


















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 2 million people with basic off-grid solar power. - Leveraging at least three times the Danish contribution in private sector financing. - At least 300 decent jobs created in the off-grid solar energy sector, incl. targeting youth and gender equality. - At least six Energy Service Providers(ESP) supported to sustainably extending their 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 as 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, as Sweden is co-partner. <p>Major risks and challenges:</p> <ul style="list-style-type: none"> - Lack of Energy Service Providers with adequate financing and implementing capacity. - The economic impacts of Covid19 could impose a risk of consumers’ ability to pay for energy connections. - Regulatory framework to accelerate off-grid energy is still in process of being adopted but solid draft. - 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
	Projected		20	30	20	20		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 and distribution.

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. This results-based model has demonstrated ability to provide speed and scale to close the energy gap for energy poor populations and provide universal access to electricity.

Summary:

The Beyond the Grid Fund for Africa (BGFA) aims to incentivise the private off-grid energy enterprises to provide 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 provide 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 – providing access to energy services (solar home systems)	DKK 57,3 million
Outcome 3 - providing access to energy (mini-grid)	DKK 13,5 million
Outcome 3 – Skills development	DKK 2,0 million
Outcome 4. Fund management and contingencies	DKK 7,2 million
Total	DKK 80,0 million

Ministry of Foreign Affairs of Denmark

DRAFT PROGRAMME DOCUMENT

Danish Support to the Beyond the Grid Fund for Africa (BGFA)

Intensifying speed and scale of off-grid renewable energy in Uganda

March 2, 2021

F2: 2021 - 10437

Draft project document for the Programme Committee Meeting on March 25, 2021

Strategic Questions for the Programme Committee

This document constitutes a first draft version of the project document concerning the proposed Danish support to Beyond the Grid Fund for Africa (Uganda Window). This is the second Danish contributions to BGFA and complements the first grant provided last year in 2020 financed by the extra funding for climate.

Guidance is sought from the Programme Committee on the following issues for the further development and formulation of the project document:

1. The draft project document proposes two different tenders for Solar Home Systems. The first focusing on scaling speed and affordability of Solar Home Systems in Uganda. The second to enhance participation of local companies and targeting specific regions.

Question: How does the Programme Committee assess this approach, the balance between the two, and views opportunities or risk for the two different component that should be considered by the implementing agencies of BGFA?

2. The proposed project is also expected to deliver some funding to implementation of micro- and mini-grids (component 3). However, access per connection is 4-5 times more expensive but will provide higher tier quality that could be combined with productive use of energy.

Question: Should we try to connect tenders with more productive use of energy to improve the business base for mini-grids? This will also make tenders more complicated and slow implementation.

3. The BGFA tender requirements will be critical, as majority of the programme will be implemented by selected Energy Service Provides. BGFA has established solid safeguards in the tender and number additional requirements such as gender action plans and e-water management plans. However, the use of economic incentives could also include other specific requirements to target other co-benefits or outcomes in Uganda?

Question: Does the Programme Committee consider that some specific topics or risks should be addressed in the public tender documents/call for proposals?

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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 draft 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 initiative 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 a number of established energy service connections. The Danish contribution will be targeted the Uganda window only.

The BGFA window in Uganda expects to contribute to up to connecting up to two million people with basic electricity services for lighting, charging phones and running small appliances such as fans, radio, etc. It expects to train at least 500 women and men in off-grid solar sector and leverage at least three times the Danish financial support in private financing. Further, the project will also use economic incentives to promote remote and underserved communities and pilot some of the first mini-grid connections under the new Rural Energy Act in Uganda.

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 catalyse and accelerate provision of affordable energy access at scale, to poor and marginalized regions. BGFA particularly supports the objective of Sustainable Development Goal 7 (SDG7), which aims to ensure access to affordable, reliable, sustainable, modern energy for all by 2030, the Paris Agreement on climate change and Uganda's country priorities.

Progress towards addressing the energy access objective has been jeopardised by the Covid-19 pandemic. The IEA estimates that the Covid-19 pandemic will reverse those lacking access to energy in Africa by 13 million people | 2020, or 2%, from the year before. The nascent off-grid solar energy sector is also affected as their clients face limitations to pay for its services during the crisis and less funding is available. In this context, the BGFA will provide much needed financial incentives to continue the off-grid energy expansion and particularly connecting the poorest regions and populations of Uganda with off-grid renewable energy making sure no one are left behind, as well as promote a green recovery by consolidating the off-grid solar market in Uganda¹. Hence, the engagement is also an element in green recovery and a concrete outcome of the Nordic "Build Back Better and Greener" cooperation.

The purpose and focus of the project is explicitly entitled in the 2021 Finance Act. The new Danish contribution to BGFA complements the Danish support provided last year, which was financed by the extra climate financing agreed as part of the 2020 finance bill. The BGFA Uganda window is financed by 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 programme where Denmark aims to contributing to connect one million people to benefit from accessing basic electricity access. This target is both ambitious and realistic, and would in an international context demonstrate new pathways to deliver speed and scale to deliver on the SDG7 target on universal access to electricity.

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 grid compared to only 4% of rural population. Expansion of the national utility grid to reach a majority of the population is in the near term neither economically nor technically feasible.

Even in peri-urban areas, the expansion of the grid and last mile connections is slow and costly. However, Uganda is one of the countries that has demonstrated progress since 2010 and expansion of access to electricity has managed to keep pace with population growth². Off-grid energy solutions are often the quickest path for the most vulnerable and remote communities to obtain increased access to modern energy services. There is already a nascent and active market for off-grid renewable energy products in Uganda, including standalone solar home-systems and small micro-utility grids. If used to its full potential this could revolutionise the energy sector just as mobile phones revolutionised the telecommunications sector and turned the purchase of a phone into an affordable commodity even in remote and poor geographic areas.

A market scoping study carried out by BGFA in Uganda demonstrates a high demand for off-grid energy services. Uganda's off-grid and rural electrification strategies emphasize the importance of private sector investments for deploying renewable energy. It also identifies a fairly mature and active market for Solar Home Systems (SHS) which include a solar energy association with over 190 member. However, there are still 5 million off-grid households without basic entry level access to electricity. The rapid growth is partly made possible by the growth and access to e-money services. However, market penetration in remote areas are still low. Particular local companies face limited availability of finance which is a barrier for speed and scale. A new standard for SHS will improve minimum standards as poor quality has been challenge in the past years. The Rural Electrification Agency (REA) of Uganda is developing an off-grid electrification master plan that identifies almost 700 mini-grid sites. The tariff scheme and REA as a regulator is well-received by private mini-grid developers. Average mini-grid size is small 10-100 kW.

In conclusion, the initial findings from the market scoping study finds that Uganda is a semi-mature and dynamic market for private sector off-grid solar power investments. However, many regions still have no or very limited presence of off-grid Energy Service Providers. Further, there are opportunities to build local up supply chain services to extend services to these regions to create local content and jobs. By this, the BGFA estimates that it is realistic accelerate access to basic energy in one of the countries with highest percentage of the population without access to electricity.

2.2. Strategic considerations and justification for support

The proposed Danish support to the BGFA will deliver affordable renewable energy targeted poor population outside the energy-grid and by this accelerate scale to achieve the SDG7 by 2030. By providing economic incentives through a results-based mechanism, BGFA is estimated to contribute to connecting up to half a million people in Uganda to mainly off-grid solar energy.

² Source: Tracking SDG7 – The energy progress report 2020

An accelerated rollout of off-grid solar energy will be critical to achieve the goal of universal and affordable access to energy. Off-grid solutions have proven to be a leapfrogging technology to expand energy access to millions of people. The off-grid solar industry is already a proven technology and a billion dollar industry that has reached 420 million users around the world in the past decade. Furthermore, prices have dropped 15% alone the last two years and have allowed the industry to operate on commercial terms many places.

Yet, affordability is still an issue in order to reach the 550 million people in Sub-Saharan Africa who lack access to electricity today. The BGFA will provide economic incentives to Energy Service Providers (ESP) to reach the poorest, extend energy services to unserved regions and close the affordability gap. In Uganda, there is also possibilities of connecting regions hosting refugees.

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, reduce food losses by providing access to cooling storage, ensure energy access to health clinics, extend the time for studies and homework, increase access to water and create new decent jobs. Further, possibilities of building stronger synergies with clean cooking is currently being explored and possibilities to strengthen gender equality. BGFA also apply a rights-based approach by using a "social impact procurement" approach, which clearly targets the poorest and most marginalized people without access to energy today.

The support for BGFA is also well-aligned with the Danish Government's new long-term global climate strategy. It emphasises that Denmark should continue its leadership on SDG7 to raise the global ambition, including closing the access to energy gap. Further, the project will also be a flagship project to deliver on the target of Danish Government's goal to provide access to clean energy for 5.8 million people in Sub-Saharan Africa, which was announced last year. In addition, the Danish development assistance will also increase focus on job creation and developing a skilled workforce as delivery for just green transition.

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..

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 engagements in Uganda. 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 in Uganda.

2.3. Lessons learned and synergies to other Danish engagements

BGFA builds on the experience and lessons-learned from the successful the pilot programme Beyond the Grid for Zambia, which commenced in 2016 with EUR 20 million financing from Sweden. The positive experiences of providing electricity to more than 800.000 in less than five years was the basis for scaling-up the programme to a multi-donor programme (for further details see Annex 12). Further, BFFA builds on proven

models such as results-based financing and the experiences of the fast growing off-grid solar industry in Africa. Initial experiences from the first grant has demonstrated ability to deliver progress on the two scoping studies on time and experiences from the first tender process in other countries allows to fast track some of the processes in Uganda. Compared to other multilateral funds on energy, BGFA has identified a niche as small and agile fund that can provide speed and scale on off-grid energy in Africa.

The BGFA is also good opportunity for the Danish development cooperation to be engage in a hands-on operational multi-donor programme targeted to deliver scale on off-grid energy in a specific country. The experiences, insights and lessons learned can feed into the Danish leadership on SDG7 and support to multilateral and bilateral support, in line with Doing Development Differently principles. On the one hand, the Danish contribution the BGFA window in Uganda is unique opportunity to design and implement a country-specific project scaling access to off-grid energy. On the other hand, it also allows Denmark to connect BGFA closer to other multilateral organisations that are also supported by Denmark and to feed-in the specific experiences from the BGFA window. Particularly, the country experiences on gender, e-waste, and skills development could provide innovative experiences that can be scaled up by other multilateral organisations such as ESMAP, SEforALL and IRENA.

Uganda is a bilateral priority country for Danish development assistance and several opportunities exist to build synergy to existing bilateral engagements. For example, synergy can be made to Danish engagement to farmers and savings groups of Northern Uganda Resilience Initiative (NURI and the Agricultural Business Initiative (aBi). Particular, the component focusing on mini-grids and productive use of energy could be relevant and with opportunities for creating a more direct collaboration. 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.

Denmark will early into project implementation seek to build alliances between BGFA and multilateral agencies such as ESMAP and SEforALL but also more investor-related funds such as SEFA and the Nordic Development Fund. So far, 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. As a first engagement with multilateral agencies could be MFA of Denmark and NEFCO organising an external webinar with ESMAP, Google or SEforALL (see annex 8)

3. BGFA business model and eligible energy service providers

An increasing number of companies in Sub-Saharan Africa already offer solutions that employ innovative consumer payment schemes, often via mobile money, to ensure that the daily cost of clean energy is lower than that of candles and other traditional energy sources. However, despite increasing demand and lower prices on solar home systems, the off-grid solar market is still nascent and the off-grid energy services not affordable to populations in the poorest regions.

BGFA aims to help private businesses overcome these challenges with the goal of contributing to inclusive and sustainable development in five African countries by providing energy access to underserved areas and new forms of jobs creation. Denmark will support this work with a targeted focus on BGFA's Uganda window.

3.1. Overall business approach

The BGFA aims to stimulate a new sustainable business model, which incentivises and accelerates the private sector to offer affordable and clean off-grid energy access at scale in Africa. The core function of BGFA is to provide financial incentives for selected private companies to provide high quality energy services and products, under sustainable and inclusive market conditions, for rural and peri-urban people in participating countries. It will do so by leveraging public financial incentives to bring private finance to bear on business ventures, supporting them to reach scale and sustainability.

BGFA will apply its four-phased approach to roll out its operation in Uganda as outlined in Figure 1. Financial incentives paid to the Energy Service Providers (ESP) are not expected to exceed 25% of capital investment costs for companies to establish themselves at scale and operate commercially sustainable businesses.

Figure 1: BGFA phases of operations



3.2. Phases of implementation and overall timeline

The period of implementation of BGFA Uganda window is 5 years, which will follow the four overall stages of the BGFA applied in the other countries³.

The first scoping phase in Uganda is almost completed with funding from the initial Danish and Swedish funding. It includes a market scoping study and a scoping study on jobs and skills development. The two scoping studies will be used to inform the country specific design of the incentive/procurement approach and technical assistance activities, theory of change, results framework, stakeholder engagement, knowledge management, market information and analytics, as well as mitigate observed risks and barriers in the market. The final project design is expected to be completed in May 2021 where after the first tenders will be prepared. Due to the importance of the scoping phase both the Danish MFA and the Danish Embassy in Kampala has followed the recommendations of the scoping phase closely.

The second stage is the detailed design and launch of the results-based public tender and incentive scheme. The procurement is managed by NEFCO through a Call for Proposals. A tailored tender process will be

³ 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.

developed for Uganda to “procure” energy services, which, under existing circumstances, would not be affordable to end users or profitable for Energy Service Providers as a purely commercial activity. It will also include exploring service providers for the skills development component.

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 check whether interested off-grid energy companies meet basic BGFA eligibility criteria and minimum technical and financial capacity requirements. Only applicants passing the Pre-Qualification stage will be invited to take part 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. The tender process is expected to be launched in Q2, 2021.

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. Applicants meeting these minimum requirements will be included on a long-list and invited to submit final applications. The final application stage will focus on the quality of the business plan and the requested price per weighted energy service calculation, resulting in an overall value for money. The scoring will incorporate a reverse auction approach in which projects are ranked and awarded based on overall value for money to BGFA.

The *fourth stage* will be the actual project implementation by the contracted ESPs, which will be subject to monitoring and evaluation by NEFCO with support from REEEP. Disbursement will be made against achieved milestones. This will also include the provision of important technical assistance to institutional capacity building, as well as support to required technical skills development.

The overall budget for capital investment into market development, mainly in form of financial incentives for selected Energy Service Providers (ESPs), is not expected to exceed 25% of capital investment costs for companies to establish themselves at scale and operate commercially sustainable businesses.

Monitoring of progress will be made on the respective agreed business plan roll-out. Quarterly progress reports will be prepared monitoring the 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 allows continuous learning and adaptation throughout project implementation.

3.3. Eligible Energy Service Providers and sustainable exist

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-profit 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.

During programme implementation, a sustainable exit strategy for BGFA in Uganda will be developed. First and foremost, the target is to build sustainable off-grid ESP's that will continue operations and establish adequate skills to ensure local maintenance services. Further, a concrete plan and timing for the transfer of programmatic ownership for Platform for Market Change will be handed over to local government institutions and other involved stakeholders. The Danish grant covers the period of the operational of the current planned BGFA Uganda window, and Sweden has committed funds for a final exit strategy for the programme.

4. Objective and summary of 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 and distribution with a particular focus on job creation”*. The Danish contribution will mainly target the “access” to energy through installation of standalone solar home systems⁴ and the pilot component on job creation and skills development.

4.1. Project components

Based on the initial outcome and recommendations of the two scoping studies, the BGFA Uganda window has been designed with four funding pillars (targets of pillars are still under revision). The four Funding windows will be co-financed between Sweden and Denmark⁵ and its total target to provide 350,000 households with basic energy; equivalent to almost two million people. However, the scope and approach aims much broader to support a sustainable and inclusive off-grid energy industry in Uganda. The below proposed pillars (and targets) are based on initial proposals based on the draft scoping studies and are still under revision.

Pillar 1 - Direct to Scale and Affordability: Provides post-paid economic incentives to incentivize affordability of solar home systems. The aim is to provide economic incentives that is targeted at proven business models to help them scale quickly through a post-paid incentive linked to the number of delivered connections. The pillar aims to reach 200,000 households (1.2 million people) but with the potential to unlock a total addressable market of 1 million households who currently cannot afford modern energy services. At least six

⁴ 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.

⁵ 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).

qualified bidders operates currently in Uganda and it is expected that the tender will select three bidders with a ticket size between EUR 1-4 million as subsidy element.

Pillar 2 – Market creation and local business partner development: This pillar will build in two overall two components – a prepaid financial support for market entry in unserved regions of Uganda and a post-paid economic incentive linked to the delivery of connections BGFA will target at pre-defined geographic areas. Applicants/consortia should demonstrate in-depth knowledge of the market. Pre-payments will be made based on milestones along phased outreach implementation such as establishment of sales and support infrastructure and campaign performance. Bidders are encouraged to build local partnerships or consortium with local businesses in the regions. Ticket size will be approximately EUR 1 million and three bidders expected to be selected. The pillar will target 150.000 household connections.

Pillar 3 – micro-grids: Piloting deployment of micro-grids within the framework of the new Mini-grid policy and related regulation. This will also include close coordination with GIZ to share lessons learned. Up to three bidders will be selected with a ticket size of between: EUR 1.200.000 – 3.700.000. This window will also target productive use and higher tier applications (eg electric cooking) through incentive add-ons and multipliers. It is expected to reach 8 – 10.000 connections across several micro-grid sites.

Pillar 4 – Jobs and skills development: Closely connected to first Danish contribution, this pillar will train at least 500 women and men. Training institution will be selected to provide training targeted different skills in the fields of marketing, sales, technical operation and maintenance. Skills development will be aligned closely to needs presented by selected Energy Service Providers.

4.2. Results framework

BGFA has identified four overall results clusters (see annex 3) as their regional results framework. Furthermore, a specific results framework for Uganda is under development (will be finished of final programme document) and feed into the overall BGFA results framework and monitoring system. In addition, for the Uganda window an additional results cluster will be added on jobs and skills development.

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.
2. Enhanced policy and regulatory ecosystem for ensuring access to energy services for all
3. Increased public and private investment into sustainable energy and energy ecosystem
4. Advanced data-driven market intelligence and blended financing models stimulate influx of efficient, targeted capital to ecosystem.

Particular results cluster 1 on increasing availability of energy services is of high importance for Denmark where the majority of the budget is targeted. The pilot jobs and skills development component is also considered strategic added value from the Danish contribution.

Based on experiences from Zambia and draft market scoping in Uganda, the BGFA window in Uganda is expected to reach up to 2 million people with basic electricity services for lighting, charging phones and running small appliances such as fans, TV and radio. Based on ESMAP's multitier framework on access to energy, in most cases it will be Tier 1 (10-50 watts) provided by Solar Home Systems. In the pilot cases of establishing micro-grids, energy quality is expected to be higher and could be linked to productive use and public services. However, the results framework will also monitor expansion of Energy Service Providers,

leveraging of private financing and improved public policies and regulations. In addition, the BGFA Uganda window will also monitor on job creation and skills development in the off-grid solar industry, particular for youth and women.

Based on the two scoping studies, a specific results framework will developed for the BGFA Uganda window covering the two Danish financial contribution and the Swedish contribution. The below indicators preliminary estimated made by using the overall results framework the BGFA (covering 5 countries).

Indicative selected indicators and results framework for BGFA Uganda window*

Results clusters	Indicator	Target	Means of verification
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.	<ul style="list-style-type: none"> • # of people, men and women, benefiting from new or improved access to energy services. • Customer satisfaction and perceived benefits by consumers in each target country by energy service and by gender • # of full time jobs created at the level of contracted ESPs (disaggregated by gender) 	<ul style="list-style-type: none"> • Up to 2 million beneficiaries reached. • 90% customer satisfaction • 500 direct jobs created 	<p>EDISON (and regular independent verification)</p> <p>ESP reporting to BGFA and external socio-economic impact assessment</p> <p>ESP reporting to BGFA and external socio-economic impact assessment, gender disaggregated.</p>
Enhanced policy and regulatory ecosystem for ensuring access to energy services for all	<ul style="list-style-type: none"> • Stakeholder satisfaction rating of the platform for market change in Uganda. • Platform for markets change in Uganda is self-sustaining and run by local actors (by 2024) 	<ul style="list-style-type: none"> • 70% above average rating • One self-sustained market platform for off-grid energy in Uganda (or contribution to other similar multi-stakeholder forum). 	<p>Periodic surveys with platform members</p> <p>Independent mid-term and end of program evaluation</p>
Increased public and private investment into sustainable energy and energy ecosystem	<ul style="list-style-type: none"> • # of qualifying ESP's responding to BGFA published tenders in the off-grid RE sector. • Amount of finance provided to ESPs in each target country- by type of finance (debt, equity, grant, other) 	<ul style="list-style-type: none"> • 5 ESP's qualify for final application stage in the published tenders • Leverage ratio of private financing to the Danish contribution is 1:3 	<p>Long-list of ESP's invited to submit final applications</p> <p>ESP reporting to BGFA</p>
Uganda pilot vocational training component has contributed to train a skilled work force and job creation	<ul style="list-style-type: none"> • # of people trained • Satisfaction rating of the trained people 	<ul style="list-style-type: none"> • 500 women and men trained • 80% above average rating. 	<p>Participants' evaluation at end of training courses, gender and age disaggregated.</p>

*The results framework will be subject to adjustment when the scoping studies will be finalized in Q1 2021.

The final results framework, targets and indicators will be informed by the Market Scoping Assessment but will also be based on the results clusters presented in annex 3. A Danish priority will be to introduce clear gender disaggregated targets in the results clusters.

5. Theory of change and key assumptions

BGFA aims to improve and expand inclusive and sustainable markets for critical energy services in Africa. Basic market condition is a central element in accelerating access to energy services in the off-grid sector. Innovative technological development and business models are key to drive change towards low-carbon economies.

BGFA is designed as a holistic approach building and 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.
- **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” approach⁶. This can e.g. be issues related to unclear taxation regulations, recycling systems for e-waste, 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.

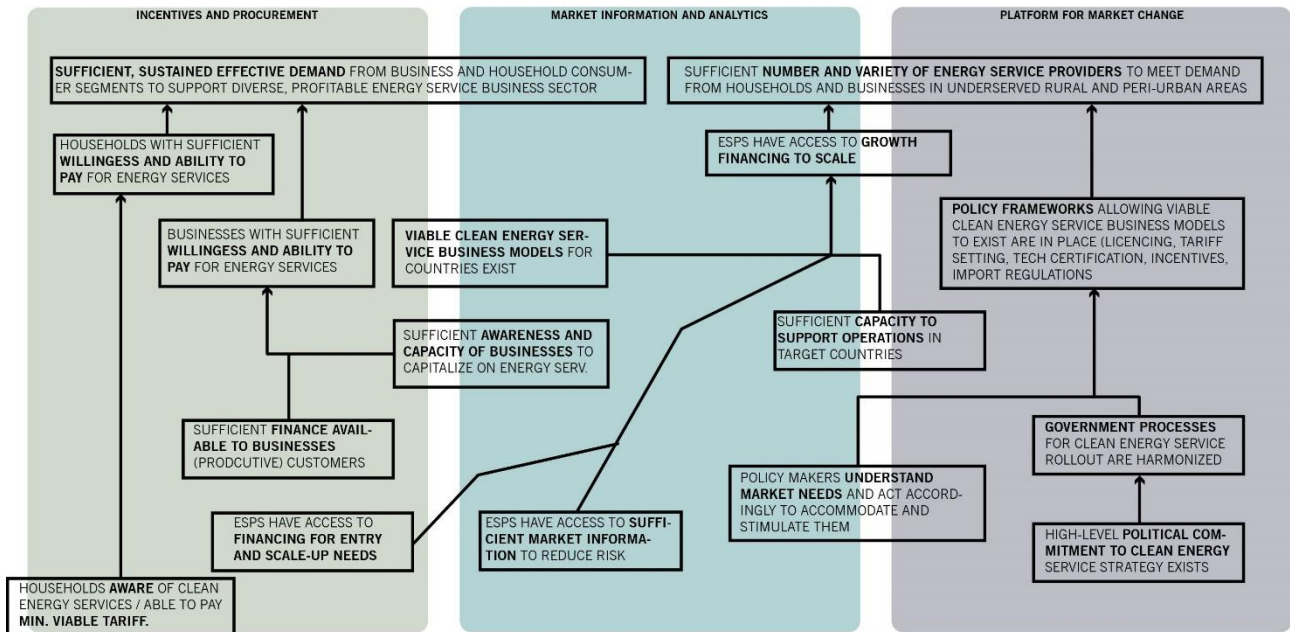
The BGFA builds on the assumption that markets often represent the swiftest and most cost-efficient mechanism to bring off-grid solar energy to underserved areas. At the same time, markets can generate new jobs, income opportunities and entrepreneurship. Further, current market gaps - such as limited 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-income levels. All together, these barriers remain a challenge for targeting regions where the markets is not operating today.

To address these barriers, 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. A specific Theory of Change will be developed for the Uganda window and included in the final programme document. In addition to existing ToC, the Danish contribution will also strengthen synergies between the scaling of a new off-grid solar sector and the creation of new inclusive green jobs in Uganda.

⁶ 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.

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.



6. Partners and Management arrangement

As result-based procurement mechanism, the BGFA has a fairly simple management set-up where the Nordic Environment Finance Corporation (NEFCO) has 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 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 equipment 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 off-grid energy services through an inclusive market-based procurement approach.

NEFCO

NEFCO 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 30 years 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. NEFCO is adopting new strategy in 2021 that increase its global engagement, incl. Africa.

NEFCO has the requisite technical, administrative and EU approved fiduciary skills to manage BGFA in a skilled and cost effective manner. The capacity of NEFCO is proven by its completion of the European Commission's Pillar Assessment and it also holds accreditation by the Green Climate Fund.

As an international financial institution (IFI), NEFCO has the legal status and competence to conclude contracts for fund management services, and the ability to accept the fiduciary responsibilities of administering such funds. It has undertaken over 120 such agreements globally in the climate change field alone and NEFCO has been engaged in over 50 climate related projects in all regions of the African continent. Of specific experience, it is worth highlighting:

- Fund management of the Nordic Project Fund (Nopef) aiming at strengthening the international competitiveness of small and medium-sized enterprises by providing loans on favourable terms for co-financing feasibility studies. Established in 1982, Nopef has to date co-financed over 3,100 feasibility study projects, of which over 140 have been in Africa.
- From 2010 - 2018, NEFCO implemented on behalf of the Nordic Development Fund (NDF), the first four Calls of the Nordic Climate Facility (NCF). The NCF is a grant financing instrument with co-funding requirements funding innovative climate adaptation and mitigation projects in Africa, Asia and Latin America.
- NEFCO is also managing two carbon facilities, the NEFCO Carbon Fund (NeCF) and NEFCO Norwegian Carbon Procurement Facility (NorCaP) on behalf of public and private sector investors. NeCF and NorCaP currently represent a portfolio of 18 ongoing Clean Development Mechanisms (CDM) projects spread across different sectors in 9 countries, including some in Africa.

NEFCO also has a track-record of managing Danish funds. NEFCO was the fund manager for the Danish neighbourhood programme in Georgia for the Energy Efficiency and Sustainable Energy project which aimed at strengthening Efficiency Building Codes. Where the Danish funding contributed to grant-based technical assistance and capacity building, NEFCO and EBRD loans financed the implementation of the energy saving measures in the public buildings. Similar to the BGFA, the project in Georgia was defined by clear quantitative targets. Currently, the Danida Sustainable Infrastructure Finance is also planning another agreement with NEFCO for a renewable energy project in Ukraine.

REEEP

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, 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 a similar role in the separate pilot BGFZ programme.

ESP's

Though not pre-defined partners, the selected ESP's will be important delivery partners for the BGFA. The ESP's will be selected through open, competitive and transparent tender processes and it is expected that most ESP's will 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 PAYG model is mainly based on solar energy and often consists of a Solar PV (incl- modules, inverter, cables, etc.), battery, mobile payment system, information and communications technology and power-consuming appliances such as LED bulbs or mobile phones. ESP's applying PAYG can provide either a "lease-to-own" model or a "usage-based payment" model. The payments are usually made via mobile credit, by sending a text message. The systems can feature a remote monitoring system that can be activated via mobile network connection. There are PAYG solar home systems without remote monitoring systems, but they still have a SIM card built in to allow ESP's to shut them down remotely if payments stop⁷.

Finally, **Power Africa**, an initiative administered by USAID, is providing a considerable in-kind technical assistance contribution (EUR 4 million over three years), and several other donors have shown interest in joining the programme.

7. Financial Management, planning, 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. NEFCO will be responsible for all reporting and accounting towards Denmark.

Due to the pending scoping studies, most of the first year of implementation will be considered scoping phase, which will result in informing and designing specific TOC and results frame for the BGFA Uganda window. A stocktaking review of the scoping phase will be conducted within the first 6-12 months after signing of the agreement and is likely to be combined with the appraisal of the second Danish contribution (pending final approval). These milestones provide early learning and adaptation opportunities.

7.1. M&E, 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

⁷ For further information, see IRENA (2020) Pays-as-you-go models – innovation landscape brief.

engagement and partnership, a strong focus on learning and adaptation will be applied, not least when it comes to the training component which is a pilot.

Disbursement of funds will generally follow the results-based outputs. This means that the majority of the disbursement will follow the progress of the instalments of off-grid solar home systems or skills development planned in the project. At least 75 pct. of the budget is expected to be programmed for financial incentives to companies, service providers or consortiums selected in public tenders for either the energy access component or the jobs/skills development component. 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 report to NEFCO and not directly to the MFA of Denmark.

7.2. 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 Grants 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 from time to time 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 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 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 Contribution⁸.

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

⁸ Further details on financial management and anti-corruption measures included in signed agreement template.

funded with the Contribution. In the event a case of Prohibited Practice is reported to 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.

7.3. 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.

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 could be related to the following topics.

- General guidance and advice on overall strategic directions, issues and priorities
- Discuss best ways to proceed to achieve BGFA programme objectives
- Advise on long-term strategic objectives
- Input to market scoping and final decision for the Uganda window
- Guidance on overall procurement requirements and plans before launch.

8 Budget, financial management and Danish contribution

The Danish contribution amounts to a total of DKK 80,0 million earmarked to the Uganda BGFA window. This complements the existing Danish contribution of DKK 37,5 and the Swedish contribution of SEK 130 million⁹. Currently, no other donors are funding the Uganda window, but expressions of interest have been received from other donors towards the BGFA.

The Danish contribution includes the payments to ESP's and the technical assistance components as well as all management fees and costs (for NEFCO and REEEP) and other costs. A specific pilot component on green jobs and skills development creation have been included in the Uganda Window and is reflected in the below budget. A detailed output based budget will be elaborated according to the Aid Management Guidelines and NEFCO policies during the scoping phase. The majority of the project is based on a 'results-based financing' approach where service providers are paid when services and infrastructure have been delivered and verified. This fits with Danish requirement of an output-based budget¹⁰.

⁹ The BGFA is a multi-donor facility. Sweden continues to be the core donor and active in all country windows. Germany expects to join the BGFA to support the Zambia window (Q4, 2020) and the Danish contribution earmarked to Uganda. Interest has been shown from Norway. The USA through its Power Africa programme will provide an in-kind contribution worth approx. EUR 4 million (USD 4.5 million) over the next three years in order to help operationalise the initiative and develop a pipeline of commercially viable projects within the framework of BGFA.

¹⁰The budget is indicative and be adjusted upon completion of scoping phase.

Indicative overall budget	DKK
Output 1: Delivery to scale and affordability	
Output 1.1: Incentives to deliver of 200.000 off-grid renewable energy installation	34.000.000
Output 1.2: Provision of TA and capacity building to 4-6 EPS and public institutions	4.000.000
Output 2: Market creation and local content in unserved regions	
Output 2.1: Support connectivity up to 150.000 households in unserved regions	15.000.000
Output 2.2.: local content development	2.300.000
Output 2.3.: Provision of TA and capacity building of 10-20 EPS's, local businesses and public institutions	2.000.000
Output 3: Micro-grid	
3.1. Support Delivery of 10-20 micro-gids	10.000.000
3.2. Pilot productive use	2.000.000
3.3. Provision of TA and capacity building of EPS and public institutions	1.500.000
Output 4: Jobs and skills development	
Output 1: Skills development for at least 500 people	2.000.000
Programme management	
Management fee (6%)	4.800.000
Contingencies (3%)	2.400.000
TOTAL	80.000.000

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. This section will also be up-dated when the final scoping studies will be completed.

The contextual risks are mainly related to the risk of corruption that always exists when building new infrastructure. Uganda is no exception. 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 large-scale infrastructure projects. The risk of political instability should also be considered due to the up-coming presidential election. Also, the impacts of COVID-19 could also disrupt the off-grid energy sector in Uganda and cause delays or change the business case. Further, REA is perceived 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 semi-mature with several operators active in the market. However, the market scoping study will tailor the Call for Proposals to the market conditions and a pro-active outreach will target both national and international operators. Further, different risks for delayed implementation will be monitored closely, including the impacts of post COVID-19, which influence consumers ability to pay for the energy service. Finally, the job creation and skills development component is a pilot sub-component which includes some higher risks as it has not been tested before by the BGFA. However, the Danish MFA will be deeply involved in development of this specific component and continuously take stock of progress and potential required adaptation.

Main institutional risks include the new set-up for NEFCO in Uganda and new regulations that has not been tested yet. BGFA's experience is based on the separate pilot programme in Zambia. Uganda is different and a successful implementation will depend on public framework conditions to accelerate off-grid connection and on the quality of the energy service providers in Uganda. This risk is considered 'likely' if not managed adequately. Coordination between the Danish and Swedish embassies in Kampala is already established and a thorough scoping study will be conducted by qualified national experts. This risk will be mitigated by engaging pro-actively with relevant public authorities and adjusting the public tender to the local context.

Annex 1: Context Analysis

1. Overall development challenges, opportunities and risks

The Uganda vision 2040 is in line with the objectives of SDG7 and the vision targets 80% of Uganda's population should access electricity by the year 2040. For universal access goals in Uganda, both grid supply and off-grid supply of electricity is required. Investments need to also be made to achieve better efficiency and system flexibility. Government and international development funding will not suffice for the required investments. Private capital is therefore also required.

Presently, it is estimated that only 28% of Ugandans have access to electricity. The government of Uganda has been supported by several development partners to increase electricity generated through the GETFit programme. The Government is also working on grid extension projects as well as upgrading and adding new power transmission infrastructure. New generation is expected from large hydro power schemes at Karuma (600MW), Isimba (180MW) and Ayago (600MW). Several small hydro projects are also under development while the potential for Geothermal power is also under geo-scientific study (Kibiro and Panyimur prospects). Uganda also recently unveiled solar power projects in Soroti, Tororo and Nakasongola which are expected to collectively add 30MW onto the grid.

However, according to modelling forecasts made by the UN in 2012, for at least 10 % of the Ugandan population, the grid will not be an option for access to electricity in the decades to come. Instead, there shall be more reliance on off-grid and mini-grid solutions. Areas for which the off-grid and mini-grid option is most viable include: West Nile (Adjumani, Arua, Zombo), Northern Uganda and western Uganda (Bundibugyo, Ntoroko) (see map below). This is according to the rural electrification master plan which show areas of grid extension and standalone solutions for the different regions.

The National Development Plan (NDP) stipulates the Country's medium term strategic direction, development priorities and implementation strategies. In addition, it details Uganda's current development status, challenges and opportunities. The thrust of the NDPII is to propel the country to middle income status in the next five years through prioritizing investment in five key growth drivers with the greatest multiplier effect as identified in the Uganda Vision 2040. In line with the country's Vision, the theme for the NDP is "Strengthening Uganda's Competitiveness for Sustainable Wealth Creation, inclusive Growth and Employment." Access to clean energy serves at least a dual purpose (i) increase sustainable production and value addition in key growth sectors; and an increase the stock and quality of strategic infrastructure to accelerate the country's competitiveness.

In July 2013, the Cabinet of Uganda approved the new Renewable Energy Strategy and Plan (RESP) 2013 - 2022. The overall objective of this plan is *"To position the electrification development program on a path that will progressively advance towards achievement of universal electrification by the year 2040, consistent with the existing policy of the Government, while ensuring the displacement of kerosene lighting in all rural Ugandan homes by 2030"*. The plan targets to achieve 26% rural electrification rate (i.e. consumers who will be utilizing electricity in their homes, businesses or institutions) by 2022 from the current 7%. This is planned to be achieved using long-range service territory plans and financial forecasts for the service territories under logical, sequential allocation of investment and capacity-building resources. This will be met by electricity service expansion of up to 1.28 million on grid new service connections and 140,000 additional installations of Solar PV Systems and Mini-Grid Distribution Service Connections for off-grids making a total of 1.42 million connections.

To address the challenge of energy access, the government has begun a master planning process to determine which rural areas are appropriate for grid expansion and which areas are better suited to off-grid solutions. Similarly, households with access to the grid have the opportunity to use off-grid solutions. Off-grid and PayGo companies exist in Uganda but are often not professional enough to attract commercial capital and loans. They do not reach the 'hard-to-reach' customers, for example refugee settlements, and they do not always offer affordable solutions to households, farmers or public institutions as they do not receive subsidies as the state-owned utilities. Access to electricity beyond the grid will require solutions that can suit the initially low demands and limited paying ability among different groups. Yet, evidence from other countries demonstrate that in most cases demand will grow as people climb the energy ladder. The off-grid businesses can capitalise on meeting social and economic development needs, providing new and innovative solutions for e.g. irrigation, cooling, welding and others. These businesses can also create new jobs and address youth un-employment or the unequal job opportunities for women in the traditional energy sector.

In view of the PayGo model being mostly viable it can be a way forward to incentivise the off-grid power supply businesses to also expand into the area of cooking. Sustainable cooking solutions are very important for Uganda, especially in the West Nile area where there are refugee settlements and deforestation rates are high. The current potential for new business models to become viable based on cooking as the core business is however not convincing with a few players like Shimoshi which can not address the existing demand.

List the key documentation and sources used for the analysis:

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

BGFA will complete a market scoping study, and a jobs and skills development study, both due end Jan 2021, and both funded jointly by Denmark and Sweden

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.

Up-coming elections could also impose a risk for increased levels of conflicts and instability of the country.

List the key documentation and sources used for the analysis:

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

BGFA will complete a market scoping study, and a jobs and skills development study, both due end Jan 2021

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

Human Rights Based Approach

BGFA takes a rights perspective into account in the intervention in terms of the four principles, non-discrimination, participation, openness and transparency and accountability. On a strategic level, this is supported by the link with SDG 7 on universal access to modern energy.

While access to affordable, reliable, sustainable and modern energy for all is a Sustainable Development Goal (SDG7), access to renewable energy is not a human right in its own right. However, given the role of sustainable energy as a broader enabler of human and economic development, it is strongly interconnected with basic rights such as the right to life, food, health, shelter, education and social inclusion. The BGFA will specifically target the inclusion of populations without access to the basic service.

BGFA will address this by enabling investment of private sector energy service providers (ESPs) to expand energy access in previously underserved areas, and by capacity development, including better understanding of the socio-economic benefits also in end-use sectors. This will enable the duty bearers (i.e. the political decision makers and public authorities) to be mindful of the needs and priorities of end-users and ultimate beneficiaries, e.g. at the household and enterprise level (the rights holders). The human rights principles of participation, accountability, non-discrimination, and transparency will thus be supported.

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.

Gender

Adopting a Gender Focus and Promoting Women's Economic Empowerment

NEFCO has always required that beneficiaries of its financing adhere to the highest standards as regards equal treatment and gender equality. To emphasize NEFCO's commitment to the shared goals and objectives of its Nordic owner countries in actively promoting gender equality and the Nordic countries'

role as a leading example of delivering on the SDGs, in particular Goal 5 - Achieve gender equality and empower women and girls, NEFCO's Board has approved a Gender Policy, which is applicable to all of NEFCO's activities.

The main method to mainstream gender issues under the Gender Policy is to conduct a Gender Assessment for all new programmes and/or project proposals considered for financing by or through NEFCO regardless of type, size or sector. The Gender Policy foresees that the Gender Assessment as a rule is carried out at an early stage (in connection to the market scoping and implementation plan) with a view to improving opportunities for women and girls.

A basic Gender Assessment is incorporated into the market scoping study and the implementation plan. This work includes complementing the gender indicators in the Results Framework to meet the characteristics of specially structured windows for each country. A separate Gender Action Plan for the BGFA will also be developed in order to document concrete actions on how gender is mainstreamed in the programme and how gender equality will be actively promoted in the context of the BGFA.

A basic Gender Assessment is incorporated into the market scoping study and the implementation plan. This work includes complementing the gender indicators in the Results Framework to meet the characteristics of specially structured windows for each country. A separate Gender Action Plan for the BGFA will also be developed in order to document concrete actions on how gender is mainstreamed in the programme and how gender equality will be actively promoted in the context of the BGFA.

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.

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

In the scoping phase, BGFA will conduct 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 will make a jobs and skills development study, which included the potential for women and youth

Both studies are due end Jan 2021

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/efco.org/files/pdf-files/efco_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), UNREEEA 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 Minigrid 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

BGFA is also in close dialogue with broader multilateral landscape working to accelerate access to energy in Africa and SDF7, e.g.

- ESMAP and the World Bank,
- African Development Bank
- SE4All
- Global Clean Cooking Alliance.

Public and private institutions in Uganda

- Uganda Solar Energy Association (USEA)
- Rural Electrification Agency (REA)
- The Deutsche Gesellschaft für Internationale Zusammenarbeit (**GIZ**)
- Recent figures for the uptake of ICS are not available, but the Uganda National Alliance of Clean Cooking (UNACC)
-

Denmark will furthermore aim to establish synergies to Danish bilateral engagements in Uganda and to the work made by other multilateral agencies supported by Denmark.

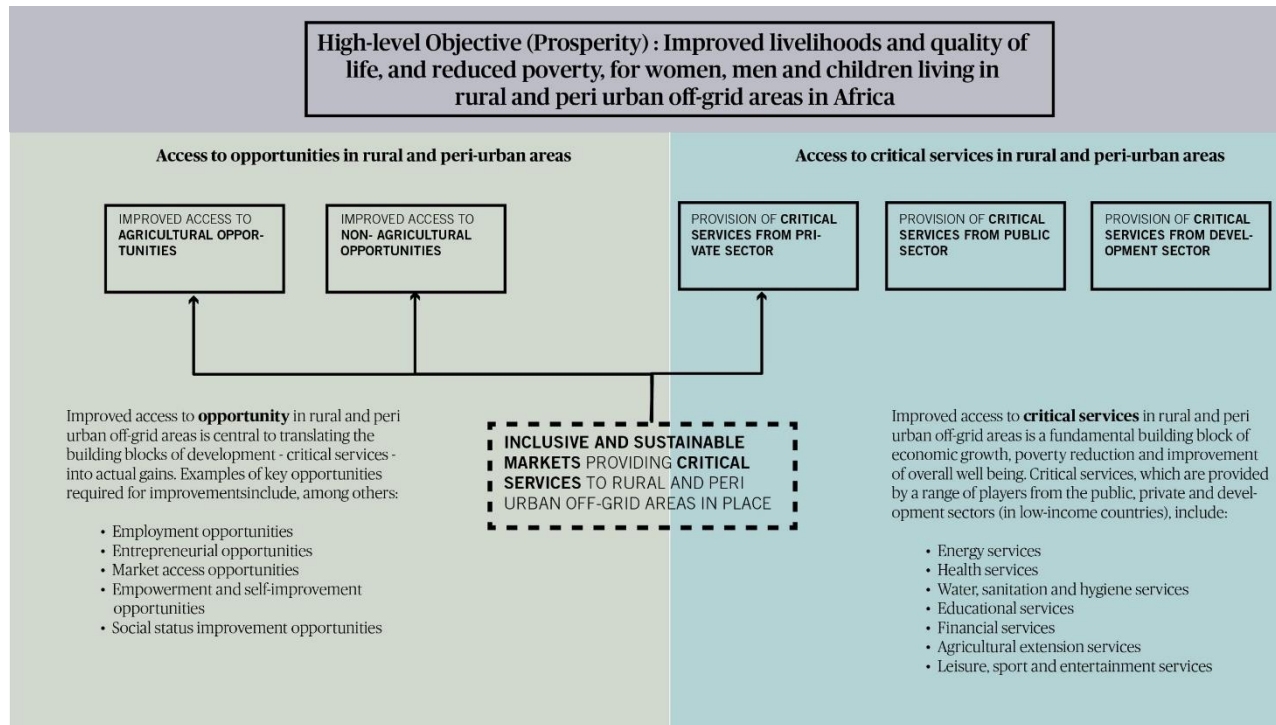
Annex 3: BGFA Results Clusters (framework) and ToC

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 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).</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
	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)
<p>Result Cluster 2</p>	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

Results Clusters	Indicator(s) DRAFT	Source of Information / Means of Verification
<p>Enhanced policy and regulatory ecosystem for ensuring access to energy services for all</p> <p>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;</p>	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
	<p>Result Cluster 3</p> <p>Increased public and private investment into sustainable energy and energy ecosystem</p> <p>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</p>	XX mEUR of BGFA public finance disbursed to selected ESPs
# 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
# 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
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 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		EDISON ESP reporting to BGFA

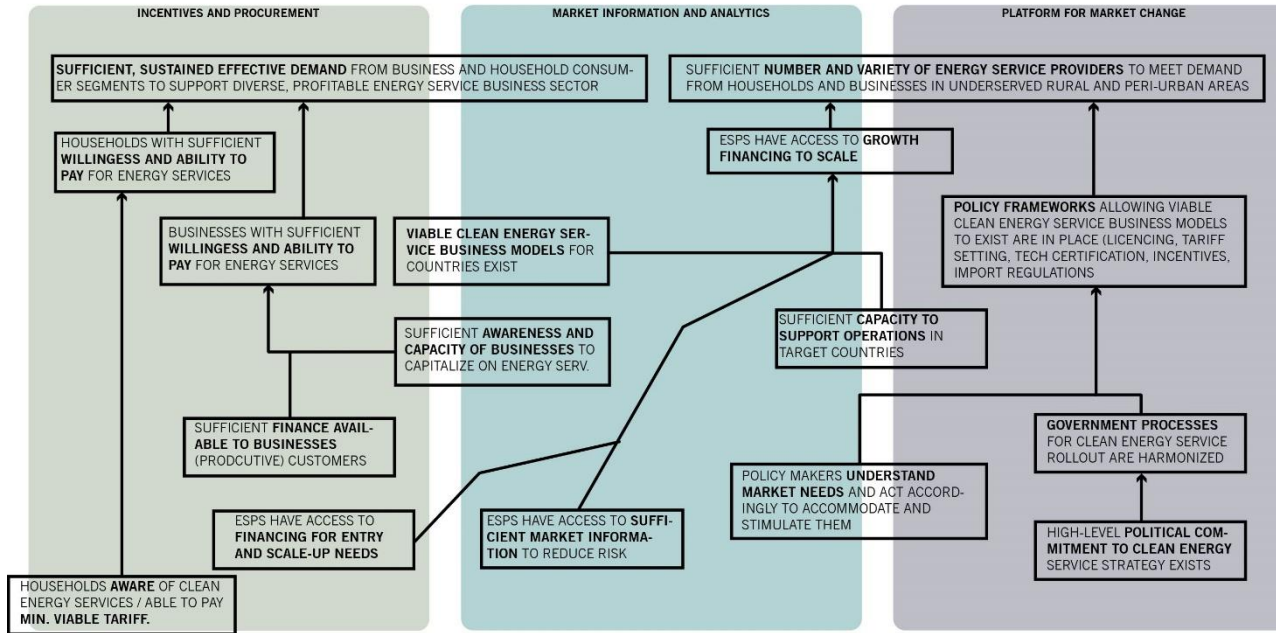
Results Clusters	Indicator(s) DRAFT	Source of Information / Means of Verification
	Key outcomes of round tables with financial institutions in each target country	Round table meeting minutes
<p>Result Cluster 4</p> <p>Advanced data-driven market intelligence and blended financing models stimulate influx of efficient, targeted capital to ecosystem</p> <p>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.</p>	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
	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 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

A specific ToC will be developed for the BGFA Uganda window during the scoping phase. It is expected to follow key elements of the regional ToC but also include job creations and skills development.



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: Detailed Indicative Budget

Annex 5: Risk Management Matrix

Risk	Risk level	Comments/mitigation measures
Low interest among potential Energy Service Providers	Low / Medium	The procurement will be widely disseminated and supported through in-country activities given that ESPs should be either present in country (or region) or are actively scoping that market for possible entry.
Lack of required consulting expertise	Low	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.
Lack of absorption capacity in Uganda	Low	Institutional capacity development will be undertaken as part of the scoping and implementation phases of the BGFA, in particular specific Platforms for Market Change in each country.
Delays during implementation because: <ul style="list-style-type: none"> a) Project proponents do not fulfil the criteria b) Project owner does not have the required capacity to implement the project c) There is insufficient interest from the private sector d) Lack of own financing among ESPs e) Inability to mobilise additional funding f) The regulatory environment concerning project implementation is underdeveloped and in continuous change g) Corruption 	<ul style="list-style-type: none"> Low Medium Low-medium Low-medium High High 	<ul style="list-style-type: none"> a. It is possible that some proposals received via open calls will not fulfil the project criteria and will thus not be selected for financing. However, strict screening and evaluation processes as undertaken in Zambia (and improved upon) will mitigate this risk. b. The tenders set high requirements. The assessment of potential bidders and business plans will take into account the technical capacity to deliver the outcomes. Capacity building is considered. c. Uganda is an active market. The market scoping study will attempt to gauge interest in attracting investors to the market. Once BGFA entry into market has been agreed, a proactive outreach effort will be undertaken by REEEP both in the country, region and internationally. d. The assessment of potential bidders and business plans will take into account the financial capacity to deliver the outcomes. e. Careful screening of bidders and the financing plans e.g. seeking evidence of funding applications will mitigate this risk. Additionally, PFAN and other advice may be offered, including access to Nordic financing if appropriate. f. This risk is related to the long and complicated project approval procedures, market barriers, lack of commercial financing, uncertain regulatory structures etc. This can be partly mitigated by providing institutional support to address identified gaps via the technical assistance component of BGFA. g. 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.
<p>Platforms for Change not leading to intended results:</p> <p>a) Private sector stakeholders do not buy into process and Platform(s)</p> <p>b) Public sector stakeholders do not buy into process and Platform(s)</p> <p>c) Platform(s) negatively influenced by political pressure</p> <p>d) Platform(s) ineffective at influencing ecosystem due to other factors</p>	<p>Low</p> <p>High</p> <p>Medium-high</p> <p>Medium</p>	<p>a. Private sector entities – with the exception of advantaged incumbents – are typically very positive toward the platform concept and the intended objectives and outcomes of public-private stakeholder engagement and donor coordination, which increases transparency and reduces investment and business risks for firms.</p> <p>b. Public sector entities must be convinced that the Platform concept can yield positive outcomes and benefits for communities, and that proactive engagement in the concept will improve chances for development cooperation programming and higher levels of foreign direct investment in their economies. The stakeholder outreach and mobilization strategy will be developed with experts intimately familiar with the political economies and personalities of BGFA countries. Where appropriate and beneficial, the case of the Zambia Task Force can be leveraged as an example of a successful approach.</p> <p>c. An effective Platform for Change will be a natural target for influence-peddling and corruption; as such REEEP will seek to maintain transparency and openness in the administration of the Platforms, to the extent possible given political circumstances in each country.</p> <p>d. In any such broad coordination and engagement venture, there is always a high tendency toward inertia. REEEP will seek to push participants toward meaningful decisions and action, and leverage the opportunities from private investment into local economies as a key driver of this action</p>
<p>Implemented projects do not lead to intended results:</p> <p>a) ESPs are unable to make sufficient ESS connections</p> <p>b) Projects do not target peri-urban and rural customers</p>	<p>Medium</p> <p>Low-medium</p>	<p>a. Proactive monitoring by REEEP such as regular progress calls with contracted ESPs will act as an early warning system. Corrective actions and technical support can be mobilised as appropriate.</p> <p>b. 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.</p>

<p>c) Projects do not result in intended environmental, social and gender benefits</p>	<p>Medium</p>	<p>c. 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.</p>
<p>d) Environmental, social and gender benefits are not sustainable</p>	<p>Medium</p>	<p>d. The Social impact procurement model sets requirements for cost effectiveness through competitive bidding. Financial feasibility is assessed during project due diligence, including ensuring that ESPs have not under-bid. Environmental, social and gender impacts are monitored through project owners' environmental reporting to REEEP.</p>
<p>e) Lack of ownership at ESP f) g)</p>		<p>e.</p>

Annex 6: List of supplementary materials

#	Document / Material	Source
1	BGFA Programme document Uganda Window	NEFCO
2	First BGFA tender: call for proposals (Burkina Faso, Liberia, Mozambique and Zambia)	NEFCO
3	BGFZ Socio-Economic Impact Study	REEEP/NEFCO
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

Annex 7: Communication Plan

What? (the message)	When? (the timing)	How? (the mechanism)	Audience(s)	Responsible
Announcement of the public tender for ESP's	Q4 2021	NEFCO preparation and announcement of fund	Relevant ESP's	NEFCO
First training of off-grid energy training module	Q4 2021	Selected service provider	Danish media story	GDK/NEFCO
First instalment of SHS equipment	Q2 2022	Media story about the first families benefitting from the SHS instalment	Danish media story	GJL/REEEP
Visit by the Danish Minister for Development Cooperation	2022	Media story on Danish support to deliver speed and scale on SDG7	Danish media	GDK/MLS

Annex 8: Process Action Plan (PAP)

Action/product	Deadlines	Responsible/involved Person and unit	Comment/status
Prepare market scoping study and skills development background research.	October - February		
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	18 - 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		

Annex 9: Summary of recommendations of the appraisal

Annex 10: 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	
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 Steering Committee

The BGFA Steering Committee constitutes a forum, where the Facility Manager can present to Donors semi-annual reports on work done (for information) and draft semi-annual work plans and budgets on work to be done (for approval) as well as seek no-objection to the Facility Manager's contracting of procured ESPs, and for Sweden 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 Donors to discuss and coordinate with the concerned Embassies before formally deciding upon the Fund Manager's recommendations on behalf of Sweden.

The BGFA Steering Committee shall have of the following composition:

One or more representatives from the Donors and if relevant representatives from each of the Embassies representing the participating countries (to the extent they wish to take part).

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 (as the founding and major donor) will function as the Chairperson of each meetings with support from the Facility Manager.

The BGFA Steering Committee will meet twice a year, once in Europe and once in one of the targeted BGFA countries, and then combined with field visits. The semi-annual meetings will tentatively be held in June and December.

Meeting dates will be agreed by the Parties 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 the Parties 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 made by Donors at the meeting will be prepared at the end of each meeting for Sweden's 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.

Exceptionally the opinion of Donor agencies 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 Donors by means of a written procedure will be accompanied by supporting documentation.

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.

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 Sweden) and outlooks for the next half year as well as seek Sweden's no- objection for the Facility Manager's contracting of procured ESPs.

The BGFA Steering Committee shall further serve as a forum for 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.

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

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 Uganda¹¹.

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 interest¹². 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.

¹¹ 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.

¹² This will be investigated further in the market scoping study but an indicator is that 400 000 SHS were sold in 2019