

**Beyond the Grid Fund for Africa**

# ANNUAL RESULTS REPORT 2023





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# Introduction

Approximately 1 billion people worldwide do not have access to electricity, which is crucial for economic growth and improving living conditions. Despite efforts to achieve universal electrification by 2030, it is estimated that nearly 600,000 people in Sub-Saharan Africa alone will still lack access to electricity by that time.

These individuals reside in rural and peri-urban areas that are not serviced by the main electricity grid. There are significant financial and technical difficulties associated with expanding the grid to these areas due to their geography and dispersed populations.

Off-grid energy solutions, such as mini-grids and solar home systems, provide a cost-effective and reliable alternative to extending the main electricity grid. In Sub-Saharan Africa, a growing number of companies offer innovative solutions that utilise mobile money and other payment schemes to make clean energy more

affordable than traditional alternatives like candles. However, despite high demand, these markets are still considered risky by investors. Even successful companies face difficulties in accessing finance to expand their operations.

The Beyond the Grid Fund for Africa (BGFA) programme aims to address these challenges and contribute to inclusive and sustainable development in its focus countries. It especially supports climate change mitigation and adaptation, energy access, and gender equality.

The BGFA programme aims to establish up to 1.7 million energy connections by 2028, benefiting more than 8.6 million people in Burkina Faso, the Democratic Republic of the Congo, Liberia, Mozambique, Uganda and Zambia.

## Key achievements of BGFA 2019-2023

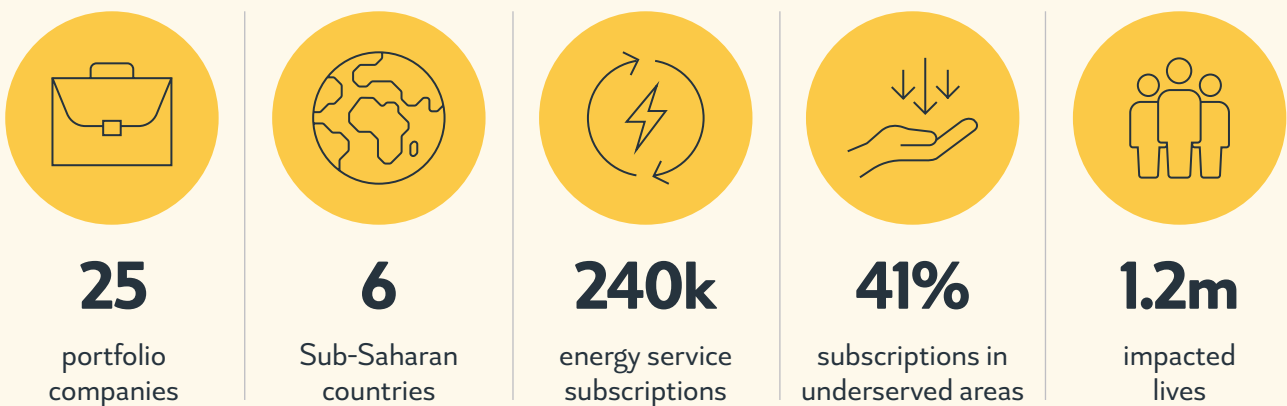


Figure 1: Cumulative achievements of BGFA 2019-2023

# A word from BGFA Chair

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**Adam Öjdahl**  
Chair, BGFA Steering Committee  
Sida, Sweden

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The BGFA programme is a testament to the commitment of the Swedish International Development Cooperation Agency (Sida) to support market development and leverage private sector resources, ingenuity and expertise to increase energy access in Africa. Launched as a result of Sweden's 2015 Power Africa pledge, BGFA represents an implementation of our innovative financial strategies aimed at increasing access to renewable energy in Africa.

Nefco's role as Facility Manager and an implementer of the programme is of course critical and reassuring – managing, developing and continuously driving advancements in the overall design and implementation of BGFA.

The programme's success is also critically dependant on the support from Denmark, Germany, Norway and the US, whose contributions have been vital in BGFA's development and achievements. BGFA's core mission is to expand renewable electricity access, a key driver for social and economic advancement.

By supporting the scale-up of long-term self-sustaining off-grid energy markets, BGFA illuminates pathways to better living standards and broadens opportunities for growth and development. The far-reaching impacts of electricity access are manifold. It transforms daily life, offering improved lighting that extends productive hours, facilitates safer environments and enriches quality of life.

Access to electric power also opens up a world of information, bridging knowledge gaps and connecting remote communities to the global digital landscape. This access is key to informed decision-making and participation in the modern economy. Moreover, the economic implications of electricity access are profound. It acts as a catalyst for economic growth, driving business innovation and creating job opportunities.

By powering small and medium-sized enterprises, electricity fuels the engines of local economies, fostering sustainable development. BGFA's approach, emphasising partnerships and scalability, ensures that these benefits reach the most underserved communities. By engaging government and market institutions, debt providers, equity investors and local stakeholders, and harnessing private sector efficiencies, the programme strives to build a resilient and inclusive energy future for Africa.

This initiative demonstrates the transformative power of electricity in uplifting lives, enhancing education, bridging information divides and stimulating economic prosperity. In essence, BGFA is not just about providing energy, it is about empowering communities and paving the way for a brighter and more equitable future.

# Reflection by the Fund Manager



**Ash Sharma**  
Head of Beyond the Grid Fund for Africa  
& Vice President of Special Funds at Nefco

At the beginning of 2024, the Beyond the Grid Fund for Africa commemorated its fifth birthday. With about EUR 126 million in committed funding from Denmark, Germany, Norway, Sweden and USAID, BGFA is now one of the largest single results-based financing instruments supporting Sustainable Development Goal 7, i.e. improving energy access. A recent review found that the scale of BGFA investment is significant relative to national off-grid energy targets and market developments. In Burkina Faso, Liberia and Zambia, BGFA contracts have the potential to meet, or even exceed, the majority of annual government targets. The review also found that BGFA contracts would greatly accelerate ongoing market activity and other donor initiatives in these countries.

## Continued portfolio building throughout 2023

During 2023, a further 12 portfolio companies were contracted. These companies will receive up to EUR 30 million in funding, which will allow them to impact the lives of up to some 3.8 million people.

At year end, BGFA had built a portfolio of 25 investee companies, cumulatively contracted to deliver over 1.7 million connections in five African countries, with the potential to serve some 8.6 million mainly rural beneficiaries. The first investments were made in the Democratic Republic of the Congo, adding to existing country project portfolios in Burkina Faso, Liberia, Uganda and Zambia. In total, these agreements, worth EUR 55 million<sup>1</sup>, aim to leverage a further EUR 150 million in total funding over their four-year lifetimes. Agreements worth a further EUR 8.4 million have been approved by donors or are under negotiation.

The application phase has now closed in Burkina Faso, Liberia and Zambia, with funds fully allocated to these country programmes. No further calls are anticipated at this point, and the focus going forward is on closing out the application phase in the Democratic of Republic of the Congo, Mozambique and Uganda, ongoing portfolio management, learning and knowledge dissemination.

## Other activities in 2023

The BGFA's institutional support programme, led by implementing partner NIRAS, to establish Off-Grid Task Forces is progressively being rolled out in all BGFA countries, inspired by the early experiences of the Zambian country programme.

The BGFA programme also recognises that targeted technical assistance (TA) is critical to support investees to reach their contracted goals. This work is led by our implementing partner, REEEP, and specifically addresses, e.g., gender policies and action plans, environmental management systems and, together with Get.Invest, facilitation of financing. Other specialist advice is provided in the areas of e-waste management, security, training and credit management.

Communications, capacity building and knowledge management continue to form an important piece of BGFA. The main objectives are to promote the programme to various target audiences with relevant messages and via appropriate channels to showcase contextualised impact stories. BGFA continues to communicate the learning and impact of the programme and incentivise private and public sector entities to contribute and cooperate towards reaching BGFA's objectives.

In 2023, a review of approaches and practices to gender inclusion was undertaken, and a review of financial mobilisation and financing trends commenced. During 2024, we will continue to implement our knowledge management strategy to enable the collection and dissemination of experiences and lessons learned, with a focus on evidence collected from the investee level. BGFA also welcomes carbon finance revenues whenever applicable.

<sup>1</sup> The key feature of results-based financing is that payments are made against pre-agreed results (i.e. milestones), which are independently verified; investees have total agency over the deployment of funds.



Photo: Jason Mulikita for BGFA

**Outlook for coming years**

Our experience to date has been that BGFA can stimulate market growth by encouraging companies to expand their operations into underserved areas. By rewarding companies for reaching remote or marginalised communities, results-based financing can help extend energy access to those who need it most. In terms of innovation and efficiency, investees are incentivised to innovate and optimise their operations to achieve better results with fewer resources, maximising rewards under BGFA. This helps drive improvements in technology, business models and operational efficiency within the off-grid electricity sector.

Notwithstanding, the outlook for companies operating in the off-grid sector post Covid remains challenging. Ongoing affordability issues are compounded by difficulties in raising equity finance, high interest rates and currency depreciation in several markets. However, we believe that results-based financing can play a crucial role in driving investment, innovation and expansion within the off-grid electricity sector, ultimately contributing to the goal of increasing energy access for underserved populations in Africa. BGFA will seek to support investees and host governments to support the objectives of SDG7.

# BGFA journey



Kari Hämekoski  
Senior Programme Manager, Nefco

The Beyond the Grid Fund for Africa reached a key milestone in 2023, having provided over one million people with access to electricity in Burkina Faso, the Democratic Republic of the Congo, Liberia, Uganda, and Zambia.

Established in 2019, BGFA emerged as a result of Sweden's desire to expand the successful Beyond the Grid Fund for Zambia (BGFZ) and collaborate with an International Financial Institution like Nefco. Developed and implemented by REEEP since 2016, in close collaboration with the Swedish Embassy in Lusaka, BGFZ achieved a key objective, reaching one million citizens. The programme ended in 2023.

The timeline (Figure 3) highlights the continued growth of the BGFA programme, which has expanded its network of target countries and investors over time. Sweden initiated the programme and was joined by Denmark and Germany in 2021. Momentum continued with Norway announced as the programme's fourth investor in 2022.

BGFA formed partnerships with a number of African nations, including Zambia, Burkina Faso and Liberia in 2020. In 2021, the programme expanded to Mozambique and Uganda. Finally, in 2022, the Democratic Republic of the Congo became a new host country.

The year 2023 represented a significant year for the BGFA programme, which saw growing success. This progress is a direct outcome of extensive preparatory work conducted over the years, encompassing scoping and portfolio building. From 2019 through to 2021 and extending into 2023, the programme has successfully launched multiple calls for proposals,

evaluated numerous business plans and negotiated many contracts. These efforts have laid a solid foundation for the results seen today.

## Value for money

BGFA prioritises value for money as a key principle. The approach was originally developed by REEEP, in close cooperation with the Swedish Embassy in Lusaka and Sida.

Eligible companies are selected based on criteria such as technical feasibility, management capacity, financing leverage, gender equality, consumer protection and e-waste management capacity. Through a transparent and open bidding process, firms competed for contracts, with external evaluations ensuring independent selection and thorough due diligence. BGFA's funding is fully results based, with strict monitoring and verification processes in place to maximise development benefits. This proven model incentivises private companies to efficiently deliver clean energy services to their customers.

## Diverse portfolio

The overall BGFA portfolio is geographically and technologically diverse and includes a mix of small, local companies and larger, international actors. Projects encompass solar home systems, mini-grids, productive use of energy and battery rental systems (see Figure 2). This comprehensive approach caters to different business models and sizes of companies, enabling the provision of varied sustainable energy solutions to meet the diverse needs of underserved regions.

## Support for local companies

BGFA also supports smaller, local enterprises to better serve remote communities, recognising their potential alongside larger companies. BGFA provides technical assistance to guide smaller firms in untapped areas. To foster fair competition and address financing challenges, BGFA employs a differentiated approach with Launch to Scale (LS) and Direct to Scale (DS) funding. LS funding is targeted at companies operating in less mature markets or entering those markets for the first time. Typically, these are small enterprises, often locally owned or managed. DS is funding directed at more mature companies and markets, which typically have



better access to international equity and debt markets. DS funding is aimed at supporting companies that, due to their existing market position and experience, are expected to rapidly deliver scaled distribution.

### Mini-grids and productive use

Progress in the mini-grid sector has presented both challenges and advancements. In Zambia, new investees joined the portfolio, while promising developments are being seen in the Democratic Republic of the Congo, Mozambique and Uganda, with potential contracts nearing finalisation. Improved regulatory and tariff conditions in Zambia provide a positive outlook for further progress in 2024. However, developing mini-grids has not been without difficulties, as regulatory

issues, complex licensing procedures, unclear guidelines and inconsistent regulations across countries can significantly impede the process. To overcome these obstacles, fostering increased collaboration among stakeholders, including government bodies, regulatory authorities, local communities and industry experts, is crucial.

While smaller solar home systems have seen successful sales figures and provided basic services, the need to shift towards higher-tier products is recognised. During 2023, we welcomed our first investments in pure productive use of energy in Uganda and Zambia, both in solar water pumps and irrigation, and expect further portfolio additions in this segment in the near future.

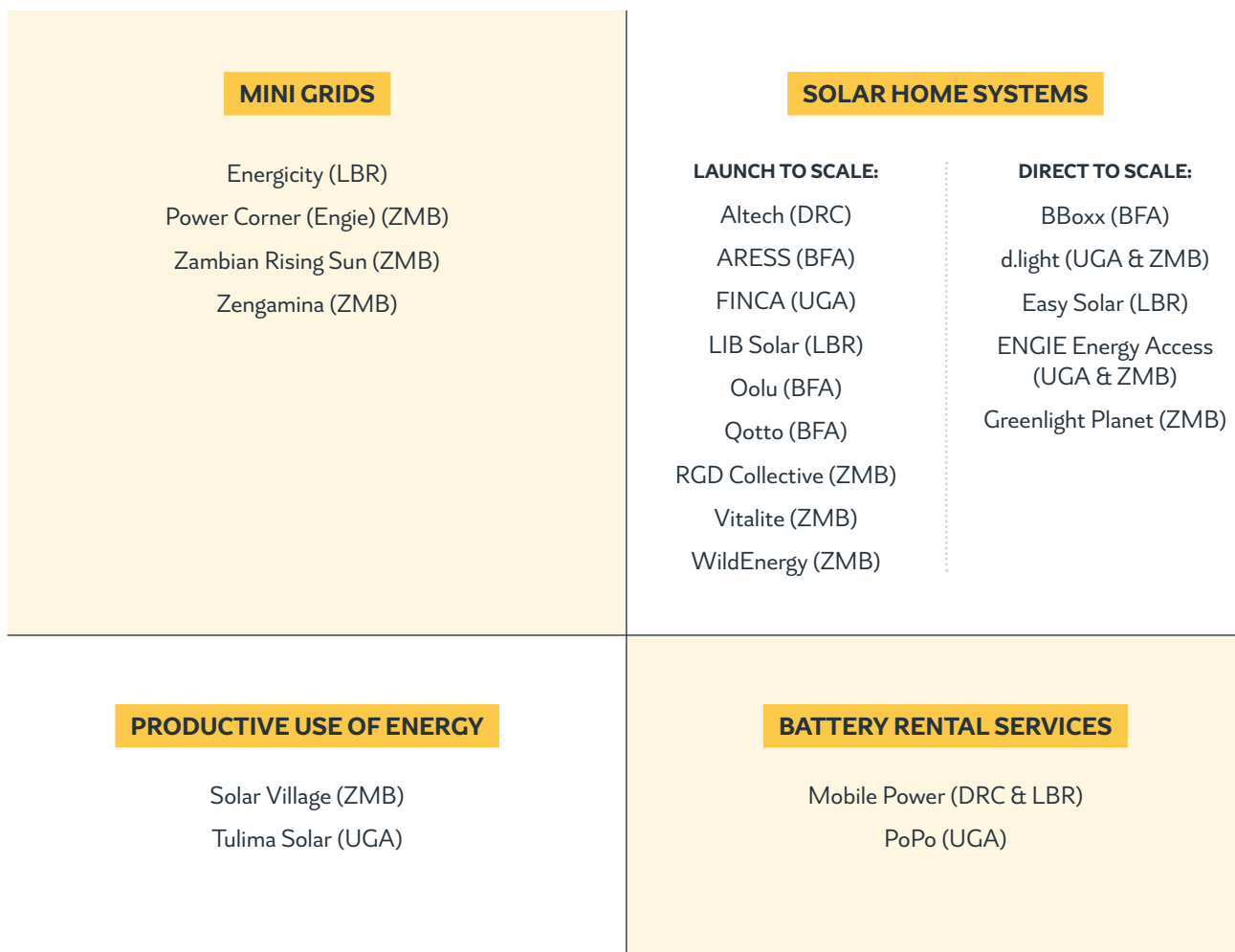
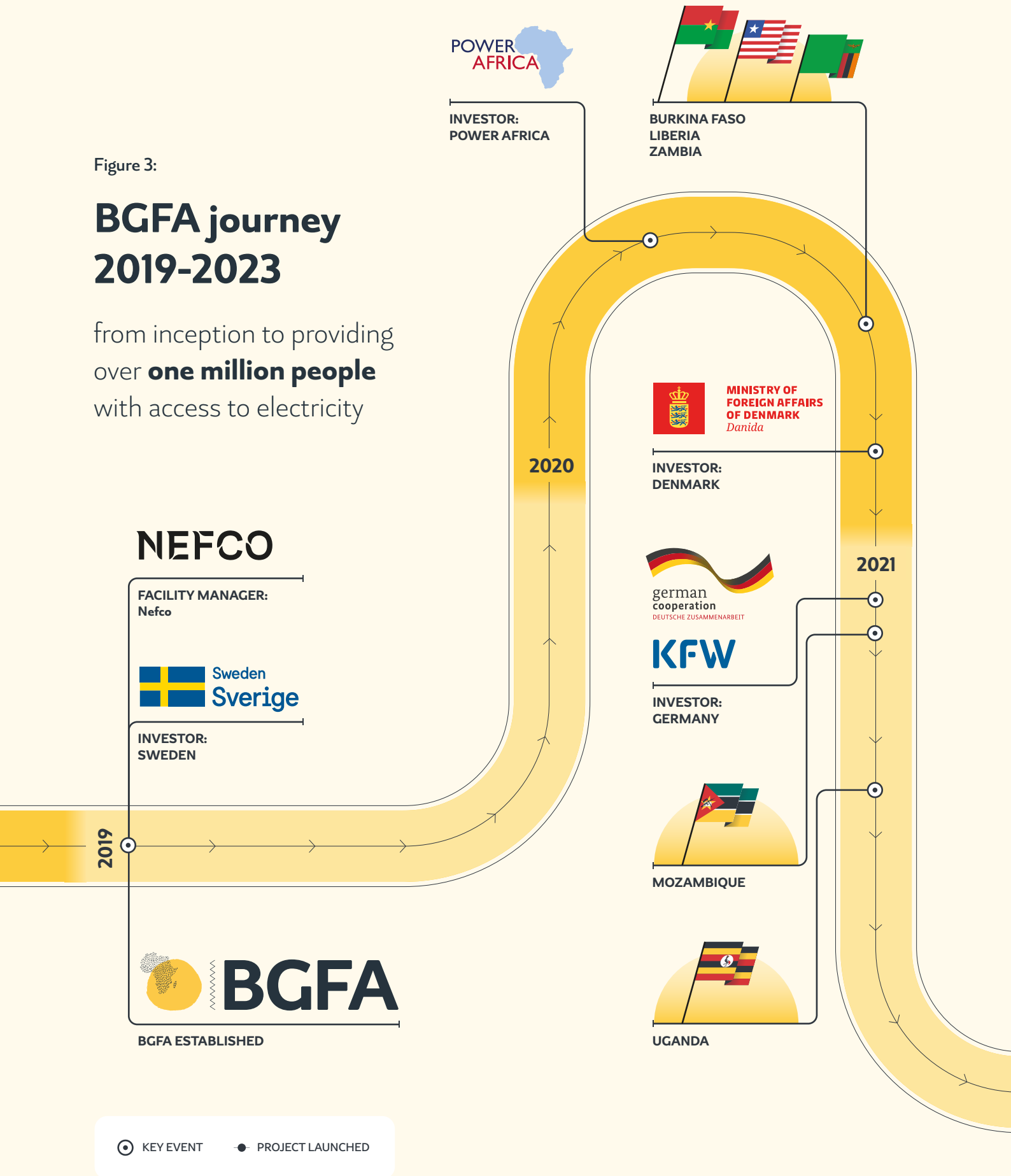


Figure 2: Types of business models in the BGFA portfolio

Figure 3:

# BGFA journey 2019-2023

from inception to providing over **one million people** with access to electricity



## 2023 IN NUMBERS

**1M**

OF PEOPLE WITH  
ACCESS TO ELECTRICITY

**€30M**

FUNDING  
COMMITTED

**12**

PORTFOLIO  
COMPANIES

**210K**

ENERGY SERVICE  
SUBSCRIPTIONS SOLD

**€8M**

DISBURSEMENTS  
MADE

**1.5K**

BUSINESS  
BENEFICIARIES

## BGFA ACHIEVEMENTS



**25**

PORTFOLIO  
COMPANIES



**240K**

TOTAL ENERGY SERVICE  
SUBSCRIPTIONS SOLD



**1.2M**

TOTAL PEOPLE WITH  
ACCESS TO ELECTRICITY



**€55M**


TOTAL FUNDING  
COMMITTED



**€11M**

TOTAL DISBURSEMENTS  
MADE

 **Norway**

 **Norad**

INVESTOR:  
NORWAY

2023



DEMOCRATIC REPUBLIC  
OF THE CONGO

2024

## 2022 IN NUMBERS

**200K**

OF PEOPLE WITH  
ACCESS TO ELECTRICITY

**€25M**

FUNDING  
COMMITTED

**13**

PORTFOLIO  
COMPANIES

**30K**

ENERGY SERVICE  
SUBSCRIPTIONS SOLD

**€3M**

DISBURSEMENTS  
MADE

2022

# Summary of results

Several significant milestones have been achieved during the year. At the end of 2023, BGFA had impacted the lives of approximately 1.2 million people. The fund has also reached nearly EUR 11 million in cumulative disbursements 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). All the achievements reported so far are validated results.



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

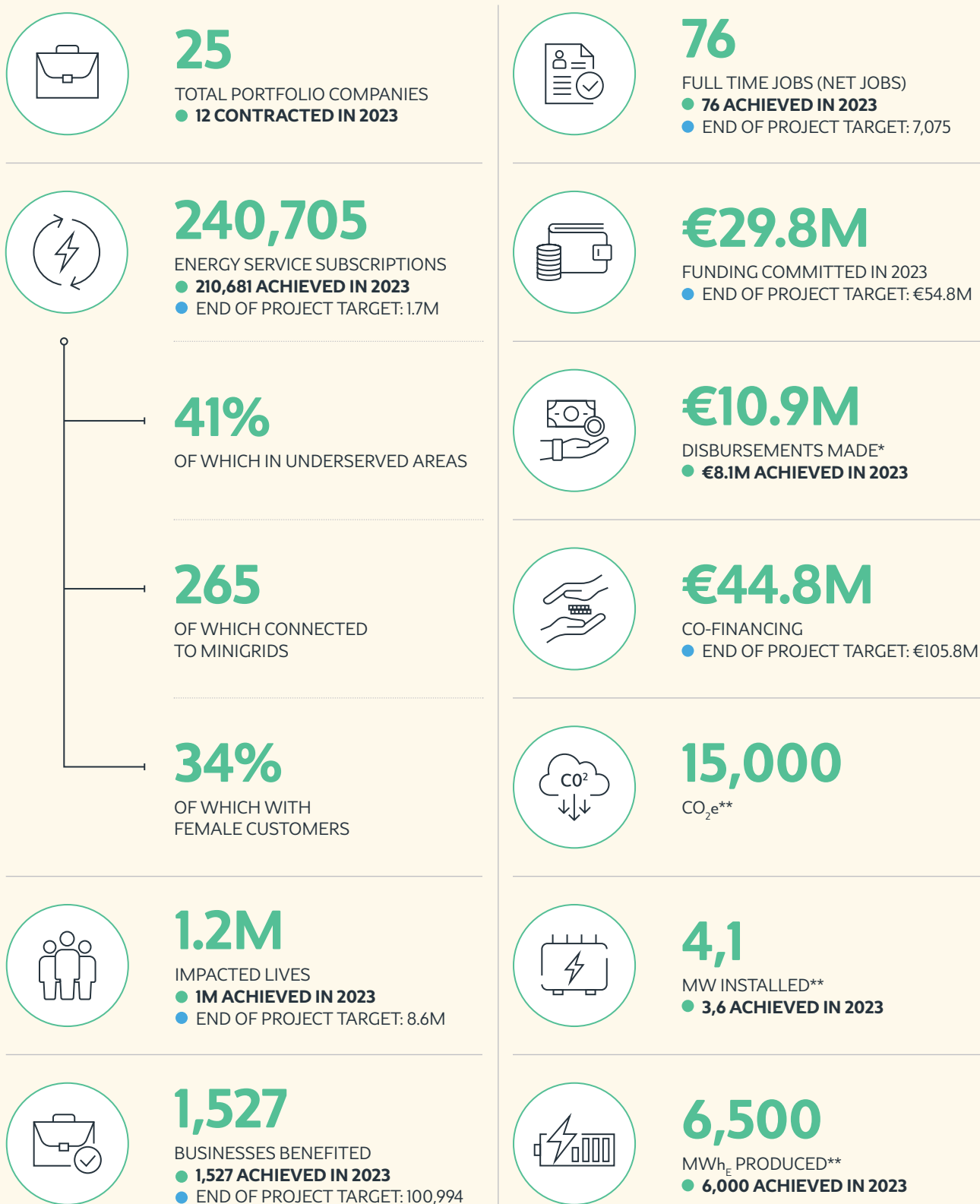


Results that have undergone the first layer of **external validation**



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

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






\*Includes advance payments.



\*\*The tool for calculating avoided CO<sub>2</sub>e emissions, MW installed, and MWh<sub>e</sub> produced has been fine-tuned in 2023 (see Monitoring, evaluation and learning framework section on page 36); the project-specific figures will be updated gradually. The CO<sub>2</sub>e numbers presented here are conservative estimates.

## BGFA portfolio companies at the end of 2023

This section provides an overview of the BGFA portfolio companies as of the end of 2023. 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 2023

| COUNTRY PROGRAMME  | COMPANY  | MAIN TECHNOLOGY               | #ESS CUMULATIVE ACHIEVED %* | #ESS TARGET |
|--|--|-------------------------------|-----------------------------|-------------|
| <br><b>Burkina Faso</b>                     | Advens Bboxx                                   | Standalone solar home systems | 0%                          | 91,750      |
|  | ARESS  | Standalone solar home systems | 0%                          | 19,488      |
|  | Oolu Solar                                     | Standalone solar home systems | 0%                          | 28,190      |
|  | Qotto  | Standalone solar home systems | 0%                          | 21,280      |
| <br><b>Democratic Republic of the Congo</b> | Alternative Energy Technologies Group (Altech) | Standalone solar home systems | 9%                          | 55,700      |
|  | Mobile Power DRC                               | Solar battery rental services | 0%                          | 69,000      |
| <br><b>Liberia</b>                          | Easy Solar                                     | Standalone solar home systems | 0%                          | 9,155       |
|  | Energicity                                     | Solar mini-grid               | 0%                          | 4,462       |
|  | LIB Solar                                      | Standalone solar home systems | 27%                         | 72,800      |
|  | Mobile Power                                   | Solar battery rental services | 39%                         | 9,361       |

| COUNTRY PROGRAMME  | COMPANY  | MAIN TECHNOLOGY               | #ESS CUMULATIVE ACHIEVED %* | #ESS TARGET      |
|--|--|-------------------------------|-----------------------------|------------------|
| <br><b>Uganda</b>   | d.light Design Uganda Limited                    | Standalone solar home systems | 6%                          | 200,000          |
|  | ENGIE Energy Access Uganda (Fenix International) | Standalone solar home systems | 44%                         | 167,600          |
|  | FINCA Plus                                       | Standalone solar home systems | 6%                          | 97,132           |
|  | POPO Universal Energy                            | Solar battery rental services | 0%                          | 15,675           |
|  | Tulima Solar                                     | Productive use of energy      | 4%                          | 2,760            |
| <br><b>Zambia</b> | d.light Design                                   | Standalone solar home systems | 0%                          | 102,458          |
|  | ENGIE Energy Access Zambia                       | Standalone solar home systems | 31%                         | 295,668          |
|  | Greenlight Planet                                | Standalone solar home systems | 5%                          | 229,029          |
|  | Power Corner Zambia                              | Solar mini-grid               | 0%                          | 3,212            |
|  | RDG Collective                                   | Standalone solar home systems | 34%                         | 25,697           |
|  | SolarVillage                                     | Productive use of energy      | 0%                          | 50,000           |
|  | VITALITE   | Standalone solar home systems | 8%                          | 113,400          |
|  | WidEnergy  | Standalone solar home systems | 0%                          | 37,000           |
|  | Zambian Rising Sun                               | Solar mini-grid               | 0%                          | 3,835            |
| Zengamina Power Limited  | Small hydro mini-grid                            | 10%                           | 2,600                       |                  |
| <b>TOTAL NUMBER OF ENERGY SERVICE SUBSCRIPTIONS (ESS)</b>  |  |                               |                             | <b>1,727,252</b> |

\* ESS vary by nature, and # of ESS 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.







Figure 4: BGFA project countries

## Country overviews

Significant progress has been made in Zambia and Uganda, which are typically considered more advanced markets. Positive outcomes have been observed in Liberia, while the Democratic Republic of the Congo (DRC) is also showing promising initial results. Burkina Faso is already selling energy service subscriptions,

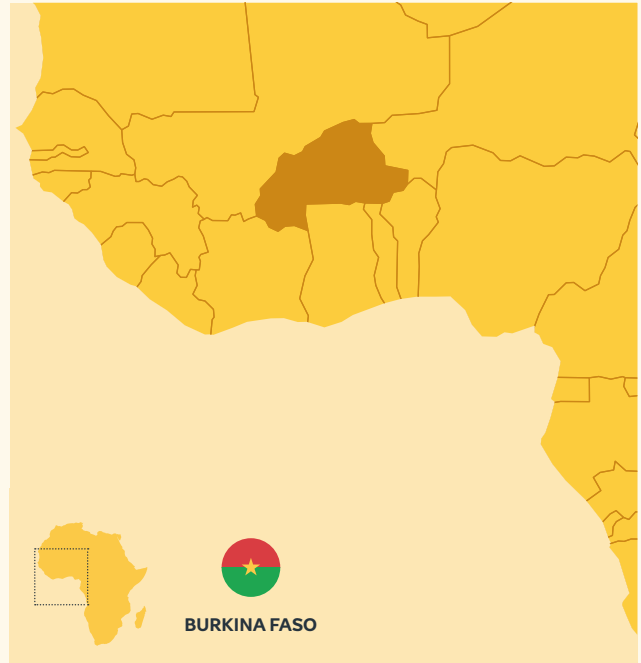
although results-based payments for these sales have not yet been requested, and Mozambique is yet to establish active contracts. BGFA, in collaboration with the Off-Grid Task Forces, continues to support energy service providers in accessing new markets and overcoming challenges.

# Burkina Faso

Burkina Faso is a nascent market. It is characterised by a low rural electrification rate and a difficult security situation but offers a market size estimated to be at least 700,000 households

The application phase in Burkina Faso closed in 2023, and the final portfolio now consists of four investees – Bboxx, Oolu Solar, ARESS and Qotto – distributing and servicing solar home systems. The security situation is the main operational challenge in Burkina Faso, with over half the country considered unsafe to operate in. This affects 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. For example, rural customers in areas that are relatively safe prefer 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.





The four investees have the potential to reach 800,000 beneficiaries and account for EUR 7 million in financial commitments. Disbursement have been made to all four portfolio companies and cumulatively 25% of funds have been disbursed.



**CONTRACTED INVESTEES:**

- Advens Bboxx
- ARESS
- Oolu Solar
- Qotto

**Country-level KPI targets in Burkina Faso, results achieved in 2023 and cumulative results**

| <br>KPI | <br>ACHIEVED IN 2023* | <br>CUMULATIVE ACHIEVED % | <br>TARGET (EXPECTED AS IN CONTRACTS) |
|--|--|--|--|
| ESS  | 0  | 0%   | 160,708  |
| # of people with access to electricity   | 0  | 0%   | 822,513  |
| Funding committed  |  |  | 7,062,743  |
| Disbursements made %**   |  |  | 25%  |

\* Externally validated results. \*\*Includes advance payments.



“With the BGFA financing we have been able to start our expansion in Burkina Faso with the aim to reach up to 116,000 people in remote areas with our solar energy solutions”

**Léonide Michael Sinsin**  
CEO at ARESS Burkina Faso

## ARESS BURKINA FASO

### Business expansion started in Burkina Faso to scale up access to electricity in remote areas

ARESS Burkina Faso is a company providing solar home systems in remote areas of the country. The ARESS group has been present in Burkina Faso since 2018 and provides diversified solar energy solutions in six Western and Central African countries from solar lanterns to Productive Use equipment. The business in Burkina Faso has been developed based on experience from the subsidiary ARESS Benin. Currently, the company has three shops in Burkina Faso and an initial network of sales agents to sell and distribute products to end-users.

With BGFA funding, ARESS Burkina Faso will scale up its current business activities in the country using a pay-as-you-go business approach until the end of 2026. The company plans to establish up to 19,500 new energy service subscriptions, providing residential energy needs, such as lighting, mobile phone charging, TV and fridges,

and customised kits for business and institutional uses, which will provide clean energy and lighting for up to 19,000 households and approx. 2,000 businesses.

During 2023, ARESS Burkina Faso reported that it dispatched over 1,800 products and finalised the establishment of two new shops outside the capital Ouagadougou. These first expansion activities will support the leveraging of additional co-financing to the company and maintain a network of sales agents. Without BGFA funding, the commencement of scale-up activities would have been delayed.

“In the ARESS Burkina Faso case we see the need for our funding to support the company to grow and scale up its business in a challenging market to provide a substantial number of people with access to clean energy”

**Aliona Fomenco**  
Investment Manager at Nefco



TARGETS:



**€1.34M**

IN COMMITTED FUNDING



**19,488**

ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED



"Since our humble beginnings in the rural DRC, Altech has come a long way; in ten years we have successfully established the largest PAYGO solar and e-mobility business in the DRC. Here, opportunities for growth are abundant, but they come with challenges. I understand this first hand, having grown up in a poor rural household where we often couldn't afford kerosene for lighting and later in a refugee camp dependent on off-grid energy solutions. These experiences drive our mission to improve daily life for people in the DRC. Thanks to the support of BGFA, we can expand our geographical reach even further within the country"

**longwa Mashangao**  
Co-founder/CEO at Altech

## ALTECH DEMOCRATIC REPUBLIC OF THE CONGO

**Entrepreneurial company expanding access to solar lighting solutions and e-motorbikes in the DRC**

Alternative Energy Technologies Group (Altech) is a Congolese-founded and managed company established in 2013 by two innovative entrepreneurs who grew up in a refugee camp in Tanzania during the late 1990s, after fleeing the Congolese civil war.

To help support themselves financially, the co-founders and co-CEOs Washikala Malango and longwa Mashangao started buying small numbers of solar lanterns in Tanzania and importing them to the Democratic Republic of the Congo to sell. They made several similar journeys, increasing the number of solar lanterns they brought back each time. Today, the company is operating in 23 out of 26 provinces in the DRC, selling solar home systems and lighting solutions mainly to households through their 4,000 engaged sales agents as well as providing e-motorcycle rentals and charging stations.

With BGFA funding, Altech will further scale up its presence in the country and expand to the remaining three provinces, as well as increase its fleet of rental e-motorcycles and expand its network of charging stations. E-motorcycles are largely used as taxis in the DRC and available for drivers to rent for eight Euros per day. The company's aim is to establish up to 60,000 new energy service subscriptions and provide 1,000 rental e-motorcycles by the middle of 2027.

With BGFA support, Altech successfully secured additional funding, rolled out a national credit agent network, distributed its first solar home systems and worked on an implementation plan to scale its e-mobility business, in which BGFA will play a pivotal role.

"Some 90% of people lack access to electricity in the DRC, and with its entrepreneurial and innovative approach Altech will make a significant contribution to scaling up access to affordable energy solutions and e-motorbikes"

**Aleksandra Reskalenko**  
Programme Officer at Nefco



**TARGETS:**



**€5M**

IN COMMITTED FUNDING



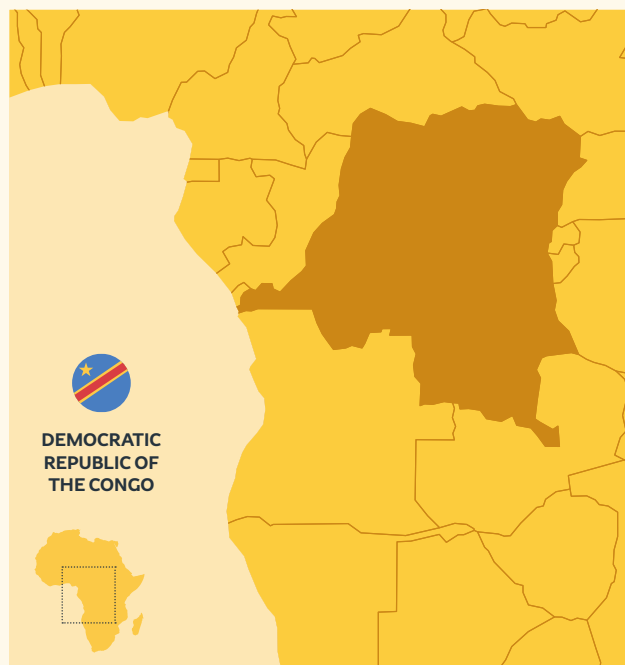
**55,700**

ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

# Democratic Republic of the Congo

The first investments in the DRC were made in 2023, and the current portfolio consists of two investees deploying innovative business models in the largest country in Sub-Saharan Africa.

The two investees, Altech and Mobile Power, have the potential to reach over 600,000 beneficiaries and account for EUR 8 million in financial commitments. Payments have been made to both companies; 5% of committed funds have been disbursed.



#### CONTRACTED INVESTEEES:

- Alternative Energy Technologies Group (Altech)
- Mobile Power DRC

### Country-level KPI targets in the DRC, results achieved in 2023 and cumulative results

| ☰                                      | ✔                 | ✔                     | 📄                                 |
|--|-------------------|-----------------------|-----------------------------------|
| KPI                                    | ACHIEVED IN 2023* | CUMULATIVE ACHIEVED % | TARGET (EXPECTED AS IN CONTRACTS) |
| ESS                                    | 5,153             | 4%                    | 124,700                           |
| # of people with access to electricity | 26,796            | 4%                    | 606,440                           |
| Funding committed                      |                   |                       | 8,000,000                         |
| Disbursements made %**                 |                   |                       | 5%                                |

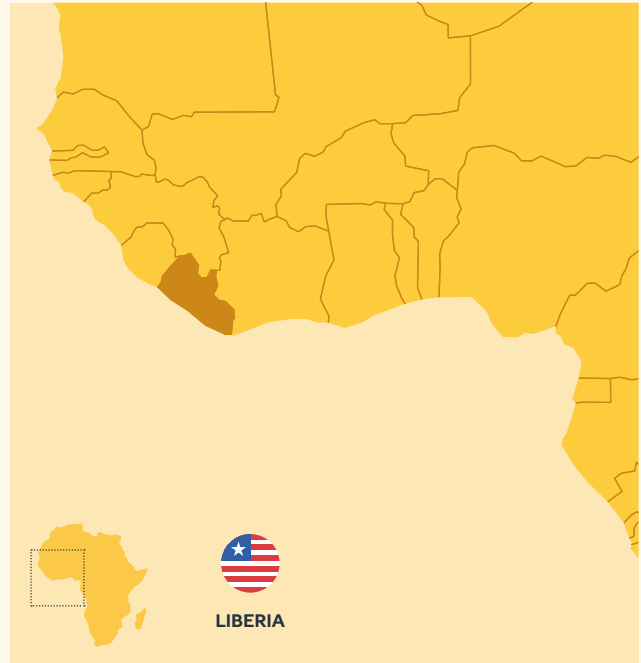
\* Externally validated results. \*\*Includes advance payments.

# Liberia

Liberia is another early-stage, frontier market for BGFA, given its very low rate of rural electrification and challenging socioeconomic and physical conditions.

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

The portfolio has been performing relatively well. The four investees – LIB Solar, Mobile Power, Easy Solar and Energency Corp – have the potential to reach over 600,000 beneficiaries and account for EUR 5.5 million in financial commitments. Disbursements have been made to three portfolio companies and 29% of committed funds have been disbursed.



**CONTRACTED INVESTEES:**

- Easy Solar
- Energency
- LIB Solar
- Mobile Power

**Country-level KPI targets in Liberia, results achieved in 2023 and cumulative results**

| ☰                                      | 🏆                 | 🏆                     | 📄                                 |
|--|-------------------|-----------------------|-----------------------------------|
| KPI                                    | ACHIEVED IN 2023* | CUMULATIVE ACHIEVED % | TARGET (EXPECTED AS IN CONTRACTS) |
| ESS                                    | 2,775             | 25%                   | 95,778                            |
| # of people with access to electricity | 14,229            | 25%                   | 482,629                           |
| Funding committed                      |                   |                       | 5,535,583                         |
| Disbursements made %**                 |                   |                       | 29%                               |

\* Externally validated results. \*\*Includes advance payments.



“Thanks to BGFA support, we have been able to expand our operations across all 15 counties of Liberia and serve over 30,000 households so far. Many households in Liberia are struggling in the current economic environment. But these economic challenges highlight the important role that solar-powered lighting and productive use assets play in improving quality of life and resilience in Liberia’s rural communities. Without BGFA, we would not have the resources necessary to serve these customers”

**Nicholai Lidow**  
CEO at LIB Solar

## LIB SOLAR LIBERIA

### Engaging the local communities to scale up access to off-grid energy solutions in Liberia

Liberia, like many African nations, faces several challenges such as unreliable infrastructure, limited access to electricity and periodic economic crises. LIB Solar, one of the first BGFA investees, began operations in 2018 to respond to the challenge of limited energy access in the country.

LIB Solar established itself by providing a reliable source of energy to remote areas through its community-based model. The company directly engages local communities to facilitate sales of solar home systems and provide customer service, with sales agents chosen among the community members themselves. The company quickly expanded its product offering from basic solar home systems to higher-tier systems, offering freezers to women-owned businesses in particular.

As Liberia experienced an economic downturn, LIB Solar encountered new obstacles. The global economic crisis started by the Russian invasion of Ukraine hit

Liberia hard and led to decreased consumer spending power, making it difficult for families to afford food and school fees for their children, let alone solar installations. Recognising the need to adapt to a changing environment, LIB Solar started to diversify its sales model and is now partnering with retail shops and engaging commission-based sales agents alongside its community-based sales approach. The company offers a variety of pay-as-you-go payment plans, paid either in cash or using mobile money.

With the support of BGFA, LIB Solar continues to sell solar home systems for lightning, phone charging, TVs, fridges and freezers. The company is covering the most underserved counties of Maryland, Grand Kru and River Ghee, as well as Lofa, Bong and Nimba, all priority areas for BGFA in Liberia. It is estimated that the BGFA project will help provide clean off-grid energy solutions and lighting equipment for over 72,000 households and 800 businesses by the end of 2026.

“We are very excited to learn that LIB Solar has been able to expand its business operations across Liberia within less than 2 years and are continuing to support them through these challenging times, helping the company to reach up to 360,000 people and 800 businesses in rural areas of the country”

**Heli Sinkko**  
Programme Manager at Nefco

**TARGETS:**

**€1.87M**  
IN COMMITTED FUNDING

**72,800**  
ENERGY SERVICE CONNECTIONS TO BE ESTABLISHED

# Mozambique

Mozambique is a country with large growth potential in the off-grid solar market. The country's overall electrification rate is about 15% and only 5.7% of rural households use electricity for lighting.

The Call for Proposals (BGFA2) was re-launched in 2023 as a simplified, single-stage application process targeting mini-grid providers. BGFA aims to incentivise private off-grid energy service companies to scale up their innovative sustainable businesses and accelerate access to affordable and clean off-grid energy for customers in peri-urban and rural areas of Mozambique at specified sites agreed by the Government of Mozambique. The selection process was finalised in 2023 and at year end the due diligence review phase was on-going.

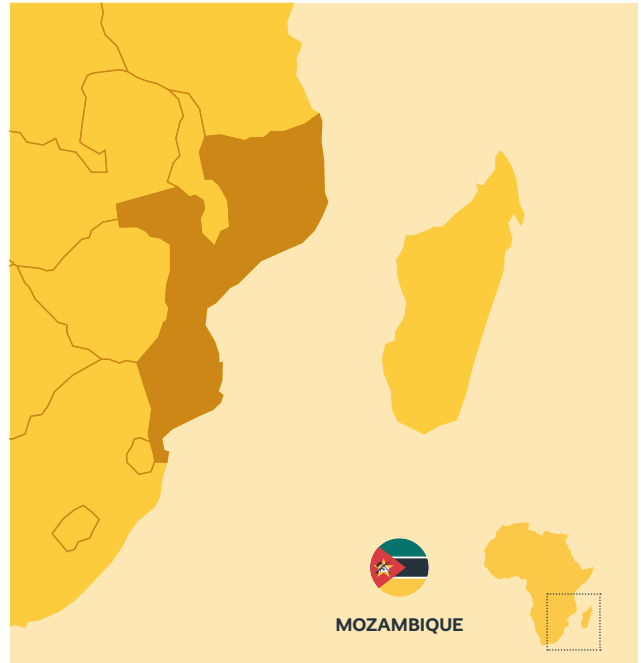


Photo: Jason Mulikita for BGFA

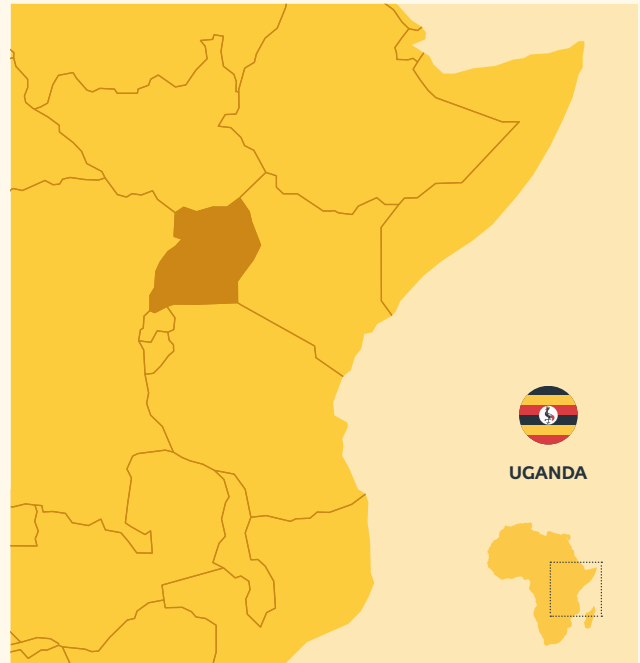


# Uganda

Uganda is one of BGFA’s largest markets by available funding, which totals EUR 20 million and is provided by Sweden and Denmark.

When it became evident that there would still be funding available following the close of the first Call for Proposals (BGFA3) in Uganda, a second Call for Proposals (BGFA5) was opened in March 2023.

In 2023, BGFA signed a further three contracts and in total five projects have been agreed from the first Call for Proposals (BGFA3). One project is still in the negotiation process. The second Call was launched in Uganda as a simplified, single-stage application process, targeting solar home systems, solar mini-grids and pure productive use of energy projects in one funding window. The available funding for the Uganda window is expected to be fully allocated in 2024 with a balanced portfolio of solar home systems, mini-grids and investments in companies focused on pure productive use of energy.



#### CONTRACTED INVESTEES:

- d.light Design Uganda Limited
- Engie Energy Access Uganda (Fenix International)
- FINCA Plus
- POPO Universal Energy
- Tulima Solar

### Country-level KPI targets in Uganda, results achieved in 2023 and cumulative results

| ☰                                      | 🏆                 | 🏆                     | 📄                                 |
|--|-------------------|-----------------------|-----------------------------------|
| KPI                                    | ACHIEVED IN 2023* | CUMULATIVE ACHIEVED % | TARGET (EXPECTED AS IN CONTRACTS) |
| ESS                                    | 90,083            | 19%                   | 483,167                           |
| # of people with access to electricity | 464,769           | 19%                   | 2,465,530                         |
| Funding committed                      |                   |                       | 10,803,266                        |
| Disbursements made %**                 |                   |                       | 25%                               |

\* Externally validated results. \*\*Includes advance payments.

Photo: Tulima Solar, Uganda



## Off-grid skills development sub-programme in Uganda

The UN Sustainable Development Goal 8 aims to promote sustained economic growth, full and productive employment, and decent work. One of the critical strategies to realise this goal is comprehensive skills development and workforce training initiatives. Increasing employment and skills in the off-grid sector in Uganda is a key priority for the BGFA programme. The off-grid skills development programme, launched in December 2022 and carried out in 2023-2024, has conducted several training sessions in 2023. The sub-programme is primarily targeted to companies contracted under BGFA, but is also open to other companies in the off-grid sector.

Training has been developed based on input received from the participating companies during the inception phase of the training programme. Courses have been held in the fields of technical, sales and business skills within the area of solar home systems and mini-grids.

The ultimate goal of the training programme is to support the creation of local jobs and in particular to enhance women's participation within the off-grid energy sector in Uganda. Meeting the targets for women's participation has shown to be somewhat challenging reflecting current gender disparities. Going forward, also training programmes aimed exclusively for women will be held to lower the threshold for women to participate. In addition, a Training of Trainers (ToT) course will also be included in the training programme for 2024 to enable even further expansion of knowledge transfer. All training material funded under the BGFA will be open source and available also after the close of the programme.

The skills development programme is carried out in partnership with Renewables Academy (RENAC) AG in cooperation with Inensus and Ugandan partners Uganda Solar Energy Association (USEA) and Sendea, with the target to reach 300 beneficiaries, of which at least 30% women.



"The BGFA results-based financing is enabling us to invest more in market development and explore more challenging areas in Uganda, enabling us to reach more farmers and livestock keepers to provide them with the tools needed to be more productive, earn more and become more resilient to climate change"

**Michael Kuntz**  
Co-CEO at Tulima Solar

## TULIMA SOLAR UGANDA

### Customised solar-powered water pumps and irrigation systems to be provided to smallholder farmers across rural Uganda

Tulima Solar is a specialised distributor and provider of solar water pumps, irrigation equipment and generator replacements, primarily for smallholder agribusinesses and farmers in rural areas of Uganda, supporting farmers to increase their incomes through access to irrigation. The company has been in operation in Uganda since 2020.

Tulima Solar provides a holistic solution for its clients. It offers a customised pump system design for every farmer and can serve farms between one and twenty acres no matter the water source. Monitoring systems are included with the products, which enable remote control as well as improve maintenance and service processes for customers. With two-thirds of Tulima clients living below the poverty line, the company has found that providing equipment through lease-to-own plans makes it affordable to those most in need.

"It was very positive to see that Tulima Solar was able to expand its operations to new rural regions in 2023. With BGFA financing, it will be able to provide local low-income farmers with affordable irrigation systems and products"

**Tina Möller**  
Programme Manager at Nefco

With BGFA funding, agreed in the first quarter of 2023, Tulima is expanding its business operations in rural areas of the Central, West Nile, Northern and Eastern parts of Uganda. Its aim is to scale up its distribution network by opening new retail hubs and hiring new sales personnel to establish up to 2,760 new energy connections. The BGFA funding has made it possible for the company to start making investments in raising awareness in underserved, remote areas that are more costly to reach.

During 2023, Tulima expanded its business operations in the West Nile and Northern areas of Uganda and opened an office in Lira. Through partnerships the company was also able to serve the Bidi, Mvepi and Palorinya refugee camps with irrigation solutions.



#### TARGETS:



**€1.7M**

IN COMMITTED FUNDING



**2,760**

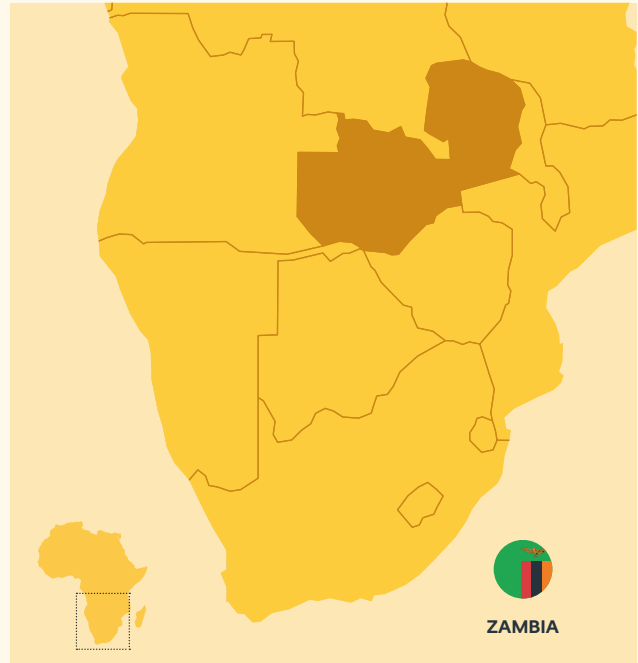
ENERGY SERVICE CONNECTIONS  
TO BE ESTABLISHED

# Zambia

Zambia is BGFA’s longest established market, and its off-grid sector is approaching maturity. The sector has the potential to absorb significant financing from BGFA, and the presence of ten BGFA portfolio companies is testament to the market environment being conducive to attracting additional financing and investments..

The application phase of the BGFA country portfolio in Zambia has been concluded and is now technologically balanced, encompassing solar home systems, productive use and three mini-grid companies. During 2023, BGFA added its first female-led business, WidEnergy, and its first productive use company, Solar Village. In total, the ten investees have the potential to reach over 4.2 million beneficiaries in Zambia and account for EUR 23.4 million in financial commitments.

The portfolio has been performing well overall. The strongest performance has been in the solar home system sector, although the mini-grid segment is expected to pick up in 2024 given favourable regulatory developments in 2023. Disbursements have been made to most portfolio companies and 16% of committed funds have been disbursed.



**CONTRACTED INVESTEES:**

- d.light Design
- ENGIE Energy Access Zambia
- Greenlight Planet
- Power Corner Zambia
- RDG Collective
- SolarVillage
- VITALITE
- WidEnergy
- Zambian Rising Sun
- Zengamina Power Limited

**Country-level KPI targets in Zambia, results achieved in 2023 and cumulative results**

| ☰<br>KPI                               | 🏆<br>ACHIEVED<br>IN 2023* | 🏆<br>CUMULATIVE<br>ACHIEVED % | 📄<br>TARGET<br>(EXPECTED AS IN CONTRACTS) |
|--|---------------------------|-------------------------------|---|
| ESS                                    | 94,254                    | 14%                           | 862,899                                   |
| # of people with access to electricity | 487,619                   | 14%                           | 4,202,043                                 |
| Funding committed                      |                           |                               | 23,407,885                                |
| Disbursements made %**                 |                           |                               | 16%                                       |

\* Externally validated results. \*\*Includes advance payments.



“We envision a world in which every African woman and girl has access to clean, affordable and sustainable energy solutions. Our partnership with BGFA is providing the catalytic funding needed to scale our business faster, access more remote regions and reach even the most underserved customers”

**Liliane Munezero Ndabaneze**  
CEO at WidEnergy

## WIDENERGY ZAMBIA

### Scaling up access to clean energy solutions by supporting female entrepreneurs in Zambia

WidEnergy Africa –Women’s Initiative for Delivering clean Energy to Africa – is a woman-led company, incorporated in 2016 in Lusaka, Zambia, committed to empowering African women by supporting them to take an active role in advocating clean and renewable energy solutions in their communities. The main line of WidEnergy’s business is the distribution of stand-alone solar home systems.

The announced partnership with BGFA in 2023 provided new purpose and determination for WidEnergy and its team in challenging times. Since receiving the initial BGFA funding, the company has been able to commence the scale up of its business operations.

WidEnergy aims to sell and establish up to 37,000 new high-quality, clean and affordable solar home systems to customers living in rural and peri-urban areas of Zambia by 2027. WidEnergy will also be able to introduce productive use appliances, such as freezers and solar water pumps, in its product portfolio with the support from BGFA and has already established a new partnership.

Beyond supplying affordable solar products, WidEnergy provides training and jobs as door-to-door sales agents to women and girls in local communities, providing sustainable employment and opportunities to overcome the negative consequences of extreme poverty.

“WidEnergy is a company with a great entrepreneurial spirit and an inspiring purpose to empower women and girls in pursuit of a better future. With both BGFA results-based financing and the expected mobilised co-financing, we hope that WidEnergy will be able to engage more female entrepreneurs and scale its business faster”

**Aliona Fomenco**  
Investment Manager at Nefco



#### TARGETS:



**€4.5M**

IN COMMITTED FUNDING



**37,000**

ENERGY SERVICE CONNECTIONS  
TO BE ESTABLISHED



Photo: Jason Mulikita for BGFA

## Institutional support and technical assistance

Institutional support in BGFA countries is an important element of the programme that aims to improve conditions for the off-grid energy market, deploying a combination of capacity building and technical assistance, stakeholder outreach and market intelligence.

### Off-Grid Energy Task Forces

The first Off-Grid Energy Task Force (OGTF) was established in Zambia, with support from Sweden, and similar platforms are being established in all BGFA countries. 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.

Table 3: Status of institutional support activities in BGFA countries

| COUNTRY  | STATUS                     |  |  | TITLE OF THE OGTF IN COUNTRY  | HOSTING MINISTRY  |
|--|----------------------------|--|--|-------------------------------|---|
|  | TERMS OF REFERENCE DEFINED | OFF-GRID TASK FORCE ESTABLISHED  | OFF-GRID TASK FORCE OPERATIONAL  |                               |   |
| <br><b>BURKINA FASO</b>                     | Yes, not endorsed yet      | No   | No   | -                             | Likely Ministry of Mines, Quarries and Energy   |
| <br><b>DEMOCRATIC REPUBLIC OF THE CONGO</b> | Yes, not endorsed yet      | No   | No   | -                             | Process led by the National Agency for Electrification and Energy Services – ANSER – then transferred to the Ministry of Energy and Hydraulic Resources |
| <br><b>LIBERIA</b>                        | Yes, endorsed              | Yes  | Yes  | Off-Grid Task Force           | Rural and Renewable Energy Agency (RREA)  |
| <br><b>MOZAMBIQUE</b>                     | Yes, not endorsed yet      | Awaiting formal launch (the “OGTF” structure has been operational for some time) | Yes” (without it being labelled the OGTF, the structure has been active and functioning since Q4 2023) | Off-Grid Energy Working Group | Ministry of Mineral Resources and Energy (MIREME)/ Integrated Unit for Coordination and Planning of Electrification (UIPCE)                             |
| <br><b>UGANDA</b>                         | Yes, endorsed              | Yes, inaugural meeting in Nov. 2023  | Yes, first OGTF and Subcommittee meetings planned for H1/2024  | Off-Grid Energy Working Group | Ministry of Energy and Mineral Development (MEMD)/ National Renewable Energy Platform (NREP)  |
| <br><b>ZAMBIA</b>                         | Yes, endorsed              | Yes, in 2016 under BGFZ  | Yes  | Off-Grid Task Force           | Ministry of Energy (MoE)  |

E-waste workshop arranged by dss+ Consulting for BGFA Zambian investees at the Swedish Embassy in Lusaka, Zambia in November 2023. Photo: Mariana Daykova, dss+



## Promoting responsible e-waste management through BGFA

Electronic waste (e-waste) management is one of the focus areas of BGFA. One key challenge in e-waste management is the proper handling of used Li-ion batteries, i.e. via repair, reuse, refurbishing, repurposing or final disposal. Recent experiences indicate that up to 70% of batteries/cells could be refurbished.

While proper solutions are still largely missing – even worldwide – BGFA requires all its investees to have e-waste policies and action plans in place to institutionalise e-waste management internally. BGFA is providing technical assistance with the help of specialised service provider dss+, particularly to smaller local companies. The support also includes a review of e-waste regulations in BGFA countries.

Smaller companies are required to ensure safe storage for accumulated e-waste; it is worth noting that the amount e-waste produced

as a result of the BGFA programme is still relatively small. Large companies are required to have a proper take-back programme and an agreement with an e-waste management partner.

Many governments, stakeholders and donors are working on similar e-waste challenges. BGFA will therefore be seeking close collaborators to find proper end-of-life solutions for e-waste during the course of the programme. National and/or regional solutions should be preferred due to the complexities of handling e-waste, including the need for aggregation, export challenges of the difficulties of finding feasible, cost-efficient processing facilities. In Zambia, BGFA investees are already collaborating informally to solve some of the challenges they face individually with regard to e-waste management.



## Technical assistance

In the year 2023 BGFA's technical assistance component entered full implementation stage following the initial set up phase in Q4 2022. During 2023, a majority of the expanding BGFA portfolio received technical assistance, positioning the companies for improved standards and growth. BGFA's implementing partner, REEEP ensures a tailored assistance to address specific challenges and opportunities of each BGFA portfolio company. This includes an initial technical assistance needs assessment, completed for 19 companies in 2023 spanning across companies in Zambia, Uganda, Liberia and Burkina Faso. A continuous engagement with the portfolio companies throughout the year ensure timely and relevant support.

With a focus on meeting high sustainability and governance standards set by BGFA and related workplan milestones, 56% of the assistance was directed towards ensuring compliance and excellence in these critical areas. Specifically, our efforts centered on establishing robust gender policies, gender action plans,

and environmental and social management systems (ESMS), aligning with BGFA requirements. Moreover, BGFA's technical assistance played a role in enhancing the foundations for scaling up energy service provision. A significant portion (43%) of the assignments was dedicated to refining operational strategies, securing funding, optimising human resources, implementing inventory management systems, and providing legal advice, among other pivotal support services. Additionally, the dedicated fundraising support provided to the portfolio companies was complemented with an assessment of financing trends and opportunities with financiers with regional focus covering BGFA countries, supporting the fundraising and finance facilitation efforts across the portfolio.



Photo: Altech, DRC

# Knowledge management

## – focus on gender equality

Off-grid electricity access in Africa is closely tied to issues of gender equality and women’s economic empowerment. Lack of access to electricity not only affects daily life but also has significant implications for gender dynamics and the economic empowerment of women. On the supply side, the private off-grid sector in Africa has grown significantly in recent years, yet women’s representation in the workforce and management remains low, especially in technical roles.

The BGFA approach towards gender inclusion encompasses all stages of the programme cycle, from procurement to monitoring and impact evaluation. It includes internal requirements placed on BGFA-supported companies as well as customer operations.

In 2023, Nefco commissioned an external assessment of approaches and practices with respect to gender inclusion under BGFA. KPMG Finland and Value for Women were tasked to review the BGFA gender inclusion requirements and practices and assess how investee companies are responding to these requirements.



WidEnergy employer  
- Jason Mulikita for BGFA

The assessment found that the BGFA gender approach is ambitious and sets high standards to advance gender equality in the off-grid solar sector



WidEnergy call center workers in Zambia - Jason Mulikita for BGFA

The assessment found that the BGFA gender approach is ambitious and sets high standards to advance gender equality in the off-grid solar sector. While the discourse around gender and energy often focuses on women as underserved end-users, BGFA views women as vital actors within the energy sector at large. By focusing on closing gender gaps in investee workforces, the programme is aligned with industry standards, including the 2X Challenge criteria.

Ambitious gender-related requirements are conducive to raising awareness of the many benefits more inclusive practices can bring to a business. However, requirements set by financiers should better reflect companies' size and maturity, as well as the nature of their operations and the resources they have at hand to internalise potential new areas for business development. Furthermore, requirements alone are not yet sufficient to root gender equality principles within the business operations of supported companies. It is therefore crucial to ensure that guidance and support are readily available, beyond mere policy documentation and related reporting requirements.

BGFA investees are required to operationalise their gender targets through concrete gender action plans, ideally informed by an ex-ante gender assessment. In the initial years of programme implementation, technical assistance provided by BGFA implementation partner REEEP was focused on supporting the majority of BGFA investees in identifying existing gender gaps as well as measures and actions to close them.

To ensure that the gender action plans are adopted throughout organisations and identified measures are implemented, continued support will be needed. The assessment by KPMG and Value for Women therefore strongly encouraged BGFA to continue providing support in the later stages of implementation and to find ways to connect learning and challenges into the work of implementing the Off-Grid Task Forces to support gender mainstreaming and deliver positive impacts in society more widely as the project portfolios in each country expand.

Overall, BGFA has been an important learning experience for the sector. Another concrete example has been the establishment of BGFA's sister facility, the Modern Cooking Facility for Africa (MCFA). Based partially on BGFA experiences, the first contract was signed within 20 months of the programme's launch. Many processes have been simplified and accelerated based on practical experience from the field.

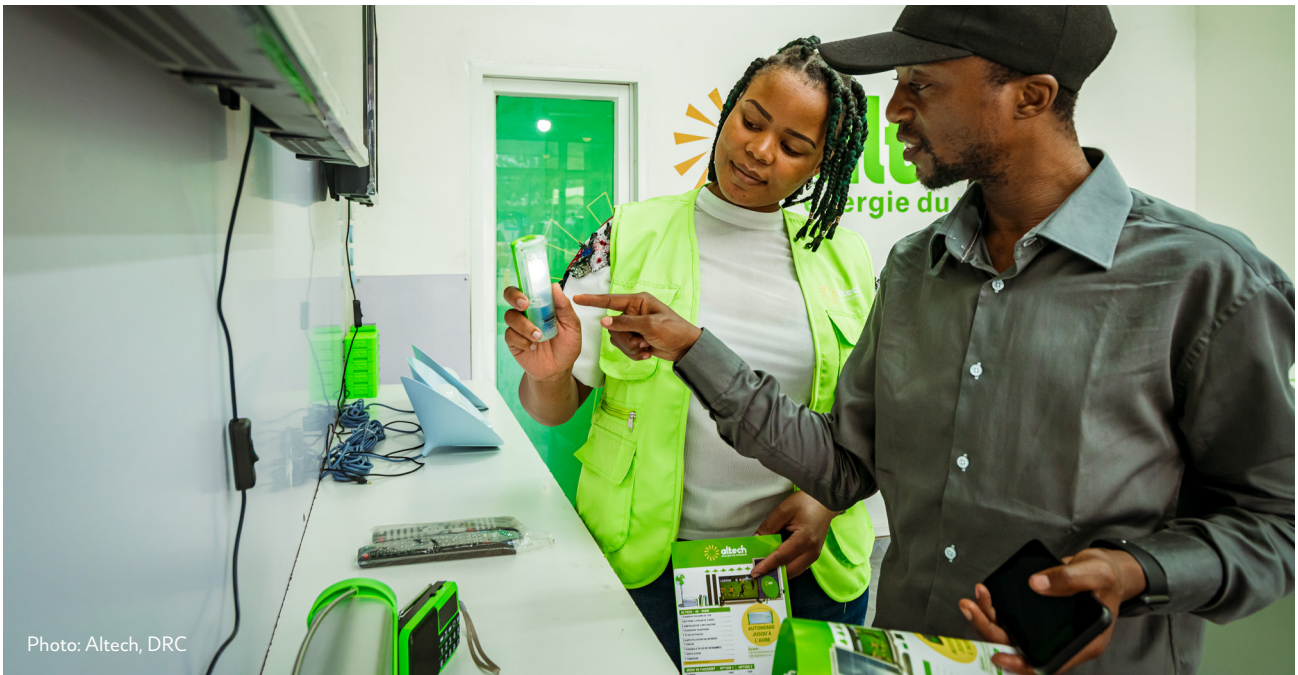


Photo: Altech, DRC

## Monitoring, evaluation and learning framework

BGFA’s Monitoring, Evaluation & Learning (MEL) framework is composed of four main parts:

- Monitoring, Reporting and Verification (MRV) framework
- BGFA learning and knowledge management strategy
- Evaluation work plan
- BGFA’s results framework and Theory of change

The four components are interconnected, collectively establishing a cohesive system for the impact management and measurement of BGFA.

The MRV Framework outlines principles and prerequisites linked to results-based payments for companies providing energy services in exchange for delivering sustainable energy service subscriptions. This guidance is linked to investee companies’ payment request procedures and annual reviews, incorporating Key Performance Indicators (KPIs) and data management protocols. Additionally, the framework mandates independent and thorough verification of results. BGFA’s MRV system is illustrated in Figures 5 and 6 below.

| REPORTS INTERNAL TO BGFA                             | MEL AND MRV REPORTS AND STUDIES                        |
|--|--|
| NIRAS quarterly reports                              | BGFA Annual Results Report                             |
| BGFA semi-annual donor report and results collection | Public dashboard                                       |
| Internal monitoring dashboards                       | Evaluations, evaluative studies and knowledge products |
|  | Independent verification and surveys                   |

Figure 5: BGFA MEL and MRV reports and products

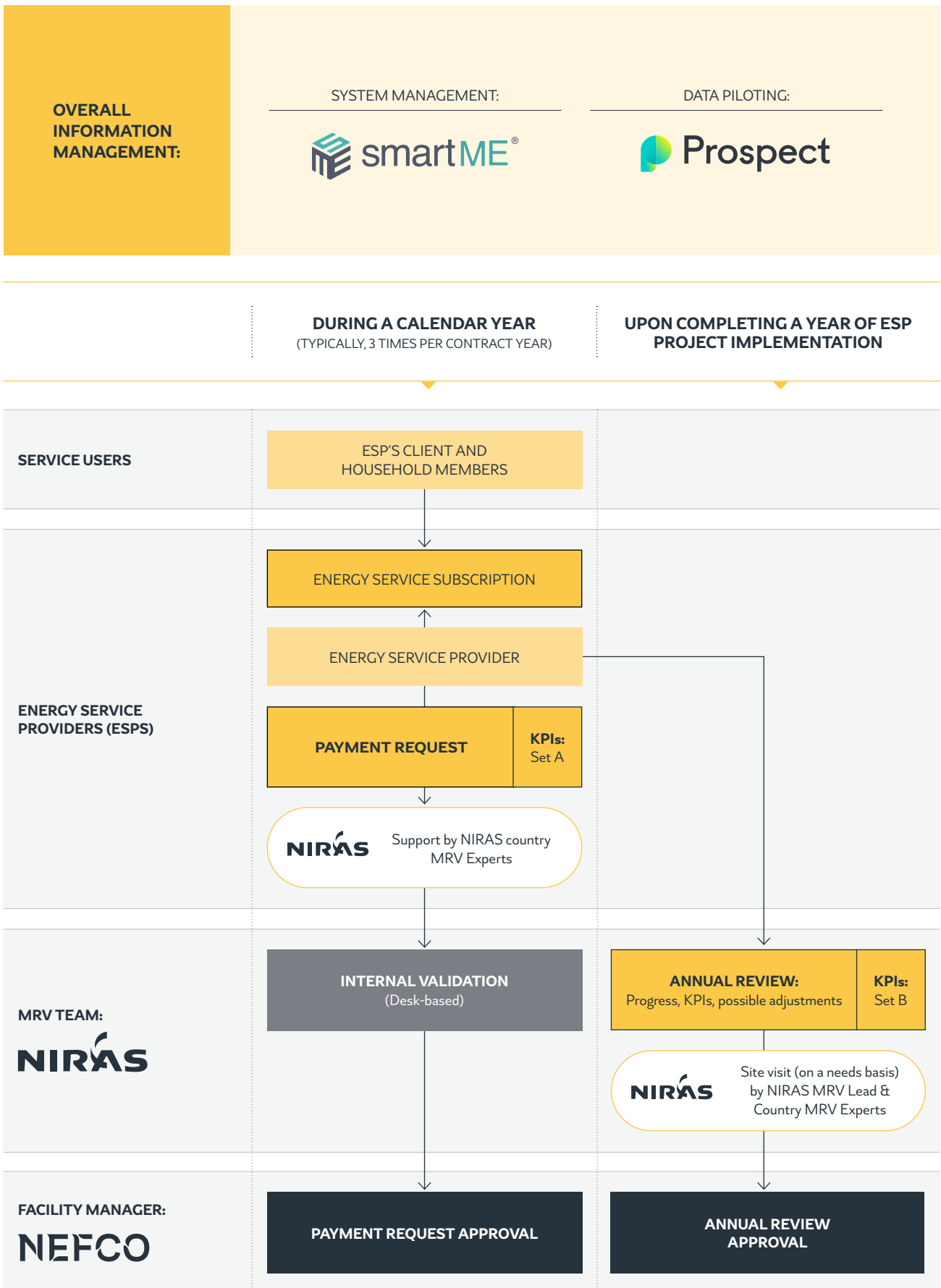


Figure 6: BGFA’s project level MRV coordination & management





The BGFA Learning and Knowledge Management Strategy delineates the approach through which the programme generates, gathers and shares experiences and lessons learned for the benefit of Energy Service Providers and stakeholders involved in the programme. Knowledge products typically include evaluative studies on specific topics, such as the Initial Review of Gender Inclusion Approach and Practices under BGFA, implemented in 2023 (see Knowledge management section).

The Evaluation Work Plan defines key evaluations to be commissioned by Nefco within the framework of BGFA, comprising a mid-term evaluation and a final evaluation. Conducted by external experts, these evaluations are comprehensive studies, delving into programme

outcomes and impacts. The primary aim is to assess the accomplishments and challenges of BGFA, reinforcing accountability, and to guide implementation as the programme’s context evolves.

As cross-cutting and overarching components, the BGFA Results Framework and Theory of Change articulate the programme’s logic from inputs to outputs, outcomes and impacts. These tools play a critical role in actively reflecting on and strategically managing the programme, allowing for adaptive adjustments without losing sight of medium- and long-term objectives.

Table 4: BGFA’s Key Performance Indicators (KPIs)

| KPI  | FURTHER DETAILS  | DIRECT/INDIRECT INDICATOR <sup>2</sup> |
|--|--|--|
|  <p># Energy Service Subscriptions</p> <p>by type (stand-alone, battery rental services or mini-grid), Tier, type of customer and type of appliance</p> | <p>by type of ESS (stand-alone/mini-grid)</p> <p>by Tier 1-6<sup>3</sup></p> <p>by type of customer (residential, commercial, institutional)</p> <p>by type of appliance, including productive use appliances</p>  | <p>Direct indicator</p>                |
|  <p># People with access to electricity, i.e. # of impacted lives</p> <p>% of which in underserved areas</p>  | <p>Calculated as (5.2 * residential ESS) + commercial ESS + (10 * Institutional ESS), i.e. 1 residential ESS provides access to 5.2 people; based on average household size</p>  | <p>Indirect indicator</p>              |
|  <p>% of women purchasing Energy Service Subscriptions</p>  | <p>Gender of the client who purchased the Energy Service Subscription</p>  | <p>Direct indicator</p>                |
|  <p># co-financing leveraged (EUR) by type and source and # financiers</p>  | <p>by source: public, private, Development Finance Institutions (DFAs)/ Official Development Assistance (ODA), DFA/-non ODA</p> <p>Co-financing is ‘leveraged’ when there is evidence that i) the agreed funding has been transferred to an associated bank account, or ii) a legally binding document confirming co-financing has been submitted or iii) other documentation satisfactory to Nefco has been presented. Only co-financing leveraged by the ESP and meant for co-funding BGFA-funded activities can be counted.</p> | <p>Direct indicator</p>                |

| KPI  | FURTHER DETAILS  | DIRECT/INDIRECT INDICATOR <sup>2</sup>                  |
|--|--|---|
|  <p>tCO<sub>2</sub>e/a mitigated</p>  | <p>Based on assumptions defined in the IVL model for estimation of GHG emission reductions. For further technical details, see the info box on the following page.</p>   | <p>Indirect indicator</p>                               |
|  <p>MWe installed</p>   | <p>Overall net installed ESS, i.e. total installed ESS of all sustainable ESS at the time of reporting</p> <hr/> <p>Mini-grids: the maximum capacity of the system is used as the reference.</p>   | <p>Direct indicator</p> <hr/> <p>Direct indicator</p>   |
|  <p>MWhe produced</p>   | <p>For stand-alone systems this is calculated on the basis of the methodology developed by IVL. The formula includes the number of hours and days in a year for which electricity should be available and uses the lower boundary of the tier system to calculate MWhe produced.</p> <hr/> <p>Mini-grids: based on direct measurement by the ESP</p>   | <p>Indirect indicator</p> <hr/> <p>Direct indicator</p> |
|  <p># e-waste recycled</p>  | <p>Method under further refinement (e.g. number of units brought to licensed recycling facility)</p>   | <p>–</p>  |
|  <p># Full-Time Equivalent (FTE) jobs created, Employees and agents, disaggregated by sex</p> | <p>Only permanent jobs within the ESP – including consortium partners – created since the start of BGFA contracting, directly related to the BGFA-funded activities and still active at the time of reporting (temporary absence from a job for reasons such as flexi-time and compensatory leave for overtime is acceptable).</p> <p>Full-time jobs are jobs with at least 5 full working days per week, with ‘full’ defined as a minimum of 6 working hours per day. Part-time permanent jobs should be converted into full-time equivalents. E.g. a part-time job for 4 days/week would count as 4/5 FTE.</p> <p>NET number of FTE jobs created. E.g. if 10 new FTE jobs were created but another 3 FTE jobs were abolished, 7 FTE jobs were created.</p> | <p>Direct indicator</p>                                 |
|  <p># governing board members, disaggregated by sex</p>                                       | <p>All officially appointed governing board members of the lead ESP (the ESP that has signed the contract with Nefco) at the time of reporting.</p>  | <p>Direct indicator</p>                                 |

2. Indirect indicator means that it is based on a mathematical formula (including certain assumptions), not direct measurements.

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

| KPI  | FURTHER DETAILS   | DIRECT/INDIRECT INDICATOR <sup>2</sup> |
|--|---|--|
|  <p># employees in management positions, disaggregated by sex</p>   | <p>All employees with management positions within the lead ESP at the time of reporting. Management positions include executive directors, head of departments and anyone supervising more than five employees and/or agents. Only permanent positions (part time and full time) are counted.</p>   | <p>Direct indicator</p>                |
|  <p># employees in technical positions, disaggregated by sex</p>  | <p>All employees with technical positions within the lead ESP. Technical positions include those working in STEM (Science, technology, engineering and mathematics)-related positions, regardless of level/grade or educational background, such as engineers, technicians and craft and trades workers (e.g. electricians, bricklayers, mechanics, installers). It does not include social scientists (i.e. economists, business specialists, etc.), supporting staff (procurement, drivers, etc.) or people with STEM degrees/diplomas not working in STEM positions. Only permanent positions (part time and full time) are counted.</p> | <p>Direct indicator</p>                |
|  <p># agents, disaggregated by sex</p>  | <p>The total number of agents that have active contracts with the lead ESP and/or other consortium partners for the sale and/or maintenance of energy equipment financed through BGFA at the time of reporting. They should have made at least 1 sale over the reporting period.</p>  | <p>Direct indicator</p>                |
|  <p># employees (other than executive managers), disaggregated by sex</p>   | <p>Total number of employees at the lead ESP at the time of reporting – covers both part-time and full-time employees. Only employees who occupy permanent positions within the company (permanent = positions that are maintained for a minimum of 1 year within the company). Each permanent employee, whether part time or full time, counts as 1 (i.e. no conversion to FTEs).</p>  | <p>Direct indicator</p>                |
|  <p>Gender pay gap quartiles</p> <hr/>  <p>Mean gender pay gap in hourly pay</p> | <p>The calculation methodology used by BGFA is based on a simplified version of the UK's Gender pay gap reporting framework. See calculation method in Box 3 in BGFA1 Application Guidelines BGFA1-Final-Application-Guidelines-20201218-Final.pdf (beyondthegrid.africa)</p>   | <p>Direct indicator</p>                |





| KPI  | FURTHER DETAILS   | DIRECT/INDIRECT INDICATOR <sup>2</sup>                |
|--|---|---|
|  <p data-bbox="320 383 544 443">Other gender-related indicators</p> | <p data-bbox="695 383 1137 443">As defined in the Energy Service Providers' Gender Action Plans</p>   | <p data-bbox="1243 398 1382 427">As applicable</p>    |
|  <p data-bbox="320 613 531 674">Weighted cost (wC) co-efficient</p> | <p data-bbox="695 501 1182 786">When evaluating and scoring applications received during the Final Application stage, the energy service Tiers offered by Applicants are weighted. The weight increases with the quality of energy services (Tier) offered by companies. During project implementation, the Weighted cost (wC) coefficient is monitored by means of an Excel tool to ensure alignment between project proposal and the delivery of results.</p> | <p data-bbox="1243 629 1406 658">Direct indicator</p> |



Photo: Altech, DRC



Photo: Jason Mulikita for BGFA

## Summary of model for estimation of greenhouse gas emission reductions

The general approach of the model builds on the use of default assumptions based on data available from the literature and conservative estimates of GHG emission reductions. The approach can be applied to the different activity categories included under BGFA as well as in all BGFA countries.

The model assumes a baseline level of GHG emissions per user case. Baseline GHG emissions may come from the direct combustion of kerosene for indoor lighting, the use of combustion engines for transportation, the use of cooking fuels based on non-sustainable biomass or the use of fossil fuel-based electricity production, for example. GHG reductions are then calculated as the difference between the baseline emissions and the project emissions (see Figure 7) considering electricity supply from either a stand-alone system or a grid solution. A fundamental aspect of the model is that empirical baseline data from literature are used, representing actual existing emission levels as far as possible.

The model design determines parameters to be monitored for the respective user case. The aim of the overall design and

assumptions is to maintain a manageable level of complexity, including monitoring requirements, as well as to quantify reductions conservatively. This has also been the aim when selecting suitable energy consumption baselines.

When literature has presented a range of possible energy consumption levels, the lower end of that range has been selected. Selecting the lowest values is appropriate in particular considering that the BGFA countries thus far are all Least Developed Countries (LDCs) where the baseline consumption of energy can be expected to be at the lower end of data present in the literature.

For example, for solar home systems or mini-grids, the baseline assumption is that households use non-electrical lighting (such as kerosene lamps or candles, depending on country context) and electricity for charging batteries for mobile phones and radios. The formula calculates the avoided emissions when using a solar-powered system. For other types of services, such as mobility solutions and productive use appliances, different assumptions are applied; see report available on BGFA website.

IVL Swedish Environmental Research Institute has developed a methodology for the quantification of greenhouse gas (GHG) emissions reductions from BGFA projects.

It is worth noting that in many cases customers will have access to a higher service level after the implementation of BGFA project activities. As an alternative to the approach selected, one could consider baseline emission levels that reflect the elevated service levels after the

implementation of BGFA projects, but assuming a conventional fuels. Such an approach would result in higher estimated emission reductions compared to the selected approach. The approach that has been selected is considered to most accurately reflect the emission reductions that are actually achieved and ensures that estimates remain conservative.



Figure 7: Approach applied for quantification of greenhouse gas emission reductions

# BGFA implementation team

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## OTHER PARTNERS

BGFA is collaborating with several other partners to implement the programme. These were in 2023:

- dss+ Consulting
- Get.invest
- KPMG and Value for Women
- Spearfish
- Swedish Environmental Research Institute (IVL)







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