


















Danish support to Beyond the Grid Fund for Africa – Uganda window

<p>Key results:</p> <ul style="list-style-type: none"> - The BGFA window in Uganda will contribute to connecting up to 3 million people with basic off-grid solar power. - Leveraging at least three times the Danish contribution in private sector financing. - At least 500 decent jobs created in the off-grid solar energy sector, incl. targeting youth and gender equality. - At least eight Energy Service Providers (ESP) supported to sustainably extending their off-grid energy services to people outside the grid in Uganda. <p>Justification for support:</p> <ul style="list-style-type: none"> - Access to electricity is a national priority in Uganda where almost 70% of the population has no access to electricity. - Closing the energy gap in Africa is a priority in the Danish Government's long-term Strategy for Global Climate Action and the Danish SDG7 leadership. - Climate and environment are priorities under the first strategic objective of Denmark's Country Policy Paper for Uganda 2018-2022. - The Danish contribution will contribute to 'building back better in greener' by providing affordable green energy services to people outside the grid in Uganda. It has a Nordic foundation with NEFCO and Sweden. <p>Major risks and challenges:</p> <ul style="list-style-type: none"> - Energy Service Providers cannot access sufficient private capital for rapid to scale up. - The economic impacts of Covid19 could impose a risk of consumers' ability to pay for energy connections. - Regulatory frameworks to accelerate off-grid energy is still early in its implementation. - Corruption and other non-compliances with NEFCO policies and safeguards could affect the planned targets and implementation plans. 	File No.	2021 - 10437						
	Country	Uganda						
	Responsible Unit	Green Diplomacy and Climate						
	Sector	Energy						
	Partner	NEFCO						
		<i>DKK million</i>	2021	2022	2023	2024	2025	Total
	Commitment	80,0						80,0
	Projected	20	20	20	20	0		80,0
	Duration	5 years						
	Previous grants	Yes, 37,5 million in 2020						
	Finance Act code	06.34.01.40						
	Head of unit	Rasmus Abildgaard Kristensen						
	Desk officer	Morten Blomqvist						
	Reviewed by CFO	Mette Schou Heise						
	Relevant SDGs							
	 No Poverty  No Hunger  Good Health, Wellbeing  Quality Education  Gender Equality  Clean Water, Sanitation							
	 Affordable Clean Energy  Decent Jobs, Econ. Growth  Industry, Innovation, Infrastructure  Reduced Inequalities  Sustainable Cities, Communities  Responsible Consumption & Production							
 Climate Action  Life below Water  Life on Land  Peace & Justice, strong Inst.  Partnerships for Goals								

Strategic objectives

The strategic objective of BGFA is to create access to basic and affordable renewable energy services for energy poor people living outside the national electricity grid in Uganda and to accelerate private sector growth in energy generation in Uganda.

Justification for choice of partner:

The BGFA builds on successful pilot results from Zambia. The provision of financial incentives allows the Energy Service Providers to provide speed and scale to close the energy gap to people outside the grid in Uganda. The results-based model has been proven as an efficient way to accelerate access to electricity and NEFCO is an experienced fund facility manager.

Summary:

The Beyond the Grid Fund for Africa (BGFA) aims to incentivise the private off-grid energy service providers to expand energy services to underserved people in rural and peri-urban areas in Uganda. This will be achieved by offering financial incentives through public tenders to select Energy Service Providers that can expand energy services to households outside the grid. The Danish support to BGFA will support the Uganda window and be targeted provision of access to primarily off-grid solar home systems.

Budget (engagement as defined in FMI):

Outcome 1: Results-based financing windows for access to energy	DKK 60,0 million
Outcome 2: Technical assistance, market analysis, quality verification	DKK 12,0 million
Outcome 3: Management, administration and contingencies	DKK 6,0 million
Total	DKK 80,0 million

Ministry of Foreign Affairs of Denmark

**Danish Support to
Beyond the Grid Fund for Africa (BGFA) - Uganda Window**

11 June, 2021

F2: 2021 - 10437

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Abbreviations:

BGFA:	Beyond the Grid Fund for Africa
BGFZ:	Beyond the Grid Fund for Zambia
EBRD:	European Bank for Reconstruction and Development
EDISON:	Energy Data and Intelligence System for Off-Grid Networks
ESMAP:	Energy Sector Management Assistance Program
ESP:	Energy Service Providers
IFI:	International Finance Institution
IRENA:	International Renewable Energy Initiative
NEFCO:	Nordic Environment Finance Cooperation
PAYG	Pay-as-you-go energy solutions
OECD:	Organisation for Economic Co-operation and Development
REEEP:	Renewable Energy and Energy Efficiency Partnership
REA:	Rural Electrification Agency
SDG:	Sustainable Development Goals
SEFA:	Sustainable Energy Fund for Africa (AfDB TF)
SEforALL:	Sustainable Energy for All
SHS:	Solar Home System
SIDA:	Swedish International Development Cooperation Agency
TOC:	Theory of Change
USAID:	United States Agency for International Development

1. Introduction

This project document presents the Danish support of DKK 80.0 million to the Beyond the Grid Fund for Africa's (BGFA) for the period 2021 to 2025. BGFA is a results-based financing facility established to accelerate the private off-grid renewable energy sector to provide affordable clean energy services in rural and peri-urban areas of Sub-Saharan Africa. Financial incentives are paid out in return for new established energy service connections to households outside the grid. The Danish contribution will be targeted the BGFA Uganda window only.

The BGFA window in Uganda expects to contribute to connecting up to 3 million people with off-grid energy services. The majority of the connections is likely to be installed with Solar Home Systems (SHS) or other stand-alone energy systems that can provide households outside the energy grid with basic electricity services for lightning, charging of phones and running small appliances such as fans and radios. The BGFA will also support development of micro-grids that can pilot the implementation of the newly adopted 'Isolated Grid System Regulation' where almost 700 sites for mini- and micro-grids have been identified in Uganda. The micro-grid component will also allow to establish synergy to more productive uses of energy for purposes such as irrigation, post-harvest processing and cold chains. By applying a result-based financing approach, it is estimated that the project can leverage at least three times the Danish financial support in private financing and create around 500 direct jobs.

BGFA was set up as a separate financing facility in 2019 and is managed by the Nordic Environment Finance Corporation (NEFCO). It is designed to contribute to the global effort of accelerating access to affordable energy access at scale, to the almost 550 million people living without access to electricity today in Sub-Saharan Africa. BGFA particularly supports the objective of Sustainable Development Goal 7 (SDG7), which aims to ensure universal access to affordable, reliable, sustainable, modern energy for all by 2030, the Paris Agreement on climate change and Uganda's country priorities. However, providing access to energy is an enabler for many other SDG's such as SDG5 on gender equality, SDG6 on clean water, SDG8 on decent jobs and growth and SDG13 on climate action.

Progress towards achieving universal energy access has been jeopardised by the Covid-19 pandemic. The IEA estimates that the Covid-19 pandemic will reverse progress for the first in many years and the number of people living without access to energy in Africa will increase by 13 million people in 2020, corresponding to a 2% decline from the year before. The BGFA will provide much needed financial incentives to nascent off-grid solar energy sector in Africa to continue the off-grid energy expansion targeted regions outside the grid.¹. Hence, the support to BGFA should also be considered as a Danish deliverables in the Nordic "Build Back Better and Greener" approach to support developing in kick-starting a green recovery.

The Danish support to the BGFA is listed on the 2021 Finance Act and complements the Danish contribution provided last year for the BGFA, which was financed by the extra climate financing agreed as part of the 2020 finance bill. The BGFA Uganda window has two main donors - Sweden and Denmark - and receives technical assistance from Power Africa (USAID). In total, the two Danish grants to the BGFA will be integrated in a joined Uganda programme where the Danish support will contribute to connecting at least 1.5 million people with basic electricity access in Uganda.

¹ The energy provision will often be in the form of solar home systems or solar-based mini-grid but can also include other renewable energy technologies. In this document, reference will mainly be off-grid solar power.

2. Strategic considerations and justification

2.1. Context

Only 36% of all Ugandans have access to modern energy services and Uganda is among the 20 countries in the world with the largest deficits when it comes to access to electricity. There is an urban-rural divide with 45% of urban population having access to the electricity through the grid compared to only 4-7% of rural and peri-urban population. Expansion of the national utility grid is not likely to reach the majority of the population in the near term as it is neither economically nor technically feasible.

However, Uganda is also one of the countries in Sub-Saharan Africa that has shown the greatest progress on expanding access to energy. National policies and efforts implemented through Rural Electrification Agency (REA) aim to increase access to the grid to 60% by 2027 and the Rural Electrification Strategic Plan (RESP) targets 100% universal access by 2040. Though the ambitious targets are not likely to be achieved, there is a commitment to engage the private sector and apply new off-grid energy technologies and business models to achieve universal access to energy through both grid and off-grid solutions.

The market scoping study produced for the preparatory phase of the BGFA Uganda window found that there is a high demand for off-grid energy services in Uganda. On the demand side, at least five million households could be served with off-grid energy solution but affordability is challenge together with low penetration of off-grid service providers in rural regions. From a supply side, Uganda is found to have an advanced and dynamic market for off-grid solar energy and national solar energy business association with over 190 members. New business approaches such as Pay-As-You-Go (PAYG), rapid decreasing prices for solar panels/batteries and access to financial e-services are positive trends which have opened up new possibilities for cheaper and more cost-efficient provision of off-grid energy solutions. Further, a specific study on scoping study on skills development and job-creation found that the off-grid energy sector could create up to 7000 new direct jobs in Uganda².

Through the market scoping process, which included an extensive outreach to local energy authorities potentially interested ESPs and end-users, it was concluded that that expansion of the BGFA in Uganda was highly relevant and in line with national policies. The scoping study found that the SHS market in Uganda consists of a diverse and extensive distribution ecosystem with different players ranging from international companies to local / niche players, component suppliers, integrators and resellers. However, access to financing and the affordability gap continues to be a barrier for expansion to many rural and peri-urban areas.

2.2. Justification for the support

The proposed Danish support to the BGFA will contribute to accelerating access to affordable renewable energy targeted underserved populations outside the energy-grid and by this contribute to SDG7. By providing economic incentives through a results-based mechanism, BGFA is estimated to contribute to connecting up to 3 million people in Uganda with off-grid renewable energy.

An accelerated rollout of off-grid solar energy will be critical to achieve the goal of universal and affordable access to energy in Uganda. Off-grid energy solutions and business models have proven to be a leapfrogging technology to expand access to renewable energy to millions of people. The off-grid solar industry has already

² See brief summary of the obs and skills development scoping study in this blog. [Promoting the job creation and skills development agenda in the off-grid sector in Uganda - BGFA \(beyondthegrid.africa\)](#)

reached 420 million users around the world in the past decade and prices has alone the past two years dropped 15% allowing the industry to operate on more commercial terms. Yet, affordability is still an issue in Uganda and there is a need to bridge the affordability gap for most rural and peri-urban households.

Off-grid solar energy is also a key enabler and accelerator to achieve many of the other SDG's. Access to electricity services is critical for health and human development and economic growth. Renewable energy can reduce the work burden for particularly women and girls, diminish food losses by providing access to cold chain storage systems, ensure energy access to health clinics, extend the time for studies and homework, increase access to water and create new decent jobs.

The support for BGFA is also well-aligned with the Danish Government's new long-term global climate strategy. The strategy emphasises that Denmark should continue its leadership on SDG7 to raise the global ambition, including contributing to universal access to clean and renewable energy. Specifically, the support to BGFA will contribute to achieving the announced Danish target of contributing to providing access to clean energy for 5.8 million people in Sub-Saharan Africa³. In addition, the Danish development assistance will also increase focus on job creation and developing a skilled workforce as an important delivery for accelerating a people-centred green transition.

The current Danish Strategy for Development Cooperation and Humanitarian Action 'The World 2030' identifies SDG7 on affordable and clean energy as one of the five overall SDG priorities. The Strategy adopts a differentiated and context specific approach to support the different SDG7 indicators depending on the geographic context. Universal access to energy in low-income and fragile countries is a priority. The project also illustrates a closer Nordic collaboration to support developing countries in Building Back Better and Greener.

Climate and environment are also listed as a priority under the first strategic objective of Denmark's Country Policy Paper for Uganda 2018-2022 and the project is aligned to the 'Uganda 2040 Vision' aiming to connect 80% of the population with access to electricity by 2040. This engagement will seek to build synergy to other existing Danish engagements in Uganda. The Danish embassy in Uganda has been invited to most meetings and further synergies will be established during the implementation of the BGFA in Uganda.

2.3. Lessons learned and synergies to other Danish engagements

BGFA builds on the successful pilot programme Beyond the Grid for Zambia, which commenced in 2016 with a EUR 20 million financing set-up from Sweden. The Zambia project has demonstrated impact of providing electricity to almost one million people, creating more than 1000 jobs and leveraging EUR 42 million in co-financing in less than five years (for further details see Annex 12). This led to decision by Sweden and NEFCO to set up BGFA as a multi-donor trust fund to expand the model to other Sub-Saharan countries.

The BGFA is also an opportunity for the Danish development cooperation to be engaged in a country-specific donor programme aiming at demonstrating innovative pathways to accelerate speed and scale to increase access to energy. As the largest donor for the Uganda window, Denmark can gain operational insights and lessons learned that can feed into the Danish knowledge and work with other funds and donor agencies. Particularly, the country experiences on gender actions, e-waste, and skills development could provide

³ This target was announced in 2020 by the Minister for Development Cooperation.

innovative experiences that can be disseminated and shared with other multilateral organisations supported by Denmark.

Uganda is a bilateral priority country for Danish development assistance and opportunities exist to build synergy to the Danish engagement to the Northern Uganda Resilience Initiative (NURI) and the Agricultural Business Initiative (aBi). This is particularly the case for the funding window for micro-grids where there are opportunities to establish synergies to productive uses of energy for post-harvest purposes and irrigation. Collaboration with “building stronger universities” (Aalborg University and Gulu university) with focus on innovation and entrepreneurship could also be strengthened as well as synergies with relevant Danish NGO’s present in Uganda such as Care, Caritas and DanChurch Aid. Further, dialogue with the Danish private sector is also explored including interest from Grundfos regarding synergies between access to energy and water management and the Danish start-up Pesitho that is developing an eCooking system that is an integrated part of solar home systems. Uganda is also one of the countries hosting most refugees in Africa, and the Call for Proposals could prioritise regions hosting many displaced people.

Denmark will also encourage close collaboration with other multilateral agencies such as ESMAP, the Green Climate Fund, SEFA and the Nordic Development Fund. This will be done jointly with Sweden that is also an active donor in these multilateral agencies. So far, BGFA has been very open to embrace collaboration and coordination with multilateral and bilateral donors in the international level but also at the national level initial donor coordination in Uganda has been established. BGFA will also ensure coordination with the planned Uganda Energy Access Scale-up Project which is under preparation by the World Bank.

Denmark has enhanced financial contribution to access to clean and renewable energy in Africa the past two years. This includes commitment to support the World Bank’s energy programme ESMAP work on access to energy in Africa and its Clean Cooking Fund. Denmark has also committed resources to an extensive bioenergy project in Kenya with Energising Development (EnDev) and also continues to be the lead-donor to the Sustainable Energy Fund for Africa (SEFA) that has a large mini-grid component. The support the BGFA complements these efforts by being the most ambitious country-level support, the only one with main focus on stand-alone solar home systems and a main focus on accelerating speed and scale of energy access.

2.4. Alignment to rural electrification plans, gender and human rights

Though the BGFA aims to provide direct results-based financing to ESPs to unlock early structural challenges in the off-grid energy market and bridge the affordability gap, it is important that the investments are aligned with national policies and regulations. The Ugandan Ministry of Energy and Mineral Development and its agencies have participated in the BGFA scoping studies: They are also expected to be involved in the planned off-grid energy taskforce, benefit from institutional training and consulted on the micro-grid component. It is particularly expected that a close dialogue and coordination will be established with the Rural Electrification Agency (REA), though without any direct project management responsibilities.

A strategy for Uganda’s Off-Grid for Stand Alone Solar Systems is currently being developed which is expected to encourage a strong private sector engagement for deploying off-grid renewable electrification technologies. Further, supporting the Uganda National Bureau of Standards (UNBS) and REA to complete the

Quality Assurance Framework would also be relevant to avoid poor quality solar products on the market, which could undermine long-term customer confidence on solar energy products.

The specific funding window for micro-grids is aligned with the new Isolated Grid System Regulation (adopted in December 2020) and will be implemented in close dialogue and collaboration with the Electricity Regulatory Authority (ERA) and the Rural Electrification Agency (REA). It is also expected that BGFA Programme will provide technical assistance to these authorities to enhance their technical capabilities. Further, it is encouraged in the Call for Proposals that ESP's demonstrate alignment to the Rural Electrification Master plan where almost 700 mini-grid sites have been identified. It is a requirement that ESP's complies with new national regulations for mini-grids which defines licensing procedures, the tariff setting process, grid connection requirements, and mandatory record keeping and reporting. Particular affordable retail tariffs will be important to allow low-income customers to benefit from the new micro-grids.

Gender is also an integrated part of the BGFA procurement approach. The BGFA requires ESP applicants to offer equal opportunities for women and men through both their own employment practices, their targeting of beneficiaries/customers and suppliers of services. Applicants/consortia are requested to have a gender strategy and action plan which should include gender-balanced representation at all organizational levels, equal pay as well as gender-sensitive marketing and awareness-raising. The gender strategy and action plans will be assessed in the final evaluation process and account for 10 points out of 100 in final evaluation of Call for Proposals. The EDISON database will also collect gender disaggregated data on several indicators.

BGFA also follows a Human Rights Based Approach (HRBA) to development cooperation, including explicitly addressing the four principles of HBRA – non-discrimination, transparency, participation and accountability. Specific attention is paid to HBRA Frameworks for Environment and Climate Change and Market Development (see annex 1). In the context of BGFA in Uganda, this means understanding how increasing energy access can empower marginalised women and men to access information, services, incomes, working conditions and general livelihoods. Further, the BGFA will also follow NEFCO's Environmental Policy and Guidelines and constructions of micro-grids and disposal of e-waste should follow a 'do no harm' principle.

2.5 Danish priorities in the BGFA Steering Committee

As the second donor to the BGFA, Denmark has supported BGFA to become a multi-donor trust funds. Denmark has through the first contribution also included a specific pilot component on skills development and job creation which is likely to be replicated in other countries. However, BGFA Uganda is still in an early stage whereby many important decisions are still to be made (e.g. final selection of ESP's) which also opens opportunities for influencing through the Steering Committee.

A pro-active participation and engagement in the Steering Committee will therefore be a priority. Denmark will monitor progress and results, but also promote specific Danish priorities throughout the implementation period, incl. the following areas:

- Engagement and consultations with local populations and end-users during planning and implementation of both Solar Home Systems and micro-grids. This should be done through socio-economic surveys that should be gender-sensitive and focus on the level of end-users satisfaction and broader livelihoods impacts.

- In the window for micro-grids, Denmark will follow opportunities to promote synergy to productive uses and seek possibilities for collaboration with relevant Danish bilateral programmes and other Danish stakeholders operating in Uganda.
- Denmark will closely monitor the skills development component to promote new decent green jobs, incl. a strong focus on opportunities for women and youth. International dissemination of results and experiences will be a priority.
- Encourage BGFA to establish an off-grid energy task force, platform or similar national multi-stakeholder forum with regular exchange of experiences and discussions between donors, government institutions, civil society and the private sector.
- Promote international dissemination of experiences from BGFA and coordination with relevant multilateral organisations such as NDF, WBG, AfDB, SEFA and GCF.
- Follow the implementation of the Launch to Scale window regarding selection of regions, opportunities for increasing local content and seek opportunities to build synergies to eCooking.
- Closely monitor progress on the overall quantitative target of contributing to provide affordable, reliable and clean energy to 3 million people in Uganda.

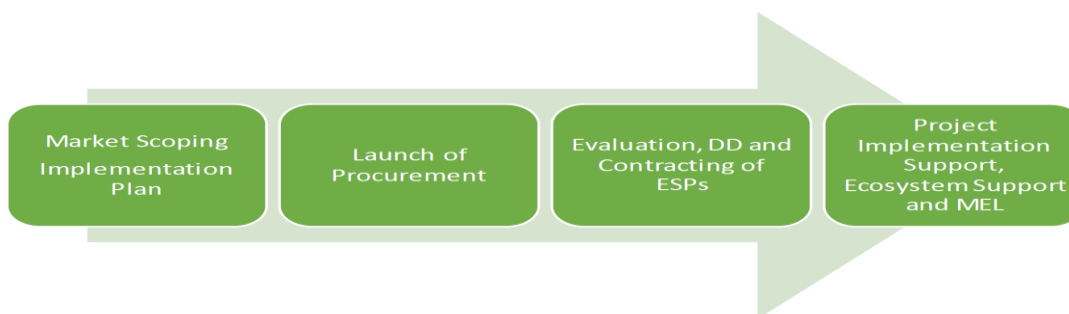
3. BGFA business model and eligible energy service providers

The market scoping study found that the potential for the stand-alone system market (mainly Solar Home System) is approximately 5 million households. However, even well-funded international companies have challenges penetrating the rural areas due to the affordability gap which is exacerbated by the cost of establishing sales, distribution and support infrastructure in rural areas. The BGFA results-based model is designed to overcome these market barriers and reach households without out any energy access today (Tier 0).

3.1. Business approach and four stages of implementation

BGFA will apply a four-phased approach to roll out its operation in Uganda and ensure a thorough selection of ESP's to quality requirements as outlined in Figure 1. Financial incentives paid to the ESP's in the Direct to Scale funding window is not expected to exceed 25% of capital investment costs for companies to establish themselves at scale and operate commercially sustainable businesses. The period of implementation of BGFA Uganda window is from 2020 – 2025, which will follow the four overall stages of the BGFA applied in the other countries⁴.

Figure 1: BGFA phases of operations



⁴ NEFCO expects an additional year to ensure a sustainable exist which so far is financed by SIDA but it is agreed that the Danish support will be targeted the operational phase.

The first scoping phase in Uganda has been completed in March 2021 with initial Danish and Swedish funding. It includes a market scoping study and a scoping study on jobs and skills development. The two scoping studies has informed the country specific design of the Call for Proposal, incentive/procurement approach, initial technical assistance activities and preliminary theory of change/results framework. The Danish MFA and embassy in Kampala have been consulted throughout process.

The second stage is the detailed design and launch of the results-based public tender and incentive scheme. The procurement process is managed by NEFCO through a Call for Proposals. The first Call for Proposals has been released end of April 2021. An adaptive approach will be applied to allow bidders to come up with innovative approaches and solutions but also to adjust to ongoing development of the off-grid energy regulations and market in Uganda. The concrete tender application process is divided into two stages: a Pre-Qualification stage and a Final Application stage. The purpose of the Pre-Qualification stage is to review whether applicants meet basic BGFA eligibility criteria and minimum technical and financial capacity requirements. Only applicants passing the Pre-Qualification stage will be invited to participate in the Final Application stage. During the Final Application stage, applicants will be required to submit a full project proposal, including a detailed business plan, financial model(s) and comprehensive supporting documentation, incl. gender action plans and e-waste management plans.

The third stage is the evaluation, due diligence and contracting of the ESP's. This will entail an eligibility check followed by a detailed third party evaluation based on a value for money assessment and qualitative assessment of the business plan to allow a ranking of proposals. This will be followed by donor approval and due diligence of qualifying ESPs. Final applications will be evaluated according to a number of evaluation criteria and requirements such as technical and commercial feasibility, management capacity and financing leverage, gender equality, consumer protection and e-waste management. The scoring will incorporate a reverse auction approach in which projects are ranked and awarded based on overall value for money and other criteria such as gender and e-waste management.

The fourth stage will be the actual project implementation by the contracted ESPs, which will be subject to both field and real time monitoring and evaluation by NEFCO with support from REEEP. Disbursement will mainly be made against achieved milestones but for smaller companies or innovative approaches alternatives payment schedules can be considered. BGFA will also include the provision of technical assistance to build institutional capacity building, as well as support to required technical skills development. A focus here will be on the micro-grid component.

An adaptive and flexible approach will applied to allow room for EPS's to apply innovative technology, business models and financing schemes. Further, changes may also occur during the qualification process or implementation, particularly considering the impacts of COVID-19. Quarterly progress reports will be prepared monitoring on agreed milestones, deliverables, and disbursement schedule included in the contracts between the ESPs and NEFCO. Verifications and results will be tracked via The Energy Data and Intelligence System for Off-Grid Networks (EDISON) database. EDISON tracks customers' use of the energy services directly from the ESPs. EDISON connects to the monitoring systems of each of the ESP's contracted and can extract real-time information on energy service subscriptions sold, payments, number of jobs created, female customers, upgrades and warranty events, among other data points. This enables the BGFA to build on a continuously learning and adaptive management approach throughout project implementation.

3.2. Eligible Energy Service Providers

BGFA aims at supporting ESP's to accelerate their service delivery to areas otherwise not attractive on commercial terms. Thus, to be eligible for BGFA funding, applicants need to be for-profit entities or project consortia where the lead applicant is a for-profit company. Applicants shall be legally incorporated and included in the register for companies in Uganda or commit to be registered as such by the time of a possible contract.

Non-profit entities, public institutions, community-based organisations or other non-commercial entities are eligible to participate as consortium members, significant sub-contractors, or partners if they apply for funding through a for-profit subsidiary or as a member of a consortium with a for-profit entity as lead applicant.

4. Objective, component and results framework

The strategic objective of BGFA is to “create access to basic and affordable renewable energy services for energy poor people living outside the national electricity grid and to accelerate private sector growth in energy generation”. The Danish contribution will mainly target the “access” to energy through installation of basic standalone solar home systems⁵ (tier 1) but it also includes a funding window for micro-grid where synergy to more productive uses of energy can be established.

Based on the recommendations of the market scoping study, the BGFA Uganda window has been designed with three components which include the main results-based funding component that will be complemented by a smaller technical assistance and capacity building component. The funding windows will be co-financed between Sweden and Denmark⁶ and benefit from in-kind technical assistance from Power Africa (USAID). The target is that the BGFA Uganda window will provide 600,000 households with basic electricity benefitting more than 3 million people in rural and peri-urban areas.

4.1. BGFA funding components

Component 1: Results-based funding windows for access to energy

This component is made up of three funding windows all providing economic incentives to drive innovation, expansion to underserved regions and population and scale for the off-grid energy access in Uganda. Majority of the funding will be targeted this component which is divided into three funding windows (lots).

- *Funding window 1: Launch to Scale*

This funding lot is targeted at enabling less experienced local, national and international ESPs to accelerate their business models and technologies in Uganda. It is particularly focused on bridging the affordability gap hindering the access to off-grid energy to millions of Uganda households in rural and peri-urban areas. ESP's are encouraged in this funding window to apply and demonstrate innovative and novel strategies to improve the last-mile promotion, sales and service of solar

⁵ The energy provision will often be in the form of solar home systems or solar-based mini-grid but can also include other renewable energy technologies. See annex 10 for definitions of the Multi-tier rating system for energy (0-5 rating).

⁶ Denmark provides a total of DKK 117.5 million of funding – where DKK 37,5 was provided last year. Sweden contributes with SEK 130 million (approx.. DKK 95,3 million).

solutions in remote and hard-to-reach areas. When implemented, it is expected that these activities will increase customer awareness, accessibility and affordability of high-quality solar solutions, leading to a significant reach-out to end-users in these regions.

Partnerships with small or medium-sized Ugandan ESPs, sub-suppliers and/or community organisation specialists are encouraged. Further, priority will be given to operations in more complex market segments or new geographic areas. In this window, the BGFA funding is foreseen to support ESPs in last-mile promotion, sales and service activities.

- *Funding window 2: Micro-grid*

The micro-grid component is aimed at encouraging ESPs to test the new mini-grid regulation, which has just entered into force. This window has been developed in close cooperation with the Electricity Regulatory Authority (ERA) and the Rural Electrification Agency (REA). This window is specifically aimed at attracting developers for construction of micro-grids (with a capacity range of about 10-150 kW) who are able to demonstrate that they can deploy innovative technology and business models to supply energy access services tailored to customer needs and ability to pay.

Applicants should demonstrate that the region in which they propose to set up a cluster of micro-grids is aligned with the electrification zones of the relevant Ugandan authorities, including but not limited to the Rural Electrification Masterplan. Applicants should also ensure that any energy solutions they propose meet all requirements detailed in Ugandan policy frameworks.

- *Funding Window 3: Direct to Scale*

Due to the relatively advanced stage of the standalone SHS market in Uganda, the Direct to Scale funding Window is aiming at providing post-paid, results-based economic incentives to accelerate the outreach to low-income end-users outside the grid for mature ESPs already operating and with proven supply chains and distribution networks. Applicants should have been operational in Uganda for at least 3 years and with more than 50,000 customers in Uganda or another Sub-Saharan country. The purpose is to scale up their sales of entry level standalone systems to customers in remote areas by making the energy services affordable for low-income end-user and accelerate outreach of services to underserved regions in remote areas. For this (and the two other windows), the Kampala district is not eligible for BGFA funding and do not count towards the total number of contracted end-users. Other exclusion zones or geographic priorities might be included in the second stage of the Call for Proposals.

Component 2: Technical assistance, market analysis and quality verification

The scope of this component is to provide technical assistance and capacity building to both selected ESP's and public institutions. Further, to continue elaborating detailed markets analysis and undertake real-time monitoring and verification of installed capacity, quality of products and compliance to BGFA tender requirements and safeguards. This component will be divided in two overall sub-components.

The first sub-component will on an ongoing basis provide market information and analytics for accurate monitoring and market intelligence. Through this component, BGFA can combine detailed market analysis with real-time data monitoring on deployment of energy service subscriptions. This component will also be responsible for verification of data from ESP's and compliance to agreed requirements on quality, e-waste, gender actions, etc.

The second sub-component will provide technical assistance and capacity building to both public and private institutions. It will improve local market conditions through a combination of capacity building and technical assistance to local energy authorities, ESP's, general stakeholder outreach and coordination. This effort will be informed by the establishment an Off-Grid Energy Taskforce or similar arrangement which will be convened by relevant donors, government agencies and private sector groupings with the aim to coordinate and improve markets for off-grid energy provision in the country. This sub-component will also build synergies to the pilot skills and jobs component that was supported by Denmark in 2020 which will deliver relevant training programmes with direct relevance to BGFA companies, particularly for ESP's supported in the Launch to Scale funding window. The programme will address identified needs (salesforce, technical and business skills training) and work largely with established curricula in the sector.

Component 3: Management and administration

The last component is administration which include managing the Steering Committee, call for proposals for the tenders, financial accounting and annual reporting. Further details regarding administration, reporting and governance structure is described in the chapters 6 -8.

4.2. Results framework

BGFA has identified four overall results clusters (see annex 3) as their overall results framework for operations in the current five countries targeted by the BGFA. Furthermore, a specific preliminary results framework for Uganda has been developed (see annex 3). The preliminary results framework is focused on five specific objectives (i) connecting up to 600,000 high quality, long-term clean energy services to underserved communities in Uganda, (ii) improved policy and regulatory ecosystem for off-grid access to energy services, (iii) leveraging of financing from domestic and international financial institutions in contracted ESPs in Uganda, (iv) effective data collection and analysis monitoring real-time delivery of and results under results-based financing and improved planning, (v) contribution to increased skills development and employability of local workforce in the off-grid energy sector.

The results framework will be subject ongoing modification based on an adaptive management approach. A specific review of indicators and targets is expected when final selections of ESP's and other technical service providers have been selected. Progress and results will be presented to the Steering Committee and in annual report. For specific Danish reporting purposes, the following key outcome and output indicators have been selected to document progress.

Project/Programme Objective	Create access to basic and affordable renewable energy services for energy poor people living outside the national electricity grid and to accelerate private sector growth in energy generation in Uganda.
Impact Indicator	Increased access to affordable and clean energy (SDG 7.1)
Baseline	4-7% of Uganda's rural and peri-urban population has access to basic energy services of tier 1 or higher.

Outcome 1	Rural and peri-urban communities in Uganda benefitting from high quality, long-term renewable energy services		
Outcome indicator 1.1	# of people, men and women, benefitting from new or improved access to energy services		
Target	Year	2026	600.000 household connected benefitting approx. 3 million people
Outcome indicator 1.2	# of full time jobs created at the level of contracted ESPs (disaggregated by gender)		

Target	Year	2026	At least 500 jobs created
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Outcome 2	Additional engagement of domestic and international financial institutions in contracted ESPs in Uganda		
Outcome indicator	Million EUR of co-financing leveraged from national/international, public and private sources by the ESPs		
Target	Year	2026	At least EUR 200 million by 2026

5. Theory of change and key assumptions

BGFA aims to stimulate new sustainable business models which can accelerate the private sector to offer affordable and clean off-grid energy access at scale for underserved communities. The basic assumption behind the ambitious target of BGFA in Uganda is the existence of a fairly advanced and diverse off-grid energy market offering a range of related solar products and services as well as extensive local demand and adequate national energy regulations for private sector operations.

BGFA is designed as a holistic approach aiming at accelerating the development of inclusive and sustainable markets for critical energy services. It does so via activities across the three pillars:

- **Incentives and Procurement:** BGFA is a tailored, results-based incentive scheme for private sector early movers in risky frontier off-grid energy markets. The approach is phased, beginning with a direct incentive scheme to temporarily bridge the demand gap for affordable energy services but also includes new innovative approaches and promotion of local entrepreneurs in the sector.
- **The Platform for Market and institutional capacity building:** BGFA works in parallel to improve market ecosystem conditions, utilising a combination of capacity building and technical assistance, stakeholder outreach and market intelligence development in a “Platform for Change” approach⁷. This can e.g. be issues related to unclear taxation regulations, recycling systems for e-waste, increased job creation for women or new forms of licencing for renewable mini-grids.
- **Market Information and Analytics:** BGFA combines detailed market analysis with data and information on deployment gathered via a rigorous monitoring and evaluation framework, yielding valuable insights and metrics on “frontier” markets and end-customer preferences.

The BGFA builds on the overall assumption that markets often represent the swiftest and most cost-efficient mechanism to bring off-grid solar energy to underserved areas. At the same time, markets can generate new jobs, income opportunities and entrepreneurship. Further, current market gaps - such as limited ability to pay for energy services and limited availability of private capital – can be overcome by providing market-based financial incentives and other services provided by ESP’s.

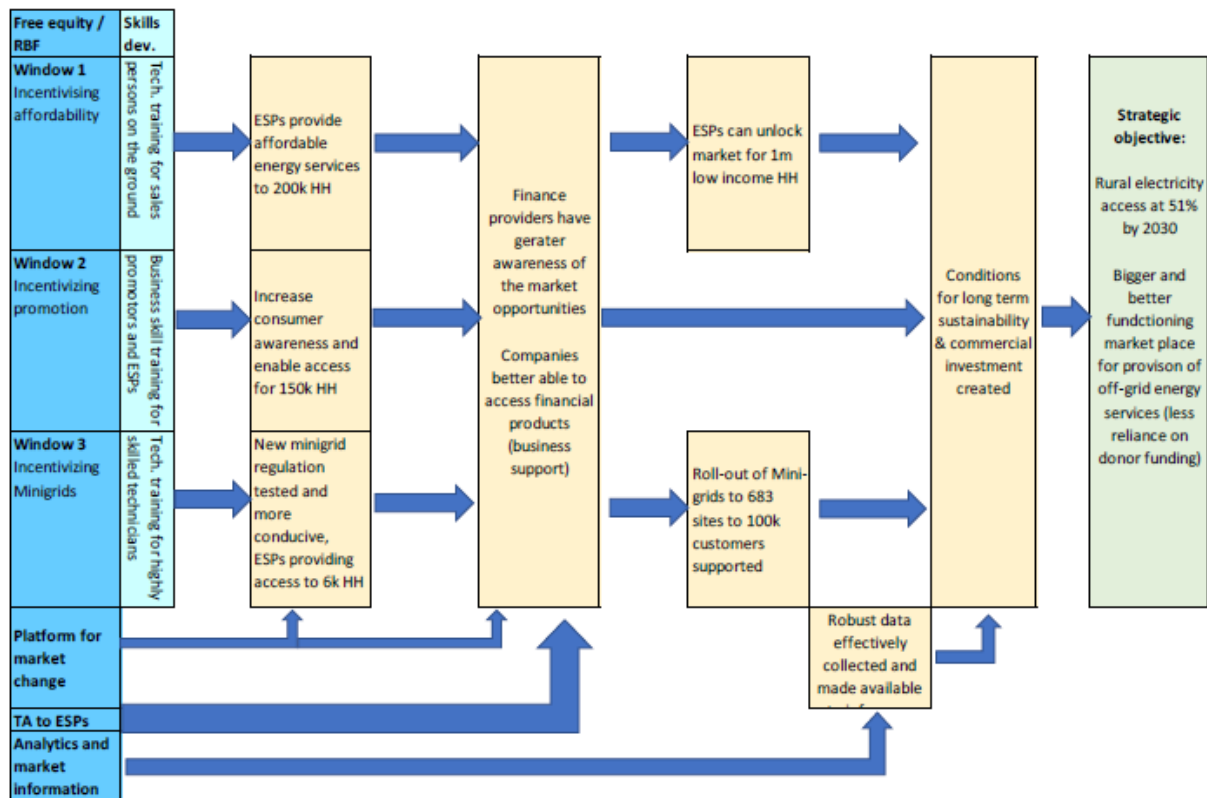
The BGFA problem statement highlights a number of barriers that the social impact procurement approach aims to address. The barriers include lack of data and information in rural and peri-urban markets, undeveloped policies, limited customer awareness of off-grid energy service in frontier markets and low-

⁷ The Platform for Market Change is inspired by the national Task Force established in Zambia bringing together government, private sector actors, and development partners and donors to address market risk related to the delivery of the energy services.

income levels. All together, these barriers remain a challenge for targeting regions where the markets is not operating today.

To address these barriers, the BGFA Theory of Change (ToC) aims to improve framework conditions for off-grid energy markets by catalysing private investment and collecting better data to accelerate access to basic and affordable renewable energy services. Below is inserted the preliminary Theory of Change for the Uganda window (see annex 3 for the overall Theory of Change for BGFA) which is expected to be subject to adjustment during project implementation, e.g. when final ESP's are selected, new technological solutions are promoted or national regulations up-dated. The result-based financing approach calls for an adaptive management approach to embrace new risk and opportunities emerging during project implementation which is also encouraged by the Danish Aid Management Guidelines.

Theory of Change for BGFA Uganda window



6. Partners and Management arrangement

As result-based and social-impact procurement mechanism, the BGFA has a fairly simple management set-up where the Nordic Environment Finance Corporation (NEFCO) has the overall responsibility as facility manager.

In February 2019, a Framework Facility Management Agreement of the Beyond the Grid Fund for Africa was signed by Sweden (SIDA) as the first donor of the BGFA. As responsible for the management and administration of the BGFA, NEFCO will apply their own policies, procedures and standards for fund management which meets EU's extensive requirements for delegated funds. NEFCO as an International Finance Institution (IFI) will make it easy to extend the donor basis for the BGFA. In May 2021, the Governing Framework for the BGFA was updated to include the current three donors Sweden, Denmark and Germany (see annex 13).

In May 2020, NEFCO signed a long-term technical advisory service agreement with REEEP, which is a continuation of the pilot phase of Beyond the Grid Zambia where REEEP was selected in an open tender process. REEEP is a specialized organisation on sustainable energy as their core mandate and will ensure access to the capacity needed to successfully implement the BGFA.

All other tasks, services and equipment will be contracted through open public tenders. This include both ESP's but also other consultancy services to support implementation, technical assistance, training and analytical work. In this sense, the BGFA has as a nimble and lean project set-up focusing on scaling off-grid energy services through an inclusive market-based procurement approach which allows the BGFA to allocate resource in an adaptive manner during project implementation.

Finally, Power Africa, an initiative administered by USAID, is providing a considerable in-kind technical assistance contribution to the work in the five selected countries where BGFA operates. For a more detailed description of project partners see Annex 13.

7. Governance, M&E and reporting

NEFCO is responsible for the management and administration of the BGFA. BGFA will be based on the application of NEFCO's standards and fund management procedures. This will create the required basis for attracting other financiers to the BGFA, since NEFCO's procedures comply with EU's high management requirements for delegated funds and follow IFRI accounting standards. NEFCO will be responsible for all reporting and accounting towards Denmark. The scoping phase of the BGFA Uganda window has been completed and has informed the first Call for Proposal for the Uganda window.

7.1. M&E and reporting

NEFCO will be responsible for commissioning scoping studies, managing the Call for Proposals, overseeing due diligence, signing contracts with selected companies and with support from REEEP monitoring timely progress with contracted ESPs. In terms of M&E reporting, NEFCO will provide semi-annual progress reports to the Danish MFA. The reports will cover the overall status of the BGFA as well as locally achieved results, challenges and impacts (including gender aspects). These reports will inform learning and dialogue in the steering committee and feed into required adjustments and adaptation. Given the innovative nature of the engagement and partnership, a strong focus on learning and adaptation will be applied towards the different stakeholders and approaches.

Disbursement of funds will generally follow the results-based outputs based on real-time data from the EDISON database and verified by field observations. This means that the majority of the disbursement will

follow the progress of the instalments of electricity to end-users. However, for the Launch to Scale and Micro-grid funding windows, some pre-payments is likely to cover up-front costs. At least 75 pct. of the budget is expected to be programmed for financial incentives to ESP's selected through public tenders. NEFCO is responsible for all contracts and payments, incl. payments to REEEP. Payment of invoices for the agreed services will follow timelines and budgets in Terms of References, budgets and contracts. REEEP will be responsible for on the ground monitoring and verification of the quality of the instalments and other services provided but will directly report to NEFCO.

7.2. Steering Committee

Denmark will participate in the BGFA Steering Committee which constitutes a forum, where the Facility Manager (NEFCO) will present to the Danish MFA draft progress reports, semi-annual work plans and budgets (for approval) with an outlook for the next half year. The BGFA Steering Committee will meet twice a year, including one meeting in one of the BGFA countries to enable field /site visits. This will be critical to ensure continues learning and adaptation in line with the Doing Development Differently approach. The semi-annual meetings will tentatively be held in June and December (see also ToR for Steering Committee in annex 13). Currently, Denmark, Germany, Sweden, NEFCO, REEEP and Power Africa (USAID) participate in the Steering Committee meetings.

As the Facility Manager, NEFCO will present semi-annual progress reports, work plans, financial reports and budgets (for approval) with an outlook for the next half year at the Steering Committee meetings. NEFCO will also seek no-objections from the Steering Group members before contracting selected ESPs. The BGFA Steering Committee will also serve as an informal forum to discuss, seek input and coordinate between donors and implementing agencies. This also include specific Steering Committee meeting for the Uganda window where issues is discussed such as governance, cost and project sharing arrangements, overall eligibility criteria of ESPs, the design and adjustment of the Uganda window, and final selection of ESP's.

8. Budget and financial management

8.1. Budget

The Danish contribution amounts a total of DKK 80,0 million earmarked for the Uganda BGFA window. This complements the existing Danish contribution of DKK 37,5 million from 2020 and the Swedish contribution of SEK 130 million⁸. Currently, no other donors are funding the Uganda window.

The Danish contribution includes the payments to ESP's and the technical assistance components as well as all administration. The majority of the project budget will be target the 'results-based financing' component where ESP's are paid when services and infrastructure have been delivered and verified. This fits with Danish requirement of an output-based budget⁹. A more detailed budget will be presented to and approved by the Steering Committee when the ESP's and other service providers are selected which is during first quarter of 2022 (see also annex for expected disbursements).

⁸ The BGFA is a multi-donor facility. Sweden continues to be the core donor and active in all country windows. Denmark was first other donor and Germany has recently signed up to supports the Zambia window. BGFA is also receiving in kind support from Power Africa (USAID programme) worth approx. EUR 4 million over the next three years.

⁹The budget is indicative and will be adjusted as contracts with ESP's are signed.

Overall budget	Danish 2021 contribution (DKK)
Component 1: Access to energy	60.000.000
Output 1.1: Launch to Scale window	18.000.000
Output 1.2: Micro-grid window	18.000.000
Output 1.3: Direct to Scale window	24.000.000
Component 2: Technical assistance, market analysis, quality verification	12.0000
Output 2.1: Data monitoring , reporting, verification and market analysis.	6.000.000
Output 2.2.: Technical assistance for institutional capacity.	3.000.000
Output 2.3.: Technical assistance to ESP's	3.000.000
Component 3: Management, administration and contingencies	8.000.000
Administration and management fee (6%)	4.800.000
Contingencies (4%)	3.200.000
TOTAL	80.000.000

8.2. Financial management

The activities of the BGFA programme shall be subject to reporting as well as accounting, financial control and auditing in accordance with Danida's Guidelines for Accounting and Auditing of Grants¹⁰ channeled through Governmental, Parastatal and International Organisations. The financial year of the BGFA programme shall be the same as the financial year of NEFCO (which runs from 1 January to 31 December). The first financial year may be extended to cover a longer period, including the calendar year following the year of the establishment of the BGFA, by written notice to the Ministry.

NEFCO shall prepare annual financial statements with respect to the BGFA programme and forward these to the Ministry no later than by 28 February each year. The accounting principle to be applied by NEFCO is the cash method of accounting. NEFCO shall cause such annual financial statements to be audited by the same auditors as are engaged by NEFCO to review NEFCO's own accounts. NEFCO shall send the auditors' report to the Ministry as soon as available and in any case no later than within 180 (one hundred and eighty) days after the expiry of each financial year.

Within three (3) months of the completion of the fund activities in accordance with this Agreement, NEFCO shall account for the use of the Contribution in a final report to be submitted to the Ministry. The Ministry may request that NEFCO complements and/or clarifies the final report and NEFCO must promptly comply with all such requests.

The representatives of the Ministry and other relevant Danish authorities shall at all times at their own cost be allowed to undertake control measures solely to verify that the Contribution is being used in accordance with this Agreement. The representatives shall hereunder be permitted to visit premises and examine records, goods and documents requested, and have access to NEFCO's auditors and the auditors' assessment of all information pertaining to the final recipients and the project activities implemented with the

¹⁰ Note that guidelines are planned to be revised during 2021.

Contribution. Confidentiality obligations on the part of NEFCO's auditors shall not hinder such access. Any access shall, however, not prejudice the confidentiality of other information which is not related to the Contribution¹¹.

NEFCO shall apply the NEFCO Policy on Anticorruption (available on NEFCO website) and Compliance which includes taking appropriate measures to prevent the occurrence of Prohibited Practices. NEFCO shall investigate and report to the Ministry any credible allegations of Prohibited Practices involving activities funded with the Contribution. In the event a case of Prohibited Practice is reported to the Ministry, and been established by NEFCO's Sanction Panel, the case will be publicly disclosed by the Ministry. The Ministry may request that the project activity be suspended, if the final recipient or another contracting party is credibly suspected of Prohibited Practice, or terminated if the final recipient or another contracting party has been found to have committed an act of Prohibited Practice.

9. Risk Management

The MFA of Denmark will focus its risk management on key contextual, programmatic, and institutional risks, based on BGFA's own identified risk for the Uganda window. The risk management section is based on overall risks identified for the BGFA results-based financing approach, by the market scoping study and observations from Danish preparation of the support (see also annex 5).

The contextual risks are mainly related to the risk of corruption that always exists when building new infrastructure. Uganda is no exception and Denmark has faced several cases recently in Uganda. To mitigate this risk, the Call for Proposals process will be managed directly by NEFCO and evaluation criteria include a thorough screening of the selected entities and the capabilities to prevent corruption. This risk is considered 'likely' but lower than in other infrastructure projects with limited political interference and limited public regulation for stand-alone systems. The risk of political and economic instability should also be considered a risk such as the impacts of COVID-19 could also disrupt the off-grid energy sector in Uganda by lowering the purchasing power of targeted end-users or impact ESP's ability to leverage co-financing. Further, institutional risk for implementing the new regulation for isolated grids is also considered a risk but REA is assessed as a fairly reliable and well-resourced regulator.

The programmatic risks include lack of ESP's with adequate financing and implementing capacity. This risk is considered 'unlikely' as the Ugandan market is more advanced than the other BGFA countries where there has been significant expression of interests from ESP's. Another risk considered "likely" is that ESP's will not meet the expected target groups, meet expectation to gender and e-waste management or cannot deliver planned number of connection. This risk will be mitigated through a thorough screening before contract signing, real-time data management, field validation and end-user surveys. Further, to avoid not reaching the targeted end-users (low-income households without access to electricity), only Tier 1 connections for Solar Home Systems will be supported.

Main institutional risks include the new management set-up where BGFA operates as a multi-donor trust fund operating in five countries in comparison to the pilot programme in Zambia. NEFCO is an experienced fund manager with adequate policies and procedures in place, but the project outcomes will also be depending on NEFCO's ability to establish a close coordination with REEEP, ESP's and other contracted

¹¹ Further details on financial management and anti-corruption measures included in signed agreement template.

consultancy service providers. Further, new off-grid energy regulations and a planned re-organisation of the energy agencies could also impact the project implementation, particularly the micro-grid window. BGFA will establish a close dialogue with relevant agencies through a local consultant that will monitor the changing landscape and through Platform of Market Change or a similar coordinating platform.

Finally, it has been observed that providing economic incentives could impose a risk for market distortion. The purpose of the market scoping study was to collect knowledge of the Uganda market and design the Call for Proposal to fit the specific market conditions. By this, BGFA would support removal of current market barriers to reach low-income customers but not distort the off-grid energy market. All contracts with ESP's will be based on open and competitive tenders and at least nine different ESP's will be selected avoiding only supported a few operators on the market. Similar results-based payments schemes have been widely tested and applied by the World Bank but also in Denmark.

10. Sustainability and exit strategy

Introducing renewable energy to rural and peri-urban household will have positive climate and environmental impact by avoiding installation and use of fossil fuel based alternatives such as diesel generators and kerosene lamps. However, a key sustainability challenge is the end-of-life management of solar products, especially how to ensure collection and recycling of e-waste. Effective policies, regulation and the physical infrastructure to manage e-waste are not in place in Uganda yet. Therefore, contracted ESPs will be required to present a detailed plan in final application process and smaller start-up ESP's under the Launch-to-Scale will receive support to develop a recycling partnership plan within one year of the signing the contract. The e-waste management plan or policy should be tailored to the local context and include procedures for e-waste handling, transportation and storage. In addition, all ESP's will have their capacity to manage social and environmental assessed to comply with relevant national environmental laws and NEFCO's Environmental Policy and Guidelines before contract signing¹².

Project implementation is expected to be completed in 2025 and the BGFA is not established as a revolving fund and no reflows of funding is expected. The economic incentives provided to ESP's through a results-based financing approach will be grants to bridge the affordability gap, extend off-grid energy services to new and underserved regions, build up more local content and service providers, integrate productive use and e-cooking and other innovative approaches close the energy gap in Uganda.

By applying a market-based approach, the BGFA is expected to contribute to develop and consolidate a dynamic and self-sustaining off-grid energy market for SHS and stand-alone systems in Uganda. Further, the BGFA will also support local and smaller service providers which should contribute to build diverse set of suppliers and entrepreneurs in the off-grid energy sector, including local enterprises. The micro-grid window will be fully aligned with the new Isolated Grid System Regulation and be engaging relevant government agencies which should ensure sustainability of the off-taking agreements.

Through the BGFA Steering Committee, Denmark will propose that an exit strategy is being developed after 2 years of implementation which could form part of the planned Mid-term Review.

¹² NEFCO's Environmental Policy and Guidelines.

Annex 1: Context Analysis

1. Overall development challenges, opportunities and risks

Uganda has a population of 41 - 44 million with 75% of these living in rural and peri-urban areas where only ca 4 - 7% of households have access to basic energy services of tier 1 or higher; in urban areas the access rate runs at about 45% and countrywide at ca 16%. Despite strong economic growth in recent years, driven by services, agriculture and oil, the per capita GDP sits at around USD 604 and over 10 million people live below the poverty line of USD 1.25 / day, putting Uganda in the lowest quartile on the Human Development Index ranking 162 out of 189 countries with a score of 0.516 (2017). The total working population is estimated at about 15 million (51% female) earning an average monthly income of USD 194 in urban areas and USD 84 in rural areas (USD 115 countrywide average).

Biomass accounts for over 87% of primary energy consumption, especially in rural and agricultural areas. The government's national development plan targets 50% clean energy use by 2025, but there is as yet no clear roadmap to achieve this, though renewable resources are abundant (at least 5,300 MW). Installed on-grid generation capacity is ca 1,250 MW (mostly hydro – 81%), which leads to a nominal surplus against current peak demand of ca 724 MW, arising from a government led push on IPPs over the last 10 - 15 years and deferred industrial developments, but grid infrastructure and management is poor and the actual available capacity fluctuates.

Ambitious government led policies and efforts implemented through REA (e.g. Sub-counties Electrification Project and the Electrification Connection Policy), which aim to increase access to the grid to 60% by 2027 and the Rural Electrification Strategic Plan (RESP) which targets 100% overall access by 2040, will likely miss their targets. But there is broad based political commitment to harnessing the private sector and alternative off-grid technologies and approaches such as stand-alone systems, mini- and micro-grids to respond to these challenges. Current donor activities are focussed predominantly on policy and the regulatory framework and although there are some small scale RBF programmes promoting mini-grids, clean cooking and SHS, there is currently relatively little capital deployed directly to the off-grid sector to support investment and operations.

The stand-alone systems market is already reasonably established and best positioned for further development and growth with a diverse supply side infrastructure in place, although there are still significant market segments and areas, which remain under- or completely unserved: coverage for entry level systems particularly still remains very patchy outside the main urban areas and distribution / logistics centres. Even the proven, well-funded vertically integrated internationally active companies still have trouble penetrating these areas with affordability being a key issue, exacerbated by the cost of establishing sales, distribution and support infrastructure. This market segment alone is estimated at ca 5 million households / USD 1.5 billion.

Compared with other BGFA countries (Burkina Faso, Liberia, Mozambique and Zambia) the off-grid sector is somewhat more differentiated and advanced (especially in the stand-alone systems segment) and therefore requires more nuanced approaches in the design of the envisaged BGFA incentives, especially in terms of ensuring additionality and avoiding market distortion. A comparison of key parameters from the 5 different markets under BGFA (Uganda, Zambia, Mozambique, Burkina Faso and Liberia) is provided in Annex 6.4.

Standalone systems

Solar Home Systems (SHS) already contribute significantly to the electrification of off grid households in Uganda. Over the past 4 years SHS annual sales volumes have ranged between around 380,000 units in 2016 to 400,000 in 2019, though unit sales are expected to decrease as a result of Covid-19 in both 2020 and 2021.

The SHS market in Uganda consists of a diverse and extensive distribution ecosystem with a range & depth of players that is different from other BGFA markets ranging from large (international) vertically integrated companies, local / niche players, component suppliers and integrators and resellers. The sector is well represented and promoted through the Uganda Solar Energy Association (USEA), which is dedicated to solar companies in Uganda and currently counts around 190 members, including the majority of SHS operators.

The overall potential for the off-grid market is relatively large (at least 5 million households are estimated to lack basic entry-level access) but needs to take into account affordability constraints and the low ability to pay for clean energy services in rural areas, mostly due to the high poverty rate. Awareness levels of the population are generally high, also in rural areas, but many areas and districts remain underserved leading to lack of access for many areas as companies have not been able to justify building out sales and support infrastructure. While Energy Service Providers (ESPs) are predominantly focussed on entry level energy services, current trends seem to suggest a rapidly growing demand for higher energy service levels and increased appliance offerings (Radio & TV).

E-waste recycling should be incentivised through the programme in order to mitigate the environmental risk associated with used SHS, in particular if old batteries and PV panels are not collected. In their business proposals, ESPs will be required to describe their environmental impact and waste management policy, procedures and demonstrate alignment to the global and respective national environmental management regulations. Investees are expected to provide an outline potential wastes in the supply chains and how they intend to manage these.

The primary barriers limiting scale of the SHS market include

- Limited affordability of SHS products (an estimated 70% of the underserved population cannot afford systems at a daily rate of USD 2-3);
- Low levels of market penetration (especially in underserved regions characterized by uneven distribution);
- Limited availability of financing (esp. for local firms);
- Low quality products (lacking standards have tarnished SHS' reputation; a new standards regime is being introduced which is generally welcomed but causing uncertainty in the market until tested);
- Limited technical and business skills & capacity.

Mini-grids

Mini- and microgrids are a nascent sector with only 7 grids currently in operation. The Electricity Regulatory Authority (ERA) - supported by GIZ and EU - has just developed and introduced a new regulatory regime. This includes licensing exemptions for smaller grid capacities, licence bundling (to cover multiple sites with similar features) as well as (partially) cost reflective tariffs (based on identification of allowable costs within ranges and accounting for donor / grant funding) to promote activity in the sector. GIZ are in the process of piloting this new regime through 40 sites and REA has identified 683 sites in the range of 10 - 100kW with a potential for ca 100,000 connections. The total addressable market is estimated to be significantly larger and further sites are under investigation.

A number of home-grown and international mini-grid operators are positioning themselves to capitalise on this emerging opportunity. The biggest problems remain the high upfront capital cost of site development and preparation combined with the long lead times to acquire and develop appropriate loads and adequate cashflow to cover financing costs. Returns are accordingly modest and predicated on unattractively long payback periods. To counter this (and encouraged by donors) operators are increasingly looking to productive uses to generate load, but this tends to lead to complexity (and additional cost) in customer acquisition and management as well as grid design (see below). An important aspect of the regulatory and operative landscape is that REA is responsible for establishing and financing the grid infrastructure for approved mini- and microgrids. This buys down some of the capex cost for operators, but may conversely also increase coordination complexity in the engineering and operation of the grid. It does however ensure a uniform standard of infrastructure which facilitates reverse engineering should the grid arrive. Financial arrangements in the event of grid arrival are not yet clear.

From this analysis it is clear that mini- and microgrids are likely to play a pivotal and increasing role in Uganda's electrification strategy. This is not without its risks and challenges as we have also seen in Zambia and also to some extent in Mozambique (see Box 1). Teething problems can and should still be expected in the administration and implementation of the new regulations; companies will be learning by doing and that will increase the level of uncertainty and required effort in monitoring and evaluation also for BGFA. But the fact that the new regulations have been fully promulgated and enacted is significant and compares favourably with other BGFA markets where this has not been the case. On this basis there is strong justification for BGFA to enter and support this emerging market at a strategically important moment in its development with a dedicated mini- microgrid window. For this reason we are proposing a dedicated micro-grid window which could be designed to buy down some of the upfront costs of site identification, grid establishment and customer acquisition (including for productive use) to facilitate market entry for existing and new players and help pilot and consolidate this emerging market.

Bio-energy

Despite the fact that BGFA focusses its attention very much on solar in the stand alone and mini- microgrid market segments, the scoping study also reviewed the bioenergy sector which, in Uganda as in other sub-Saharan countries, is an important source of primary energy, especially for cooking. Biomass is by far the most dominant source of energy, contributing 87% of the overall primary energy consumption in the country as a whole: 98% of urban households and close to 100% of rural households rely on some sort of biomass (firewood, charcoal and fuels derived from crop residue) for their cooking and heating needs and, alongside fossil fuels, it is still the main energy source in the agricultural sector. Overall, however the sector is relatively underdeveloped.

The main issue facing the sector is affordability, particularly in rural and poor areas away from the main commercial centres. Initially carbon finance had some positive impact in reducing prices but this receded with the collapse of the carbon price and actually reversed as a result, because many small producers had become dependent on the initial higher prices to protect their margins. The development of a more open and commercially oriented market has also been impeded in the past by start stop cycles of donor support resulting in heavily subsidised and often cheap / poor quality equipment. It is still unclear how carbon markets might develop in the future though it could be hoped that development of activities under Article 6 of the Paris Agreement and/or voluntary carbon markets could serve to underpin carbon finance and carbon prices.

Productive use

The Productive use market segment was also investigated by the market scoping to establish its potential to complement the core objectives of BGFA in rolling out sustainable electricity services at scale,

particularly in the context of generating load and driving economic growth and development in connection with mini-grid deployment. As in other BGFA countries the Productive Use sector is, to all intents and purposes, as yet completely undeveloped as a sector in its own right. Both mini-grid developers / operators and distributors of stand-alone systems are investigating this sector, seeing in it the opportunity to generate higher revenue through sale of more sophisticated systems and / or higher loads. However intuitive this appears, it remains elusive since each system / solution tends to be unique / tailor made, requiring significant upfront sales and marketing effort as well as ongoing customer management and system care / maintenance. To this end many companies are exploring partnerships with specialist organisations (agricultural distributors / cooperatives / trade associations etc) to facilitate access to customers and support distribution but these are still at an experimental stage. Accordingly, there is no obvious route to scale and the potential market remains diffuse and unclear, though it is cautiously estimated at about USD 187 million (e.g. for pumping, cooling, drying milling, agricultural processing, retail and commercial, artisanal production and small scale manufacturing and industrial uses).

List the key documentation and sources used for the analysis:

Are additional studies / analytic work needed? How and when will it be done?

The information in the box is copied from the BGFA Market Scoping Study for Uganda and ongoing market research, including specific studies from underserved regions are ongoing.

2. Fragility, conflict, migration and resilience

The overarching objective of the BGFA programme in Uganda is to create access to basic and affordable renewable energy services for energy poor people living outside the national electricity grid and to accelerate private sector growth in energy generation

BGFA is expected to reach out to deep rural areas and vulnerable regions with weak social contract, weak institutions and inadequate capacity among public institutions such as parts of northern Uganda. Thus, there may be outbreaks of violence and other conflict-related risks that can threaten the ability to implement activities. There may also be security risk for the involved companies and for NEFCO/REEEP staff.

Understanding of conflict dynamics, conflict sensitivity and risks in each country is expected to be addressed in the market scoping study and in the due diligence review of the ESP companies, and will involve recommendations for risk mitigation measures and may have an impact on the proposed geographic targeting in the country.

Uganda is the largest refugee-hosting country in Africa, with over a million refugees. Specific targeted underserved region could be regions supporting displaced groups and host communities.

List the key documentation and sources used for the analysis:

Are additional studies / analytic work needed? How and when will it be done?

A specific study of underserved regions is currently ongoing by a local consultant.

3. Assessment of human rights situation (HRBA) and gender

Human Rights Based Approach

BGFA envisages to follow the Swedish government's guidelines with regard to the Human Rights Based Approach (HRBA) to development cooperation, including explicitly addressing the four principles of HBRA – non-discrimination, transparency, participation and accountability – and with specific attention paid to HBRA Frameworks for Environment and Climate Change and Market Development. On a strategic level the rights perspective is supported by the link with SDG 7 on universal access to modern energy.

Applying a human rights-based approach entails, following Sida guidance, should include:

- “Assessing how the initiative will further the realisation of human rights as laid down in the UN Human Rights Conventions and how it will ensure to do no harm”. In the context of BGFA in Uganda, this means understanding how expanding energy access can increase the power of marginalised women and men to access information and services and to improve living and working conditions. For larger infrastructure projects, protection of land rights needs to be considered, following the ‘do no harm’ principle.
- “Planning and monitoring how the values and principles underpinning these UN Conventions (non-discrimination, participation, accountability and transparency) are applied in the programme design and processes”. In the context of BGFA in Uganda, this means applying the principle of non-discrimination in targeting end user groups, transparency of the programme towards citizens and government, and accountability procedures to enable affected citizens to raise complaints. In addition, consideration should be given to how citizen participation from beneficiary groups (i.e. rural communities without access to energy) can shape the design and implementation of the programme.
- “Empowering men, women, girls and boys (with hope, assertiveness, knowledge, skills, tools, communication channels, legal mechanisms, etc.) to enable them to address their situation and claim their rights individually and collectively”. In the context of BGFA in Uganda, this means looking at how expanded energy access can contribute to a broader process of claiming economic and social rights.
- “Developing capacities of those who have power and formal obligations to protect, respect and fulfil human rights obligations”. This principle is particularly relevant for technical assistance and government engagement as part of the BGFA programme.
- The anticipated conflicts within the Ugandan context potentially include:
 - Concerns about environmental degradation may be addressed by incorporating social and environmental safeguards to ensure safety in energy production and service supply.
 - Concerns about loss of income for traditional energy resource businesses may be addressed through alignment and partnership with existing renewable energy networks as well as outreach and awareness raising with existing value chain operators.
 - Concerns related to Gender based violence in the context of BGFA may be addressed by encouraging Energy Service Providers to conduct stakeholder consultation in a gender-inclusive way, targeting both women and men.
 - Concerns about labour rights abuse may be addressed by ensuring that Ugandan labour laws are enforced to protect against exploitation.

Incorporating an integrated conflict perspective requires also required a good understanding of the past and present context of conflict in Uganda, how this may affect programme implementation and how a programme may affect ongoing tensions.

- From the late 1970s through to the mid-2000s Uganda experienced civil instability due to political conflicts borne out of a broken system of governance in the 1970s. Throughout the 1990s, there are a number of civil wars, but most notably in the Central Northern parts of Uganda against the rebel Lord's Resistance Army (LRA). As a result there was great suffering and a reversal in the

development of the region. Some 1.5 million people were internally displaced and ended up resorting to live in camps.

- Over the last 20 years, Uganda's relative stability and progressive refugee policies have made it the destination for an estimate of 1.2 million registered refugees, including people fleeing conflict and instability in South Sudan, the Democratic Republic of the Congo, and Burundi. The recent influxes of refugees have aggravated the need for a comprehensive understanding of the humanitarian situation and the provision of services for refugees living both in dedicated refugee settlements as well as in urban settings.
- Inequality and disputes over control of resources and access to opportunities have been sources of ongoing tension. Local advice should be specifically sought on the geographic focus of BGFA (specifically for the proposed funding window 2, standalone systems) to avoid further exacerbating perceptions on unequal distribution of resources.

Transparency

Openness and transparency will be safeguarded through reporting requirements, and through publicly sharing of results via the EDISON data tool (based on the SDG monitoring methodology). The scoping process for each procurement window will be broadly participatory and involve consumer perspectives (including as appropriate, use of energy user groups to gain an understanding of energy needs and preferences). In addition, the due diligence and sustainability-screening process for the bidding companies will explicitly address consumer rights.

The results-based financing model is based on open and public tenders where ESP's will be selected through transparent competitive selection process.

The Platforms for Market Change, a key feature of the BGFA, will be set up in each country of operation building on the approach to set up the Task Force for Off-grid Electrification in Zambia. The Platform for Market Change works to improve market ecosystem conditions utilizing a combination of capacity building and technical assistance, stakeholder outreach and market intelligence to address issues e.g. related to unclear taxation regulation or enforcing, recycling systems for e-waste or new forms of licensing for renewable mini-grids that have to be developed to support a new type of market.

The first Call for Proposals have been published for the Uganda window and follow an open and competitive model.

Gender

The gender assessment was informed by a desk review, focus group discussions with representatives of the off-grid energy private sector as well as consultative meetings with stakeholders from the finance sector (e.g. the Uganda Energy Capitalisation and Credit Company), civil society and women's organisations (e.g. UN Women, National Association for Women Organisations), and the Government of Uganda (e.g. the Ministry of Energy and Mineral Development).

The gender assessment revealed significant gender inequalities including:

- Social norms and practices tend to reinforce gender related inequalities; women are often considered as primary caregiver in the household responsible for childcare, cooking, wood and water collection;
- Decision-making roles between women and men in the household are not equal and therefore purchase of energy services does not necessarily meet the needs of all members in the household;

- Women in general, and particularly in the rural areas are disadvantaged in terms of access to economic resources, access to ownership and control over land and other forms of property and access to finance;
- Affordability is a general issue that is disproportionately affecting women as primary care givers;
- The energy sector is considered to be generally male-dominated and activities such as electrical installation and use of appliances are perceived as male domains resulting in less training and employment opportunities for women;
- Energy for cooking is the primary issue for gender and energy access as women are mainly responsible for firewood collection and for cooking, and as a result suffer from time poverty and negative health impacts related to indoor air pollution;
- Jobs in the energy sector are usually perceived to be for men; nevertheless, there are opportunities for women as sales agents of off-grid clean energy services or by supporting female entrepreneurs to establish small shops selling renewable energy equipment alongside other goods
- Women mostly work in the informal sector and are responsible for subsistence farming and reproductive work.

Empowering women and promoting gender equality is crucial to accelerating sustainable development. Ending all forms of discrimination against women and girls is not only a basic human right, but has also a multiplier effect across all other development areas.

The BGFA programme in Uganda will build on the gender-sensitive procurement approach developed for BGFA1 (first financing round in Zambia, Burkina Faso and Liberia) aiming at actively promoting, incentivizing and transferring best practices regarding gender equality in all BGFA target countries. Hence, BGFA requires Applicants/Consortia to offer equal opportunities for men and women through both, their own employment practices as well as the proposed projects and follows a gender-sensitive procurement approach, where Applicants/Consortia, who integrate gender equality as a core value into their proposals are specifically rewarded.

BGFA is promoting gender inclusion at all stages of the programme. The procurement stage as described for BGFA1 has a clear focus on gender aspects in the evaluation of the business plan, with 12 points evaluating the performance of the Applicant and the proposed project on specific gender aspects. In turn, gender commitments made in the proposal will be transformed into contractual undertakings through the Project and Service Description. During implementation, gender aspects will further be thoroughly monitored and enforced in an active dialog with contracted ESPs. At the Final Application stage in BGFA3, three main aspects will be considered:

- 1) whether the proposed project is designed in an inclusive manner and appropriately addresses the needs of both women and men as well as girls and boys;
- 2) whether the Applicant can demonstrate its commitment to gender equality at a company level; and
- 3) whether the Applicant and its Consortium Members are willing to commit to ambitious targets to close possible gender gaps at the company/Consortia level.

Youth

BGFA Uganda will leverage hands-on and innovative approaches to scale energy access to energy poor communities. Using financial incentives to bridge the financing gap, develop skills development for youth and female employment in off-grid sector and managing e-waste are some of the expected innovative take-aways from the project

The off-grid businesses can capitalize on meeting social and economic development needs, providing new and innovative solutions for e.g. irrigation, cooling, welding and other. These businesses can create new jobs and address youth un-employment.

Off grid energy is still a largely untapped opportunity for creating jobs for youth. BFGA is conducting a scoping study financed jointly by Denmark and Sweden, which will lead to the design of a small job-creation sub-programme. The scoping study will provide a comprehensive, up-to-date overview of off-grid energy market in Uganda, including the demand for and availability of training institutions. The jobs and skills development component will aim to develop vocational and/or tertiary level training for the off-grid sector with selected local partner institutions and promote local job creation through inclusive business development, particularly focusing on opportunities for women and youth. The specific timeline for the job-creation component will be developed once the scoping study is finished

Employment

The off-grid sector is emerging as a significant employer in emerging economies that suffer from high rates of joblessness as surveyed by Power for All. Although nascent and just beginning to scale, it has already grown a workforce comparative to the utility power sector and can have a wide, positive impact in Uganda through formal, informal and productive use jobs. Distributed renewable energy is an engine for creating good, skilled jobs in emerging economies through formal employment, with 2 to 5 times more jobs being created through informal work and productive use. Estimates of productive use jobs stimulated through new or improved electricity access in 2017–18 show 65,000 jobs in Kenya and 15,000 in Nigeria – five times the size of the sector’s direct, formal workforce. Pico-solar appliance and Solar-Home-System companies are the jobs engine of this sector, though employment from mini-grids is likely to grow, match and potentially exceed in some regions. Importantly, off grid energy is still a largely untapped opportunity for creating jobs for women and youth. At present, less than 25% of the off-grid workforce are women but increasing this is an area of focus for BGFA. Women’s participation brings proven benefits, especially in sales and distribution. Employment generation a performance indicator monitored through the BGFA and reported via the public dashboard.

List the key documentation and sources used for the analysis:

https://www.nefco.org/sites/nefco.org/files/pdf-files/nefco_gender_policy_february_2018.pdf.
NEFCO jobs scoping study from Uganda – soon to be published.

Are additional studies / analytic work needed? How and when will it be done?

In the scoping phase, BGFA has conducted a market scoping study with will include an assessment of social results and impacts including peace and conflict and human rights. This includes an analysis of challenges and opportunities relating to gender considerations, and an assessment of social results and impacts including peace and conflict and human rights perspectives

In addition, BGFA has conducted a jobs and skills development study, which included the potential for women and youth

Smaller and more targeted studies will be conducted on an ongoing basis.

4. Inclusive sustainable growth, climate change and environment

Climate change and environment

The support to BGFA is aligned to new Danish Government’s long-term global climate strategy. While the main aims of the BGFA are to support energy access in line with SDG 7, the BGFA will have notable and

mostly positive impacts on climate change mitigation and enhanced resilience (e.g. in the context of reduced use of kerosene lighting or sustainable use of bioenergy and reduced deforestation). Other environmental impacts are likely to be minimal given the nature of the technologies supported by the Fund. NEFCO will ensure that at a minimum, projects and contracted ESPs comply with relevant national laws regulating Environmental and Social Impact Assessment requirements, but also NEFCO's Environmental Policy and Guidelines and Sida's approach for safeguarding sustainability in support to the power sector in sub-Saharan Africa. E-waste will specifically be addressed.

Sustainability

NEFCO recognizes that sustainability is dependent on local ownership, since in most cases results will not be sustained over time if they are not supported by local key stakeholders and correspond to a genuine local demand and generate tangible benefits to the final beneficiaries. Hence, country engagement and dialogue with the demand side, the customers, are critical for accelerating the creation of a true market. Likewise, sustainability also depends on how assets, knowledge, skills and resources financed by the BGFA will be managed after the completion of the BGFA. In addition to the nurturing of self-sustaining private businesses in Uganda, considerable focus will therefore be put on the institutional capacity development aspects and aimed at creating local capacity that will last beyond the lifetime of the BGFA initiative. Likewise, when optimizing the BGFZ concept efforts will be made to strengthen the demand side in understanding and expressing its real needs and preferences for different energy services in an effort to stimulate a more vibrant market, where demand side drives innovation in business models and product available on the market (including gender preferences).

A well-developed exit strategy is essential for sustainability. During programme implementation, an exit strategy for BGF Uganda will be developed, whereby a concrete plan and timing for the transfer of programmatic ownership for BGF and Platform activities to local government institutions (e.g. the Rural Energy Agency) will be elaborated. This plan will be complemented by tailored capacity building of the identified agencies such that at the appointed time they will be in a position to assume the management responsibility for BGF Uganda.

More broadly, NEFCO's own policies will form the basis for the operational integration of social and environmental aspects, gender, human rights, as well as policy and practices for anti-corruption, disclosure and transparency. In addition to this NEFCO will also maintain an on-going dialogue with the Danish Embassy and Danida to ensure compliance with latest policies and requirements, and (jointly with REEEP) coordination with other Denmark funded initiatives in Uganda.

List the key documentation and sources used for the analysis:

Projects will be followed up and reported with regard to environmental performance according to NEFCO's Environmental Policy and Guidelines
https://www.nefco.org/sites/defnecfco.org/files/pdf-files/nefco_environmental_guidelines_2017.pdf

If this initial assessment shows that further work will be needed during the formulation phase, please list how and when will it be done?

N/a

5. Capacity of public sector, public financial management and corruption

The BGFA is managed by the Nordic Environment Finance Corporation (NEFCO). As responsible for the management and administration of the BGFA, NEFCO will apply their own policies, procedures and

standards for fund managements which meets EU's extensive requirements for delegated funds. NEFCO as an International Finance Institution (IFI) will make it easy to extend the donor basis for the BGFA.

For technical advisory, analytics, monitoring, evaluation and verification, the BGFA programme is implemented in partnership with the Renewable Energy and Energy Efficiency Partnership (REEEP). REEEP is an international multilateral partnership. REEEP is responsible for the continuous technical dialogue and capability development with partners and service providers in Uganda. REEEP also supervises the day-to-day implementation work.

NEFCO's own policies will form the basis for the operational integration of policy and practices for anti-corruption, disclosure and transparency. In addition to this NEFCO will also maintain an on-going dialogue with the Danish Embassy and Danida to ensure compliance with latest policies and requirements as well as (jointly with REEEP) coordination with other Denmark funded initiatives in Uganda.

The Energy Service Providers (ESPs) will be contracted through open public tenders. In this sense, the BGFA is nimble and lean project set-up focusing on scaling of off-grid energy services through an inclusive market-based procurement approach.

Capacity building will form an important element of the technical assistance as described to create an enabling environment in Uganda to support the market creation and roll out the analytics to support a robust and accessible monitoring, evaluation and learning system. Another important part of this work will be aimed at increasing public and private investment into sustainable energy ecosystem by engaging domestic and international energy service providers and financial actors.

BGFA will also set up a Platform for Market Change with multiple stakeholders, including the public sector. The members of the Platform will meet regularly and will work towards:

- Clarifying and improving import regulations for solar energy products and appliances designed for use with solar home systems
- Drafting a policy to regulate the construction and operation of mini-grids, in consultation with the private sector.
- Clarifying land rights regulations to de-risk investment in mini-grids.
- Identifying approaches to improving the affordability of off-grid energy technology.
- Improving the sharing of market Intelligence.

On BGFA procurement and investment level, there are general principles for the procurement and procedures for due diligence and integrity check of the bidding companies, based on clearly communicated and transparent assessment criteria and evaluation process.

List the key documentation and sources used for the analysis:

https://www.NEFCO.org/sites/NEFCO.org/files/pdf-files/NEFCO_procurement_guidelines_12_dec_2013_0.pdf

Are additional studies / analytic work needed? How and when will it be done?

n/a

6. Matching with Danish strengths and interests, engaging Danish actors, seeking synergy

The Danish policies emphasize that Denmark should continue its leadership on SDG7 to raise the global ambition, including closing the access to energy gap. The announcement of the Danish Minister for Development Cooperation that Denmark will aim to provide access to clean energy for 5.8 million people in Sub-Saharan Africa demonstrates the level of ambition.

The Danish development assistance will also increase focus on job creation and developing a skilled workforce for the green transition. The Minister has launched the ambition to train 10.000 more skilled workers in Africa.

The current Danish Strategy for Development Cooperation and Humanitarian Action 'The World 2030' identifies Sustainable Development Goal (SDG) 7 on affordable and clean energy as one of the five overall SDG priorities. The Strategy adopts a differentiated and context specific approach to support the different SDG7 indicators depending on the geographic context. Universal access to energy in low-income and fragile countries is a priority. The planned new Strategy for Development Cooperation is expected to reconfirm the Danish commitment to SDG7.

Climate and environment are also listed as priorities under the first strategic objective of Denmark's Country Policy Paper for Uganda 2018-2022 and the project is aligned to the 'Uganda 2040 Vision' aiming to connect 80% of the population with access to electricity by 2040. This engagement will seek to build synergy to other existing Danish engagement in Uganda, such as e.g. post-harvest activities in the agricultural sector, and the Danish private sector engagement and cooperation with the financing sector. Danish companies have already shown interest for participating in the BGFA Uganda tendering process. The Danish embassy in Uganda has been involved in the initial meetings and further synergies will be established during scoping and implementation of the BGFA.

Further, opportunities for Denmark to build alliances between BGFA and multilateral agencies such as ESMAP and SEforAll, Danish supported institutions such as GGGI, and also more investor-related funds such SEFA and Nordic Development Fund. So far, dialogue with BGFA has been very open to strengthen collaboration with multilateral and bilateral cooperation. BGFA is already coordinating with several multilateral alliances and agencies such as Power Africa, who has already committed considerable in-kind contribution to the BGFA.

Also, the BGFA in Uganda will support other Danish priorities such as technical skills development, job creation and gender equality. A stronger effort to build skills and create new green jobs in the off-grid solar sector will be a specific Danish footprint for further development of the BGFA approach.

List the key documentation and sources used for the analysis:

n/a

Are additional studies / analytic work needed? How and when will it be done?

BGFA will make a jobs and skills development study, which included the potential for women and youth. The study is due end Jan 2021

7. Stakeholder analysis

The BGFA, through the foreseen initial country scoping/stakeholder consultation and the considerable institutional capacity-building component, will adhere to the principles of local ownership, and the respect of Uganda's own priorities. The BFGA country specific implementation plan for Uganda will demonstrate alignment to the partner countries' own objectives, related to poverty reduction and

energy access and follow up mechanisms, inclusive partnership, transparency, prevention of corruption and accountability, as well as donor coordination and harmonization.

NEFCO and REEEP recognize that ownership and sustainability of the action are critical success factors and depend on the support or the counteraction from specific groups, institutions or individuals within as well as outside the Fund. The BGFA in Uganda will operate in a complex stakeholder landscape, engaging with institutions of the Government, such as ministries and regulatory authorities; international aid agencies and Development Finance Institutions (DFIs); international organisations and non-governmental organisations (NGOs); businesses and private sector financial institutions; and others.

The BGFA will have a number of direct beneficiaries in Uganda. These include: small and medium-sized enterprises (SMEs) aiming to serve rural energy markets; households, businesses and institutional energy users (energy poor women and men) served by the BGFA-supported companies - which may be considered the primary beneficiaries. Other important stakeholders are policy institutions and government agencies engaged in the Platform for Market Change, and possibly local financial institutions looking to support renewable energy business models that are de-risked through the BGFA intervention.

Productive uses of energy are identified as an area that few donor-funded activities address in Uganda. Denmark could support that e.g. farmers are supported to express their demands and preferences/hindrances for investing in renewable energy, including for post-harvest production. This kind of customer or end-user support would be complementary to supporting the suppliers. Farmers appear to be a relevant group for starting and other income bringing activities can stem from this. The districts to focus on should be discussed with Rural Electrification Agency (REA) and the Ugandan National Farmers Federation (UNFFE).

The demand dialogue and customer support could be discussed with The Ministry of Energy, the Private Sector Foundation of Uganda (PFSU), UNIDO and UNCDF. Apart from UNFFE and REA, it is advisable that the Ugandan National Renewable Energy and Energy Efficiency Alliance (UNREEE) and its member associations are engaged and given tasks in the dialogue. Further to productive uses of energy, net-debit business models would be in the interest of Ugandan Solar Energy Association (USEA), UNREEE and these organisations could be involved as responsible for pilots and demonstration projects that demonstrate the opportunity of the net-debit business model within the area of productive uses of energy and wider.

Supporting the energy end-users is a new perspective in Uganda for creating demand growth and economic development. One recommended way of launching a sustainable and result oriented end-user dialogue could be to support Buyers' Groups. For examples, small industries' branches or specific types of farming can aggregate and be supported to formulate their needs and join forces to impact the suppliers to deliver more appropriate and valuable energy services. Another highly relevant end-user category is the agricultural sector and other productive/service sectors. Without doubt, the modernization of agriculture will entail energy use. It is paramount to understand that energy end-users that started off as off-grid later can become important players in the grid. If Denmark supports farmers in business development and to become productive users of energy, it can be added to regard the possibility of selling excess electricity to the grid. Activities that support this can be demonstrational pilots, general awareness, capacity development, networking and research cooperation

The Uganda Rural Electrification Authority (REA) has been created and mandated to design and implement rural electrification programmes, support and effect grid extension and / or provide alternate electricity infrastructure and services to rural areas in order to increase energy access, thereby increasing

productivity and contributing to improved quality of life. The specific engagement approaches of the BGFA programme with REA will be adapted to the specific needs and requirements with a view to strengthening their capacity. Depending on the local circumstances at hand, the REA could be involved in the actual project evaluation. In all circumstances, efforts should be made to coordinate and avoid overlap with grid extension activities to ensure optimization of the BGFA investments. The REA could also be beneficiaries of TA support and advice to facilitate implementation of their own procurement rounds or targeted capacity building to assume responsibility and programmatic ownership of the BGFA in the long term and it is proposed that this will form part of the “exit strategy” of the BGFA.

List the key documentation and sources used for the analysis:

n/a

Are additional studies / analytic work needed? How and when will it be done?

n/a

Annex 2: Partners

BGFA is a result-based procurement mechanism that was set-up with funding by Sweden. The Nordic Environment Finance Corporation (NEFCO) was selected as the facility manager. In February 2019, a Framework Facility Management Agreement of the Beyond the Grid Fund for Africa was signed with Sweden (SIDA) as the first donor to the BGFA. As responsible for the management and administration of the BGFA, NEFCO will apply their own policies, procedures and standards for fund managements which meets EU's extensive requirements for delegated funds. NEFCO as an International Finance Institution (IFI) will make it easy to extending the donor basis for the BGFA.

In May 2020 NEFCO signed a long-term technical advisory service agreement with REEEP which should be understood as a continuation of the pilot phase of Beyond the Grid Zambia where REEEP was selected in an open tender process. REEEP is a specialized organisation on sustainable energy as their core mandate and will ensure access to the capacity needed to successfully implement the BGFA.

All other tasks, services and an energy services will be contracted through open public tenders. In this sense, the BGFA is considered as a nimble and lean project set-up focusing on scaling of off-grid energy services through an inclusive market-based procurement approach.

The BGFA has a nimble and simple management set-up where majority of the implementation will be implemented by Energy Service Provides (ESP). The ESP's will be selected through open and competitive tender processes.

Summary of stakeholder analysis

An informal mapping for potential institutions/partners to deliver scale on SDG 7.1 (access to energy) and the Minister's target to deliver access to 5.8 million people in Africa. The mapping were made in Q1 and Q2 2020 by making a call for proposals to embassies and MFA departments but also mapping the landscape for relevant multilateral and inter-governmental proposals.

Despite the rapid expansion of off-grid solar power in Sub-Saharan, relatively few dedicated trust funds or facilities targets a roll-out of the off-grid renewable energy sector in Africa. Larger funds appeared slow before implementation would begin or with a broader energy access mandate. The mapping identified three potential funds/facilities: Beyond the Grid Fund for Africa (BGFA), Energising Development (EnDev) and the Energy and Environment Partnership Trust Fund (EEP).

Criteria for selecting programme partners/BGFA

BGFA is managed by NEFCO as an intergovernmental International Finance Institution with Denmark as a member, which has a range of advantages and also opens up for direct selection of grantee. However, the selection was also based on a mapping. The mapping was based on a number of selection criteria which reflected the target of Denmark contributing to provide 5.8 million people in Africa with access to clean electricity within the term of the current Government.

- Deliver extensive scale on access to electricity in Africa
- Rapid execution of projects
- Target the under-deserved communities without access to energy today

- Leverage private financing
- Potential for becoming a Danish flagship contribution on SDG7 in Africa
- Ability to influence design to establish links to other Danish priorities, e.g. green jobs, skills development and displaced people.

The Beyond the Grid Fund for Africa was the best match as it aims to scale access to energy rapidly, targets the under-deserved communities in Africa through financial incentives and will still be able to leverage private financing. It clearly had established quantities targets to and a monitoring system in place to deliver on the target of Danish development assistance contributing to provide 5,8 million people in Africa with renewable energy. Further, the BGFA was about to start up the Uganda window in a priority country for Danish development cooperation which allowed Denmark to participate almost from the beginning in the country.

Brief presentation of partners and multilateral coordination

The BGFA has two main partners:

- NEFCO as the overall facility manager of the BGFA. It is an international finance institution established in 1990 by the five Nordic countries. Denmark is represented in NEFCO's board by the Danish Environmental Protection Agency and the Ministry of Foreign Affairs. NEFCO provides loans and makes capital investments in order to generate positive environmental effects of interest to the Nordic region. As such, NEFCO acts as a specialist Fund Manager for a number of climate and environmental funds. It has considerable experience as an international financial institution working for 30 years with environment and energy projects on behalf of the Nordic governments initially in eastern Europe and former Soviet Union and in China but since 2008 its mandate was extended to Africa and globally.
- REEEP has been contracted to provide technical advisory, analytics, monitoring, evaluation and verification. REEEP was selected in a competitive tender during the first phase. REEEP is an international multilateral partnership, constituted as a Quasi International Organisation under Austrian Law that works to accelerate market-based deployment of renewable energy and energy efficient systems in low- and middle-income countries. REEEP is responsible for the continuous technical dialogue and capability development with partners and service providers in Uganda. REEEP also supervises the day-to-day implementation work and builds on similar role in the separate pilot BGFZ programme.

Once selected through open and competitive tenders, the selected ESP's will be an important delivery partner for the BGFA. The ESP's is expected to use one form of the PAYG business-model. The PAYG model is fairly new and emerged when widespread use of mobile payment technologies and declining solar PV and battery costs became an opportunity.

The BGFA has also established a formal collaboration with Power Africa. Power Africa, a U.S. Government-led partnership, is providing support to the Beyond the Grid Fund for Africa (BGFA). It will provide an in-kind contribution worth approx. EUR 4 million (USD 4.5 million) over three years in order to help operationalise the initiative and develop a pipeline of commercially viable projects within the framework of BGFA.

The BGFA programme is also in constant contact with relevant industry stakeholders, e.g.

- GOGLA, the global association for the off-grid solar energy industry. Established in 2012, GOGLA now represents over 180 members as a neutral, independent, not-for-profit industry association. Our services assist the industry to build sustainable markets and profitable businesses delivering quality, affordable off-grid electricity products and services to as many customers as possible across the developing world.
- Africa Minigrad Developers Association (AMDA). AMDA was created by developers and is supported by donors, governments and financiers to ensure that we reach the goal of universal electrification in the next 15 years

Denmark will also encourage BGFA to collaborate closely with Danish supported partners such as:

- ESMAP and the World Bank,
- African Development Bank, incl. the Sustainable Energy Fund for Africa
- SEforAll
- Global Clean Cooking Alliance.
- GGGI

List of relevant stakeholders mapped in Uganda:

1. GOVERNMENT INSTITUTIONS
Electricity Regulatory Authority (ERA)
Ministry of Energy and Mineral Development (MEMD)
Rural Electrification Agency (REA)
Uganda Bureau of Statistics (UBoS)
Uganda National Bureau of Standards (UNBS)
Uganda Revenue Authority (URA)
Uganda Energy Credit Capitalisation Company
Private Sector Foundation Uganda
2. DEVELOPMENT PARTNERS/ ORGANISATIONS
Agence Française de Développement (AFD)
EU
Foreign, Commonwealth & Development Office (FCDO)
GIZ
SNV
Shell Foundation
USAID
Swedish International Development Agency (SIDA)
UNCDF
3. CONSULTING FIRMS
OCA/ UOMA
Tetratich
NRECA
Energy and Security Group Ltd
4. ASSOCIATIONS & COOPERATIVES
The Uganda National Renewable Energy and Energy Efficiency Alliance (UNREEEA)
Biomass Energy Efficient Technologies Association (BEETA)
Uganda National Biogas Alliance (UNBA)
Hydropower Association of Uganda (HPUA)
Uganda Solar Energy Association (USEA)
Energy Efficiency Association of Uganda (EEAU/Energy Auditors)
Wind Power Association of Uganda (WPAU)
National Association for Women's Organizations
Uganda Small Scales Industry Association (USSIA)
Uganda National Alliance on Clean Cooking (UNACC)
Kyegegwa Rural Electricity Cooperative Society Ltd (KRECS)
5. Private Sector Players
Solar Home Systems Companies (Fenix, Solar Now, Bright Life, D-light, Village Power, yellow, Energy Systems, All-in Trade, Power Trust, Solar Today, Chloride Exide, SoloGrid)
Mini-grid Companies (Equatorial Power, Winch Energy, Mandulis)
Bioenergy Companies / Associations (UNACC, UNREEEA)

6. ACADEMIA
CREEC
Enlight Institute
Makerere University: College of Engineering, Design, Art and Technology
Ndejje University, Faculty of Engineering
East African Center for Renewable Energy and Energy Efficiency (EACREEE).
Kampala International University (RE Programme)
7. FINANCIAL INSTITUTIONS
Centenary
Finance Trust
Post Bank
Stanbic Bank
Tujjijenge Uganda
8. NGOs
The Women Support Initiative
WWF
Joint Energy and Environments Projects (JEEP)
Conservation and Development Uganda Limited (CODE)
Global Off-Grid Lighting Association (GOGLA)
Uganda Carbon Credit Bureau
New Horizons Womens' Education Centre
Gender Specialist - MUK

Annex 3: Preliminary BGFA Results Framework and ToC

BGFA Uganda: Draft Result framework

Specific Objectives	Indicator(s)	Source of Information / Means of Verification
<p>Specific Objective 1</p> <p>By 2026, up to 600,000 high quality, long-term clean energy services (ESS) are deployed in Uganda to underserved communities in rural and peri-urban areas, reaching up to 3 million people (women and men).</p>	# of BGFA procurement/funding windows/rounds implemented	Procurement documents
	# of Energy Service Providers (ESPs) projects originated and contracted	Documentation of procurement evaluation Contracts signed between NEFCO and ESPs
	# of people, men and women, benefiting from new or improved access to energy services	ESP reporting to BGFA, Edison data and regular independent verification
	# of ESP operating at scale (serving > X% of addressable market) in Uganda	ESP reporting to BGFA
	Customer satisfaction and perceived benefits by consumers in Uganda by energy service and by gender	ESP reporting to BGFA External socio-economic impact assessment
	# of full time jobs created at the level of contracted ESPs (disaggregated by gender)	ESP reporting to BGFA
	tCO2e per year mitigated against business-as-usual, and other relevant climate adaptation and mitigation indicators	ESP reporting to BGFA, EDISON; based on methodology develop by external experts (e.g. the Swedish Energy Agency)
	Contribution to industry-wide environmental priorities on e-waste handling, aggregation and recycling	ESP submission of e-waste policy documents to BGFA ESP reporting on kilograms/tons of e-waste responsibly disposed Signed contracts between ESPs and e-waste providers

<p>Specific Objective 2</p> <p>By 2026, BGFA stakeholder engagement mechanism for Uganda is developed and effectively implemented to support enhancement of policy and regulatory ecosystem for access to energy services for all</p>	Stakeholder engagement strategy is in place and long term local BGFA representative contracted	Stakeholder engagement strategy Contract and TOR for BGFA local representative
	Targeted engagement with key market stakeholders	Stakeholder meeting minutes REEEP reporting and briefing to NEFCO
	Amount of funding available and (directly / indirectly) leveraged for stakeholder coordination and policy / market development activities in Uganda	REEEP reporting to NEFCO Stakeholder platform minutes
	Total number of institutions approached by regular BGFA stakeholder engagement activities (government, donor, private sector, financial institutions, NGOs, CSOs, etc.) in each target country	BGFA Customer relationship management system (CRM) [being considered]
	Stakeholder satisfaction with BGFA stakeholder engagement - per stakeholder category and benefits perceived	Regular surveys with key stakeholders
	Number and summary descriptions of stakeholder activities in each target country - meetings, round tables, events, establishment of market knowledge base, donor coordination, analysis of systemic market challenges and opportunities, policy analysis, recommendations to improve ecosystem for off-grid RE sector in the target countries	BGFA Customer relationship management system (CRM) [being considered] REEEP reporting to NEFCO Stakeholder platform minutes
	Sustainability of stakeholder engagement post BGFA windows	Integration of stakeholders with robust and funded engagement platforms
	# of new National Ugandan mini-grid regulations that is better suited to the future scaling and expansion of the industry through the period of BGFA funding	REEEP reporting to NEFCO

Specific Objective 3 By 2026, additional engagement of domestic and international financial institutions in contracted ESPs in Uganda	MEUR of BGFA finance disbursed to selected ESPs	NEFCO reporting to donors
	# of additional public donor institutions supporting BGFA, and amount of additional funding provided	Steering Committee documentation
	MEUR of co-financing leveraged from national / international, public / private, sources by the ESPs	ESP Reporting Independent Mid-term and End of Program evaluation

Specific Objective 4 By 2026, an effective data collection and analysis effort, including IT systems, has collected relevant data from the deployments of high quality energy services in Uganda, and: 1) is used to monitor the delivery of results under RBF incentive schemes; 2) demonstrates impact transparently and in real-time to the public; 3) has the potential to analyze and process data into intelligence products (as appropriate) that could contribute to improved planning, increased investment and additive impact on energy services for beneficiaries.	# of ESPs have established automated data transfer integration with to Edison	Edison data Security testing report External ESS verification report
	An appropriate legal setting for a data processing and analytics centre has been established and security of data system is tested on a regular basis	REEEP reporting to NEFCO Security testing report
	data collected and analyzed has been tested and trialed into # tailored intelligence products	Intelligence products Stakeholder meeting minutes
	Stakeholder satisfaction with the public facing elements of the BGFA data system	Independent Mid-term and End of Program evaluation

	The Danida-funded training program to support BGFA companies is in place and being implemented (support from 2020)	Reports from trainings held
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<p>Specific Objective 5</p> <p>By 2026, BGFA in Uganda has contributed to increased skills development and employability of local workforce in the off-grid energy sector (standalone and Mini-grid), and the direct and indirect creation of jobs</p>	Coordination and cooperation mechanism in place between BGFA, training institutions and ESPs	REEEP reporting to NEFCO Agreements with training institutions
	# of full time jobs / part time jobs (commission based agents) created at the level of contracted ESPs (disaggregated by gender)	ESP reporting to BGFA External socio-economic impact assessment
	# of indirect jobs created in the off-grid sector value chains	External socio-economic impact assessment
	Trainings provided by training institutions are meeting the requirements of ESPs	External socio-economic impact assessment
	% women in ESP's management, board of directors, employees, and gendered pay gaps, as well as changes to these along the course of the program	ESP reporting to BGFA External socio-economic impact assessment

BGFA regional results clusters (covering five BGFA countries)

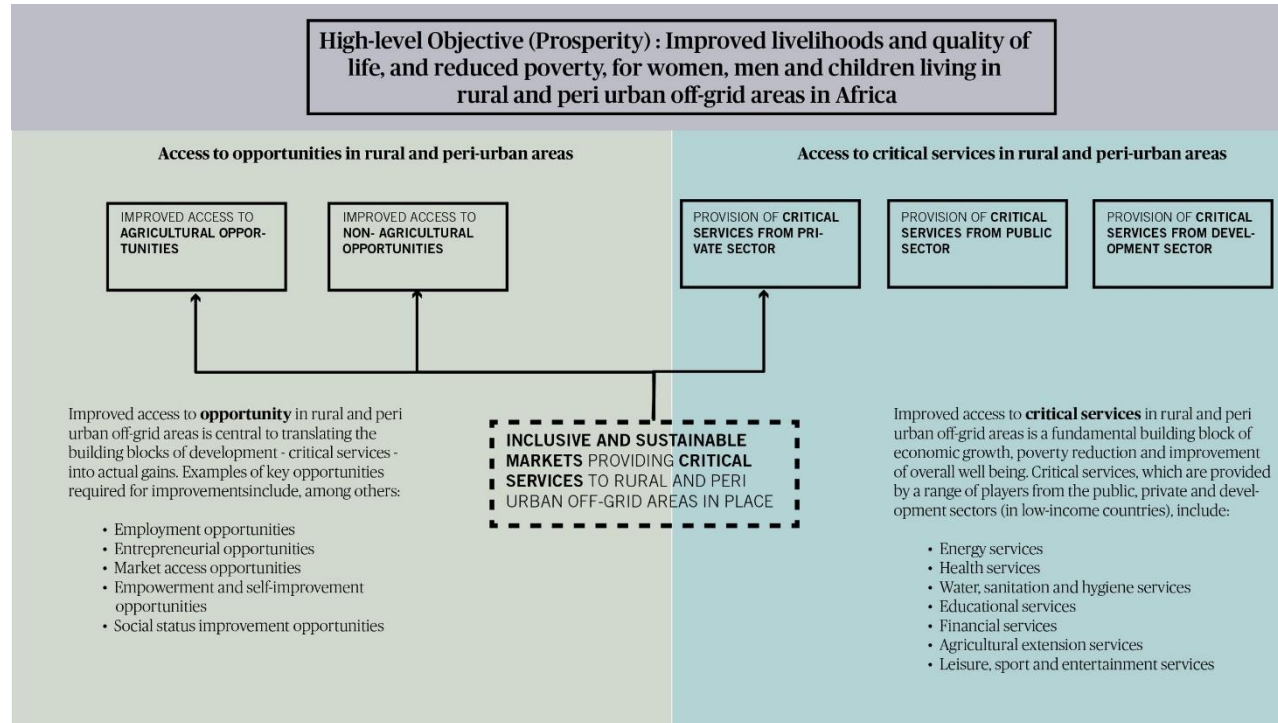
Results Clusters	Indicator(s) DRAFT	Source of Information / Means of Verification
<p>Result Cluster 1</p> <p>Result Cluster 1: Increased availability of high quality energy services to meet demand affordably and sustainably and improved economic capacity of targeted population (women and men) to secure needed critical energy services.</p> <p>By 2024; BGFA procurement mechanism developed and implemented -- providing tailored incentives and financial security to selected Energy Service Providers (ESPs) to enter the rural electrification markets in target</p>	# of BGFA procurement/funding windows/rounds implemented	Procurement documents
	Robust and effective mechanisms and systems in place in four target countries for results-based procurement/incentive schemes	Independent Mid-term and End of Program evaluation
	# of projects originated and contracted (thereof # of women-led businesses)	ESP contracts Documentation of procurement evaluation
	# of people, men and women, benefiting from new or improved access to energy services	EDISON (and regular independent verification)
	# of ESP operating at scale (serving > X% of addressable market) in each country	ESP reporting to BGFA BGFA reporting to Sida
	# of full time jobs created at the level of contracted ESPs (disaggregated by gender)	ESP reporting to BGFA External socio-economic impact assessment
	Customer satisfaction and perceived benefits by consumers in each target country by energy service and by gender	ESP reporting to BGFA External socio-economic impact assessment
	Impact on customer economic situation (expenditures and income)	External socio-economic impact assessment
Impact on macroeconomic conditions in country (employment+, FDI+, GDP+, etc.)	Independent Mid-term and End of Program evaluation	

Results Clusters	Indicator(s) DRAFT	Source of Information / Means of Verification
countries (Zambia, Mozambique, Burkina Faso, Uganda and Liberia) and scale the sales of off-grid solutions to reach at least five million people (women and men).	Relevant climate adaptation and mitigation indicators (e.g., tCO2e per year mitigated against business-as-usual) in each target country	EDISON; based on methodology develop by external experts (e.g. the Swedish Energy Agency)
Result Cluster 2 Enhanced policy and regulatory ecosystem for ensuring access to energy services for all By 2024, Platforms for Market Change in Zambia, Mozambique, Burkina Faso, Uganda and Liberia are developed and appropriate to national context; they are self-sustaining, owned and operated by local actors, and interacting with each other;	ToRs approved and annual work plans developed by key stakeholders of the platforms in each target country	Terms of References Stakeholder platform minutes
	Amount of funding available and leveraged for platform coordination and selected platform activities in each target country	BGFA reporting to NEFCO Stakeholder platform minutes
	Total number of institutions represented in the platform - government, donor, private sector, financial institutions, NGOs, CSOs etc. in each target country	BGFA Customer relationship management system (CRM)
	Stakeholder satisfaction with the platform in each target country - per stakeholder category and benefits perceived	Annual surveys with platform members
	Number and summary descriptions of platform activities in each target country - meetings, round tables, events, establishment of market knowledge base, donor coordination, analysis of systemic market challenges and opportunities, policy analysis, recommendations to improve ecosystem for off-grid RE sector in the target countries	BGFA Customer relationship management system (CRM) BGFA reporting to NEFCO Stakeholder platform minutes
	Platforms in each target country are self-sustaining and run by local actors (by 2024)	Independent mid-term and end of program evaluation
	INDICATOR for platforms interacting with each other	TBD
Result Cluster 3	XX mEUR of BGFA public finance disbursed to selected ESPs	BGFA reporting to NEFCO (PC)
	# of additional public donor institutions supporting BGFA, and amount of additional funding provided	TF documentation
	# of concessional or private investors supporting energy access and low-carbon development via investments into off-grid market activities in target countries	Annual country level surveys Independent Mid-term and End of Program evaluation

Results Clusters	Indicator(s) DRAFT	Source of Information / Means of Verification
Increased public and private investment into sustainable energy and energy ecosystem	# of national and international, public and private, financial institutions providing finance to ESPs in the off-grid RE sector in each target country - debt, equity, grant, other and by SHS and mini-grid sector	Signed finance agreements; confirmation by relevant stakeholders
By 2024 increased engagement of domestic financial sector and international financial institutions in target energy service sectors in Zambia, Mozambique, Burkina Faso, Uganda and Liberia	Amount of finance provided to ESPs in each target country- by type of finance (debt, equity, grant, other) and by SHS and mini-grid sector	ESP reporting to BGFA
	# of public and private banks and/or micro-finance institutions providing consumer finance to ESP customers in the off-grid RE sector in each target country- by type of consumer finance and by SHS and mini-grid sector	Annual country level surveys Independent Mid-term and End of Program evaluation
	Amount of consumer finance provided by ESPs in off-grid RE power sector	EDISON
	Amount of consumer finance provided by ESPs in off-grid RE power sector - by type of consumer finance and by SHS and mini-grid sector	ESP reporting to BGFA
	Key outcomes of round tables with financial institutions in each target country	Round table meeting minutes
Result Cluster 4	By Q4 2019, a robust, secure and effective integrated data system in place to effectively support result based procurement / incentive schemes in Zambia, Mozambique, Burkina Faso, Uganda and Liberia	Technical acceptance of the data system (as per requirement specification) Security testing report External ESS verification report
Advanced data-driven market intelligence and blended financing models stimulate influx of efficient, targeted capital to ecosystem	By Q4 2019, an appropriate legal setting for a data processing and analytics centre has been established and security of data system is tested on a regular basis	BGFA reporting to NEFCO and Sida Security testing report
By 2024, an effective data collection and analysis effort, including IT systems, has collected relevant data from the deployments of at least 1 million high quality energy services in Zambia, Mozambique, Burkina Faso, Uganda and Liberia; utilized for: 1) monitoring the delivery of results under RBF incentive schemes; 2) demonstrating impact transparently and in real-time to the public; 3) analyzing and processing data into intelligence products which contribute to improved planning, increased investment and additive impact on energy services for beneficiaries.	By Q2 2020, data collected and analyzed has been processed into # tailored intelligence products (e.g. contributing to GIS mapping layers and other spatial planning datasets, data-driven recommendations for policy and regulatory stakeholders, etc.)	Intelligence products Platform meeting minutes
	Stakeholder satisfaction with the public facing of the BGFA data system	Independent Mid-term and End of Program evaluation

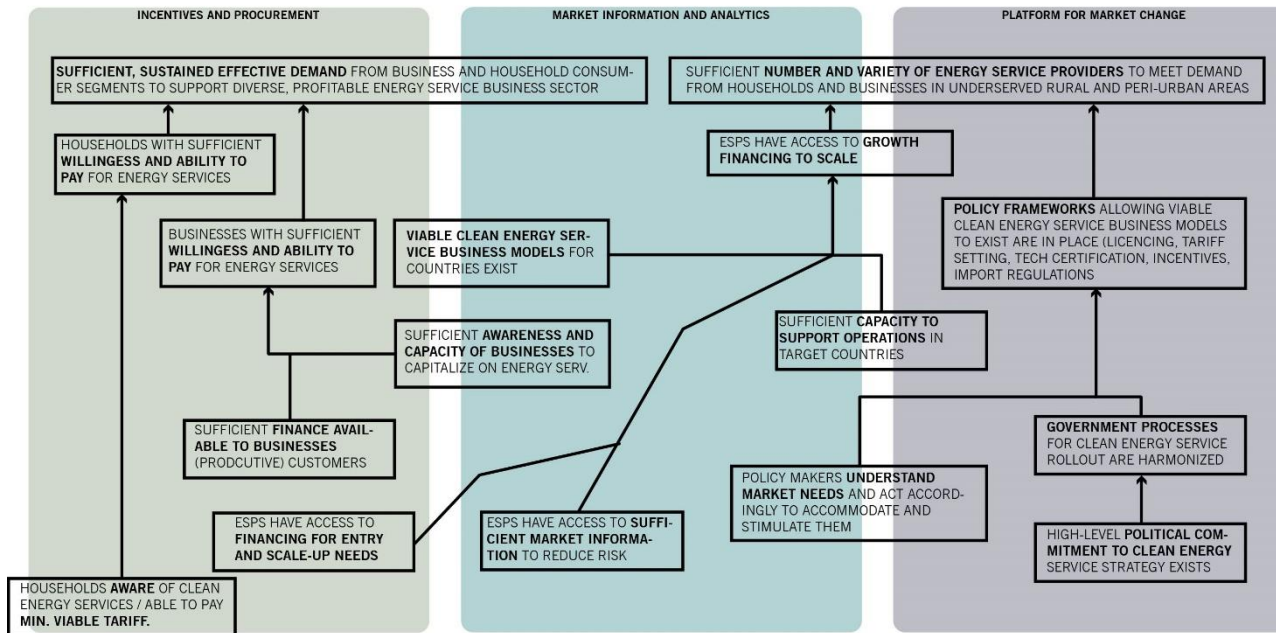
Overall BGFA Theory of Change.

The specific ToC for the BGFA Uganda window has been developed which in several ways is aligned to the overall theory of change for the regional Sub-Saharan scope of the BFGA. Below is the overall assumptions for the Theory of Change included.



Strategic Objective: Improve Inclusive and Sustainable Markets for Critical Energy Services in Africa

BY 2024, AT LEAST FIVE MILLION UNDERSERVED PEOPLE IN RURAL AND PERI-URBAN AREAS ACROSS FOUR COUNTRIES HAVE ACCESS TO HIGH QUALITY CLEAN ENERGY SERVICES ON INCLUSIVE AND SUSTAINABLE MARKETS.



Annex 4: Indicative budget for disbursement

A detailed budget will be elaborated for two overall components when the Call for Proposals are completed and final ESPs selected, which is expected to be in the first quarter of 2022. The budget will be presented to and approved by the Steering Committee.

The below budget includes the planned disbursement of funds. The budget assumes payment of advanced payment of 30% for the companies in Launch to Scale in year 1, and then flat line thereafter. For Direct to Scale selected companies, the budget assumes half-year payment in Year 1 and 5. All other costs are flat rate.

	DKK	2022	2023	2024	2025	2026
Access to Energy Component						
Funding Lot #8 SHS (LS)	18.000.000	5.400.000	3.150.000	3.150.000	3.150.000	3.150.000
Funding Lot #9 MG (LS)	18.000.000	5.400.000	3.150.000	3.150.000	3.150.000	3.150.000
Funding Lot #10 SHS (DS)	24.000.000	3.000.000	6.000.000	6.000.000	6.000.000	3.000.000
Sub-total, Financial Incentives	60.000.000	13.800.000	12.300.000	12.300.000	12.300.000	9.300.000
Technical Assistance						
Monitoring, reporting and verification	6.000.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000
TA - institutional / Off grid taskforce	3.000.000	600.000	600.000	600.000	600.000	600.000
TA - Support to ESPs	3.000.000	600.000	600.000	600.000	600.000	600.000
Sub-total, TA	12.000.000	2.400.000	2.400.000	2.400.000	2.400.000	2.400.000
Programme management						
Management fee (6%)	4.800.000	960.000	960.000	960.000	960.000	960.000
Contingencies (4%)	3.200.000	640.000	640.000	640.000	640.000	640.000
TOTAL	80.000.000	17.800.000	16.300.000	16.300.000	16.300.000	13.300.000

Annex 5: Risk Management Matrix

Preliminary risk management matrix for BGFA Uganda:

Uganda - Key Risk	Risk level	Comments/mitigation measures
Low interest among potential Energy Service Providers (ESPs)	Low	The procurement will be widely disseminated given that ESPs should be either present in country (or region) or are actively scoping that market for possible entry. Uganda in particular is lower-risk for this given the wide variety of participants in the market, and its competitive nature.
Lack of required consulting expertise in the new countries	Medium	The use of REEEP own resources and networks, as well as the PFAN network of advisers and consultants in the region should mitigate this risk. Given there a few qualified experts, conflicts of interest in particular need to be carefully managed.
Project implementation may be impeded or faces severe delays during implementation because:		
a) Project proponents do not fulfil the criteria	Low	As mentioned earlier, the high number and wide variety of Ugandan clean energy firms makes this risk unlikely.
b) Project owner does not have the required capacity to implement the project	Medium	While large SHS companies and mini-grid providers will likely have the required abilities, there may be some need to undertake capacity development or technical assistance with smaller or younger productive use of energy firms or fledgling mini-grid operators. Finally, each of the lots might require special care or training in coordinating their members, and the tailored capacity building work supported by DANIDA could be crucial.
c) Lack of own financing among ESPs	Low	The assessment of potential bidders and business plans will take into account the financial capacity to deliver the outcomes.
d) Inability to mobilise additional funding	Low / Medium	Careful screening of bidders and the financing plans e.g. seeking evidence of funding applications will mitigate this risk.
e) The regulatory environment concerning project implementation is underdeveloped and in continuous change	Medium	This risk is related to the long and complicated project approval procedures, market barriers, lack of commercial financing, uncertain regulatory structures, and shifting institutional landscape. This risk applies most heavily to Lot #9, as the mini-grid sector is much more heavily regulated than stand-alone systems. Furthermore, a Mini-grid regulation has been approved and is expected to provide clarity to developers. In order to hedge this risk REEEP has been in contact with two major governmental institutions (the Rural Electrification Agency as well as the Electricity Regulatory Authority), and are in the process of signing formal

Uganda - Key Risk	Risk level	Comments/mitigation measures
		Letters of Partnership with them as well. ERA perceived as a reliable and well resourced regulator
f) Corruption	Medium	Corruption in sub-Saharan Africa is endemic and widespread. NEFCO and REEEP will oversee procurement processes of services and during implementation which leaves little room for project related corruption. Other political and administrative processes interacting with the project have the potential increase the risk of corruption and result in a negative impact on the project implementation and results.
Implemented projects do not lead to intended results:		
a) ESPs are unable to make sufficient ESS connections	Medium	Proactive monitoring including regular progress calls with contracted ESPs will act as an early warning system. Corrective actions and technical support can be mobilised as appropriate.
b) Macro-economic and/or pandemic related shocks create difficulties in program execution, especially if low income customers cannot afford or are not willing to pay for the services	Medium / high	The Ugandan macroeconomy has demonstrated some fragility in recent years, and the combination of a turbulent election season and COVID-19 related lockdowns has been detrimental to purchasing power. In order to hedge against disruptions from this, BGFA will pay close attention to the financial fundamentals of applicant firms, and sensitize participants on the importance of translating BGFA3 funding into reduced customer prices for energy solutions, as this will help households afford these relatively sizeable investments. In the implementation stage, ESPs are monitored against their contractual requirements to target low income groups.
c) Projects do not target peri-urban and rural customers	Low	Customers in rural and peri-urban areas often do not represent the ideal target segments for energy services. REEEP will ensure that any geographic and demographic aspects of incentive schemes are sufficiently documented, understandable and verifiable, such that ESPs will incorporate high-need areas into target segments. Furthermore, Lot #8 will likely have some geographic zones that are prioritized in scoring, which should help focus activities in high-impact regions.
d) Projects do not result in intended environmental, social and gender benefits	Medium	The project appraisal process covers potential environmental, social and gender benefits and impacts. Consulting support / coaching during project implementation mitigates the risk and improves quality and certainty of delivery of outcomes, and we are exploring options for targeted TA on difficult/complex requirements.
e) Environmental, social and gender benefits are not sustainable	Low/Medium	Environmental, social and gender impacts are monitored through project owners' environmental reporting. Finally, many of the requirements with an environmental, social and gender focus are not

Uganda - Key Risk	Risk level	Comments/mitigation measures
		onerous, and should just accelerate the development of processes that need to occur at these firms anyways.
f) Lack of ownership at ESP	Low	The project owners are required to allocate own financing to the project (they have “skin in the game”) and are incentivised by the payment on performance structure of contracts.
g) Lack of ownership from beneficiary government	Medium	While discussions with governmental agencies have been productive, it is not entirely certain how the current reorganization of agencies will finalize, and which entities might be willing or able to forward the objectives of the program in the years ahead. With support of our local consultant, REEEP will closely work with government entities to monitor the changing landscape and act accordingly.
Outcomes are not verifiable	Low	A unique web-based tool (Edison) is utilized to track the performance of contracted ESPs and enables evidence-based payment and decision making for government, financiers and the project developers; the tracking through the data tool is complemented by on-site reviews and independent assessments.
Provided services fail to meet the different preferences of women/men	Low	Inclusive participation of women and men during project preparation and Gender Aspects integrated in the scoping phase, the CFPs documents and results mainstreamed in the implementation phase (e.g. design of funding windows, evaluation of projects, external impact assessments).
Planned systems experience delays or drops in functionality and utilization, negatively impacting programme impact because:		
a) ESPs are delayed in implementing technical cooperation for automated data-sharing	Medium	ESPs might struggle to manage high-demand IT projects in parallel to normal operations. Development of the EDISON design will take this into account, seeking to minimize the time and resource required from private sector entities to set-up and maintain automated links for data transfer.
b) EDISON or other system security attacked or otherwise compromised	Low	EDISON and any EDISON redesign rely primarily on highly robust, industry standard systems, and employ state-of-the-art security protocols and approaches. Regular security audits are planned post-launch.

Annex 6: List of supplementary materials

#	Document / Material	Source
1	BGFA Programme document Uganda Window	NEFCO
2	First BGFA calls for proposals: (Burkina Faso, Liberia, Mozambique, Zambia and Uganda)	NEFCO
3	BGFZ Socio-Economic Impact Study	REEEP
4	TOR market scoping study Uganda	NEFCO/REEEP
5	TOR Jobs and Skills scoping study Uganda	NEFCO/REEEP
6	SDG7 Tracking report 2020	ESMAP
7	World Energy Outlook Report 2020	IEA
8	2020 off-grid solar market trends progress report	GOGLA/ESMAP
9	Pays-as-you-go models – innovation landscape brief (2020)	IRENA
10	BGFA Market Scoping Study	NEFCO/REEEP
11	BGFA Skills and Development Study	NEFCO
12	Call for Proposals and pre-qualifications guidelines for the BGFA Uganda Window	NEFCO/REEEP

Annex 7: Communication Plan

In May 2021, the BGFA Steering Committee adopted a new communication strategy. The purpose of the new strategy is to: (i) revise the initial BGFA communications strategy prepared in 2019, when BGFA was established, and clearly define WHY we communicate about BGFA and HOW this communication can best serve the programme in its present state of development; and (ii) further develop coordination measures and synergies (with actors and contributors working with BGFA) to ensure inspiring, coherent and efficient external communications.

Since the launch in August 2020, the website has had over 17,500 unique users (until 30 April 2021), and during the Call for Proposals the weekly user rate increased by some 150 per cent. In addition to the website, BGFA communicates with external audiences through the social media channels Twitter, LinkedIn and Facebook and currently sends out newsletters to over 700 subscribers.

The main objectives of the BGFA communications are to: a) promote the programme to various target audiences with relevant messages and b) showcase contextualised impact stories. The communications activities will focus on funding related to announcements and events, and dissemination of results and achieved impact of the BGFA programme. This will be done by continuing to develop and maintaining BGFA's visibility in digital channels, and by producing various presentation materials and supporting participation in events.

The aim is to provide tools for stakeholder engagement and influencing actions towards key stakeholders, including other international donor agencies and development finance institutions (DFIs); international impact and commercial investors; local and regional political and regulatory stakeholders; international, regional and local media; and the broader community interested in innovative, market-based development cooperation strategies and energy access.

Through the communications activities, the 'Beyond the Grid' story will showcase the learning and impact of BGFA and support incentivising private and public sector entities to contribute and cooperate towards reaching BGFA's stated objectives.

The key objectives of the communications activities are to:

1. Support the programme implementation
2. Share lessons learnt and further grow awareness of and promote the programme, its impacts and its potential for the creation of long-term sustainable markets among decision-makers in the target countries as well as other African countries
3. Support the mobilisation of additional funds from potentially interested donors, and support ESPs' efforts to mobilise funds from other financiers
4. Reach out to the general public, i.e. taxpayers, in the donor countries with contextualised impact reports to show the value of results-based funding
5. Meet transparency requirements

Target audience:

In the coming years, the BGFA programme will focus on implementing contracted projects, raise awareness of clean off-grid energy in all country programmes as well as highlight achieved impact through financed projects. There are also plans to expand into 2-5 new countries and attract more donors when the time is appropriate. Communications activity plans will be adjusted accordingly.

External audiences	Role related to programme	Level of knowledge of the programme ¹³	Motivations/Barriers
1. Target country governments and other African governments	Partners, facilitators, awareness creators and representatives of end beneficiaries	Partial	Motivations: BGFA contributes to SDG #7, i.e. host countries' fulfilment of Nationally Determined Contributions (NDCs) under the Paris Agreement and electrification goals, which will lead to long-term developments and provides the opportunity to be recognised as a country promoting clean off grid energy. Barriers: Lack of time/interest/right people/capacity, potential concerns over duplication of efforts/deviation of funds away from local Rural Electrification Authorities, complicated bureaucratic requirements, unstable political and economic circumstances, corruption.
2. Energy Service Providers (ESPs)	Potential future recipients; existing recipients as awareness creators	Minimal	Motivations: BGFA showing the way and inspiring other ESPs – as results-based financing (RBF) accelerates and makes it possible for ESPs to open up challenging areas and off-grid energy markets and expansion as well as mobilising additional financing Barriers: ESPs that have not applied for BGFA financing may not know about BGFA's potential concerns about entering into difficult and unstable markets.
3. Policymakers and stakeholders in target country governments	Potential members of Platforms for Market Change, off-takers of policy lessons learnt	Minimal	Motivations: BGFA provides useful insights and peer-learning and influences opportunities to progress the development of off-grid energy markets. Barriers: Time/interest/right people/capacity limits; they may not know BGFA and lack faith in the usefulness and accuracy of the presented lessons learnt.
4. Potential additional BGFA donors	Provide funding for further expansion of BGFA.	Some partial/Some minimal	Motivations: To be part of an exciting, innovative, impactful RBF initiative that has already been tested and provided lessons learnt and early evidence of success and could therefore ensure faster scale-up and effective spending of public money. Barriers: Potential lack of awareness of BGFA and understanding of the current state of the off-grid space, risk perceptions, numerous competing initiatives in place, change in political focus.

External audiences	Role related to programme	Level of knowledge of the programme ¹³	Motivations/Barriers
5. Potential investors in ESPs	Invest in BGFA-supported ESPs, off-takers of market intelligence generated.	Minimal	Motivations: Find promising, impactful investment opportunities in emerging markets; access to high-quality data on market conditions in off-grid areas. Barriers: Risk reality and perceptions in challenging markets, potential lack of awareness of BGFA, potential lack of faith in accuracy and relevance of impact data provided.
6. General public – communities in target countries and other African countries	Read and share news about BGFA.	Minimal	Motivations: Read inspiring stories about real impact affecting communities and people on the ground. Nordic countries generally perceived as climate frontrunners with very high-quality solutions to offer. Barriers: Lack of access to communications channels, difficulty differentiating between numerous different initiatives, potential low awareness of donor countries/Nefco/REEEP as project partners.
7. General public – taxpayers in donor countries	Taxpayers	Minimal	Motivations: Showing taxpayers that we are spending their money in a good way, including using it to create long-term development and jobs in Africa (and thereby limit financial immigration). Stimulating business opportunities for supplying clean energy solutions in contributing countries to target countries; supporting sustainable development/green transition with climate benefits for the whole planet. Barriers: Limited knowledge and/or reluctance to learn about today's development aid concepts and policies.
8. Women in the local community	Potential ESP employees and salespersons	Minimal	Motivations: Opportunities to get a job, increased income and improved quality of life; general empowerment of women. Barriers: Limited access to information, family reasons, low self-esteem.
9. NGOs	Possible influencers	Minimal/partial	Motivations: Possibilities to engage and influence decision-makers and communities for their cause. Barriers: Possible negative perceptions related to policies/business objectives/impact on communities and/or environment.

Key messages:

Messages and channels tailored for each BGFA target group:

Target audiences	Communications objectives	Key messages	Activities
1. Target country governments and other African governments	<p>Encourage currently targeted host country governments to support BGFA.</p> <p>Encourage other African governments to do something similar.</p>	<p>BGFA's programme approach supports your long-term development and the implementation of your NDCs/Electrification/Development Plans.</p> <p>The BGFA approach has already proven effective in Zambia and is now expanding into four other countries.</p> <p>Other target country governments Zambia benefits generally from task-force work, and the new BGFA countries will be part of similar task-force networks.</p> <p>BGFA/Sweden/Denmark/KfW/Power Africa/Nefco/REEEP and possible new contributors and/or partners are trustworthy, respectful, reliable and effective and can assist your government in reaching its goals, not set goals for you, and work with you. Additionally providing an example on how to work with other donors in relation to other programmes.</p>	<p>Use target and other country perspectives in communications: refer to National Development Plans/NDCs, use government testimonials, stress cooperation through Platforms for Market Change, invite target country officials to speak where possible at BGFA events.</p> <p>Prioritise events where potential target and other country governments are represented for outreach.</p> <p>Encourage local partners to engage with national media in target and other countries to disseminate success stories, giving credit to governments and inspiring other governments to do something similar.</p>
2. Energy Service Providers	<p>Encouragement/awareness Inspire other ESPs to join similar efforts, through demonstration.</p> <p>Encourage contracted companies to support BGFA/BGFZ (until merged with the BGFA brand) outreach/awareness.</p>	<p>BGFA offers innovative financing and other support for you to enter and develop in new markets.</p> <p>The BGFA approach has showed early promising results in Zambia, and the three Calls for Proposals have attracted great interest in spite of COVID times.</p> <p>Joining the BGFA 'family' of ESPs will provide you with enhanced financial status and credibility, including with regard to women's empowerment and to waste handling, and make you more attractive to investors.</p>	<p>Publish news/stories/social media posts about contracted companies, from the companies' perspective; include testimonials.</p> <p>Work closely with ESP communications teams to share successes in both directions.</p> <p>Attend events where off-grid energy service companies are present for BGFA outreach.</p> <p>Communicate investment-leveraged numbers.</p>
3. Policy makers and stakeholders/target country and other governments	<p>Encourage them to engage with the Platform for Market Change.</p> <p>Encourage them to build on/ use lessons learnt from BGFZ/BGFA and influence.</p>	<p>The Platform for Market Change is a useful, effective body for furthering the off-grid energy market.</p> <p>BGFA and BGFZ generate useful lessons learnt for the creation of enabling policy environments for off-grid energy markets that you can apply and influence the future development of.</p>	<p>Longer term – publicise the achievements of the Platforms for Market Change, including testimonials by government officials, and give credit to all stakeholders involved.</p> <p>Longer term – produce publications for the Platforms for Market Change: Annual Reports with achievements and opportunities; Policy Briefs with useful, actionable lessons learnt.</p>

<p>4. Donors – existing and potential new ones</p>	<p>Encourage them to support the implementation and fund further expansion of BGFA.</p>	<p>Donors, including local embassies implementation – BGFZ has shown the importance of donor support to implementation generally and on the ground. BGFA provides a cost-effective way for public funding to stimulate markets for high-impact clean energy services in low-income countries. BGFA has high impact potential both in the immediate term (connections, electricity to communities) and in the longer term (market building, general development and prosperity). BGFA is doing something new and exciting and you can be a part of it. The current BGFA Management and Implementation Partners (Nefco and REEEP) are reliable, effective and respectful, which is appreciated by donors, host country governments and companies alike. For Nefco’s part this has been acknowledged by both the EU and the Green Climate Fund (GCF) through accreditations, which means that Nefco can mobilise and blend BGFA funds with EU and GCF funds. Fund leveraging figures – how much funds ESPs have been able to raise from other sources after the initial phase.</p>	<p>Include donors and use a donor perspective in communications, including quotes, and emphasise donor acknowledgement throughout all communications. Produce high-standard audio-visual and storytelling materials to emphasise the positive impacts of BGFA on people’s lives (impact targets and achievements presented in a separate document). Stress climate and innovation aspects in all communications. Support and provide tools to the donors to reach out to media in both the target and donor countries. Stress the importance of partnerships in all communications.</p>
<p>5. Investors</p>	<p>Encourage them to consider investing in BGFA-contracted ESPs and other ESP companies. Encourage them to use BGFA market intelligence for their investment decisions.</p>	<p>The off-grid space and the results-based financing by BGFA offer new, high-impact investment opportunities. The BGFA (once contracted) companies have undergone extensive due diligence and present the best opportunities in the market. BGFA can provide reliable market analysis to make your investment decisions.</p>	<p>Mention and give credit to ESPs in all communications, stress growth (potential). Produce high-quality audio-visual and storytelling materials to emphasise the impact of ESP services on people’s lives. Work closely with ESP communications teams to share their successes. Publish examples of market analyses.</p>
<p>6. General public (locally in Africa and internationally)</p>	<p>Raise awareness of the achievements of BGFZ/BGFA (once available) and the potential of off-grid renewable energy to build prosperity. Encourage them to share news/talk about BGFZ/BGFA.</p>	<p>BGFA is applying a new results-based financing approach, accelerating energy access in remote areas with potential high impacts. Off-grid renewable energy, even in small amounts, can change lives for the better and contributes to climate change mitigation. BGFA supports local businesses.</p>	<p>Produce high-quality audio-visual and storytelling materials to emphasise the impacts of ESP services on people’s lives. Impact targets and achievements presented in a separate document. Stress climate, innovation and uniqueness aspects in communications. Engage with international media to disseminate BGFA impact.</p>

<p>7. General public – taxpayers in donor countries</p>	<p>Raise awareness of and trust in the achievements of BGFZ/BGFA (once available) and the potential of off-grid renewable energy to build prosperity.</p>	<p>BGFA is applying a new results-based financing approach, accelerating access to energy with high impacts. Off-grid renewable energy, even in small amounts, can change lives for the better and contributes to climate change mitigation.</p>	<p>Produce high-quality audio-visual and storytelling materials to emphasise the impact of ESP services on people’s lives (impact targets and achievements presented in a separate document). Stress climate, innovation and uniqueness aspects in communications.</p>
<p>8. Women in local communities</p>	<p>Raise awareness of the opportunities BGFA can offer them. Encourage them to apply for jobs at the ESPs or invest in mini-grids to improve their existing businesses.</p>	<p>Clear benefits for women – a high number of female entrepreneurs (selling connections) and female customers in the BGFZ phase indicate clear benefits also in BGFA.</p>	<p>Work with ESPs to develop high-quality audio-visual and storytelling materials to highlight opportunities and distribute through ESPs.</p>
<p>9. NGOs</p>	<p>Engage them in the concept to get them to act as influencers with a positive agenda.</p>	<p>Off-grid renewable energy, even in small amounts, can change lives for the better and contributes to climate change mitigation. BGFA supports local businesses The BGFZ/BGFA (once contracted) companies have undergone extensive due diligence and present the best opportunities in the market.</p>	<p>Shortlist and meet with relevant NGOs. Inform about new developments and impact of projects. Monitor for possible adverse impact (e.g. battery production and life cycle management, misconduct in the ESPs, etc.) related to the concept, which may be raised by NGOs.</p>

Communication mix:

BGFA channels and tools
<ul style="list-style-type: none"> • BGFA brand <ul style="list-style-type: none"> ○ With country-specific sub-brands ○ Brand manual
<ul style="list-style-type: none"> • BGFA website <ul style="list-style-type: none"> ○ BGFA branded ○ Ownership: Nefco ○ Content production and updates: REEEP unless otherwise agreed ○ Language versions – main language English, with limited content in locally used languages ○ Use of digital advertisement campaigns when considered necessary to reach target audiences and attract more relevant visitors
<ul style="list-style-type: none"> • Newsletters <ul style="list-style-type: none"> ○ BGFA branded ○ Ownership: Nefco ○ Content production: REEEP
<ul style="list-style-type: none"> • Social media channels <ul style="list-style-type: none"> ○ BGFA branded ○ Ownership: REEEP and Nefco ○ Updates: REEEP ○ Social media guidelines for BGFA team ○ Use of sponsored campaigns when considered necessary to reach target audiences and attract more relevant visitors
<ul style="list-style-type: none"> • Events <ul style="list-style-type: none"> ○ A separate events list is to be part of the yearly activity plan
<ul style="list-style-type: none"> • Basic brochure/fact sheet <ul style="list-style-type: none"> ○ BGFA branded
<ul style="list-style-type: none"> • Impact reporting – expected from 2022 <ul style="list-style-type: none"> ○ BGFA branded ○ Apart from real-time updates to be created as part of the BGFA website, a full bi-yearly impact report will be produced once the programmes have started to generate real impact
<ul style="list-style-type: none"> • Other material <ul style="list-style-type: none"> ○ Articles/blog posts/reports related to BGFA ○ Videography ○ Photography

NOTE: Reports made by third-party consultants shall not be BGFA branded but clearly indicate the author of the report(s).

Risk Management

To identify risks related to the ability to efficiently achieve the communications objectives and deliver the key messages to the intended audiences.

Assumptions/risks	Mitigation measures
1. Target country governments and policymakers are not reached directly through programme outreach	Work closely with local partners and consultants to ensure the messaging reaches the right people.
2. Local communities perceive that similar programmes support companies and business models from high-income countries, owned and run by expatriates	Distinction drawn between Direct to Scale (DS) and Launch to Scale (LS) companies, with differentiated offer to these companies. Engage communities, e.g., through key influencers and ensure communications highlight the possibilities for the local people.
3. NGOs/the general public may question topics such as the sustainability of the business and/or life cycle of the products, from raw materials all the way to waste management	Require ESPs to have strategies to maximise sustainability of product life cycles. Engage NGOs to communicate those sustainability strategies.
4. How can we guarantee that we have correct impact results and figures to communicate	Evaluation of data and figures provided from the data tool.

Monitoring and Evaluation

The performed and implemented communications activities will be assessed by among other indicators:

- Analytics on website visits
- Social media engagement
- Analytics on newsletter distributions
- Speaking slots attained at chosen events
- Media coverage of BGFA (media monitoring from Notified)

Roles and responsibilities

To create the best synergies, stronger outreach and optimised visibility, BGFA will divide roles and responsibilities as follows in order to coordinate activities and make sure that information is shared with internal stakeholders, including donors.

	Preparation lead	In collaboration with	Approved by	Share information with
Comms strategy	Nefco	REEEP	Donors	Donors
Activity plan	REEEP	Nefco	Nefco	Donors

Implementation of comms activities				
○ Donor engagement and fundraising	Nefco	REEEP	Nefco	Relevant donors
○ Call for Proposals	Nefco	REEEP	Nefco	Donors
○ BGFA website	Nefco	REEEP	Nefco	
○ BGFA newsletters	Nefco	REEEP	Nefco	
○ Events	REEEP	Nefco	Nefco	Donors
○ Other campaigns and activities	Tbd case by case	Tbd case by case	Nefco	
○ Impact reporting	REEEP/ consultants	Nefco	Nefco	Donors
○ Translate and localise	REEEP	Nefco	Nefco	
○ Monitoring	Nefco	REEEP	Nefco	
○ Status update on communications activities	Nefco	REEEP	Nefco	Donors

Annex 8: Process Action Plan (PAP)

Action/product	Deadlines
Prepare market scoping study and skills development background research.	October 2020 – March 2021
Prepare draft programme document	February
Confirm agenda item for Programme Committee	4 February
Submit draft programme document to the Programme Committee, including time for public consultation	2 March
Danida Programme Committee	25 March
Prepare programme documents including annexes	30 April
Appraisal	1-17 May
Confirm agenda item for Council for Dev. Policy	19 May
Incorporate recommendations from appraisal into programme documentation	21 - May
Management comments	1-4 June
Incorporate comments and approval	5 – 10 June
Submit programme documentation including annexes to Council for Development Policy	11. June
Council for Development Policy meeting	30 June
Approval of the programme by the minister	August
Prepare “aktstykke”	August
Meeting in the Finance Committee	September
Signing of agreement	September
First disbursement	October

Timeline for implementation of tender and application process:

	2021					2022									
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
BGFA Uganda CfP3															
SC Meeting	█														
Pre-qualification (PQ) stage		█	█	█	█										
Deadline for PQ applications				█	█										
Review of PQ applications					█										
Final Application (FA) stage						█	█	█	█	█					
Deadline for FA applications									█	█					
Review of FA applications										█	█				
Invitation to highest scoring FA applicants to proceed											█	█	█	█	
Due diligence											█	█	█	█	
Contract negotiations														█	█
Final decision on list of selected applicants														█	█
Contract signing with selected applicants														█	█
Announcement of BGFA3 outcome														█	█
Start Programme implementation (MRV, TA, Management), tentatively 4 years from May 2022 to May 2026															█

Annex 9: Summary of recommendations of the appraisal

Title of Programme/Project	Danish support to Beyond the Grid Fund for Africa – Uganda window
File number/F2 reference	2021 - 10437
Appraisal report date	28.05.21
Council for Development Policy meeting date	30.06.2021
Overall conclusion of the appraisal	
<p>The Appraisal Team (AT) found the project to be fully in line with the development cooperation priorities of the Danish Government including the long term strategy for global climate action (A green and sustainable world) as well as those of the Government of Uganda. This includes the Sustainable Development Goal 7 (SDG7) on access to energy, and the Paris Agreement on Climate Change, as well as Uganda’s strategies for rural electrification.</p> <p>The project is innovative by demonstrating new pathways to increase access to affordable and clean off-grid energy, delivered by private sector Energy Service Providers (ESPs). The project will provide output-based support to the ESPs to scale-up delivery of sustainable and affordable energy services. It is expected that the Danish contribution will leverage at least three times the Danish contribution in private sector financing and will provide access for one million people to basic electricity services.</p> <p>The AT believes that that the project can provide important learnings to Danida, e.g. on public-private partnerships and on involving the private sector in service delivery to poor target groups not only in the energy sector but possibly other sectors such as water. The AT also noted that several issues are still to be addressed in the Development Engagement Document (DED).</p> <p>The conclusion of the appraisal is that the project is recommended for approval. The Appraisal Team recommends that the following issues are added, updated or completed in the final version of the DED.</p>	
A. Recommendations for improving the DED	
Recommendations by the appraisal team	Follow up by the responsible unit

<p>The AT found that the scoping report and the project component, proposed by Denmark, focusing on the potential in the off-grid energy sector for job creation and skills development is not well elaborated in the DED, including the Danish involvement during implementation.</p> <p><i>A1: The DED should include more information on how the results of the job creation study have been integrated in the project, including in the job creation and skills development subcomponent, and on how Denmark will get involved in this area during project implementation.</i></p>	<p>The job creation and skills development pilot component received funding through the previous Danish support. It was assessed that the skills-development component did not need further funding from second round of support from Denmark. Rather, this will be integrated in the component for technical assistance and capacity building.</p> <p>Further the overall finding from the jobs scoping study has been inserted on page 6 with a link to a summary of the findings and in annex 1. How the skills development component will be designed and integrated has been explained briefly in the technical assistance component on page 14.</p>
<p>The AT found some gaps in the annexes to the DED that need to be filled, to improve the quality of the document.</p> <p><i>A2: The DED should include an update/ completion of the cover note, e.g. on the commitments and time schedule, and the following annexes: Annex 1: Context analysis; Annex 4: Detailed indicative budget; and Annex 5: The Risk Management Matrix, which seems to be not fully Uganda focused nor to be fully completed.</i></p>	<p>The cover note has been completed.</p> <p>The context analysis has been up-dated with information from the market and job creating scoping studies.</p> <p>A specific Risk Management Framework has been developed informed by the Uganda market scoping study and based on the overall BGFA Risk Management Framework.</p> <p>An overall budget including expected disbursement has been included but a detailed budget cannot be made until final ESP's has been selected. A detailed budget will be submitted to Steering Committee for approval.</p>
<p>The AT found that definitions of some key concepts should be included in the DED, to improve the understanding for the reader.</p> <p><i>A3: The DED should include definitions of key concepts, possibly in a new annex. This includes e.g. 1) energy poor, underserved, access to modern energy services, which describes the pre-project situation of access to energy for the expected beneficiaries; 2) solar home systems and stand-alone solar home systems; and 3) mini-grid and micro-grid connections.</i></p>	<p>Key technical terms have been defined and explained in annex 10.</p>

<p>The AT noted that the status of the recently developed key government strategies on off-grid electrification should be further clarified in the DED.</p> <p><i>A4: The DED text on Uganda’s key framework documents for off-grid electrification should be updated in the main text and in Annex 1.</i></p>	<p>Uganda’s key strategies, policies and regulations has been outlined in Annex 1.</p>
<p>The AT found that the linkages and cooperation modalities with key government institutions (e.g. Ministry of Energy, REA, ERA, UNBS) are important for government ownership and key to a successful program implementation, and that this should be better explained in the DED.</p> <p><i>A5: The DED should describe the approach/ mechanisms to involve and provide Technical Assistance to key Government institutions during implementation, e.g. the Ministry of Energy and Mineral Development, REA and ERA.</i></p>	<p>It has been emphasised in the project document that it is Rural Electrification Agency will be the key agency of interaction.</p> <p>It is planned to establish a kind of Platform for Market Change (public-private engagement mechanism for exploring market barriers and issues). It can also be establish a sub-group of an existing donor-coordinating arrangement but with more active participation of the private sector. It will be the Ministry of Energy and Mineral Development or one of its sub-agencies that would co-lead platform.</p> <p>Specific capacity building needs will be identified by the Platform and in dialogue with the Ministry but it is foreseen to primarily focus on funding window for micro-grids and for building an operational Quality Assurance Framework for solar energy products.</p>
<p>The AT found that sustainability should be more elaborated in the DED, e.g. as a new chapter 3.4, called ‘sustainability and exit strategy’ also highlighting institutional and environmental sustainability.</p> <p><i>A6: The issues of sustainability should be further elaborated in the DED, e.g. through references to NEFCO’s and Sida’s guidelines, and the BGFA tender documents. The AT suggests including a new chapter 3.4: ‘sustainability and exit strategy’, which could also include institutional and environmental sustainability such as management of e-waste and environmental benefits like e.g. reduced indoor pollution.</i></p>	<p>A chapter 10 has been inserted addressing the issue of environmental sustainability and outlining the plan for sustainable exist.</p>

<p>The AT found that the strategic objective in the DED should be more clearly linked to and aligned with the results clusters in the results framework and the ToC. The DED should include a Uganda specific Theory of Change and a Results Framework that include the two Danish contributions, to facilitate future monitoring and reporting on the Danish grants.</p> <p><i>A7: In the final DED include logically interlinked immediate objectives, Theory of Change (including assumptions), and Results Framework, which includes targets and indicators for the Danish contribution to BGFA Uganda.</i></p>	<p>A Uganda specific Theory of Change has been developed together with a country specific results framework.</p> <p>Both the Theory of Change and Results Framework will be subject to revision when the Energy Service Providers have been selected.</p>
<p>The DED does not include information on how interaction with key actors in the off-grid electrification area will take place. The AT noted that a platform for interaction is being discussed with REA, and that REA would welcome this. This includes possibilities for using existing fora, not to duplicate efforts.</p> <p><i>A8: The DED should include information on plans to establish a multi-stakeholder forum for regular exchange of experience and discussions with stakeholders throughout implementation.</i></p>	<p>It emphasised in the project document that BGFA will establish or support a form of Off-Grid Energy Taskforce/platform or a similar existing arrangement which will be convened by relevant donors, government agencies and private sector groupings with the aim to coordinate and improve markets for off-grid energy provision in Uganda.</p> <p>If relevant, BGFA will build on existing donor-coordinating structures but it is expected that there will be a need to engage more private sector stakeholder.</p>
<p>B. Recommendations on issues that are important for Denmark to follow in the Steering Committee. They could be reflected in DED Chapter 7.2 on the Steering Committee, or in a separate annex.</p>	
<p>Recommendations by the appraisal team</p>	<p>Follow up by the responsible unit</p>

<p>The AT believes that that the project can provide important learnings to Danida, e.g. on public-private partnerships and on involving the private sector in service delivery and that there are good possibilities for synergies with Danish support to the agricultural sector and with the Uganda activities of Danish supported multilateral programs.</p> <p><i>B1: In the Steering Committee, Denmark should pay close attention to the learning outcomes and possible synergies with Danish supported programs throughout the implementation period.</i></p>	<p>Synergy to Danish bilateral programmes and the agricultural sector will particular focus on the funding window targeted micro-grids which is the only one providing energy services that can be applied for productive uses.</p> <p>A chapter 2.5 has been included in the project document that outlines Danish priorities for the forthcoming work in the BGFA Steering Committee, incl. this specific recommendation</p>
<p>The AT finds that to maintain the relevance and sustainability it will be important that each BGFA supported project in Uganda is prepared in a transparent and participatory way involving consumer perspectives.</p> <p><i>B2: In the Steering Committee, Denmark should follow how the ESPs are performing on consumer rights, transparency, and participation by the local population/ end-users during planning and implementation of new PV projects.</i></p>	<p>The market scoping study has provided initial information. An external consultant is currently contracted to match end-users needs with energy services and product such as price, product quality, reliability, additional products and after-installment services.</p> <p>Many ESP's also conduct their own regular site surveys to effectively size the technical systems according to customer needs. The BGFA will also conduct external socio-economic impact assessments to measure customer satisfaction and livelihood impacts. Further, a mid-term review and final evaluation is planned which also will explore local consumer participation.</p> <p>A chapter 2.5 has been included in the project document that outlines Danish priorities for the forthcoming work in the BGFA Steering Committee, incl. this specific recommendation.</p>

<p>Productive uses of energy can add significantly to the local benefits from off-grid electrification, e.g. in the form of additional jobs and incomes. Attention to productive uses of energy could provide important learning for Demark and help creating linkages to the Danish support to the rural and agriculture sector in Uganda, e.g. on supply of water for irrigation, the cold chain and post-harvest processing.</p> <p><i>B3: In the Steering Committee, Denmark should follow how productive uses of energy are addressed, e.g. by monitoring if and how the ESPs (delivering Solar Home Systems and Mini-grids) facilitate access to efficient and productive equipment for their customers.</i></p>	<p>Building synergies to productive uses of energy is particular relevant for the Micro-grid funding window but it could also be for stand-alone systems linked to cold chains and irrigation.</p> <p>A chapter 2.5 has been included in the project document that outlines Danish priorities for the forthcoming work in the BGFA Steering Committee, incl. this specific recommendation.</p>
<p>The DED confirms that a broader impact assessment to identify the social, environmental, and economic effects will be done every second year. The AT found that beyond the immediate results, this should capture the indirect, secondary, and potential consequences of the intervention, e.g. the potential effects on people’s well-being, human rights, job creation, gender equality, and the environment.</p> <p><i>B4: In the Steering Committee, Denmark should work to ensure that the planned socio-economic impact assessments are comprehensive and cover e.g. direct and indirect job creation, the benefits of electrification for households, institutions, and businesses (including agriculture), and productive end-uses of electricity.</i></p>	<p>Denmark will work towards broader impacts and changes on livelihoods and rights should be included in the socio-economic surveys. However, in-depth impact studies are complex and synergies to other impacts surveys on energy access is also relevant, e.g. 60 Decibel’s impact report “Why off-grid energy matters” that was launched last year based on 35.000 customer interviews. Studies across the five BGFA countries would be relevant or as joined studies with other donor agencies.</p> <p>A chapter 2.5 has been included in the project document that outlines Danish priorities for the forthcoming work in the BGFA Steering Committee, incl. this specific recommendation.</p>

<p>The AT believes that success of the BGFA Uganda project and its long-term sustainability depend on local ownership and participation, and that the anticipated multi-stakeholder forum is important in this respect.</p> <p><i>B5: In the Steering Committee, Denmark should follow how the anticipated multi-stakeholder forum works with regular exchange of experience and discussions with stakeholders.</i></p>	<p>In the last BGFA Steering Committee meeting, it was confirmed that BGFA will promote a Platform for Market Change or a similar arrangement (if possible building on existing structures). As described in the project document, the purpose of such a platform is to strengthen multistakeholder coordination but also to improve beneficial markets conditions for end-user and ESP's on topic such as taxation, social tariffs, certified standards of solar products, recycling systems for e-waste and improved opportunities for female employment.</p> <p>A chapter 2.5 has been included in the project document that outlines Danish priorities for the forthcoming work in the BGFA Steering Committee, incl. this specific recommendation</p>
<p>The DED indicates that a sustainable exit strategy for BGFA in Uganda will be developed during programme implementation. The AT believes that a sustainable exit strategy should be broad and address commercial and institutional issues, including the capacity to continue market research, technical assistance, and capacity development.</p> <p>The AT suggests that the independent mid-term review could include issues relevant to the sustainability and exit strategy</p> <p><i>B6: In the Steering Committee, Denmark should work to ensure that a comprehensive sustainability and exit strategy is being developed after 2 years, e.g. in the beginning of 2023 and possibly as part of the scope of the Mid-term Review, addressing commercial, institutional and capacity issues.</i></p>	<p>The sustainability of BGFA Uganda window will be important to achieve the expected long-term impact of accelerated access to universal access to energy.</p> <p>The regular stakeholder analysis will provided inputs on the sustainability of the improved market access for off-grid solar energy on an ongoing basis. BGFA is also considering establishing a Customer Relationship Management System that can collect this data in a systemic manner. Further, private co-financing and progress on instalments of end-user services will be good indicators for the sustainability of the off-grid energy market.</p> <p>A new Chapter 10 has been included in the project document outlining environmental sustainability and consideration for the exist-strategy.</p>

I hereby confirm that the above-mentioned issues have been addressed properly as part of the appraisal and that the appraisal team has provided the recommendations stated above.

Signed in..... on the

Appraisal Team leader/ELK representative

I hereby confirm that the responsible unit has undertaken the follow-up activities stated above. In cases where recommendations have not been accepted, reasons for this are given either in the table or in the notes enclosed.

Signed in.....on the.....

Head of Unit/Embassy

Annex 10: Key technical terms and definitions

This annex briefly explains some key technical terms regarding different off-grid energy solutions and equipment and also includes a simple overview of different levels on quality of energy access (the energy multitier framework).

Pico Solar Systems

These systems use small compact and light weight solar photovoltaic panels to generate just a few watts of power in a wide range of small and portable applications. Typically, pico-solar cells have power outputs ranging from as little as 0.1 watts-peak (Wp) to 5 watts-peak for powering smartphones, portable devices or recharging batteries. These systems are often integrated with rechargeable dry-cell battery or batteries of less than 12 volts to store the solar power for use when needed. Finally, they often integrate some form of charge control and battery management circuitry to protect the battery or batteries from overcharging or deep discharging.¹⁴

Solar Home Systems

Solar home systems (SHS) are stand-alone photovoltaic systems that offer a cost-effective mode of supplying amenity power for lighting and appliances to remote off-grid households. In rural areas, that are not connected to the grid, SHS can be used to meet a household's energy demand fulfilling basic electric needs. SHS provide power for low power DC appliances such as lights, radios and small TVs for about three to ten hours a day.

Most solar home systems on the market have a watt peak of between 8 and 50 W, and battery sizes that range from 14 kWh to 200 kWh. The most popular and wide-spread systems tend to cluster near the bottom of this range, with a 10W peak of generation power and a battery of around 20kWh.

A SHS typically includes one or more PV modules consisting of solar cells, a charge controller which distributes power and protects the batteries and appliances from damage and at least one battery to store energy for use when the sun is not shining. Most SHS link their battery to external attachments (like lights, fans or televisions) through wiring, though some SHS on the market are 'integrated' solutions in which features like radios, lights or even television screens are built into the same casing as the battery.¹⁵

Stand-Alone Systems and Nano-Grids

A free standing or *Stand Alone PV System* is made up of a number of individual photovoltaic modules (or panels) with power outputs of between 50 and 100+ watts each. A simple *stand alone PV system* is an automatic solar system that produces electrical power to charge banks of batteries during the day for use at night when the sun's energy is unavailable, though some stand-alone systems have minimal battery capacity instead relying on direct energy flow from the sun to power their linked appliances.

Stand alone PV systems are ideal for remote rural areas and applications where other power sources are either impractical or are unavailable to provide power for lighting, appliances and other uses. In these cases, it is more cost effective to install a single stand alone PV system than pay the costs of having the local electricity company extend their power lines and cables directly to the home.¹⁶ The sizes of these systems can vary widely: stand-alone systems can have watt-peaks as low as 50W (to power a small battery bank

¹⁴ <https://www.alternative-energy-tutorials.com/solar-power/pico-solar-systems.html>

¹⁵ [https://energypedia.info/wiki/Solar_Home_Systems_\(SHS\)](https://energypedia.info/wiki/Solar_Home_Systems_(SHS))

¹⁶ <https://www.alternative-energy-tutorials.com/solar-power/stand-alone-pv-system.html>

linked to a fridge in a local shop, for instance), or as high as 2000W+ (to power a Shell gas station, for instance).

As stand-alone systems become larger, the line between these systems and grids blurs. The **nano-grid** (NG) is a relatively new concept and applies to a grid serving a single customer or building. The NG generally has a single generation unit and does not use transmission or distribution lines, and may make use of DC reticulation.¹⁷ Thus while the line between the grids and stand-alone systems can become blurred when stand-alone systems start to link several buildings¹⁸ (like powering the office of a coffee drying plant alongside the machinery), generally mini-grids are built for the purpose of providing an on-grid experience to households in a geographic region.

Mini-Grids and Micro-Grids

Generally speaking, a *mini-grid* refers to a low voltage network involving one or more small-scale electricity generation units such as photovoltaic (PV), storage devices (usually batteries), and the distribution of electricity to a limited number of customers via a distribution grid, that can operate in isolation from national electricity transmission networks, and supply groups of consumers with electricity at grid quality level. The consumer group may be a rural settlement, a residential estate, commercial or industrial park, university campus, medical centre or any other consumers grouped together for a common purpose.

The generating capacity of the mini-grid varies with definitions but a range of between 50 kW and 1 MW seems to be reasonable. Some definitions go as high as 10 MW. The main distinguishing characteristic is that the grid derives power from its own power sources and serves a concentrated number of consumers. The mini-grid uses distribution lines.

Micro-grids are similar to mini-grids but operate at a smaller size and generation capacity (there is no generally accepted range of generation capacity for Micro-grids, in BGFA we refer to a range from around 10 up to around 150 kW). Micro-grids serve a concentration of consumers, and also use distribution lines. In addition to rural, urban and industrial sector, micro-grids are appearing on campuses, such as universities, hospitals, military establishments and business parks. As with mini-

¹⁷ ee.co.za/article/development-renewable-energy-based-mini-micro-nano-grids.html

¹⁸ At the end of the day, a lot depends how a developer wants to pitch their project. An entire school (dormitories, kitchen, classrooms, etc) with solar panels on the roofs and batteries for storage could be described as a large stand-alone system or a nano-grid, depending on what will get the project creators more funding.

Definition of the Energy Multitier framework on access to energy

	POWER CAPACITY	AVAILABILITY	SERVICES	EXAMPLE OF APPLIANCES CONNECTED	TIER
Work 800 W	800 W <	Min 16 h & 23h electricity/day		4 lights, phone, radio, TV, sewing machine	TIER 4 & 5
	200 W - 800 W	Min. 8 hours of electricity/day	Tier 2 + any medium power appliances	4 lights, phone, radio, TV	TIER 3
Media 50 W	50 W - 200 W	Min. 4 hours of electricity/day	General lighting + phone charging + Television + Fan (if needed)	4 lights, phone, radio	TIER 2
Home 10 W	3 W - 50 W	Min. 4 hours of electricity/day	Task lighting + phone charging	2 lights, phone	TIER 1
Light 3 W	0				TIER 0

Source: IRENA (2020) 'Pays-as-you-go-models' (based on ESMAP's multi-tier framework)

Annex 11: ToR for BGFA Steering Committee

Up-dated version, approved 25 May, 2021

Background

In relation to the Beyond the Grid Fund for Africa (the “**BGFA Programme**” or the “**BGFA**” as the case may be) and the BGFA Framework Facility Management Agreement between Sweden and Nordic Environment Finance Corporation (“**Nefco**”) dated 22 February 2019 (the “**Agreement**”) Sweden and Nefco established the BGFA Steering Committee. Terms defined in the Agreement shall have the same meaning where used herein, if not stated otherwise.

On 12 November 2020 Denmark and Nefco signed an agreement whereby Denmark joined the BGFA Programme for activities in Uganda.

With effect from 16 March 2021, Germany’s contribution to the BGFA Programme for activities in Zambia was formalized.

Purpose

The BGFA Steering Committee constitutes a forum, where the Facility Manager can present to Sweden (meaning Sida, Stockholm and Embassies in concerned countries), Denmark (represented by the Ministry of Foreign Affairs of Denmark (Danida)) as regards activities in Uganda and Germany (represented by KfW Frankfurt am Main (KfW)) as regards activities in Zambia (together the “**Donors**”) semi-annual reports on work done (for information to the Donors) and draft semi-annual work plans and budgets on work to be done (for information and approval by the Donors) as well as seek no-objection to the Facility Manager’s contracting of procured ESPs, and for the Donors to provide general guidance and advice on how to best proceed to achieve the BGFA Programme objectives.

The BGFA Steering Committee will not have any formal decision-making powers, but will provide recommendations and serve as a forum for the Donors to discuss and coordinate (including for Sweden’s part with the concerned Embassies) before formally deciding upon the Facility Manager’s recommendations on behalf of the Donors.

Composition and Chairperson

The BGFA Steering Committee shall have of the following composition:

One or more representatives from Sida, Stockholm and one or more representatives from each of the Embassies representing the participating countries (to the extent they wish to take part), coordinated by the focal point person from Sida, Stockholm.

One or more representatives from Danida and KfW.

One or more representatives from the Facility Manager shall take part and will submit material to form basis for the members’ discussions.

In its capacity as the BGFA Programme Implementation Manager one or more representatives from REEEP will take part and present matters of relevance regarding BGFA implementation and related strategy to

inform the BGFA Steering Committee.

A representative from Sida, Stockholm will function initially as the Chairperson of each meeting with support from the Facility Manager. The Chair of the BGFA Steering Committee may alternate between Donors as decided by the Donors.

Meetings, Distribution of Material and Records

The BGFA Steering Committee will meet twice a year, once in Europe (Stockholm, Helsinki, Copenhagen, Frankfurt or Vienna) and once in one of the targeted BGFA countries, and then combined with field visits. Meetings may also be held virtually through videoconferencing facilities. The semi-annual meetings will tentatively be held in June and December.

Meeting dates will be agreed by Nefco and the Donors and meetings will be convened by the Chairperson.

The BGFA Steering Committee may also be convened on an ad hoc basis upon the request of any of Nefco or the Donors and be convened by the Chairperson.

At the discretion of the Chairperson, observers may be invited to participate in regular and ad hoc BGFA Steering Committee meetings.

Meeting documents, including an agenda and other material supporting discussions to be held and recommendations to be made, will be circulated to the BGFA Steering Committee by the Facility Manager fourteen (14) business days ahead of each meeting.

The Facility Manager will keep the minutes of the meetings. As a rule, minutes recording formal approval/no-objections made by the Donors at the meeting will be prepared at the end of each meeting for the Donors' immediate signing. Draft minutes recording main parts of general discussions and recommendations by the BGFA Steering Committee will be circulated to the BGFA Steering Committee by the Facility Manager not later than twenty one (21) business days after each meeting inviting the BGFA Steering Committee members represented at the meeting in question to provide possible comments within seven (7) business days. Final minutes will be circulated by the Facility Manager not later than seven (7) business days thereafter.

Written Procedure

Exceptionally the opinion of the Donors and Embassy representatives of the BGFA Steering Committee may be sought by means of a written procedure at the initiative of the Facility Manager.

Any request or recommendation submitted by the Facility Manager for approval by the Donors by means of a written procedure will be accompanied by supporting documentation.

Sweden's response will be coordinated with the concerned Embassies by the focal point person at Sida, Stockholm, who will do his/her best to respond to the Facility Manager's request/recommendation within twenty one (21) business days.

If the Donors so wish, they may before expiry of the twenty one (21) business day period request that an ad-hoc meeting of the BGFA Steering Committee is called to discuss and decide on the Facility Manager's request/recommendation.

The Facility Manager will inform the BGFA Steering Committee on the outcome of the written procedure,

either in writing, or orally at the next meeting of the BGFA Steering Committee.

Responsibilities

At the BGFA Steering Committee meeting, the Facility Manger will present semi-annual reports on work done (for information), draft work plans and budgets for upcoming half-year periods (for approval by the Donors) and outlooks for the next half year as well as seek the Donors' no-objection for the Facility Manager's contracting of procured ESPs.

The BGFA Steering Committee shall further serve as a forum for the Donors to discuss, seek input and coordinate with Embassies from concerned countries, the Facility Manager and the Program Implementation Manager (REEEP) related to the following matters:

General guidance and advice on overall strategic directions, issues and priorities of the BGFA Programme, including fundraising issues;

General guidance and advice on how to proceed with planned and on-going activities to best achieve the BGFA Programme objectives;

Advice on long-term strategic objectives of the BGFA Programme;

Input to the market scoping and preparation of implementation plans;

Guidance on the determination of overall eligibility criteria for the ESP procurement rounds and new activities;

Guidance on the procurement plan (before the ESP procurement is launched);

Input to possible expansions and replenishments; and

Input to possible amendments of these Terms of Reference for the BGFA Steering Committee.

Amendment

The Terms of Reference for the BGFA Steering Committee can be amended by separate mutual agreement between the Donors and NEFCO.

Cost of Third Party Services

The Donors agree to split costs of third party services *pro rata* based on the amount of their respective contributions to the BGFA Programme activities as relevant for each country of operation.

Annex 12: Lessons learned

The past few years, renewable energy has become cheaper than conventional fossil fuel energy sources and innovative business models such as Pay-As-You-Go (PAYG) solutions have been transformative. This is now allowing to accelerate deployment of off-grid solar home systems and mini-grid at scale.

Denmark has been engaged in the access to energy agenda for many years. Access to electricity has been targeted through different channels such as multilateral trust funds (e.g. Sustainable Energy for All) but also through bilateral programmes, government-to government technical assistance programmes and more private sector oriented investments. Danish development assistance has also supported mobilisation of private capital to de-risk private investment in high-risk markets or with limited market potential. The support for BGFA is a similar case, where the financial incentives provided by Denmark will leverage a ratio 1:3 in private capital while still protecting a sustainable market-driven approach to expand off-grid energy in Uganda¹⁹.

BGFA builds on the experience and success of the PAYG business model. It is a relatively new but proven business model enabling primarily rural, low-income populations to access modern clean energy solutions. In less than five years, PAYG companies have improved livelihoods of approximately eight million people—primarily in Sub-Saharan Africa—by bringing clean energy and financing to customers without access to electricity. PAYG companies provide clean energy services but is also combining its services with retailers and financial institutions that provide leasing that makes access affordable for low-income customers. Many of these companies operate a "lease to own" model. Denmark has through support to ESMAP and Lighting Africa supported the development of the business model.

The BGFA is the scale-up of the pilot programme Beyond the Grid Fund for Zambia (BGFZ), which commenced in 2016 with a core EUR 20 million financing from Sweden. The early positive experiences in terms of connecting new customers, mobilised private capital and strong social and gender outcomes to date have been encouraging. BGFZ has within a few years connected almost 884.000 people with basic electricity, connected 2.000 businesses and created 1.375 jobs while mitigating 375.000 kg CO₂ emission annually. The average financial incentive in Zambia has been below DKK 300 per connection and covers approximately 25% of capital investment costs for companies to establish themselves at scale, operate commercially sustainable businesses and target poorer districts and populations in Zambia.

The lessons learned from Zambia can in several ways be compared to conditions in Uganda as both countries are considered semi-mature off-grid markets in terms of installed off-grid energy base, active investors/operators and level of consumer interest²⁰. Hence, the BGFZ demonstrates that results-based and social-impact procurement model can accelerate access to electricity to marginalized regions while still mobilising private investments and a sustainable private sector approach. BGFZ demonstrates that when financial incentives are made available, it is possible to provide electricity to even hard-to-reach-rural-areas. The BGFA is now scaling the approach from Zambia to Burkina Faso, Liberia, Mozambique and Uganda but is also building on the broader experiences from the renewable off-grid energy sector in Africa, which is currently booming with innovation to scale the off-grid energy sector.

¹⁹ The leveraging ratio is based on BGFZ experience. USD 11 million committed in grant by Sweden and mobilized USD 41 m in additional funding (a ratio is 1: 3.7). Since the PAYG has matured as a business model and prices on SHS has dropped since, this is considered a conservative estimate.

²⁰ This will be investigated further in the market scoping study but an indicator is that 400 000 SHS were sold in 2019

Annex 13: Governing framework

Term of Reference for the BGFA Steering Committee (version 26 May 2021)

Background

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One or more representatives from Danida and KfW.

One or more representatives from the Facility Manager shall take part and will submit material to form basis for the members' discussions.

In its capacity as the BGFA Programme Implementation Manager one or more representatives from REEEP will take part and present matters of relevance regarding BGFA implementation and related strategy to inform the BGFA Steering Committee.

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- Input to possible amendments of these Terms of Reference for the BGFA Steering Committee.

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