

### Contents

1.	Introducing the Smart Communities Coalition Innovation Fund (SCCIF)	3
2.	First results of the SCCIF	4
	2.1 Finding Winning Approaches	4
	2.2 Why invest in displacement?	6
3.	Matchmaking	7
4.	Winner Profiles	9
	<ul><li>4.1 EleQtra PAYGO Workspaces – Sharing Tools and Space for a Start</li><li>4.2 Moban SACCO led solar-powered connectivity energy and water services with</li></ul>	. 10
	OffGridBox and BiziSol	. 13
	4.3 Solar Poultry and Household Lighting with PHB Development, Yelekeni Farmers' SACCO and BrightLife	
	4.4 Solar E-Cycles in Kakuma – Kalobeyei in partnership with OFGEN and	
	Strathmore University	. 21
5.	What can SCCIF Do next?	. 23
	5.1 Global Action for Humanitarian Settings: Energy Access, Connectivity and Digital	
	Tools5.2 SCCIF Fund design	
c	Energicing Dayolonment (EnDay) global partnership	25
6.	Energising Development (EnDev) global partnership	
	D. I ETIDEV AND ENERGY IN DISDIACEMENT SERINGS	∠ე

## Introducing the Smart Communities Coalition Innovation Fund (SCCIF)

### Combined forces for change

The Smart Communities Coalition (SCC) is a public-private effort seeking to transform the humanitarian operating model to empower host communities and the private sector to effect positive change in refugee settings. SCC has over 60 members and is cochaired by Mastercard and USAID. The coalition organizes and mobilizes stakeholders according to their core strengths to address three strategic pillars - energy, connectivity, and digital tools. The overall objective of the coalition is to enable innovative, sustainable approaches to the delivery of basic services, creating perspectives and economic opportunities for refugees and host communities.



Figure 1: Focus Areas of the SCC, Kenya and Uganda



The Smart Communities Coalition Innovation Fund (SCCIF) aims to bring private sector-led innovative solutions to displaced populations and crisis-affected host communities. The SCCIF was brought about to bring private-sector led innovative solutions to displaced populations and crisis-affected host communities. Actors should improve service delivery, economically empower displaced populations and contribute to economic and social integration. The fund is designed to address three strategic pillars to trigger a paradigm shift in humanitarian settings - energy, connectivity, and digital tools.

The SCCIF is implemented by the Energising Development programme.

Power Africa and SCC are tackling challenges that governments, donors, and the private sector cannot solve working alone. Together, we are creating solutions that help provide basic services that are sustainable and restore dignity to these forcibly displaced persons and their host communities.

Mark Carrato,
Power Africa coordinator.

### First results of the SCCIF

### 2.1 Finding Winning Approaches

The Fund was designed by EnDev in close cooperation with Power Africa and the Smart Communities Coalition (SCC) Secretariat to generate locally needed solutions with combined know-how from international and local actors for refugee communities in Kenya and Uganda, the focus areas of the SCC.

Today, refugees and the communities in which they live often struggle to access basic services, and current short-term approaches fail to create operationally and commercially sustainable models to ensure ongoing access to services that address critical needs. Through the SCC Innovation Fund, we are able to accelerate partnerships between public, private, and nongovernmental organizations, so that we can identify new models to deploy innovative technology and partnership solutions to enable transformational progress in the delivery of services to forcibly displaced individuals and host communities.

Tara Nathan, Executive Vice President Mastercard.

The process was designed to make it accessible and user-friendly for local businesses, cooperatives and NGOS as

well as international start-ups offerring renewable energy solutions while respecting transparency and the Do-No-Harm principle.

After the official project launch and the opening of the First Call for Proposal, matchmaking was organized as one of the first steps to make sure that rich local knowledge about problems, needs and resources in displacement settings could be combined with new technical solutions and adapted business models from local and international actors.

A focus on solutions designed in collaboration between public, and private, local and international actors is part of the founding logic of the Smart Communities Coalition. The SCIFF implementing structure was set up and the first call for proposals announced in mid-2020 during the COVID pandemic with a first call for proposals under Pillar 1 – Energy.

This brochure highlights the fund design and potential and showcases the first projects that are being made possible through grants from the Smart Communities Coalition Innovation Fund. After a first competitive call for proposals for the energy pillar in Kenya and Uganda in fall 2020, four awardees were selected from 57 eligible proposals in November 2020. Eighteen applications received were ineligible and could not be considered. Supported applicants were private companies or a consortium of actors (NGOs, United Nations and intergovernmental organizations, local and

national governmental agencies), including at least one private company.

Awardees represent successful collaborative alliances between local SACCOs (Savings and Credit Co-Operative Society), NGOs and renewable energy companies. The grant funding providing (€10 000 to €120 000) was established based on the project budget,

internal regulations and a rapid need analysis of potential grantees.

Through the first call for proposals, the projects will benefit more than 3,500 displaced persons and host-community households with innovative solutions for improved energy access and economic opportunities by June 2023.

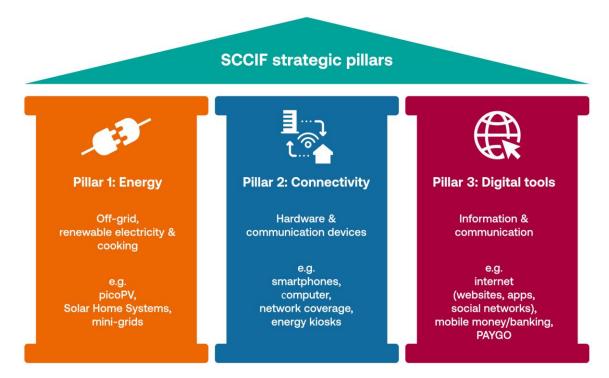


Figure 2: SCCIF Strategic Pillars with examples

### 2.2 Why invest in displacement?

The existence of energy markets in displacement settings is often overlooked. However, according to a recent report on collaborative approaches to providing energy in displacement: "Displaced people around the world already spend more than \$1.6 billion a year to light their homes and cook their food. So, energy markets, even if often informal, already exist. Every dollar spent on better energy access generates between \$1.40 and \$1.70 in the form of employment, environmental benefits, productivity and time savings".

With access to electricity, displaced populations can feel safer at night, keep shops open after dusk and power their productive activities. Electricity supports access to basic services (education, health, water and sanitation) as well as the ability to benefit from connectivity and associated digital tools (communication, payments, information).

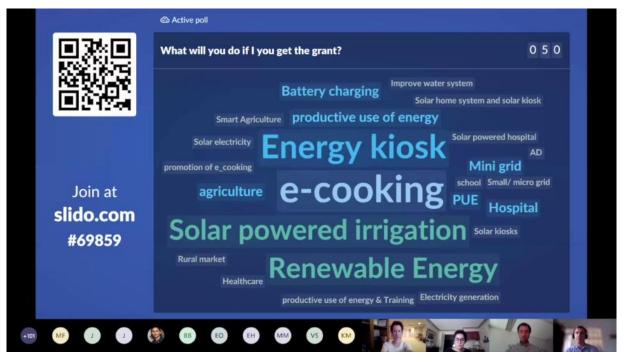
The SCCIF aims to close the gap between risky customer segments (displaced populations) and the utilities working on energy, connectivity and digital tools.

### The "Do-no-harm" principle

Aid is not neutral. Aid – and how it is administered – can cause harm or can strengthen capacities for peace amid conflict-affected communities. However, the transfer of resources and the manner in which staff conduct the programmes can strengthen ocal capacities for peace, build on connectors that bring communities together, and reduce the divisions and sources of tensions.

### Matchmaking

The building of innovative alliances was supported by a matchmaking session two weeks after the first call was launched. More than 120 persons were connected to the online session. The first part of the meeting was used to answer questions from participants regarding the first pilot call for proposals. Different topics were discussed such as the country of registration of the applicants, the role of universities, the minimum rate of co-funding etc.



Screenshot from the Matchmaking Session in September 2020, © Eveille/GIZ

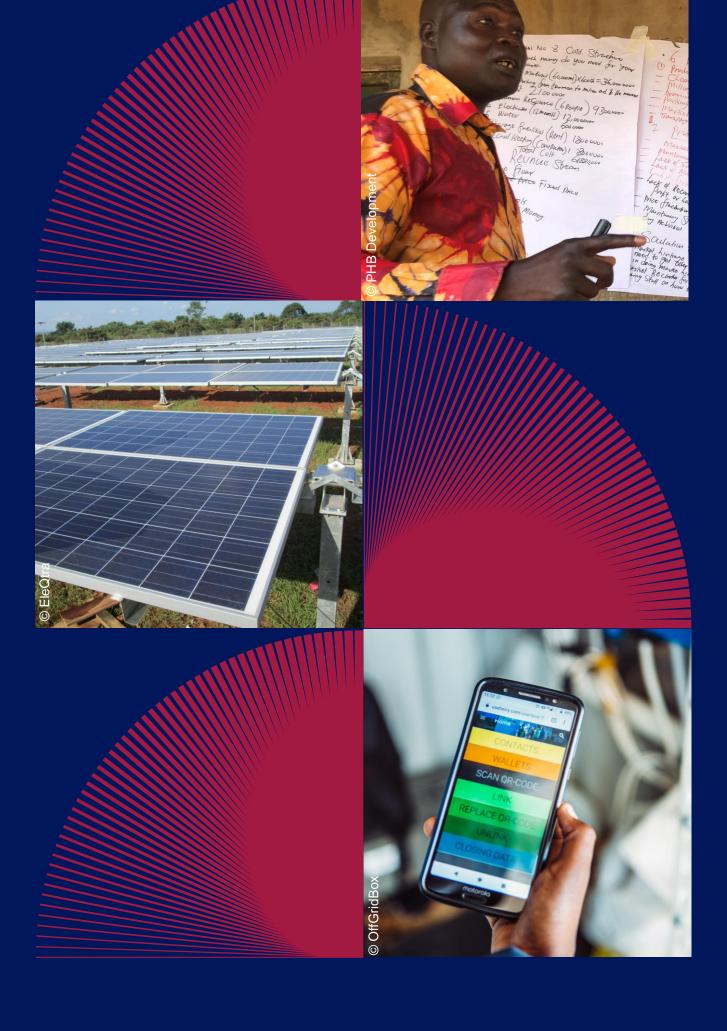
Out of the participants, 77% were from companies, 18% from NGOs and 5% from UN agencies.

After answers were provided to questions collected, participants were divided into five break-out rooms to network through an offer and ask mechanism:

- Exchanging contact details
- Offering services
- Asking for services
- Providing a few details on project ideas

As a private sector company working within the humanitarian space, developing the right project partnerships can be a tricky, laborious, and admin-heavy process. The SCCIF's matchmaking session was able to cut through the red tape and be a highly effective way to align potential partners quickly.

Brandi DeCarli Founding Partner, Farm from a Box.



### 4. Winner Profiles

Applicants were selected by an independent panel. Different criteria were evaluated such as the team experience, the solution proposed, the impact of the proposition on gender and cross cutting humanitarian sectors. The applicants had to indicate their monitoring concept, the risk mitigation framework as well as a draft workplan. Finally, all applicants submitted a detailed budget, a tentative income statement as well as a business model

canvas to demonstrate the economic viability of the proposed solution.

The winning projects from the first call for proposals are starting implementation in 2021 and will continue the work until 2023. All projects have a sustainable exit strategy to ensure the continuity of the services they will provide for many years to come. Each project is profiled on the next pages.



PV technician © Namusis, GIZ/SNV

# 4.1 EleQtra PAYGO Workspaces – Sharing Tools and Space for a Start

<u>EleQtra</u> will deploy off-grid workspaces in the Rhino Camp, Arua and Palabek refugee settlement, Lamwo in Uganda to provide access to "pay-as-you-go" workspaces and appliances.

Solar EleQtra works well for my business, in fact I am looking to expand and I am interested in getting another one.

Syrus Lukoma Buvuma,

Printing business owner.

Refugees live in precarious situations accessing basic services including affordable health care, electricity and water is a challenge, and income for daily expenses is minimal. In Uganda, 48 percent of refugees live in poverty, while the surrounding population has a poverty incidence of only 17 percent. Better services could spur businesses and economic growth, but affordability of services is a large hurdle. Refugee settlements do not have electricity access which could support business services. Pay As You GO (PAYGO) solar solutions are well established in the Arua and Lamwo districts, but refugee households generally cannot afford the initial downpayment of \$70-80 for a Solar Home System (SHS), although they might afford the monthly fees of about \$20. EleQtra, a solar company operating in Uganda since 2005, is using the SCCIF funding to develop a new kind of affordable infrastructure service for refugees to help bridge the business service gap.

rent with no down-payment within the camps to spur business growth. The workspaces will be operated locally by the community with remote monitoring support from EleQtra.

The two solar-powered kiosks that will be implemented for the SCCIF are to be designed and developed for specific trades in the two refugee settlements. Each Kiosk is a mobile self-contained solar-powered industrial unit housed within a modified shipping container. It will offer affordable pay-as-you-use access hourly or daily to six fully equipped workspaces. Each kiosk has durable lithium iron

Solar EleQtra has helped our health Center in many things like we have increased deliveries even during the night. We now work in the night as well because of the solar.

Babirye Eunice, Health worker.

phosphate (LFP) batteries ensuring renewable and uninterrupted power supply. Customers can rent either the entire kiosk or one of the workspaces to power different industrial activities or to provide space for vocational trainings. A grain mill for maize milling is pre-installed. Appliances for other trades, most likely tailoring, hair dressing and electrical work will be part of the package, and will be determined after dialogue with the communities.

They will offer modern solar PAYGO workspaces, equipped with appliances for

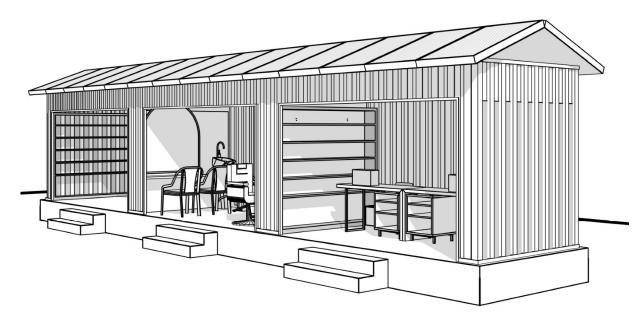


Illustration of EleQtra solar kiosk with equipped workspaces, © eleQtra

Innovations in this solution for business power are:

- the high quality of the infrastructure, including the LFP battery and thus the service that will be offered,
- the mobility of the solution to different areas or different refugee settlements if necessary
- lowering of entry barriers for small businesses with access to electrical appliance and computer use
- lowered cost of grain milling for the community
- flexibility of hours for business work
- plan for local management with modern remote management tools.

The kiosk approach is highly flexible and can be easily transported to new locations and refitted for other trade use if necessary. The payment is done with easy mobile-money payment application developed by EleQtra. Furthermore, LFP batteries tolerates full charging better than lead-acid, are less polluting and easier to recycle. Company staff will provide maintenance during the project and will train operators from the camp and engage in a strategic partnership with the camp operation to implement a long-term operation and maintenance plan within the community. The solution could be affordable also to any rural or peri-urban community with poor electricity access.



# 4.2 Moban SACCO led solar-powered connectivity energy and water services with OffGridBox and BiziSol

MOBAN Savings and Credit Cooperative Society (SACCO), BiziSol and OffGridBox will establish solar-powered energy-hubs providing modern and affordable energy, drinking water and connectivity in the Nakivale refugee settlement in Uganda and will establish a financially sustainable utility to maintain and grow the offered services.

In Uganda, many refugees lack adequate access to safe, clean and sustainable energy and drinking water. This has a dramatic impact on health, sanitation and well-being. Women, girls and children are the most affected. Current water delivery models based on diesel are costly and carbon intensive.

The MOBAN (Moral Brotherhood and Neighborhood) SACCO is a community based financial institution serving refugees and the host community in Nakivale. A member survey indicated refugees face the following main problems in order of importance: 1. food, 2. water, 3. energy and 4. internet access. When the SCCIF was announced, the local SACCO partnered with BiziSol, a social enterprise founded by African immigrants in Sweden and OffGridBox, Inc, a technology provider with offices in Boston and Kigali, to address three of those four priorities.



Off-Grid Box in Mtavira, Ikungi District, Tanzania,



The project grant will allow the installation of a solar powered pumping system and two Off Grid Boxes, which each generate 12 kWh a day. Beyond offering purified water to 800 households, they will offer phone and power bank charging and wifi services. Also, a further 6-8 kWh of electricity per day is available for small enterprises. Businesses expected are refrigeration, grain milling, barber shops, carpentry, welding and a cyber café. Two women and several security guards from the community will be recruited to act as operators and safeguard installations. The project will provide digital skills training and business training to maximize the impact of the offered services.

Customers will access all services for a single monthly subscription fee, paid with the existing mobile money system. Solar energy will replace environmentally damaging fuels currently used – not only diesel for pumping and kerosene for lighting, but also large amounts of fuel wood used to boil water to make it safe to drink.. More revenues will be generated in the community with the support to small businesses, and women and children will benefit from increased health, time and opportunities.

Financial sustainability is guaranteed as MOBAN SACCO will establish a community-based utility company to run the boxes. Residents will save money on non-potable water, fuel wood and kerosene, and are willing to pay for electricity and digital services. Also, small businesses will pay for the electricity and generate added-value in the community. These revenue streams will allow the new utility to be financially sustainable in 3 years.

At MOBAN SACCO we are a community-based Cooperative empowering refugees and host communities with financial services in Uganda... We look forward to achieving a positive impact and scale-up to more people for not leaving any one without access to energy, water and digital services, regardless if they are refugees, displaced or host communities.

Nepomusene Hasabintwari
Chairman, MOBAN SACCO





# 4.3 Solar Poultry and Household Lighting with PHB Development, Yelekeni Farmers' SACCO and BrightLife

PHB Development, Yelekeni Farmers' SACCO and BrightLife will develop a solar-powered hatchery and individual solar home systems for small-scale poultry farming and improved electricity access in Kiryandongo, Uganda.

This consortium is killing three birds with one stone, increasing local small-scale farming revenues and also making it possible for a PAYGO solar company to operate profitably in a refugee community with low ability to pay and high default rates. Ultimately, the consortium will improve local nutritional outcomes while demonstrating the benefits of PV stand-alone systems for local businesses.

BrightLife, a solar PAYGO company, previously tried to expand its distribution network into the Kiryadongo Refugee Settlement, but the company was challenged by high default rates and low sales, as well as the high cost of maintaining a distribution network in a remote area.

Kiryandongo is one of the most expensive places to be a refugee in Uganda - According to 2021 information from the World Food Programme (WFP), cashtransfers cover just one-third of minimum living expenses.

Meanwhile, the 513 members of the Yelekeni SACCO in Kiryadongo, (over 58% of whom are women), have been working with PHB Development to maximise local livelihood potential since 2019, initially on a project to store and mill maize. Now they are eager to expand their livelihood activities to poultry businesses thanks to solar-based electricity.

In maize and soybean farming, there are many challenges, like the weather conditions. Poultry is not seasonal. If we start raising poultry, it will bring more money than crops.

Joseph Okony, Manager of Yelekeni Farmers' SACCO.





The hatchery will increase the productivity of refugee and host farmers, lower the costs of buying chicks from Kampala, which often die during transit, and make starting a poultry business more feasible. The SACCO has calculated that increased poultry farming would increase not just incomes, but battle child malnutrition when eggs are cheaper. Furthermore, the members want electricity access for their homes and the grain waste from the maize mill can be used directly as chicken feed.

With support from PHB, a scheme was developed that strengthens all the actors and allows the SACCO to add new services for its members. SCCIF lowers the up-front investment and will allow the scheme to be financially sustainable. The hatchery will be powered by a 5 kWp system installed and maintained by UltraTech.

The system will act as a demonstration project for other community businesses that could convert to solar-powered electricity. After training, the SACCO will manage the solar hatchery and will act as a sales agent for BrightLife and UltraTech, lowering those companies' costs of doing business in a challenging market.

The poultry farmers will rent-to-own 50 Wp solar home systems from BrightLife to support their poultry business (light increases laying, attracts insects for food and deters theft) and provide their household with electricity. Payment will be made to the hatchery partly in fertilized eggs and partly with revenues from selling the eggs and chickens on the local market.



A Brightlife SHS in Uganda © Brightlife/Wright



The SACCO is in a unique position to improve the affordability of solar home systems for its members. It has numerous linkages with them to experiment new payment options, such as linking payment schedules to maize harvesting and accepting fertilized eggs as payment.

It can also offer lower prices with group rates due to its bargaining power. Finally, it supports the members payment ability with the improvement in their poultry businesses. All around, this will lead to higher sales and much lower default rates, and better lives for the community.



Discussion of poultry farming with Yelekeni SACCO © PHB Development /Akinyi



# 4.4 Solar E-Cycles in Kakuma – Kalobeyei in partnership with OFGEN and Strathmore University



Solar Tryke at Strathmore University © Solar E-cycles Kenya

Solar E-Cycles, Strathmore University and OFGEN Limited will launch an e-mobility solution in the Kakuma-Kalobeyei area in Kenya using solar-powered electric bicycles.

Building on first experiences around Nairobi (Kenya), a local start-up is paired with a respected university and an Engineering, Procurement and Construction (EPC) contractor in the Commerical and Industrial space to bring affordable sustainable, accessible transport and mobile business solutions to the refugee community in the Kakuma-Kalobeyei area in Northwest Kenya.

Solar-E-Cycles started developing sustainable-mobility solutions in 2015 and has won several awards in Kenya. Now in partnership with Strathmore University and OFGEN Limited, it will attempt to establish a scalable e-mobility and e-business solution at affordable prices for refugee communities in Kenya.

Twenty of the solar tricycles, named Try.Ke's, will be assembled and piloted in the refugee area, with business and user training being provided by Strathmore University, with which the company has an ongoing pilot and partnership in Nairobi. The Try.Ke's will be an affordable alternative to motorcycle or bicycle transport, but are also expected to be mobile solar power stations available for further productive use at daily rates for different applications.



Existing charcoal transport solutions in Kakuma refugee camp © FAO, Thulstrup



TryKes will serve food vendors, farmers, events organizers, health centers, families and communities at \$3.50 per day, which is expected to be more affordable than renting a motorcycle, and will also replace diesel generators for mobile power generation. Two experts will be trained to assemble, maintain and lease the bikes locally, and Strathmore Univeristy will offer training to micro-entrpreneurs that can use the Try.Ke's.

State of the art digital technology makes the project possible and affordable, using digital payment tools, light and efficient solar panels, efficient e-bike motors and pedelec systems, and highly developed remote management tools. Ever since we started using the Try.Ke's for our last-mile food delivery business, we have recorded monthly savings of a whopping \$80! The cycles replaced the conventional motorcycles which we would hire for the same tasks and for only half the carriage capacity. Thank you Solar E-Cycles!

Kwanza Tukule,
Solar-E-Cycle User in Nairobi

Before finding out about Solar E-Cycles, we would rely heavily on ordinary bicycles and motorcycles for our last-mile food delivery operations. However, using the solar-powered tricycle proved to be far much better for us. For the first time ever, we were able to register up to a 300% increase in monthly revenues!"

Mlo Zone, Solar E-cycle User in Nairobi



Test of the Solar tricycle at Strathmore University © Solar E-Cycles Kenya



### 5. What can SCCIF Do next?

# 5.1 Global Action for Humanitarian Settings: Energy Access, Connectivity and Digital Tools

Funding from **USAID Power Africa** and technical support from the Mastercard has made it possible for EnDev to set up the fund and enact a first call for proposals in the area of energy access in Kenya and Uganda. Funding from other coalition partners or interested governments is being sought to roll out more calls for proposals under all three pillars.

Funding can be dedicated with a geographic focus, a thematic focus on one of the pillars, for upscaling projects, or for particular innovations.

### Global action for a paradigm shift

In recent years, international initiatives increasingly call for a transition along with systematic cooperation between development and humanitarian actors. EnDev is well aligned with other actors in this respect, such as the United Nations High Commissioner for Refugees (UNHCR), the Moving Energy Initiative (MEI), the Humanitarian Energy Expert Network (HEEN/SAFE). EnDev is part of the steering group of the "Global Plateform of Action for Sustainable Energy Solutions in Situations of Displacement (GPA)" launched in 2018. The GPA was formed as a coordination and high-level advocacy organization to globally promote the idea that access to energy needs to be systematically addressed in displacement situations, especially by including private actors.

### **SCCIF financing windows**



Geographic focus



Thematic focus



Up-scaling



Innovation

**SCCIF Financing Windows** 



### 5.2 SCCIF Fund design

The SCCIF is implemented by EnDev, a strategic partnership that supports access to modern energy services in more than 20 countries. The fund is designed as an open flexible mechanism which is able to absorb additional funding from other donors. Financing windows are launched either as open or restricted calls with a clearly defined specific objective, selection criteria, application process, minimum & maximum threshold as well as potential percentage of matchmaking.

The fund design takes into consideration the following elements:

- Innovation bringing together actors to design and test innovative technology and partnership solutions
- Scalability delivering innovative, replicable solutions to scale
- Partnership making use of comparative advantages and knowledge of profit and non-profit actors as well as entrepreneurs among refugees and host communities
- Sustainability building the bridge from short- to long-term solutions to meet the needs of refugees and host communities
- Employment creating employment opportunities for refugees and host communities to support social cohesion amongst the target groups
- Do-No-Harm taking into account the "do no harm" principles when introducing private sector actors and innovative solutions in displacement settings

The financing windows need to target at least one of the three SCCIF strategic pillars - energy, connectivity, and digital tools - in combination with the following four options:

- Geographic focus financing window: Funding targeting specific countries or regions
- 2. Thematic focus financing window: Funding targeting a particular challenge or topic related to well-being and livelihoods indisplacement situations, such as mobility, cooking, health, economic empowerment, etc.
- Up-scaling financing window: Financing windows focusing on scaling-up with either geographic or thematic targeting
- Innovation financing window: Financing windows targeting innovation with either a geographic or thematic targeting





### 6. Energising Development (EnDev)

2.6 billion people are without access to modern cooking energy and 759 million people have no access to electricity. This has a dramatic impact on quality of life, environment, health, education and income opportunities. EnDev's involvement focuses on providing access to modern, renewable energy. This is a pivotal factor in strengthening socio-economic development and combatting climate change.

EnDev's drive is to improve the lives of the most vulnerable people, ensuring no one is left behind. Economic opportunities and green jobs are created by building markets for modern, renewable energy. EnDev contributes to reducing greenhouse gas emissions to protect our planet's climate. Its approach is to empower structural, self-sustaining change; kickstarting market and sector development that evolves further without support from EnDev.

EnDev's work is about people. Results are monitored and reported rigorously. EnDev's achievements on helping people, schools, health centres, and companies gain access to electricity or improved cooking technologies can be found in this report. This report also presents EnDev's impacts on gender, job creation, and reduced carbon emissions.

EnDev is a strategic partnership. Dedicated donors, partners and individuals work together to support social development and economic growth by providing access to modern, renewable energy in more than 20 countries around the globe.

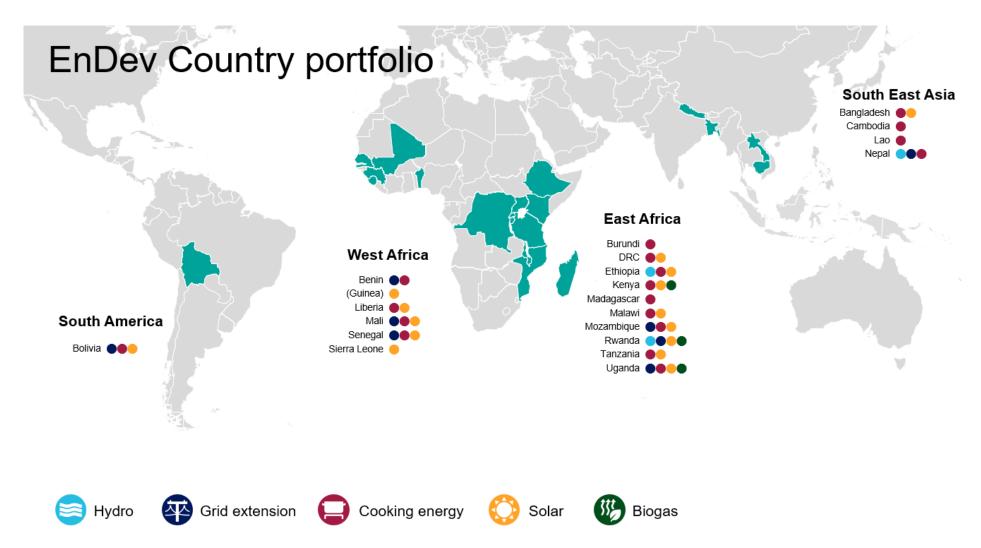
The driving force behind EnDev is the partnership of Germany, the Netherlands, Norway, and Switzerland; donors who are committed to accelerating energy access and socio-economic development.

# 6.1 EnDev and energy in displacement settings

In 2016, EnDev started exploring opportunities in the context of displaced people and stabilisation. EnDev's main approach is to support and incentivise the private sector already active in the nearby local market to invest and expand their business and delivery chains into refugee and host community areas. Very importantly, EnDev also includes host communities in establishing production and sales structures for energy access services. EnDev's support consists of a mix of capacity development, financial support, awareness raising, advocacy and monitoring.

EnDev interventions take into account the needs of vulnerable target groups, which cannot be reached by purely commercial market-driven approaches. As of January 2021, EnDev has provided access to 75,000 people in displacement settings in Burundi, Ethiopia, Kenya, Mali, Malawi, Mozambique, Tanzania and Uganda covering clean cooking access, Pico PV market development, electrification of social institutions and mini-grids deployment.





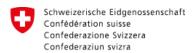
**EnDev Intervention Map** 



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