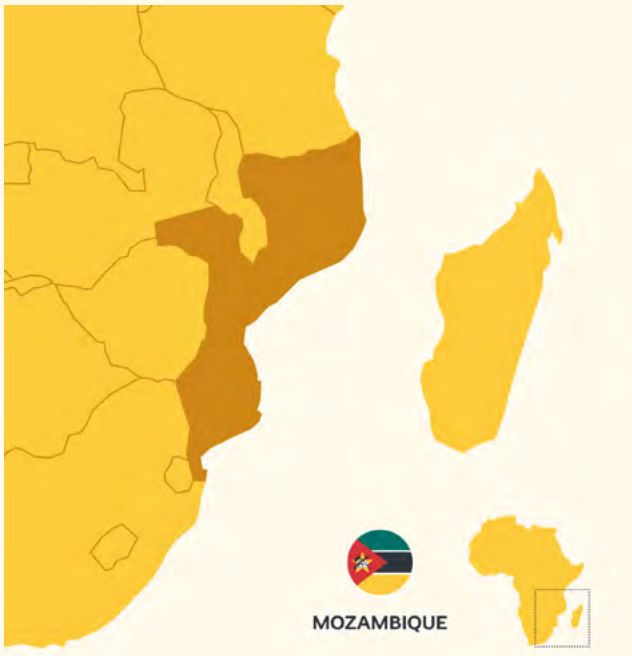


Figure 8: Mozambique

Photo: Mayra Pereira, Institutional expert, presenting at the OGTF meeting in Mozambique in March 2025 - NIRAS

The financing round in Mozambique was closed in September 2024, and six projects have been shortlisted following the evaluation and due diligence stages. The first projects are expected to be signed in autumn 2025.

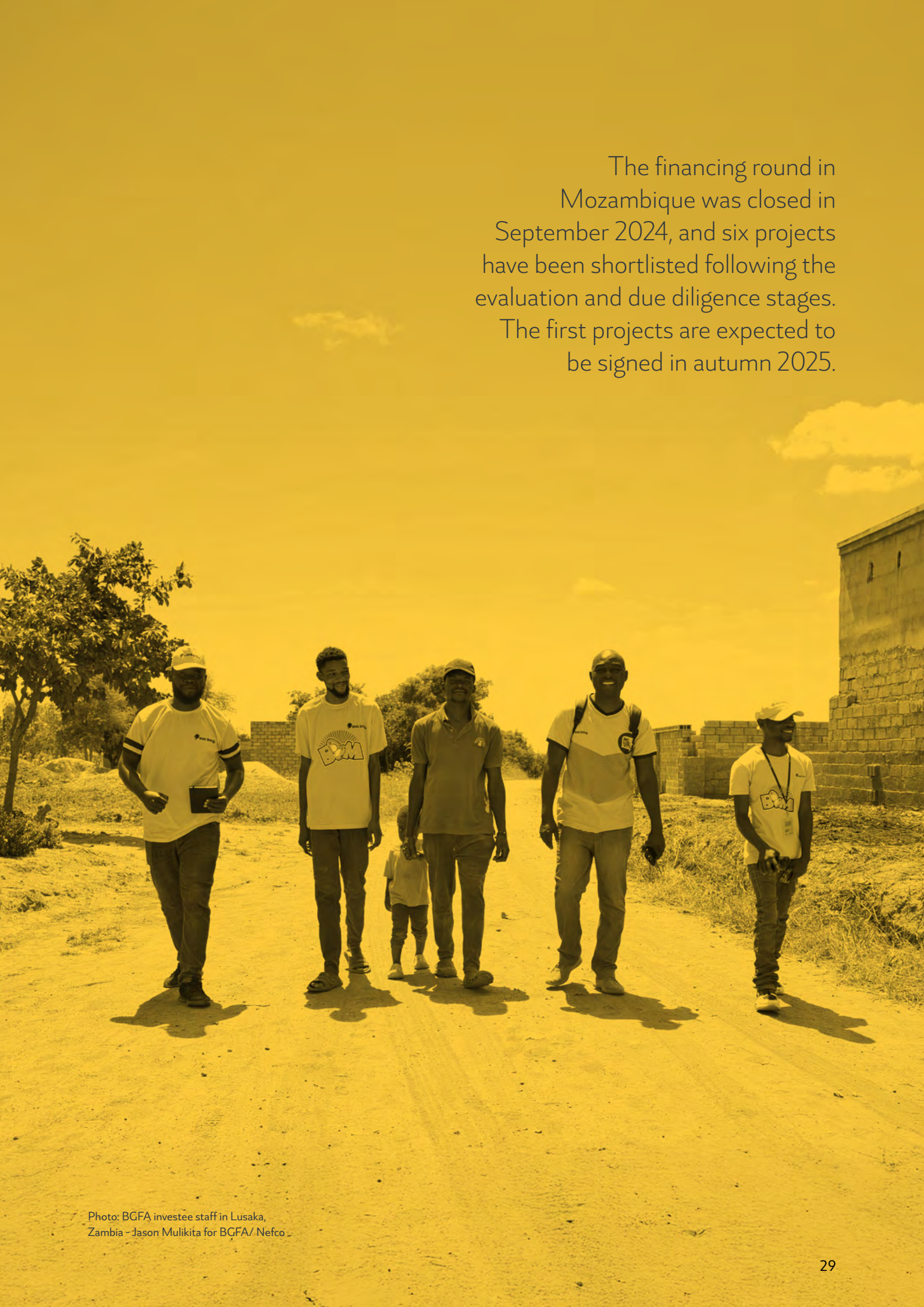


Photo: BGFA investee staff in Lusaka, Zambia - Jason Mulikita for BGFA/ Nefco

Uganda

Uganda is one of BGFA's largest markets in terms of available funding, which totals EUR 20.6 million and is provided by Denmark, Norway and Sweden.

In 2024, BGFA signed a further four contracts to close out the country funding allocation with two productive use companies and two mini-grid operators. The country portfolio is technologically diverse. In total, nine projects have now been agreed from the first and second Call for Proposals (BGFA3 and BGFA5).

The portfolio is performing well overall and has reached over 1.3 million people in Uganda.

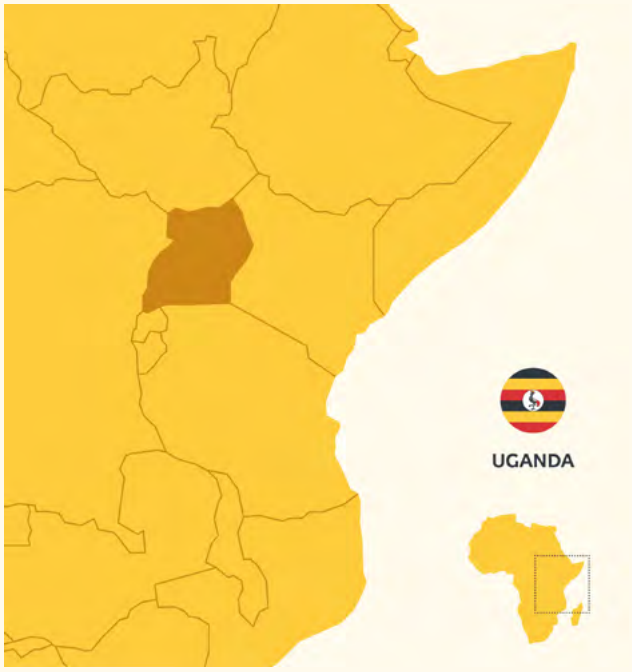


Figure 9: Uganda

Table 6: Country-level KPI targets in Uganda; results achieved in 2024 and cumulative results

KPI	ACHIEVED IN 2024*	CUMULATIVE ACHIEVED %	TARGET (EXPECTED AS IN CONTRACTS)
ESS	165,820	44%	588,107
# of people with access to electricity	858,305	44%	2,934,991
Funding committed			€20.6 million
Disbursements made %**			34%
Other cumulative results:			
Co-financing leveraged		€1 million	
% of ESSs in underserved areas***		57%	

*Externally validated results **Includes advance payments ***The entire country is considered an underserved area

Photo: Customer using ENGIE Energy Access SHS appliance in peri-urban Kampala, Uganda - Petra Mikkolainen, Nefco

"Thanks to the use of digital tools and strong penetration of mobile money in Sub-Saharan Africa, we are able to sell access to energy products and services to our customers on credit. Selling on credit allows us to meet our customers' affordability thresholds. With the much-needed support from impact investors such as BGFA, we are providing reliable, sustainable and renewable energy to communities with limited and/or fragile income that are the most vulnerable with a goal to support them climbing the energy ladder."

Gillian-Alexandre Huart
CEO of ENGIE Energy Access

ENGIE ENERGY ACCESS UGANDA
UGANDA

Bringing solar-powered off-grid appliances closer to the customers

ENGIE Energy Access Uganda (Fenix Uganda) is selling solar home systems in Uganda, bringing clean, reliable power for lights, phones, radios and TVs. With the provided BGFA funding, the company is further scaling up its business activities in the country, with the aim to establish 305,500 new high-quality energy service connections to customers in rural and peri-urban areas of Uganda.

With the support from BGFA, the company has been able to open three additional service centres in the northern and eastern parts of Uganda, bringing products closer to customers. With a larger agent network and more distribution points, ENGIE Energy Access Uganda is supporting a growing customer portfolio in Uganda.

"We use the solar home system appliance as a backup source to power lighting about three times per week. Before, we used battery torches. They were more expensive than using the ENGIE Energy Access Uganda appliance. An agent moved into the neighbourhood, and that is how we learned about this opportunity. We also recharge our phones with the system. Previously we had to ask neighbours to recharge our phones if there was no electricity," explains **Kasule Niajidu**, a resident living in the Mokono district, Kampala, Uganda.

Photo: Jussi Ratilainen for Nefco

Kari Hämekoski
Senior Programme Manager at Nefco

"We are very happy to continue and expand our cooperation with ENGIE through this well performing project in Uganda to support its business expansion and the scale-up of solar home systems on the market."

TARGETS

€4.9M
IN COMMITTED FUNDING

305,500
ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

Zambia

Zambia is BGFA's longest established market, with a large and diverse portfolio of investees. In total, the ten investees have the potential to reach nearly 4 million beneficiaries in Zambia and account for EUR 22.9 million in financial commitments.

The portfolio has been performing well overall, reaching over 1.5 million Zambians to date. The strongest performance has been in the solar home system sector. Disbursements have been made to the majority of portfolio companies and 31% of committed funds have been disbursed.

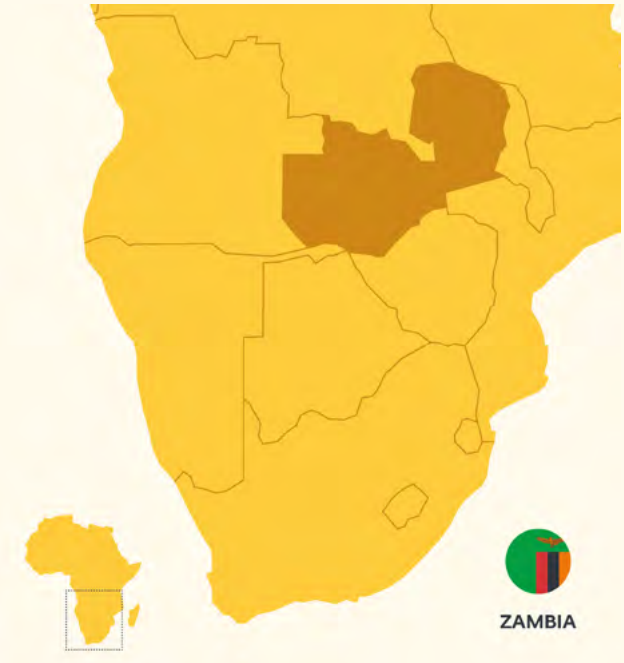


Figure 10: Zambia

Table 7: Country-level KPI targets in Zambia; results achieved in 2024 and cumulative results

KPI	ACHIEVED IN 2024*	CUMULATIVE ACHIEVED %	TARGET (EXPECTED AS IN CONTRACTS)
ESS	179,536	37%	822,662
# of people with access to electricity	924,038	37%	3,992,811
Funding committed			€22.9 million
Disbursements made %**			31%
Other cumulative results:			
Co-financing leveraged		43%	
% of ESSs in underserved areas***		17%	

*Externally validated results **Includes advance payments ***The entire country is considered an underserved area

SOLAR VILLAGE
ZAMBIA

Solar-powered crop sprayers are transforming women's roles in farming

Solar Village Zambia is providing access to affordable energy for customers in rural areas for productive-use purposes, in particular more efficient farming. With BGFA funding, Solar Village aims to sell 40,000 Solar Battery Sticks to smallholder farmers to power highly water- and labour-saving spinning disk sprayers used for weed, pest and plant disease management, as well as to provide crop nutrition. In addition to powering the sprayers, the Battery Sticks can be used for lighting, charging phones and running other appliances.

The spinning disk sprayer provides substantial environmental and economic benefits. Compared to traditional knapsack sprayers, it reduces water usage by 90%, cuts chemical inputs by 20% and saves an average of 37 labour days per year. Farmers also report yield increases of up to 35% (about 215 euros annually) with significantly reduced exposure to harmful chemicals. In addition to these benefits, Solar Village's Battery Stick helps to eliminate waste from disposable batteries.

The Solar Battery Stick has become a tool for women's empowerment, enabling them to participate more fully in agriculture, improve their economic standing and transform perceptions of women's roles in their communities.

"Using the Solar Battery Stick has made me more independent – I can manage my field without depending on my brother. It gives me more control over my income," says **Mercy**, a young farmer in Zambia.

"The BGFA funding is serving as a springboard for us to roll out our popular solar farming solution in Zambia at scale. Together with our partners Alliance Ginneries, Good Nature Agro and Micron Sprayers, we are supporting smallholder farmers within their crop value chains to reduce crop losses, maximise yields and increase incomes."

Peter Legat
CEO at Solar Village.

Mercy and her brother share a small plot of land, where pesticide spraying was once a day-long chore, typically handled by her brother. Mercy's role involved hauling heavy drums of water to fill their manual knapsack sprayer – a time-consuming, back-breaking task.

Today, with the Solar Battery Stick powering herspinning disk sprayer, Mercy can complete her pesticide application with conventional chemicals and biological products in just two hours, using only 2 buckets instead of a 200 litres drum of water. Not only has this freed her from hours of water hauling, but it has also provided her with the independence to handle the pest management herself and given her control over her earnings. Mercy grows maize and spinach and uses her income to support her education and her younger siblings. "We used to think that only men could do the spraying, but women can do what men can," she says, proud to challenge gender norms in her community. For Mercy, this innovation has brought light, income and newfound independence, allowing her and many others to shape a brighter future.

Photo: Jussi Ratilainen for Nefco

Tina Möller
Programme Manager at Nefco

"Through BGFA's support, Solar Village is enabling smallholder farmers in remote areas to access affordable, sustainable energy solutions. This initiative is not only improving farming efficiency but empowering communities, and especially women, to transform their roles in agriculture and local economies."

TARGETS

€1.6M
IN COMMITTED FUNDING

40,000
ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

Institutional support

Dennis Hamro-Drotz
Acting Head of Special Funds Department at Nefco

Photo: Jussi Ratilainen for Nefco

Institutional support is a key element of the BGFA programme that aims to improve conditions in the off-grid energy service markets of the target countries. This support includes a combination of capacity building and technical assistance, stakeholder outreach and market intelligence.

The first Off-Grid Energy Task Force (OGTF) was established in Zambia, with support from Sweden, and similar platforms have been established in all BGFA countries during the course of 2024. The work on institutional support is led by NIRAS and its institutional experts employed in all BGFA countries, as well as international staff.

OGTFs gather stakeholders from the government, donor agencies, finance institutions and the private sector to coordinate activities, share challenges and opportunities and agree on priorities for actions to strengthen the off-grid market environment.

The main achievements for each country for 2024 include the following:

Burkina Faso: An OGTF was established in 2024 under the name 'Cadre de Concertation des Acteurs de l'Energie' (CCAE). Two working meetings were held by the CCAE, which helped strengthen the commitment of many off-grid stakeholders, including the United Nations Development Programme (UNDP), the National Agency for Renewable Energy and Energy Efficiency (ANEREE), the Renewable Energy Associations Cluster Solaire and the Association des Professionnels de l'Électricité du Burkina Faso (APER). Of the 12 subcommittees that have been established, four have been prioritised. Towards the end of the year, two subcommittee workshops were held: one on 'Rural Electrification' and one on 'Productive Use of Energy and Technological Adaptation'. Both were well attended by public and private entities that presented the opinions and concerns of sector stakeholders.

Democratic Republic of the Congo (DRC): An OGTF was established in 2024 under the name of 'Groupe de Travail des Énergies Renouvelables et Décentralisées' (GTERD). The first GTERD meeting was held in Kinshasa on 19 July 2024. GTERD is chaired by the Ministry of Energy and Hydraulic Resources (MERH) and hosted by the National Rural Electrification Agency (ANSER). The Secretariat includes ANSER and the Association Congolaise pour les Énergies Renouvelables et Décentralisées (ACERD), a private sector renewable energy association. Five subcommittees were established under GTERD, chaired by both public and private stakeholders, including the United States Agency for International Development (USAID), Altech, NURU and Bboxx, with government agencies acting as co-chairs. Examples of meetings and workshops include the GTERD/Subcommittee on Finance and Parafiscal and Fiscal Incentives, which convened in November to discuss challenges related to financial access and duty exemptions in the DRC. Additionally, the second GTERD Steering Committee meeting was held in December 2024 in Kinshasa. During the meeting, the Ministry of Energy and Hydraulic Resources announced that a proposal for a revised Electricity Law would be presented in March 2025, with input to be solicited from all GTERD subcommittees.

Liberia: Three meetings of the OGTF Steering Committee were held in 2024, focusing on the growth of Liberia's off-grid sector and challenges faced. Specific topics were addressed at each meeting, such as e-waste management in the country. The discussion on e-waste emphasised the need for a national roadmap to define stakeholder responsibilities within the e-waste management chain. All subcommittees met during 2024. The OGTF, together with sector stakeholders, was successful in lobbying for a waiver on import duties on quality-verified solar photovoltaic products, with the previously expired Executive Order now renewed. Ongoing discussions with the World Bank, the Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Dutch Enterprise Agency (RVO) aim to prevent results-based financing (RBF) being double claimed and double KPI counting in the sector.

Mozambique: The official Portuguese name for the Bi-Annual Off-Grid Energy Forum is Forum Bi-Anual de Energia Fora da Rede, abbreviated as Bi-Annual Forum. Bi-Annual Forum has developed strong working relationships with the Mozambican Renewable Energy Association (AMER) regarding energy sector planning, mini-grid coordination and other activities. The Bi-Annual Off-Grid Energy Forum is co-financed by the Belgian Development Agency (Enabel), the EU-Technical Assistance Facility (TAF), the Green Energy Transition Finance Programme (GET.Fit) by KfW, the Global Off-Grid Lighting Association (GOGLA) and the Tony Blair Institute. There is continued alignment with relevant stakeholders in the development of the national Energy Transition Strategy (ETE), specifically Pillar 3 on Off-Grid Energy. Following Mozambique's 2024 election, civil unrest and military interventions in Maputo and other areas have impacted institutional support work within BGFA. As a result, physical meetings were restricted.

Photo: Participants at the OGTF meeting in Lusaka, Zambia on 31 October 2024 - Jumbe Ngoma

Uganda: Uganda has seen regular convening of sub-committees since the first Off-Grid Energy Working Group (OGEWG) Steering Committee meeting in March 2024. A second meeting was held in October 2024. The OGEWG, together with other stakeholders, has successfully lobbied to overturn the ban on solar fishing lights on Lake Victoria. Through the OGEWG, greater awareness has been raised about issues resulting from the competitive nature of RBF in the energy sector, such as RBF double claiming and KPI double counting. Concerns remain regarding the launch of the Uganda Energy Credit Capitalisation Company's (UECCC) results-based finance energy programme, which could distort the fragile solar market in Uganda.

Zambia: The OGTF is well established in Zambia, with active participation from both public and private sector stakeholders. Two OGTF meetings were held in Zambia during 2024, alongside various subcommittee meetings. Enhanced cooperation with the US Agency for International Development's East and Southern Africa regional mission (USAID-ESA) led to USAID considering support for the OGTF's 2024/25 activities. Additionally, Zambia's customs handbook was updated through the facilitative efforts of the OGTF. A study on the Zambia OGTF and lessons learned was launched at the OGTF meeting in October and disseminated to the other five countries where BGFA is active. Key challenges in the sector include the regulation of mini-grids and the ongoing drought, which is impacting the disposable incomes of both farmers and residential households.

Photo: BGFA partners, investees, and donors in Lusaka, Zambia in April 2025

COUNTRY	OFF-GRID TASK FORCE ESTABLISHED AND OPERATIONAL	TITLE OF THE OGTF IN COUNTRY	HOSTING ORGANISATION
 **Burkina Faso**	Yes	Cadre de Concertation des Acteurs de l'Energie (CCAE)	Ministry of Mines, Quarries and Energy
 **Democratic Republic of the Congo**	Yes	Groupe de Travail des Énergies Renouvelables et Décentralisées (GTERD)	National Agency for Electrification and Energy Services (ANSER)
 **Liberia**	Yes	Off-Grid Task Force (OGTF)	Rural and Renewable Energy Agency (RREA)
 **Mozambique**	Yes	Bi-Annual Off-Grid Energy Forum / Forum Bi-Anual de Energia Fora da Rede	Ministry of Mineral Resources and Energy (MIREME)/ Integrated Unit for Coordination and Planning of Electrification (UIPCE)
 **Uganda**	Yes	Off-Grid Energy Working Group (OGEWG)	Ministry of Energy and Mineral Development (MEMD)/National Renewable Energy Platform (NREP)
 **Zambia**	Yes	Off-Grid Task Force (OGTF)	Ministry of Energy (MoE)

Table 8: Status of institutional support activities in BGFA countries

Technical assistance

Under BGFA, the Renewable Energy and Energy Efficiency Partnership (REEEP) provides technical assistance (TA) to the Energy Service Providers (ESPs), enabling them to navigate challenges, enhance standards, attract private and commercial investments and unlock growth in diverse and often complex markets. BGFA's TA is customised and tailored to the unique needs and goals of each company, also recognising the market dynamics and regulatory environments in each of the six BGFA markets. By addressing these differences, BGFA TA ensures that support remains relevant and impactful across all regions.

Emphasis has been placed on quality assurance, technical standards and certification reviews, which are essential for building end-user trust in the offered technologies and unlocking funding opportunities. This is particularly important as the development of large solar home systems and increased penetration of productive use of energy appliances present both challenges and opportunities. Additionally, gender mainstreaming interventions have been a key priority for BGFA TA support. These interventions ensure that all portfolio companies develop and implement solid but contextually relevant gender-responsive policies, especially in regions where cultural norms may hinder equality and diversity. Figures 11–14 illustrate the specific areas of technical assistance that BGFA offers to companies, including the project cycle of TA provision. Spearfish provides TA on security, dss+ on electronic waste management and GET.Invest on financing.

TA FOCUS

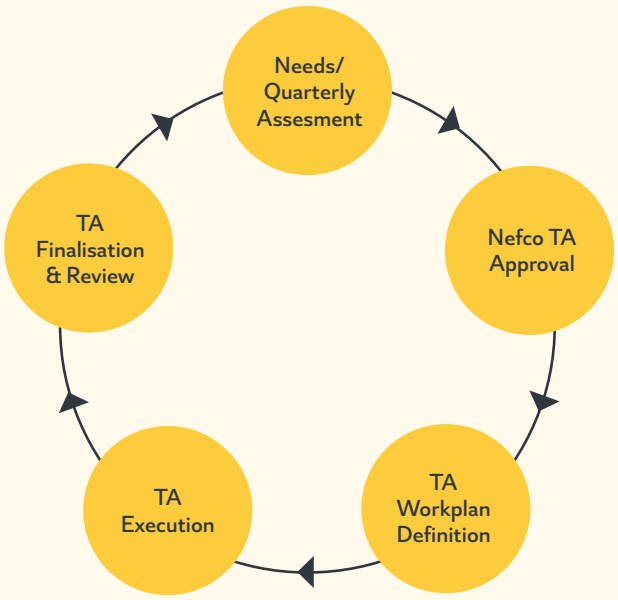
Contractual
MILESTONES

Governance
IMPROVEMENTS

Operational
EFFICIENCY

TA ASSIGNMENTS INITIATED

TA PROCESS



BGFA's TA is customised and tailored to the unique needs and goals of each company, also recognising the market dynamics and regulatory environments in each of the six BGFA markets.

Photo: Giuseppe Gregu from REEEP with a sales agent in Zambia - Jason Mulikita for BGFA / Nefco

SPECIFIC TA AREAS

Figure 11-13: Overview of Technical assistance assignments, process and areas

Photo: BGFA investee workers in Zambia - Jason Mulikita for BGFA / Nefco

Technical assistance delivered since the beginning of the programme

Since the programme's inception, 69* TA assignments have been completed by REEEP, with the majority being company specific, aiding in meeting work plan milestones.

TA assignments provided to all BGFA portfolio companies generally include support for developing Gender and Environmental and Social Management System (ESMS) policies and action plans. These efforts help strengthen consumer protection and improve companies' ability to access financing. Gender-related and the management of environmental and social risks are likely to remain major priorities in the provision of TA in 2025.

Since the programme's inception, 69* TA assignments have been completed, with the majority being company specific.

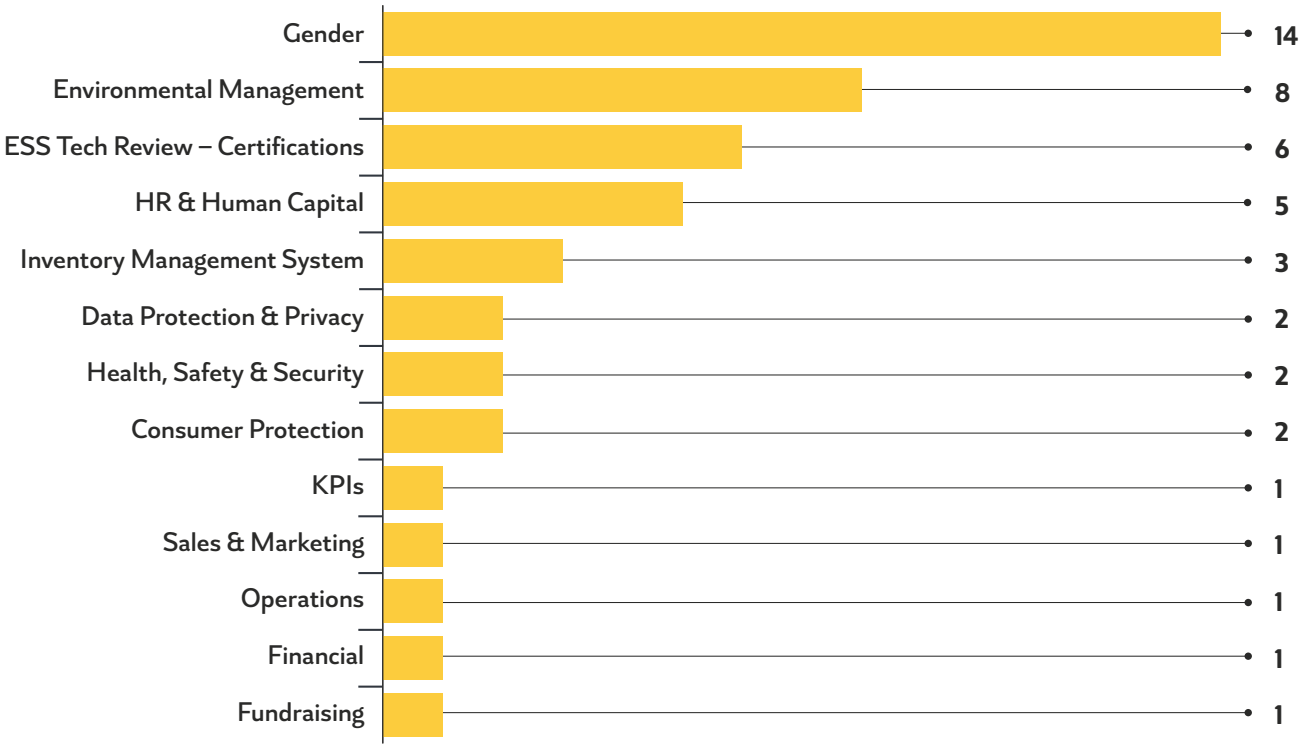


Figure 14: Completed technical assistance tasks by REEEP since the beginning of the BGFA implementation

*22 tasks cancelled, on hold or ongoing

Photo: Farmer in Zambia using Solar Battery stick - Solar Village

> The inventory system that you have helped us set up is now in active use. We are training and guiding our staff members, [...]. So, we are moving – thanks to your great help!"
>
> **Peter Legat**
> Managing Director, Solar Village

Inventory management system in Zambia

Solar Village, a BGFA investee in Zambia, wanted to migrate and integrate its CRM and Inventory management systems to improve shipment tracking and mitigate risks of inventory fraud and theft. REEEP's TA support enabled a cost-effective solution by leveraging existing smartphone hardware for external data storage. Phase 1 focused on designing a scanning solution, conducting staff training and distributing necessary tools. In Phase 2, support was provided to Solar Village to conduct audits, migrate data to a System of Truth and implement interactive dashboards for real-time insights. Key takeaways emphasise that while technical limitations can be addressed through innovation and experience, reliable execution and follow-through are key factors in success. Furthermore, the initiative underscores the financial benefits of robust data management for business operations. Solar Village's experience illustrates how strategic, practical interventions can significantly enhance operational efficiency and accountability under the BGFA framework.

Photo: Customer service worker at a BGFA investee in Zambia - Jason Mulikita for BGFA / Nefco

"We are extremely appreciative of your support and can affirm that Taslaf has been extremely helpful in developing the Data Privacy and Protection Policy."

Vincent S. Sseremba
President & Co-Founder,
Tulima Solar Limited

Data protection and privacy in Uganda

Tulima Solar requested help to ensure its systems complied with the legal and regulatory frameworks of Uganda's data protection legislation. With REEEP's TA help, the company successfully overhauled its processes to ensure compliance. Phase 1 focused on developing a robust data privacy policy aligned with seven core principles, including lawfulness, transparency and confidentiality. In Phase 2, Tulima Solar completed staff training and formal registration with the regulator (NITA-U). Key lessons highlight the necessity of local expertise to meet local and national requirements, such as mandatory registration, annual reporting and cross-border data protocols. This inclusive approach – pairing policy revision with staff capacity building – has positioned Tulima Solar for long-term success in data governance. The case demonstrates the importance of tailored support in fostering regulatory compliance and operational excellence within the BGFA framework.

The TA provided under BGFA, is expected to deliver significant benefits. The logic is that, as an enabler, BGFA TA enhances the performance of ESPs, helps with overcoming local barriers, improves market-wide technical standards and scales up solar energy use. In this way, TA reduces risks for investors and increases investor confidence, unlocking commercial funding opportunities beyond BGFA funding. This tailored, comprehensive approach ensures sustained growth, positions companies for long-term viability and strengthens the broader energy market, delivering lasting socio-economic benefits.

BGFA in international forums and engaging in partnerships

BGFA is actively engaged in international dialogue to promote the important role played by the private clean off-grid energy sector in global climate action and accelerating access to clean energy solutions to strengthen climate resilience in Africa.

Participation in international events is key to fostering collaboration, sharing best practices and driving innovation in the clean off-grid energy sector. By engaging with global stakeholders, BGFA aims to amplify its impact and contribute to the achievement of international climate and sustainability goals.

In 2024, BGFA took part in several events, as well as celebrating its 5-year anniversary and reflecting on the journey of the programme so far. The key events are described below.

CELEBRATING BGFA'S 5-YEAR ANNIVERSARY

In April 2024, the Beyond the Grid Fund for Africa (BGFA) marked its five-year milestone with a celebratory seminar highlighting the programme's journey since its launch in 2019. The event featured insights from BGFA investees, programme donors, Nefco as the facility manager, and NIRAS and REEEP as implementation partners, showcasing key achievements and the evolving impact of off-grid energy access in Africa. Engaging panel discussions with private sector representatives, programme donors, and implementation partners explored BGFA's future direction and its role in scaling up sustainable energy solutions across the continent.

PRODUCTIVE USES OF RENEWABLE ELECTRICITY IN AFRICA

The webinar Productive Uses of Renewable Electricity in Africa, held in June 2024 as part of the EU-funded RePower Project, explored how renewable energy can drive economic growth and rural electrification across Africa. Speakers from organisations including Nefco, as Facility Manager for BGFA, Africa GreenTec, GIZ, Sustainable Energy for All, and the World Bank shared case studies on how productive uses of energy (PUE) are transforming local economies. Tina Möller, Programme Manager at Nefco, highlighted the rapid development and significant impact of PUE projects in transforming rural livelihoods across Africa. Möller emphasised the transition of technologies like solar water pumps and refrigeration systems from emerging concepts to commercially viable solutions. These advancements are evident in BGFA's project portfolio, which now includes equipment that not only meets basic energy needs but also enhances economic opportunities for communities.

UN CLIMATE CHANGE CONFERENCE COP29

At the UN Climate Change Conference COP29, held in November 2024 in Baku, Azerbaijan, BGFA actively contributed to discussions on accelerating energy access.

The BGFA side event Scaling up clean off-grid energy access explored the role of results-based financing in accelerating access to clean energy in rural areas, supporting Africa's green transition and fostering technological innovation. The discussion centred on the opportunities and challenges of scaling the off-grid energy sector, highlighting the achievements of the BGFA programme so far and strategies to drive private sector growth. The event provided valuable insights into advancing clean energy access and fostering private sector innovation to support Africa's sustainable development goals.

Photo: Participant at the BGFA side event at the UN Climate Conference COP29 in December 2024 - Joel Sheakoski for Nefco

Photo: BGFA donor representatives from Sweden and Germany at a BGFA investee sales office in Lusaka, Zambia - Jason Mulikita for BGFA / Nefco

Results of the BGFA Portfolio Analysis

BGFA's 2024 portfolio analysis assessed the performance of supported companies, identifying progress, challenges and key trends in delivering energy service subscriptions (ESS). This analysis helps bridge critical information gaps, supporting investment decisions and programme implementation. The findings highlight both successes and barriers, from logistical and financial constraints to regional security issues, underscoring the need for adaptive strategies and continued support to ensure sustainable energy access.

Introduction

In 2024, BGFA carried out a portfolio analysis of the performance of BGFA-supported companies, using data available up to 15 November 2024. The assignment, conducted by NIRAS, aimed to assess progress on ESS delivery by country, Energy Service Provider (ESP) and thematic area, as well as identifying key success factors and challenges and validating critical elements of the Theory of Change.

The analysis covered progress on ESS deliverables for all ESPs that had reported ESS results by 15 November 2024 (20 in total). While ESPs without approved ESS results by this date were excluded from the data analysis, the identified challenges and recommendations remain broadly relevant to them as well.

The analysis had certain limitations. It primarily focused on stand-alone ESSs, with only one mini-grid included.*

The study was based on desktop research, supplemented by interviews and email exchanges with selected ESPs to address information gaps and offer insights into specific successes and challenges.

Overall ESS results

By mid-November 2024, BGFA successfully delivered 468,796 sustainable ESSs, achieving 27% of the contracted target of 1,712,728.

As 15 demonstrates, the most common solar system sold by BGFA companies by a significant margin is Tier 1 solar home systems for residential customers without any additional appliances attached.

* Additionally, the two companies applying rental models – Mobile Power Liberia and MPDRC – report sales data in a different format from those of other ESPs. As a result, they were excluded from the analysis of payment and sustainability status, which relied on consolidated granular ESS data from the other ESPs.

Sum of Sustainable ESS

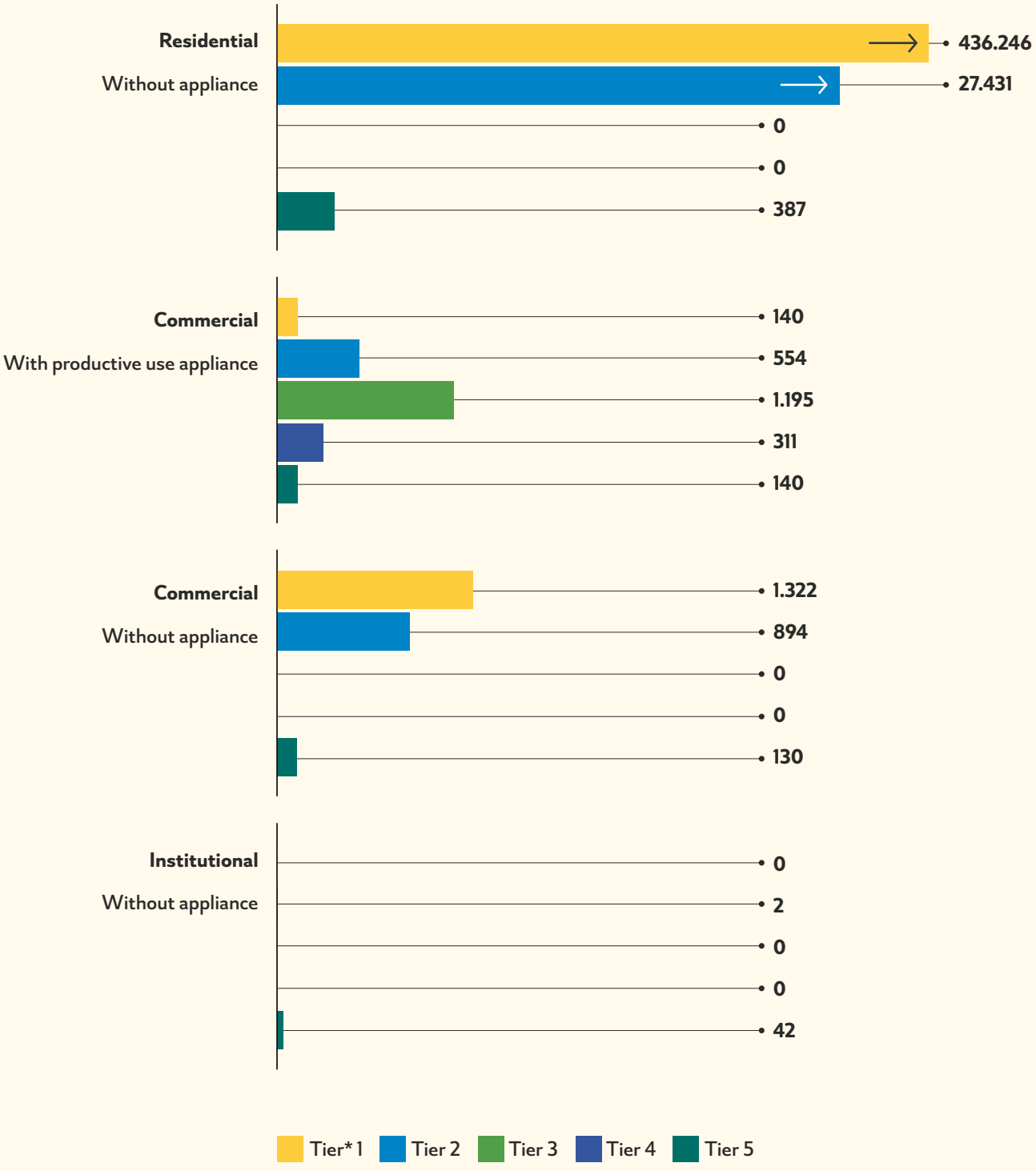


Figure 15: Overall progress on sustainable ESSs per customer type, appliance and tier

* Tier – Categorisation used to distinguish different levels of energy services by the amount of energy the system can generate

Figure 15 shows the progress made by country and in relation to expected results. The taller bars represent the progress relative to the latest cumulative milestone target (the total number of ESS it was expected to have achieved at this stage of the contract). The shorter bars indicate progress against the overall contractual targets in that country.

The data reveals notable variations – both promising and somewhat concerning – between countries in terms of their progress towards achieving expected ESS sales. ESPs in Liberia, Uganda and Zambia are the most developed, although some delays can be seen in Liberia and Uganda, with the companies having reached 66.7% and 77.5% of their cumulative milestone targets to date in the two countries respectively. In contrast, companies in Burkina Faso and the DRC are trailing, having only achieved roughly half of their current milestone targets and less than 10% of their overall targets so far. It is also important to note that these figures reflect progress against the latest targets. Given that a significant number of contracts have been amended downwards (with a few exceptions) and most projects undergo some changes over their lifetime – which is both normal and expected – the original targets may have been higher than those indicated in the figures.

These trends in the data are explained by a number of challenges, including operational and logistical issues such as supply chain disruptions caused by the COVID-19 pandemic and difficulties in establishing new sales networks. To address these, BGFA-supported companies have implemented adaptive measures, including changing the product line up in response to customer demands. High staff turnover has been tackled through restructuring and improved training efforts. Regulatory hurdles, such as lengthy licensing processes, were also noted. Technical challenges, including faulty equipment, have been mitigated through replacements and upgrades. Financial difficulties, such as delays in securing co-financing and liquidity constraints, have led companies to scale down activities and seek internal loans.

Photo: End user in peri-urban Zambia - Jason Mulikita for BGFA / Nefco

Country-specific challenges have also arisen. In Burkina Faso, a difficult security situation, high default rates due to displacement and competition from informal sellers who evade taxes have posed hurdles. Zambia faced a severe drought during the 2023-2024 season, which reduced farmers' incomes and hence their ability to pay for solar products. Liberia encountered obstacles due to the suspension of an Executive Order for duty-free imports. In Uganda, the implementation of a similar World Bank programme hosted by the Uganda Energy Credit Capitalisation Company (UECCC) has created uncertainty about market development. Meanwhile, the DRC struggled with a worsening security situation, particularly in the Eastern region where BGFA activities also take place.

These delays and challenges have not come as a surprise to BGFA. While most of the delays are beyond the control of the companies or BGFA implementing partners, the programme continues to provide various supporting activities based on the needs of the ESPs.

At the programme level, BGFA has the potential to deliver about 2 million sustainable ESSs. This estimate is based on the extrapolation of current results achieved against the RBF funding provided, assuming full utilisation of the total available RBF budget. However, given the current pace of programme implementation, extensions will likely be required.

Photo: End user in Liberia - NIRAS

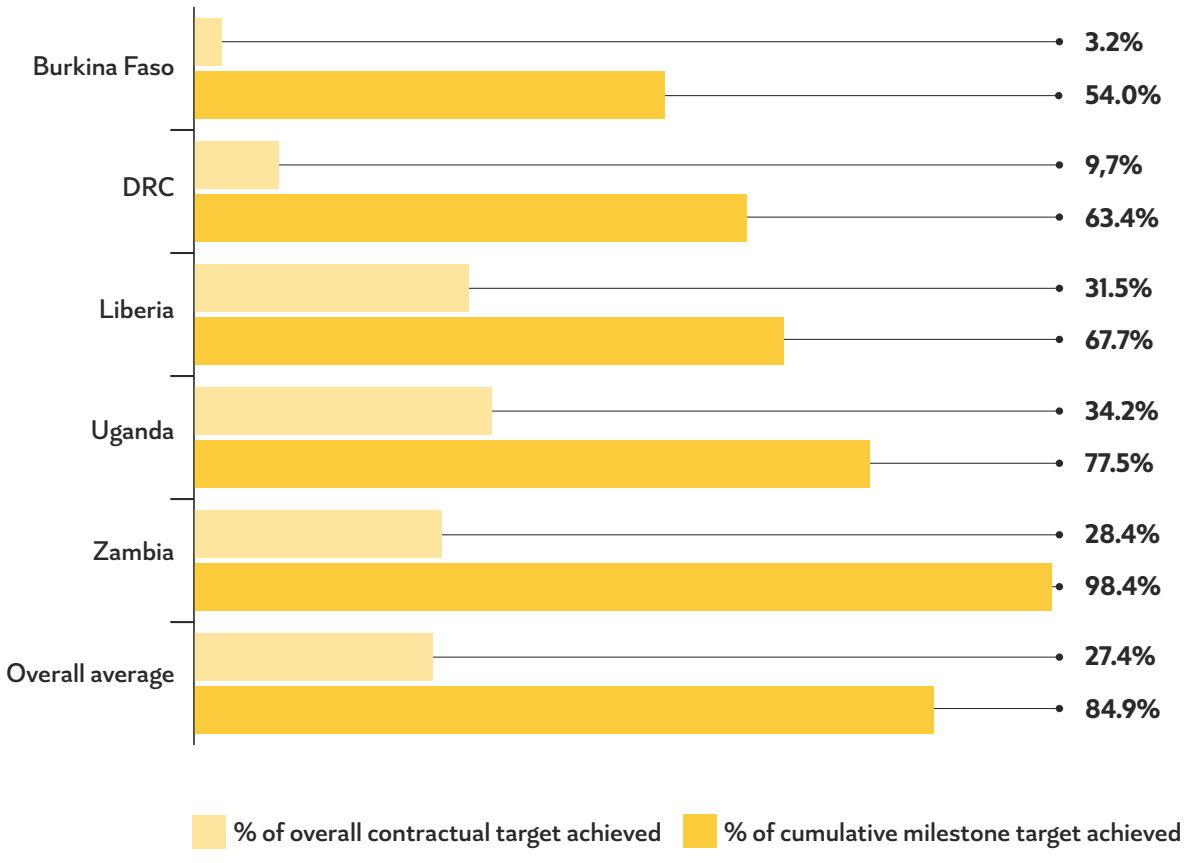


Figure 16: ESSs delivered per country as percentage of latest milestone target and overall contractual target, based on the latest contract versions

Photo: Klaudine Wakasa, Regional Institutional Lead for the BGFA programme visiting Zambia - Jason Mulikita for BGFA / Nefco

Women as clients of BGFA companies

The portfolio analysis presented in the previous chapter also examined the role of women as clients of BGFA supported companies.

So far, 167,582 ESS units have been deployed to female customers, representing 35.7% of all ESSs sold. The lowest percentage of deployment to female customers is in Burkina Faso, at 12%, due to various country-specific factors. Cultural and religious norms have been identified by ESPs as barriers, mainly affecting the recruitment of female agents but potentially also impacting female customers. Additionally, the unstable security situation in a country like Burkina Faso likely limits women's movements and ability to visit sales points.

Zambia has the highest percentage of female customers, at 39.6%, followed by Uganda, at 33.0%.

Generally, there is a trend of decreasing percentages of female customers from the lowest to the highest tiers, with some notable exceptions. It is important to note that ESS units sold to male customers can also benefit women and children. For example, solar pumps, mostly sold to men, can benefit entire families by increasing agricultural income from irrigation and providing clean water for domestic use.

PERCENTAGE OF FEMALE CUSTOMERS PER COUNTRY:

12%
BURKINA FASO

24.4%
DRC

30.7%
LIBERIA

33%
UGANDA

39.6%
ZAMBIA

Productive uses of energy (PUE) – early results

To date, 2,340 ESS units with PUE appliances have been sold, accounting for approximately 0.5% of all ESS units delivered. The range of PUE appliances sold remains limited, though this is expected to expand as mini-grids become operational. Currently, solar pumps dominate sales, with 1,590 units sold – primarily for irrigation but also domestic use. Additionally, 20.2% of PUE appliances have been purchased by female customers, with the highest proportions observed for fridges/freezers and agricultural sprayers (see Figure 17).

The limited number and range of PUE appliances available so far are directly linked to the limited capacity of stand-alone systems. However, this is expected to increase significantly for two main reasons: later Calls for Proposals (CfPs) have placed a greater emphasis on PUE compared to the initial ones, and more mini-grids are set to become operational in the coming years. Mini-grids will provide power for a much wider range of PUE appliances.

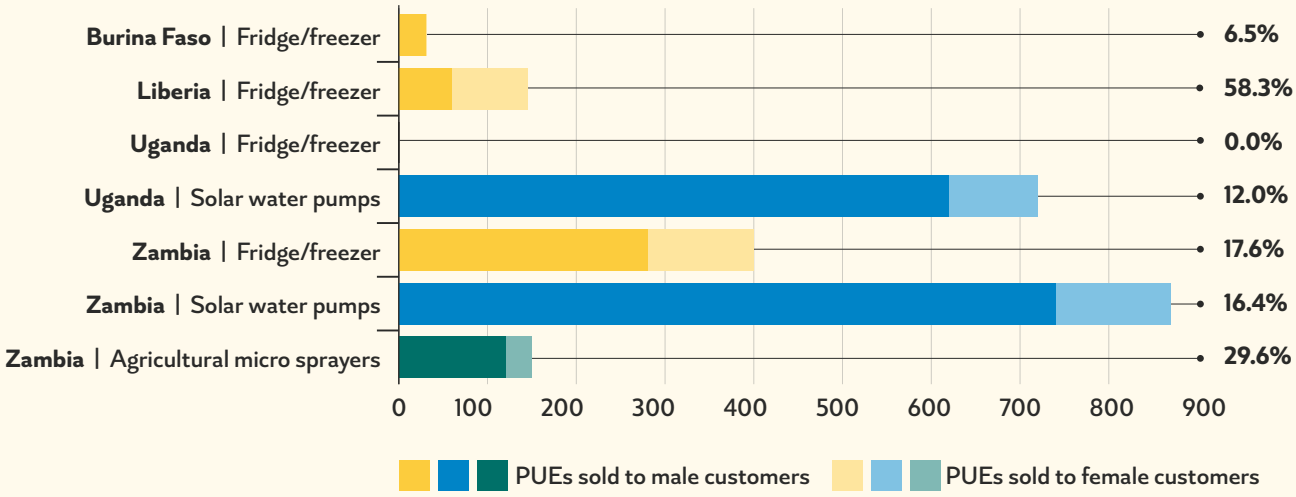


Figure 17: Type and number of PUE appliances sold by country and by gender of customer

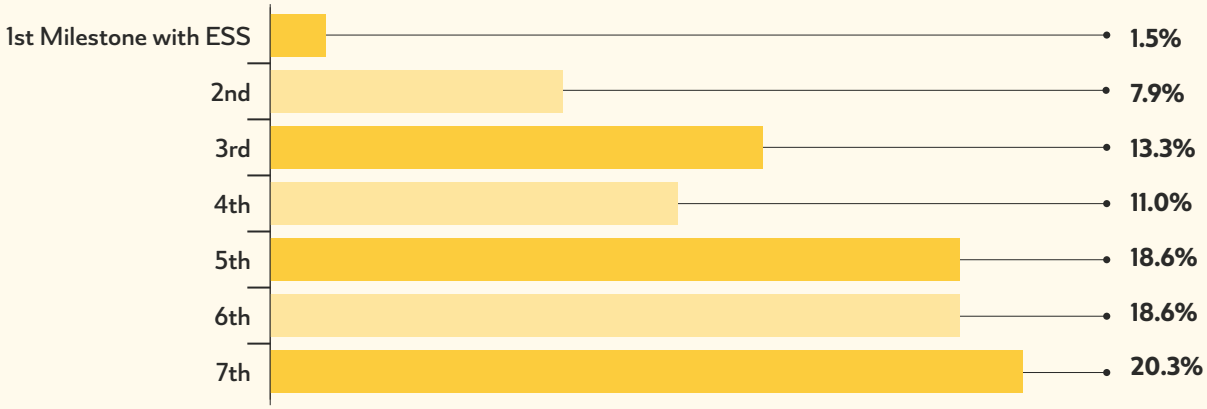


Figure 18: Average change in the percentage of unsustainable ESSs from first to most recent milestones

Sustainability status of BGFA ESSs

A distinctive feature of BGFA's ESS monitoring and results-based payments is the sustainability requirement. Sales qualify for results-based financing (RBF) only if the company can demonstrate that the client continues to make payments for the product and associated services every 90 days until the full amount is paid.[5] This requirement acts as a proxy to ensure that appliances are not only sold but also actively used. It allows BGFA to infer that the product is functioning properly and delivering electricity and other benefits to clients. If there is a disruption in payments, BGFA still considers the ESS eligible for RBF if the client resumes payments.

The results of the portfolio analysis indicate that 3.2% of ESS units have been fully paid off, 80.7% are deemed sustainable and 16.2% are considered unsustainable. There are some differences between the countries in this regard. However, given the varying levels of progress in each, it is still too early to make detailed comparisons. Investigating the underlying reasons for these figures was beyond the scope of the analysis. However, it was noted that a higher percentage of unsustainable ESSs was found among male clients and in priority areas, which are typically characterised by lower socio-economic status and more remote locations. A clear trend was also observed across tiers, with the percentage of unsustainable ESSs decreasing from Tier 1 to Tier 4 (e.g. 16.4% of unsustainable ESSs in Tier 1 compared to 2.8% in Tier 4), as higher tiers tend to include customers with more stable incomes.

The analysis also revealed a significant finding: the percentage of unsustainable ESSs increased over time. In other words, while customers initially make payments reliably, they face growing difficulties as they progress further into the PAYGo contract. However, evidence suggests that approximately 80-85% of ESSs remain in use and continue to be paid for by customers even after several years, which is a remarkable outcome (see Figure 18).

Photo: BGFA investee workers in Zambia - Jason Mulikita for BGFA / Nefco

Conclusion

In conclusion, the results of the 2024 BGFA portfolio analysis demonstrate the programme's success in delivering sustainable energy solutions, with notable progress made towards achieving targets. The challenges faced, including logistical, operational and financial difficulties, were anticipated and have been effectively addressed thanks to BGFA's support mechanisms, including through improved planning, adaptive measures and strengthened partnerships. However, evolving operational conditions – due to regional security issues, regulatory changes, socio-economic conditions etc. – present barriers that could affect future progress. The need to amend ESS targets downwards could become a concern if a negative trend develops beyond what has been observed so far.

It is important to note that the analysis focused solely on the progress of ESS delivery, but BGFA also tracks other key performance indicators, such as co-financing, which provide a broader perspective on the programme's impact and sustainability. The findings underscore the need for continued flexibility and support to help companies navigate challenges while maintaining momentum in the face of changing circumstances.

5. More precisely, the so-called '90-day rule' requires at least one payment from the client to the energy service provider within the 90 days before the end of the reporting period (also known as milestones) for the ESS to be eligible for RBF.

Lean Data insights by 60 Decibels

In 2024, Nefco commissioned a study to externally verify investigate customer satisfaction among BGFA companies, aiming to better understand the socio-economic profiles of households and assess the impacts of BGFA activities on their quality of life. The assignment consisted of three main components:

Component 1 – BGFA ESP-specific reports on customer insights

Seven BGFA companies from Liberia, Uganda and Zambia – the three countries with the most ESS sales under BGFA to date – were included in a survey of the current portfolio (numbered projects 1–7 in the main report). Each company received its own report, which included customer feedback and insights into their performance. For Nefco, these reports also serve as verification of the sales claimed by the ESPs during programme implementation to access results-based payments, with the results showing high data accuracy.

Component 2 – BGFA Portfolio insights

The second component involved creating a pool of responses from these current 7 BGFA projects and Lean Data surveys funded by various organisations between 2022 and 2024, targeting a total of 10 BGFA ESPs across all seven BGFA partner countries. It should be noted that these 10 additional surveys targeted non-BGFA-funded activities, despite some ESPs also being part of the BGFA portfolio. This approach enabled the benchmarking of BGFA results against a comparable data set, providing a better understanding of the types of end-users BGFA projects are reaching and how the programme results compare with non-BGFA activities by the same companies.

All the included surveys were conducted according to rigorous methodological standards, including statistically significant sample sizes and high confidence intervals.

METRIC	BGFA AVERAGE		60 DECIBELS ENERGY BENCHMARK
Female Reach (% female customers)	36%	=	38%
Quality of Life (% 'very much improved')	64%	>	55%
Access to Alternatives (% with no easy access)	70%	<	76%
First Access (% accessing product for the first time)	75%	=	79%
Income Inclusivity (Inclusivity Rate)	0.84	>	0.77
Customer Challenge Rate (% experiencing challenges)	39%	<	32%
Customer Service Rating (Customer Effort Score, on a scale from 1 to 5)	3.05	<	3.25
Customer Satisfaction (Net Promoter Score®, on a scale from -100 to 100)	60	>	47

Table 9: Performance Snapshot. The BGFA portfolio ESPs we worked with outperform the 60 Decibels Energy Benchmark for Income Inclusivity, Quality of Life, and Satisfaction

Component 3 –
Global benchmarking of BGFA results

The third component involved comparing the survey results of the 7 current BGFA projects and those of the additional 10 surveys against the 60dB Energy Global Benchmark. Some indicators were also compared to the 60dB Energy Africa Benchmark. This analysis allows conclusions to be drawn on (1) how well BGFA portfolio companies perform overall and (2) BGFA's ability to support ESPs to deliver results and impacts based on the 7 current BGFA projects.

Results

Figure 19 provides an overview of how well the seven current BGFA projects perform against each other and the 60 Decibels Global Energy Benchmark, as well as how well they compare to the other 10 companies that are part of the BGFA portfolio but were not part of this specific survey (for which 60 Decibels has data from earlier assignments).

Projects 1-7, which are currently part of BGFA's portfolio, perform particularly well in terms of Rural Reach, Quality of Life, Income Inclusivity and Net Promoter Score. For most of the 7 current projects, Female Reach and First Access are also close to the global benchmark. However, the Customer Challenge Rate leaves room for improvement. The most common issues reported by clients included product malfunctions, battery-related issues and payment or repair delays.

An income inclusivity rate above 1 means that an ESP is serving a higher proportion of low-income customers than the national population. A ratio below 1 means an ESP is reaching a lower proportion of low-income customers relative to the national average.

Customer satisfaction was assessed via the Net Promoter Score (NPS); all of the current BGFA projects had an NPS well above the benchmark.

Other findings

Most customers (87%) of the current 7 BGFA projects use their solar system for domestic purposes, while only 3% use it exclusively for business purposes and 10% for both business and domestic purposes. Of those who do use their appliance for income generation, 47% reported that their income has 'very much increased'. Additionally, 94% of the respondents confirmed that their safety and the security of the assets in their homes or businesses had improved.

Regarding future preparedness to climate shocks, 53% of the respondents (covering the 7 current BGFA projects) said that they feel more prepared thanks to the ESS, with 27% feeling much more prepared. Reasons for this included improved self-sufficiency, income generation and business continuity, safety and security. Those that did not feel more prepared mentioned financial constraints as one of the main reasons.

Conclusion

Overall, it can be concluded that BGFA companies are performing well, able to address energy access constraints across Sub-Saharan Africa and generating a host of co-benefits to underserved populations. The current BGFA projects in Liberia, Uganda and Zambia show highly positive results exceeding the Global Benchmark or showing scores very close to the Benchmark in all key metrics, except on Customer Challenge Rate. It is possible, given the solid performance on the other metrics (e.g. reaching remote areas), that the Customer Challenge Rate demonstrates an area in which ESPs still need support to thrive in a sustainable manner.

Photo: End users in outskirts of Lusaka, Zambia - Jason Mulikita for BGFA / Nefco

Performance Compared to 60dB Energy Benchmark

BGFA PORTFOLIO COMPANIES								
1	2	3	4	5	6	7	OTHER SIMILAR PROJECTS AVG.	60DB ENERGY BENCH-MARK
Female Reach (% female customers)								
33 %	34 %	36 %	40 %	24 %	35 %	19 %	39 %	38 %
Rural Reach (% living in rural areas)								
7 %	61 %	70 %	75 %	68 %	0 %	62 %	44 %	56 %
Quality of Life (% 'very much improved')								
62 %	71 %	71 %	73 %	65 %	43 %	82 %	63 %	55 %
Access to Alternatives (% with no easy access)								
90 %	58 %	53 %	84 %	57 %	98 %	89 %	67 %	76 %
First Access (% accessing product for the first time)								
90 %	64 %	75 %	78 %	76 %	98 %	89 %	67 %	76 %
Income Inclusivity (Inclusivity Rate)								
0.96	1.04	1.07	1.09	0.87	0.53	1.04	0.77	0.77
Customer Challenge Rate (% experiencing challenges)								
27 %	41 %	35 %	39 %	45 %	33 %	43 %	39 %	32 %
Net Promoter Score (on a scale from -100 to 100)								
56	55	62	72	51	50	58	56	47

Outperforming 60dB Energy Benchmark At par with 60dB Energy Benchmark

Figure 19: Performance across companies compared to other similar projects and the 60 Decibels Energy Benchmark

Guest article: Digital monitoring, verification and reporting

Victoire Cowley Gottlieb
Advisor at GET.invest

John Tkacik
Head of Prospect at GET.invest

The energy access sector generally lacks trusted, up-to-date, reliable and comparable data. In the context of energy investments and financing, this results in uncertainty and caution, often leading to lengthy and costly evaluation, due diligence and disbursement processes.

The advent and maturity of digital monitoring, reporting and verification (dMRV) systems stands to dramatically increase access to trusted, up-to-date data on energy projects by utilising the data generation and transmission opportunities enabled by modern energy systems. If fully realised, this can in turn lead to greater efficiency and speed at all stages of project investment and financing, as well as opening up new financing opportunities.

DMRV begins by leveraging and integrating diverse data-rich technologies, such as:

- Internet of Things (IoT) devices
- Mobile/electronic billing, payment and management systems
- Smart meters and telemetry
- Cloud-based remote system control and monitoring platforms

The higher the level of automation in data acquisition and entry, the more precise and accurate that data – and all the analyses and reporting thereafter – will be.

Once data is generated and acquired, it is critical that it is transmitted within a robust, secure, digital data infrastructure that adheres to strict standards and governance, so as to ensure end-to-end integrity of the data.

Access to high-integrity, accurate data on project performance and impact is expected to contribute to a step change in how decisions are taken in nearly every facet of energy sector planning, financing, operation and regulation, enabling:

- Instant decision-support on, e.g., results-linked finance
- Automated and high-integrity impact reporting, verification and aggregation, e.g. for climate finance, and ultimately faster attainment of SDG7

"The higher the level of automation in data acquisition and entry, the more precise and accurate that data, and all the analyses and reporting thereafter will be."

Photo: Prospect team demonstrating Prospect services - Prospect

With this in mind, Nefco is piloting the use of the open-source SDG7 tracking support tool Prospect (www.prospect.energy) to facilitate awardee reporting requirements. Prospect has been developed through cooperation between the Access to Energy Institute (A2EI) and the European programme GET.invest and is supported by the European Union, Austria, Germany, the Netherlands, Norway, and Sweden. The platform automatically collects, harmonises, aggregates, analyses and displays data from any modern, sustainable energy solution and is expected to automate and greatly simplify often onerous, manual reporting processes, ultimately giving companies more time to do what they are good at: distributing and maintaining energy services for their customers. For Nefco, this is expected to result in more regular and up-to-date insight into realities on the ground, quicker turnaround times when it comes to milestone reviews and independent verification processes, and ideally faster disbursement times.

As 2024 comes to an end, the Prospect technical team at the Access to Energy Institute (A2EI) is busy expanding integrations for industry-standard energy software and hardware, working closely with the BGFA teams at Nefco and NIRAS, as well as BGFA investees.

Victoire Cowley Gottlieb,
Advisor at GET.invest

John Tkacik,
Head of Prospect GET.invest

Knowledge management – Improved skills in Uganda's off-grid energy sector

A tailored training programme Job creation and skills development sub-programme for BGFA-funded companies in Uganda, and other stakeholders developing and selling off-grid energy solutions in the country, was implemented in 2023-2024, with the aim to increase capacity building. In total, 20 courses on technical, sales and business skills within the fields of solar home systems and mini-grids were conducted during the period October 2023–October 2024, with the aim to develop and broaden knowledge and skills within the off-grid energy sector and support the creation of jobs and engagement of women in Uganda's off-grid energy sector. Over 300 participants took part in the courses, of whom 32% were women.

On Denmark's initiative, a study to assess the opportunities for increasing job creation in Uganda within the context of the BGFA programme was carried out by Oxford Policy Management in 2021. The outcome of the study confirmed the need for skills development in a number of areas among off-grid energy actors and recommended that a separate sub-programme be designed. A project team consisting of Renewables Academy (RENAC), Inensus, Sendea UG and USEA was chosen to undertake the design, organisation and provision of the training courses in Uganda. The programme was launched in December 2022 in Kampala.

When carrying out the training, the main focus was on developing technical and business skills, such as project management, financial planning and risk management, as well as sales and interpersonal skills, such as customer engagement and after-sales support. Equipped with these skills, energy service providers are better positioned to explore growth opportunities and adopt new operational models that can drive their businesses forwards.

Gender inclusion was a key cornerstone of the overall programme and, as a result, the sub-programme encouraged women to take on leadership roles in the solar market and actively engaged them as trainers and content developers. These efforts are critical for fostering a more inclusive and equitable renewable energy landscape in Uganda.

The diversity of participants taking part in the training encouraged the sharing of varied perspectives and experiences, enriching the learning environment and building stronger networks within the sector. Such collaborations promote a more integrated and supportive community, crucial for the sustained growth of the off-grid energy sector.

Continuous support for the energy service providers will ensure that the skills and knowledge gained are applied effectively, and continued efforts to scale this learning will lead to long-term improvements in performance and outcomes, thus contributing to the achievement of BGFA's targets and Uganda's off-grid electrification goals.

The training programme focused on the following key components:

- A flexible and tailored approach to cater for the diverse needs and differing availability of participating companies and individuals, ensuring broad and effective engagement
- Sector-specific training for the practical application and exploration of new business opportunities offered by decentralised solar solutions
- A hands-on learning approach to bridge the gap between theory and practice
- Inclusion of a diverse group of participants and a committed gender perspective to foster knowledge exchange and a broader impact across the sector

Photo: Course participants in Uganda - RENAC

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Photo: Worker at BGFA investee recycle and repair unit in Zambia - Jason Mulikita for BGFA / Nefco

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Photo: Special Funds team at Nefco - the Facility Manager of BGFA - Gunnlaugur Björnsson, Nefco

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