



**MERCY
CORPS**



**MERCY CORPS UGANDA
RENEWABLE ENERGY
STRATEGY
2024-2027**

Acronyms

AMPERE	Accessing Markets through Private Enterprises for Refugees' Energy'
AYAN	African Youth Action Network
CREEC	Centre for Research in Energy and Energy Conservation
CCS	Clean Cook Stoves
CSA	Climate Smart Agriculture
COP	Conference of Parties
COP	Conference of Parties
CECI	Community Empowerment for Creative Innovation
CRRF	Comprehensive Refugee Response Framework
DANIDA	Danish International Development Agency
DFIs	Development Finance Institutions
DGBP	Danida Green Business Partnerships
IEA	International Energy Agency
EKN	Embassy of the Kingdom of the Netherlands
E4I	Energy 4 Impact
EPCs	Electric Pressure Cookers
ELRHA	Enhanced Learning and Research for Humanitarian Assistance
ESCOs	Energy Service Companies
ETP	Energy Transition Plan
GHG	Greenhouse Gas
GCR	Global Compact on Refugees
GPA	Global Platform for Action
GoU	Government of Uganda
HPP	Hydro Power Plant HumEn Humanitarian Energy
INGO	International Non-Government Organisation
KWh	Kilowatt hours
LPG	Liquefied Petroleum Gas
IOM	International Organization for Migration
PAYGO	Pay-As-You-Go
MEMD	Ministry of Energy and Mineral Development
MCU	Mercy Corps Uganda
MW	Mega Watts
NDC	Nationally Determined Contributions
NREP	National Renewable Energy Platform
OGE	Off Grid Energy
OGS	Off-grid solar
PAYC	Pay-As-You-Cook
PPPs	Public-Private Partnerships
PUE	Productive Use of Energy
PV	Photo voltaics

RHD	Refugee Hosting Districts
RLOs	Refugee-Led Organizations
SWP	Solar Water Pumps
SERP	Sustainable Energy Response Plan
SOLCO	Solar Electric Cooking partnership
SDG	Sustainable Development Goal
SERP	Sustainable Energy Response Plan
SEforAll	Sustainable Energy for All
TRaQ	Technical Resource and Quality
SEforAll	Sustainable Energy for All
SUSTAINED	Supporting Stronger Access to Innovative Energy Solutions
PPPs	Public-Private Partnerships
Pump-Up	Powering the Uptake of Climate Change Mitigating Pumps
UOMA	Uganda open market accelerator
USEA	Uganda Solar Energy Association

Executive Summary

The Mercy Corps Uganda Renewable Energy Strategy (2024-2027) outlines a comprehensive approach to accelerating the adoption of clean and renewable energy solutions across Uganda. Rooted in Mercy Corps' global vision of resilient, equitable, and sustainable communities, this strategy emphasizes adoption of best practices, collaboration, policy advocacy, and innovation to ensure access to affordable, reliable, and clean energy, particularly for underserved populations.

Renewable energy offers a unique opportunity to address pressing challenges in Uganda, such as energy poverty, climate change, and economic inequalities. However, significant barriers remain, including underdeveloped markets, limited infrastructure, inadequate financing, and a weak regulatory framework. This strategy aims to address these challenges by leveraging Mercy Corps' expertise, the resources of strategic partners, and evidence-based practices.

The overall goal of the strategy is **to establish a dynamic, resilient and equitable renewable energy ecosystem serving last-mile communities in Uganda.**

Mercy Corps Uganda (MCU) will focus on three key strategic outcomes to achieve this goal:

- 1. Best practice for last mile communities is adopted within Ugandas renewable energy sector:** Mercy Corps will promote the adoption of proven, scalable renewable energy solutions for last-mile communities, enhancing the efficiency, sustainability, and impact of renewable energy programming. Through knowledge sharing, capacity building, and pilot programs, Mercy Corps will drive sector-wide adoption of innovative approaches, such as Pay-As-You-Go (PAYGO) clean cooking technologies, solar irrigation systems, and productive use of energy (PUE) models.
- 2. Improved regulatory environment for renewable energy adoption in the last mile:** A supportive regulatory framework is essential for scaling clean energy solutions. Mercy Corps will advocate for favorable policies, such as tax incentives and subsidies, while also strengthening the capacity of government agencies to engage effectively with the private sector. Institutional strengthening will be a key focus, helping government entities operationalize renewable energy policies and streamline public private partnerships.
- 3. Value driven partnerships between renewable energy stakeholders are established:** Collaborative partnerships are vital for achieving long-term success in the renewable energy sector. Mercy Corps will facilitate relationships with and between key stakeholders, including private sector actors, government agencies, civil society, and international organizations. These partnerships will be leveraged to drive innovation, mobilize resources, and scale impactful projects that meet the energy needs of last-mile communities.

To achieve the ambitious goals of this strategy, significant financial, technical, and human resources will be required. Mercy Corps will work closely with partners to mobilize these resources, ensuring adequate support for energy access projects.

I. Introduction

Mercy Corps is an international, non-governmental organization (INGO) driven by the belief that a better world is possible. Mercy Corps operates in more than 40 countries across Africa, Asia, Europe, the Middle East, and the Americas, 20 of which have energy programming. In 2021, Mercy Corps merged with Energy 4 Impact (E4I), expanding our energy access expertise while extending the geographical and sectoral reach of our energy initiatives.

Mercy Corps views access to affordable renewable energy as a catalyst to delivering the goals of its ten-year ‘Pathway to Possibility’ strategy. Mercy Corps’ vision is to create a world where people harness the power of renewable energy to build resilient, equitable communities while adapting to and mitigating the impacts of climate change.

Mercy Corps energy access programming is designed to scale models that empower communities—especially the most marginalized—to access the technology, information, financial tools, and social support they need to secure reliable, clean, and affordable energy. MCU, through the Energy 4 Impact platform, also works to strengthen national energy sectors by improving policy frameworks and building the capacities of national and sub-national agencies to expand access to electricity and clean cooking. In addition, Mercy Corps offers business advisory services to energy companies, supporting the piloting of high-potential innovations, business models, and financing strategies to enhance energy service providers’ reach to underserved communities.

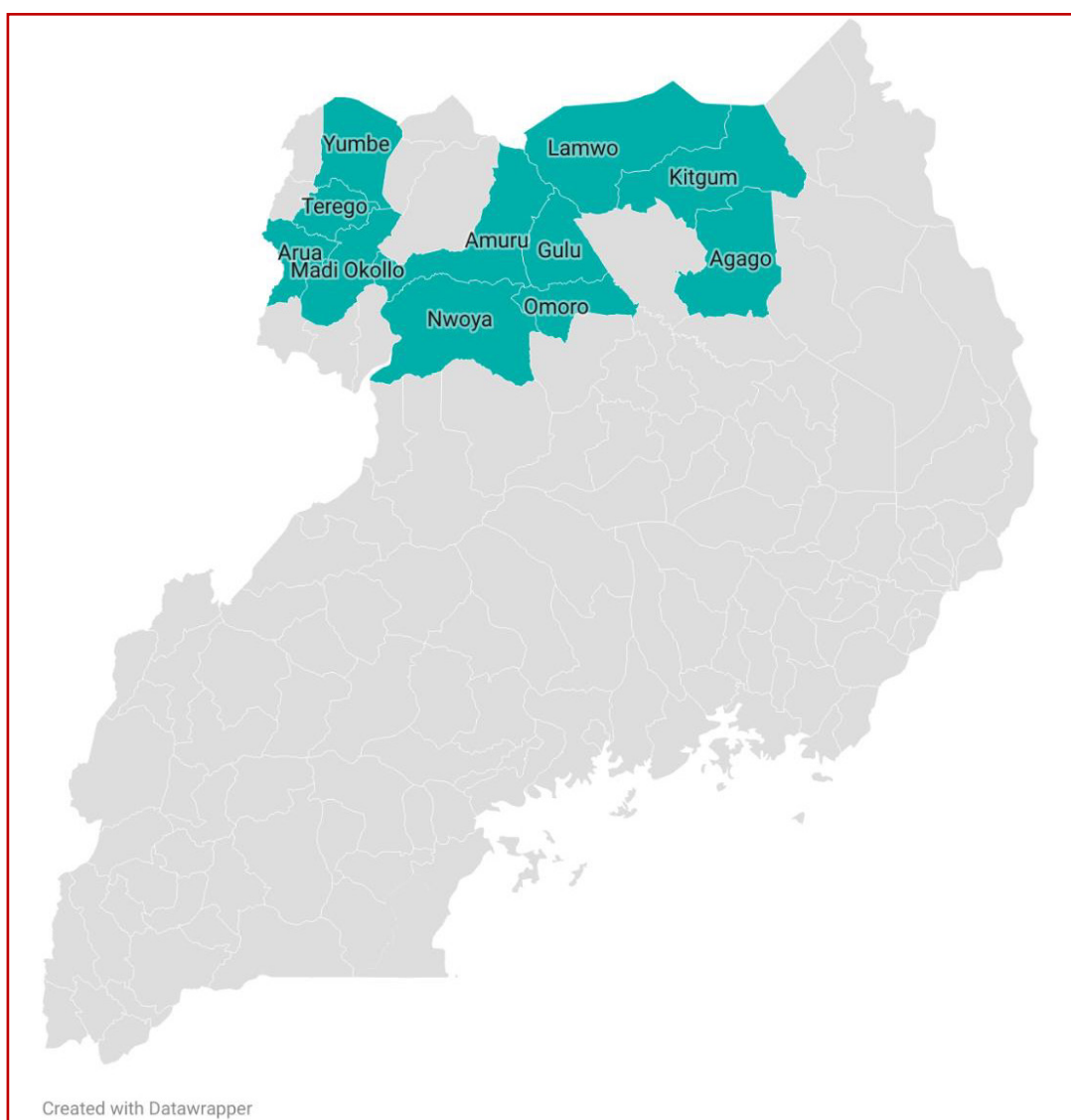
The Mercy Corps Uganda (MCU) Renewable Energy Strategy has been developed to support the achievement of our FY24-27 Country Strategy, which seeks to promote sustainable and equitable development through innovation by partnering with private, public, and civil society organizations. It also aims to increase MCU’s influence by sharing evidence-driven research with policymakers. A key element of MCU’s strategy is a commitment to climate-smart approaches, embedding climate-conscious practices across the organization.

This Renewable Energy Strategy includes an overview of MCU’s energy access portfolio, providing a situational analysis, an overview of the policy and legal framework, and a comprehensive examination of the challenges and barriers to accelerating energy access in Uganda. It identifies strategic interventions needed to overcome these barriers while emphasizing MCU’s approach to supporting last-mile energy access. The strategy also highlights risk mitigation measures, a monitoring and evaluation framework and key stakeholders needed to foster collaboration among the Government of Uganda (G.O.U), development partners, and sector players, aligning efforts to achieve a shared vision for expanded and sustainable energy access across the country.

II. Mercy Corps Ugandas energy access portfolio

Since 2019, MCU has implemented several renewable energy access programs in Uganda in different locations as outlined in the map and the project summaries below.

Figure 1: Mercy Corps Energy Programming Locations
Mercy Corps Energy Program Locations



Strengthening Solar Markets for Refugees in Uganda: 2019-2020

MCU implemented the 'Accessing Markets through Private Enterprises for Refugees' Energy' (AMPERE) programme in partnership with d.light Design Uganda Ltd and Village Power Uganda Ltd in the Bidibidi refugee settlement, Uganda. AMPERE enabled the partners to test, prove, and build evidence for quality, market-driven energy access solutions and humanitarian response programming, including the development of PAYGO models. Through AMPERE, MCU has supported partners to sell 3,918 solar products (primarily PAYGo

household lighting systems, and productive-use solar systems). Ampere's strong gender focus meant that women accounted for 56% of the total solar product sales.



Journey 2 Scale: 2021 to 2022



The Journey to Scale project was a 20-month project funded by Enhanced Learning and Research for Humanitarian Assistance (ELRHA) aimed at promoting the Pesitho innovated electric cook stove, ECOCA. MCU worked within Pesitho to 1) strengthen their supply chain and distribution networks, improve product pricing, and increase uptake of products via pay-as-you-cook (PAYC) modalities, and 2) Develop a sustainable business model that would provide affordable access to the ECOCA for refugees. Pesitho and MCU set up the ECOCA assembly line facility in Yumbe district, creating 15 fulltime jobs; 94% of clients reported high satisfaction with a reduced cooking time. Pesitho has currently distributed 1,200

units in and around the Bidibidi settlement.

Greening Humanitarian responses through Recovery Repair and Recycling of Solar products in displacement settings 2022 - 2024

MCU and the International Organization for Migration- (IOM) are contributing to tackling the challenge of e-waste management in displacement settings through the Innovation Norway-funded E-waste Project in Bidi-Bidi settlement. The E-waste Project aims to create a circular economy for solar lanterns that have been distributed in displacement settings. Based at Mercy Corps' Zone 4 Innovation Centre in Bidibidi refugee settlement camp in Yumbe district, solar lantern repair technicians have collected, repaired, and returned 2,895 solar lanterns since 2022. IOM and MCU are currently implementing the 2nd phase of this project, aimed at supporting the establishment of an independent e-waste business enterprise in the, transitioning its existing grant-funded e-waste center into a sustainable, community-driven model. The project aims to provide essential e-waste management services such as collection, repair, refurbishment, and sale of solar products across all zones of Bidi-Bidi.

Powering the Uptake of Climate Change Mitigating Pumps (Pump-Up) 2023 - 2025

The Pump-Up Uganda project, funded by the Danish International Development Agency (DANIDA) Green Business Partnerships (DGBP) program, seeks to enable 2,300 farmers in Northern Uganda (Yumbe and Gulu districts), including women, youth, and refugee farming communities to build resilient livelihoods and adapt to the negative impacts of climate change by developing the market for solar water pumps (SWPs), coupled with training in Climate Smart Agriculture (CSA) and Integrated Water Resource Management.



Supporting Stronger Access to Innovative Energy Solutions (SUSTAINED) 2024

SUSTAINED is a 12-month programme funded by the Embassy of the Kingdom of the Netherlands (EKN) and implemented in a consortium with Oxfam, CARE, and MCU, in collaboration with Refugee-Led Organizations (RLOs) and private sector actors in Yumbe district. The programme's main goal is to build a sustainable market for off-grid energy products and services that serve households, commercial enterprises, and public institutions in Uganda's Refugee Hosting Districts (RHDs). It is designed to achieve three key objectives:



- Increased access to off-grid solar (OGS), PUE, and clean cookstoves (CCS) for households and enterprises in refugee-hosting areas through demand activation.
- Establishing a sustainable market for OGS and CCS in refugee-hosting areas by improving access to market-strengthening, de-risking facilities for private sector actors on the supply side.
- Enhancing the enabling policy, regulatory, and coordination environment for off-grid renewable energy solutions in refugee-hosting areas.

Solar Electric Cooking (SOLCO) Partnership

SOLCO is a multi-stakeholder partnership committed to increasing access to clean and sustainable cooking solutions for displaced people and host community households across Africa. SOLCO was launched in Uganda in February 2024 with a goal to scale up solar-electric cooking solutions to 150,000 households by 2027. MCU is taking the lead in coordination and implementation of SOLCO providing technical support focusing on localization, supporting resource mobilization and acting as an intermediary between national, local and global organizations.



III. Context and Situational Analysis

Uganda has one of the lowest electrification and clean cooking rates in sub-Saharan Africa¹, yet electrification is a high priority for the government in achieving economic and social development. Uganda has outlined a clear goal through its Energy Transition Plan (ETP)(2023) Sustainable Development Goal 7 (SDG7), which focuses on ensuring access to affordable, reliable, sustainable, and modern energy for all². Currently, only 45% of the population has access to electricity, while 15% have access to clean cooking solutions. This leaves 25 million people, or 55% of the population, without electricity. Access is predominantly concentrated in Kampala and the Central Region, where grid infrastructure is more developed. Around 6 million individuals with access do not reach the International Energy Agency (IEA's) basic bundle of minimum level of electricity services. This low level of access contrasts with the high natural hydro, geothermal and solar resources in the country, and the existing electrical overcapacity.

Currently, around 1.4 gigawatt of electrical capacity is available but cannot be fully used as it is unable to reach the final consumers due to a lack of proper transmission and distribution infrastructures. While many people without access could afford basic electricity services if provided with free grid connections, those in remote areas face challenges in accessing the same services through off-grid technologies.

At the same time, Uganda benefits from abundant solar radiation: the country's estimated solar power potential is around 5,300Mega watts (MW). Several projects most rated 10 MW or lower on solar energy production have been launched including the Soroti Solar Power Station (10 MW) in Soroti District, Tororo Solar North Power Station (10 MW) in Tororo District, completed in 2017, Kabulasoke Solar Power Station (20 MW) in Gomba District, completed in 2018 and the Mayuge Solar Power Station (10 MW) in Mayuge District, completed in 2019³.

Additionally, it is estimated that there are more than 30,000 individual solar PV systems installed in households and institutions such as schools and hospitals, with a cumulative installed capacity of 1.25 MW, mostly located in rural regions (IRENA, 2021). However, even with these projects, Uganda is still not able to meet the demand, especially in the rural areas of the country that are mostly not connected to the national grid.

The off-grid sector in Uganda has steadily grown over the last 15 years with new players including foreign investors entering the market. This has been mainly in areas of Solar Photo Voltaics (PV), most especially solar home systems and mini grids. The lack of grid access in rural areas, high connection fees, and the growth of telecoms which facilitate mobile payment and monitoring systems, are structural factors that have benefited off grid solar development.

Policy measures such as tax exemptions for solar equipment (solar panels, complete solar home systems, deep cycle batteries, etc.) and subsidies for the end-user have also supported expansion of the sector⁴. Uganda Solar Energy Association (USEA) has 189 registered off grid solar companies out of the estimated 400 operating in Uganda. These are active in solar home systems, minigrid, solar water pumping and clean cooking market.

¹ [Uganda Energy Situation - energypedia](#)

² <https://memd.go.ug/wp-content/uploads/2020/07/UgandaEnergyTransitionPlan-2023.pdf>

³ [Uganda 2023 Energy Policy Review](#)

⁴ [Gogla_PURE-Roadmap-Report-Uganda.pdf](#)

The Government of Uganda has set ambitious goals for transitioning to clean cooking, recognizing the numerous benefits it offers. Currently, only 15% of Uganda's population has access to cleaner cooking technologies. About 95% of the population still relies primarily on solid biomass, wood, charcoal, or other vegetal and animal residues, with only one in ten of those using improved biomass cookstoves, while the remainder still relies on traditional, harmful, and inefficient stoves (e.g., three-stone cooking fires). (ETP 2022) Just over 5% of the population uses modern clean fuels such as Liquefied Petroleum Gas (LPG), electricity –mostly concentrated in the urban areas of Kampala and the Central Region – or biogas from biodigesters for cooking⁵.

In the Uganda renewable energy sector, knowledge sharing across stakeholders is limited, with insufficient platforms for exchanging lessons learned or proven best practices⁶. This fragmentation hinders collaboration and the ability to replicate successful models across different regions. Due to lack of best practice, proven models and approaches such as subsidies and financing models, such as PAYG and micro-loans, are insufficiently scaled leaving many rural and low-income households without access to clean energy technologies like SHS, clean cooking stoves, or productive-use energy (PUE) applications. While PUE applications such as solar water pumps and milling machines have significant potential to transform rural economies, their adoption remains constrained by high upfront costs, limited financing options, and the lack of tailored business models for smallholder farmers and entrepreneurs. These challenges are further exacerbated by limited knowledge transfer, which has hindered awareness of the benefits, operational know-how, and scalability of these technologies. To address this, there is a critical need to promote technology transfer, knowledge-sharing, and resource mobilization partnerships, as well as to establish the requisite information management infrastructure and a knowledge hub for renewable energy best practices.

Uganda's government has put in place laws and policies to increase access to modern, affordable renewable energy and energy-efficient technologies. However, the legal framework for solar energy remains underdeveloped. While the on-grid segment is regulated, the off-grid sector lacks clear guidelines. The policy environment is unclear, particularly regarding tax regimes for solar energy, leading to challenges for suppliers. The import taxes also add to the cost of solar systems. While solar panel tax exemptions exist, it has often been difficult for importers to benefit from them in practice. Part of the problem appears to be the complexity of the rules, which in turn may contribute to inconsistency in their enforcement⁷. Additionally, the market is flooded with substandard solar products. Addressing these gaps requires innovative policies to incentivize safe market entry and scale-up, alongside strong consumer protection laws to ensure quality technologies reach last-mile communities.

The Ministry of Energy and Mineral Development (MEMD) is responsible for coordinating stakeholders within Uganda's energy sector. To support this role, the Renewable Energy Department established the National Renewable Energy Platform (NREP), bringing together various sector players, including ministries, departments & agencies, development Partners, the private sector, and civil society organizations. However, the 2023 Energy Policy identifies a significant gap in coordination and information-sharing among government institutions, projects, and the private sector, which results in inconsistent energy programming and complicates sector-wide growth.

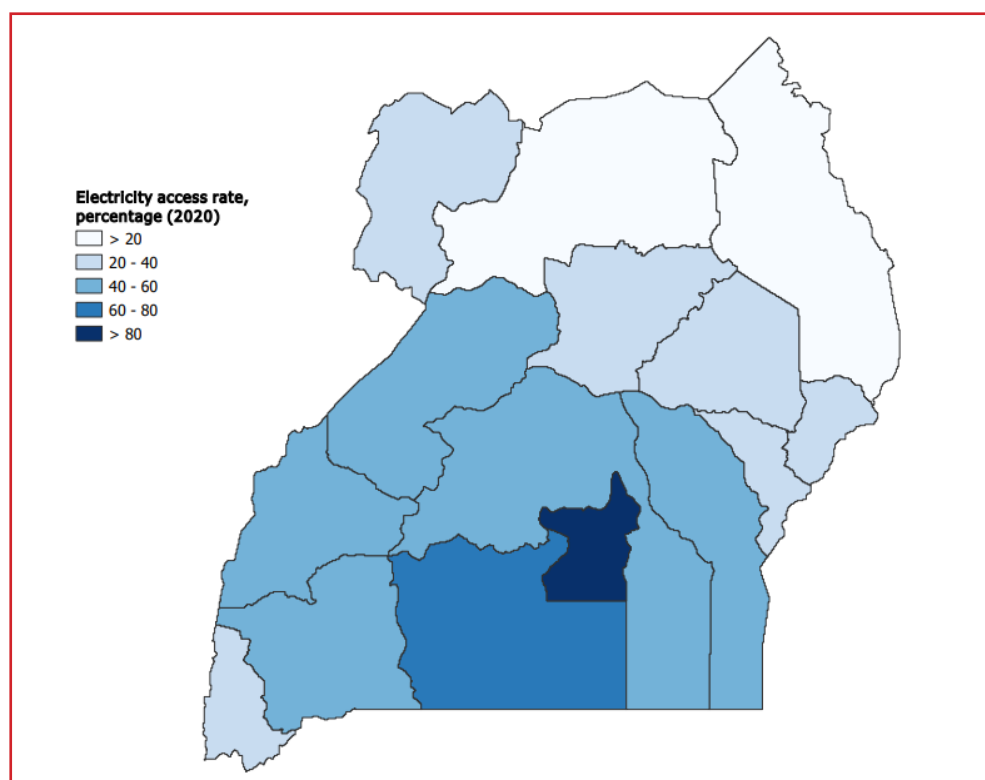
⁵ <https://memd.go.ug/wp-content/uploads/2020/07/UgandaEnergyTransitionPlan-2023.pdf>

⁶ https://www.gogla.org/wp-content/uploads/2023/07/Gogla_PURE-Roadmap-Report-Uganda.pdf

⁷ [Uganda 2023 Energy Policy Review](#)

Effective coordination structures and systems are needed to enable integrated energy planning and collaboration that align with national, regional, and international commitments. Additionally, building strategic partnerships is crucial especially involving civil society to facilitate public-private partnerships (PPPs) to access critical financial, technological, and human resources that can drive sector growth.

Map of Uganda with electricity access rates by sub-region, 2020-2021
Figure 2: Map of Uganda Electricity Access rates by sub region



Source: IEA analysis based on data from the Uganda Bureau of Statistics

The map above highlights that the lowest levels of electricity access are predominantly in northern Uganda. MCU is actively operating in this region and will collaborate with the GoU to address the underlying barriers limiting electricity access in areas with connectivity rates below 20%. MCU will facilitate strategic public-private partnerships, promote the adoption of sector best practices, and advocate for an enabling environment that encourages active participation from all key stakeholders in advancing the energy access transition plan.

Uganda's legislative and policy framework for energy

Vision 2040 aspires to change the country from a predominantly low-income to a competitive upper-middle income country within 30 years. The vision acknowledges energy as one of the critical fundamentals required to harness the country's opportunities and drive the industrial and service sector. Key energy related targets under vision 2040 includes; raising per capita electricity consumption to 3 668 kilowatt hours (kWh) and increasing the share of the population with access to electricity to 80%, by 2040.

The **National Energy Policy for Uganda 2023** replaces the previous energy policy, which was adopted in 2002. The overall objective of the new National Energy Policy is to ensure a sustainable, adequate, affordable, competitive, secure, and reliable supply of energy at the least cost geared to meet national and county needs while protecting and conserving the environment (MEMD, 2023a). The National Energy Policy has highlighted key focus areas including: "increasing power generation, expanding the electricity transmission and distribution grid networks, increasing energy efficiency, promoting the use of alternative energy sources, and strengthening the policy, legal and institutional framework" (MEMD, 2023a). Under National Energy Policy 2023, the Ugandan government aims to reach universal access to electricity and 50% access to clean cooking by 2040.

The **Renewable Energy Policy (2007)** notably established a standardised PPA for renewable projects, as well as new, higher feed-in tariffs and a number of financial and fiscal preferences. It also created a Renewable Energy Department at the MEMD. The policy also set a target to increase electricity generation capacity from renewable sources to 1,420 MW by 2017, a goal missed by the target date but likely to be achieved during 2023 with the commissioning of the 600 MW Karuma Hydro Power Plant (HPP). The policy also aimed to increase the contribution of renewable energy sources other than large hydropower to more than 60% of generated output by 2017.



In 2023 Uganda developed the **ETP** which lays the groundwork for Uganda's net zero ambitions. ETP's priority is to reach every household with energy access by 2030. More robust connections and modern cooking fuels are prioritized where possible, but smaller, transitional, and affordable solutions that can deliver immediate benefits by 2030 are deployed where needed.

Uganda has committed to reducing its emissions by 24.7% by 2030 through its **updated Nationally Determined Contributions (NDC) 2022** which set specific energy targets to improve access and use of electricity from sustainable sources; from 24% in 2020 to 75% by 2030 and Increase access to clean energy cooking from 15% to 65% by 2030.

The MEMD is currently developing an **Integrated National Clean Cooking Strategy**, which will guide the government and its partners in meeting its clean cooking targets. The sector's mandate is also governed by other sector policies, including the Gender Policy (2007), Climate Change Policy (2015), Environment and Social Safeguards Policy (2018), etc. The Climate Change Policy (2015) supports energy policy implementation through the promotion and development of new clean energy technologies to reduce Greenhouse Gas (GHG) emissions.

The GoU continues to lead efforts in implementing the Global Compact on Refugees (GCR) by promoting inclusive policies and integrating refugee response in longer-term plans at various levels. The **Sustainable Energy Response Plan (SERP)** for Refugees and Host Communities complements the holistic approach of the Comprehensive Refugee Response Framework (CRRF) and sets a precedent by integrating refugees into national energy planning. The SERP envisions that refugee and host communities attain universal access to affordable, reliable, and clean energy for socio-economic transformation in an environmentally sustainable manner.

The sector also ascribes to international and regional legal and policy frameworks that Uganda is a party to, e.g., the SDGs, Sustainable Energy for All (SEforAll), East African Community laws and policies, among others. The integration of gender and equity considerations into policies, programmes and projects fosters women's involvement in policy development and the advancement of human rights.

Systemic Barriers to Energy Access for last mile-communities

The table below summarizes the key barriers impeding energy access for unserved populations in Uganda. These barriers are categorized into demand-side, supply-side, and enabling environment challenges, highlighting the obstacles that hinder both the adoption of energy solutions by consumers and the effective functioning of market systems. Addressing these barriers is essential to unlocking energy access for vulnerable communities and fostering sustainable development.

Table 1: Key Barriers to Energy Access in Unserved Communities in Uganda

Demand-side barriers are classified as obstacles or challenges that impede the willingness or ability of consumers to purchase a particular product or service. Some of the demand side barriers for energy access in the unserved populations in Uganda include:	
Affordability	Most populations in hard-to-reach communities such as displacement settings live below the poverty line and struggle to afford energy solutions. Often, the most affordable solutions are not the cleanest, while the cleanest solutions are affordable only to higher-income households. Lack of business models or financing instruments that reduce high fixed costs for energy access exacerbates the affordability challenges⁸. PAYGO models and asset financing are central to supporting consumers to purchase energy solutions, the costs of which are often perceived as prohibitive. However, vulnerable communities such as refugees and small businesses lack access to and awareness of financial services, and energy companies lack market information and technical expertise to design appropriate PAYGO models (Open Capital 2023 assessment). In addition, the main barriers to the widespread adoption of energy solutions are affordability, unwillingness, or inability to pay out of pocket, and limited access to flexible financing.
Lack of Awareness	Hard-to-reach communities in Uganda face significant awareness gaps regarding the availability and usage of solar technologies. Many households and businesses lack knowledge about energy solutions for productive uses and struggle to access financing for solar PV systems. This challenge is particularly pressing given the high upfront costs of purchasing productive use of solar energy equipment, which often hinder the sector's scalability. Additionally, consumers are generally unable to identify quality-certified energy products or demand warranty and after-sales services, further limiting their access to reliable energy solutions. There is a critical need to raise awareness of the applications of solar technologies for both domestic lighting and productive uses, alongside financing mechanisms tailored to these technologies. Targeted awareness campaigns should also address social barriers and norms that restrict access for women and marginalized groups. Messaging should emphasize existing, affordable clean energy products

⁸ [Gogla_PURE-Roadmap-Report-Uganda.pdf](#)

	that are not only user-friendly but also have a meaningful environmental impact by promoting sustainable energy consumption. This comprehensive approach will help drive adoption and enhance the sector's growth potential (OCA 2023 assessment).
Lack of aggregated demand	The relatively low population density, poor infrastructure, and lack of developed urban markets raise costs for sales and marketing by Energy Service Companies (ESCOs) wishing to build market share in hard-to reach regions. Due to limited purchasing power and varying energy needs among individuals, it becomes difficult to create a sustainable market. Without a significant aggregate demand, it becomes challenging for energy providers to invest in infrastructure and offer affordable solutions in such regions.
Supply-side barriers are classified as obstacles or challenges that hinder the production and supply of goods and services in a market. These barriers can affect the ability of suppliers and producers to enter or operate within a particular industry. Supply-side barriers for the clean energy products market in unserved communities in Uganda include.	
Lack of adapted renewable energy products	Existing energy technologies in the market may not be suitable for the most vulnerable communities or may not align with the needs of the end users. For example, the cooking preferences and needs of end-users are highly localized based largely on geography, culture, and income level. Without access to adapted energy products, such as efficient cookstoves or affordable solar solutions, vulnerable communities may continue to rely on traditional, less sustainable energy sources.
Lack of adapted asset financing and PAYGO models	The lack of PAYGO models adapted to the income profiles of end users are key barriers to uptake in the hard-to-reach markets (OCA 2023 assessment). In addition, financial service providers such as banks and micro-finance institutions have few offerings in the asset finance space, and these are not adapted or segmented to such market.
Lack of market information	The lack of market information about the energy sector in unserved communities majorly due to a lack of robust data, the fragmented nature of the market and access constraints prevents ESCOs from making informed investment decisions and efficiently allocating capital. Without adequate market benefits, and the associated costs. This lack of information hinders decision-making and makes it difficult for the market to function effectively.
Lack of distribution and supply chain	Distribution and overall storage and logistics costs for clean energy solution suppliers are high, particularly for hard-to-reach areas given their remoteness and the lack of developed retail infrastructure. This is in addition to the limited operational capacity for installation, maintenance, and after-sales service.
E-waste	Off-grid solar products eventually reach end-of-life and require repair or disposal. Off-grid solar products can be recycled through repairs or safely disposed off in a manner that ensures environmental protection.

	However, e-waste has not been well addressed in access to energy interventions to date, with extremely limited functional e-waste recycling centers active all over the country. This means consumers are largely unable to repair or recycle equipment, leading to a growing e-waste problem, with attendant negative impacts on the environment (OCA 2023 assessment).
Enabling environment barriers are defined as obstacles that impede the creation or maintenance of a conducive environment for effective market systems development. These barriers can affect the interactions among market actors, hinder competition, and limit the growth and sustainability of market systems. Enabling environment barriers for the Off Grid Energy (OGE) market in Uganda include:	
Inconsistent Policy Environment for Renewable Energy	Uganda's renewable energy resources remain largely untapped due to the perceived technical and financial risks. Key barriers include the lack of an enabling framework for exporting surplus power from solar PV selfgenerating facilities to the national grid, limited awareness of solar system standards, importation of substandard equipment, and poor aftersales service, which undermine market confidence. This creates risk and uncertainty for private investors wishing to enter the sector. The GoU has developed several policies to promote clean cooking, including the Renewable Energy Policy 2007 and the Energy Policy 2023, which focuses on transitioning from biomass to electricity for cooking. The government has also introduced a cooking tariff, which is a declining block tariff for domestic consumers. However, despite these efforts, there is still need to review the existing policies to improve affordability, particularly for low-income households, and address barriers related to the high upfront cost of appliances such as Electric Pressure Cookers (EPCs). Currently, high import taxation on these appliances contributes to their high cost. Waiving or reducing these taxes could make such products more affordable. The market is also flooded with sub-standard products that are significantly cheaper than durable clean energy solutions and are distorting consumers' perception of energy solutions. The market needs stricter enforcement of product standards to improve consumer confidence.
Weak Coordination:	A weak and uncoordinated policy and advocacy landscape at the national level has had limited success driving large-scale national transformations. The lack of coordination for market-development activities in the country is a key barrier, with the sector characterized by a variety of approaches, including market-distorting interventions such as distributions and grants, a high level of bureaucratic impediments to access hard to reach areas such as refugee settlements and a lack of a robust platform engaging

	civil society, private sector, and government in the coordination of energy access projects. Coordination at the donor level, for example through platforms such as the Refugee Humanitarian Partners Group (RHPG), must also be strengthened so that funding approaches align with market-based strategies.
Quality assurance:	Protections for the end-users of OGE products in Uganda are still weak and the market in quality products, affecting the competitiveness of genuine products on the market compared to cheaper, lower-quality alternatives. A lack of consistent application of context-appropriate standards for both the private sector and civil society also hampers energy access projects in hard-to-reach areas.

IV. Our Approaches

Mercy Corps has innovated and a number of effective approaches to supporting access to renewable energy in the last mile. These include:

Mercy Corps Market System Development (MSD) approach: MCU focuses on identifying barriers that prevent markets from serving all participants effectively and addressing these barriers in a way that promotes long-term change. In the last-mile energy sector in Uganda, MC collaborates with different partners to address the underlying market barriers with the aim of building sustainable local energy ecosystems, providing technical assistance to ESCOs looking to enter last mile energy markets. Our experience working with private sector companies has proven that acting in partnership with the private sector is essential to making market systems work better for the most vulnerable. We have learned that partnerships with the private sector are critical to achieving scale, even in complex settings.



Social Behavior change: MCU has an established presence in the humanitarian setting in Uganda and currently delivers a portfolio of market-driven, energy access projects in the settlements in West Nile. MCU will leverage its presence and strong community relations in the RHDs to deliver social behavior change activities that promote understanding of the environmental, economic and physical benefits of renewable energy products Demand Aggregation: MCU leverages its extensive field presence and experience to aggregate demand and create more sustainable energy markets. By identifying and mobilizing existing groups, cooperatives, and local networks, we will accelerate demand that makes energy service provision more cost-effective and sustainable. Aggregating demand reduces operational costs and increases the viability of network expansion for ESCOs, enabling them to reach last-mile communities more efficiently.



Innovative financing solutions: To address affordability challenges MCU promotes a range of financing options to encourage private sector investment, whilst focusing on mechanisms that remove the high upfront costs of products for consumers.

- **Pay-as-you-go (PAYGo):** The PAYGo model has proven to be an effective solution for financing clean energy products. This model allows consumers to pay for energy products over time, making them more affordable and accessible. MCU has partnered with PAYGo energy providers like d.light and Village Power to expand access to renewable energy products, particularly for low-income households and small businesses. By utilizing PAYGo and Pay-as-you-Cook (PAYC) modalities, we have increased access to modern, affordable, and sustainable energy services, allowing consumers to pay for products based on their usage.
- **Enter Energy Facility:** MCU established Humenergi, a private limited company, to provide sustainable energy as a service to refugee and host communities. Humenergi offers a blended financing model that combines technical assistance with financial support to enable energy companies to build sustainable business models in displacement settings. This approach provides critical support to energy companies seeking to expand their operations in these challenging environments, ensuring that energy solutions are both accessible and scalable
- **Results Based Financing:** MCU has successfully utilized a results-based financing (RBF) model to drive the adoption of solar products in refugee settlements. In Bidibidi, for example, MCU built consumer confidence in high-quality solar products by tying subsidies to the successful installation and customer satisfaction. This results-based model incentivized companies to provide quality service and has allowed them to sell smaller solar products at market prices, thus creating a sustainable market for off-grid energy solutions.
- **Asset financing:** MCU supports the development of asset financing mechanisms that help consumers access renewable energy products without the burden of upfront costs. By working with financial institutions and energy companies, we enable households and small businesses to obtain solar products on financing terms that align with their income profiles. This approach reduces the barriers to accessing clean energy, empowering consumers to invest in long-term, sustainable solutions.

E-waste: Off-grid solar products eventually reach end-of-life and require repair or disposal. Off-grid solar products can often be recycled and reused through repairs or safely disposed of in a manner that ensures environmental protection. MCU is piloting a sustainable circular economy model to address e-waste challenge in the last mile communities.

Policy and Advocacy: MCU through the Energy 4 Impact platform, works to strengthen national energy sectors by improving policy frameworks and building the capacities of national and sub-national agencies to expand access to electricity and clean cooking. MCU also works in partnership with other partners under GPA and SOLCO platform to influence policies and regulations that enable renewable energy access and affordability.

V. Guiding Principles

The Renewable Energy Strategy is guided by MCU's core global energy access principles, which are designed to power resilience through innovative, market-based energy programming that reduces emissions and supports resilient livelihoods.

Building community climate-smart resilience: Climate shocks and stresses disproportionality affect those who are heavily reliant on natural resources. Our energy access strategies seek to reduce natural resources' exploitation by building communities able to effectively and productively utilize, manage, and transport these resources. At the same time, our work addresses the vulnerabilities embedded within energy systems, which are increasingly exposed to extreme weather events.



Addressing climate change and strengthening ecosystems: We prioritize renewable energy solutions that will allow communities to reduce their reliance on scarce natural resources, strengthening damaged and at-risk ecosystems. This will reduce environmental degradation and increase ecosystems' ability to cope with climate changes and capture carbon dioxide from the atmosphere.

Sustainability: Reflecting the UN SDG 7, MCU looks to prioritize sustainable energy solutions that meet the current energy needs of communities without threatening the ability of future generations to do the same. In our vision, renewables play a catalytic role in the economic, social, and environmental dimensions of sustainability, crucial to create lasting positive impacts on society and the planet.

Evidence-based: MC promotes evidence-based research on how investments in inclusive energy access have positive impacts on community resilience and climate adaptation. Champion gender, inclusion, and diversity: Our strategies aim to cultivate greater equity and inclusion by empowering those who are the most vulnerable within the community. We promote partnerships with women-led energy companies, and we deliberately target women and female youth when supporting green job opportunities.

Scale: We believe that any investment must tackle the problem on a scale. We address challenges at their roots, starting small and learning as we go. We pilot our programs directly with specialized private sector organizations before improving and replicating at scale.

VI. Mercy Corps Uganda's Renewable Energy Strategy Development

To develop this strategy, consultations were carried out with MCU 's Program and Quality (PaQ) team, senior management, Technical Resource and Quality (TRaQ) unit, and field teams to gather insights for shaping the renewable energy strategy's design and structure.

The first step involved reviewing national energy policies, sectoral plans and goals, and related commitments. This included analyzing demand and supply dynamics and evaluating the broader enabling environment. Through desk research, we identified key needs and challenges across the ecosystem, focusing on last-mile communities, private sector players, government agencies, and supporting organizations.

Key actors engaged in energy access initiatives were mapped, alongside ongoing and planned interventions. This exercise provided insights into existing efforts, enabling us to learn from past experiences and ensure our strategy complements and supports the broader ecosystem.

Using insights from the stakeholder mapping and desk review, a comprehensive gap analysis was carried out. This identified critical barriers and unmet needs across supply, demand, and enabling environment dimensions. These findings highlighted priority areas requiring accelerated interventions to catalyze energy access for last-mile communities.

Based on the gap analysis, MCU has identified and prioritized high-impact interventions addressing supply and demand barriers while strengthening the enabling environment. Our approach emphasizes fostering partnerships, leveraging best practices, and strengthening the enabling environment towards scaling clean energy solutions in Uganda.

Finally, internal workshops were held with the MC Uganda and TRAQ teams to review and discuss the proposed interventions. This workshop established consensus on the critical market gaps, strategic vision, and key priority actions required to achieve the vision outlined in this document



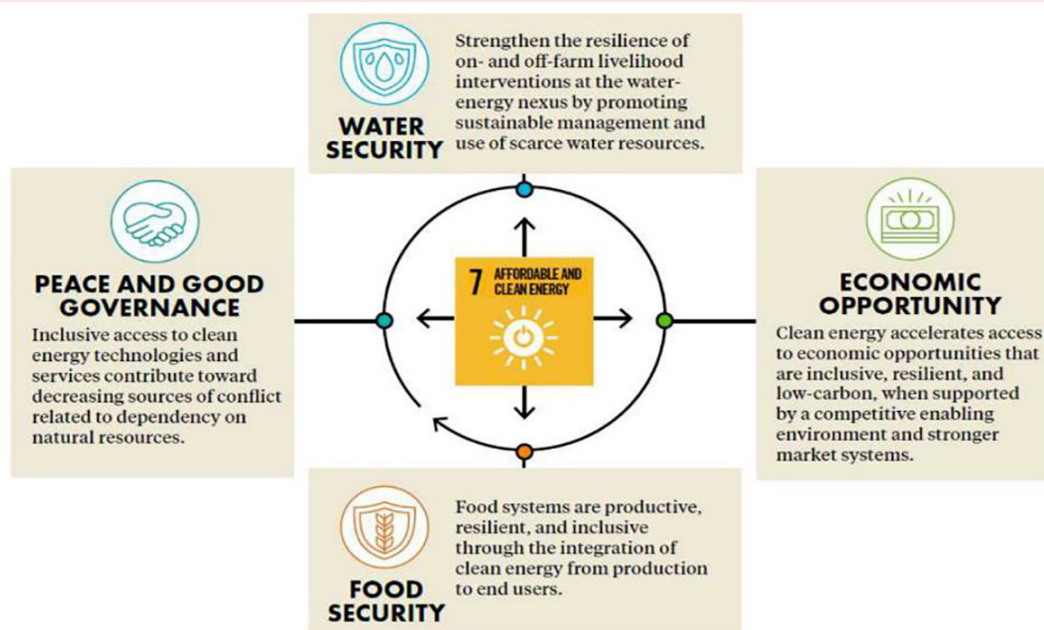
VII. Linking Energy Access to Mercy Corps Uganda's Country Strategy

The renewable energy strategy is designed to support the three key outcomes under the Uganda country strategy as follows:

Figure 3: Global Mercy Corps Energy Access Approach

Mercy Corps Approach to Power Resilience

Our **vision** is a world where people leverage the power of renewable energy to build inclusive, resilient communities, while adapting to and mitigating the impact of climate change

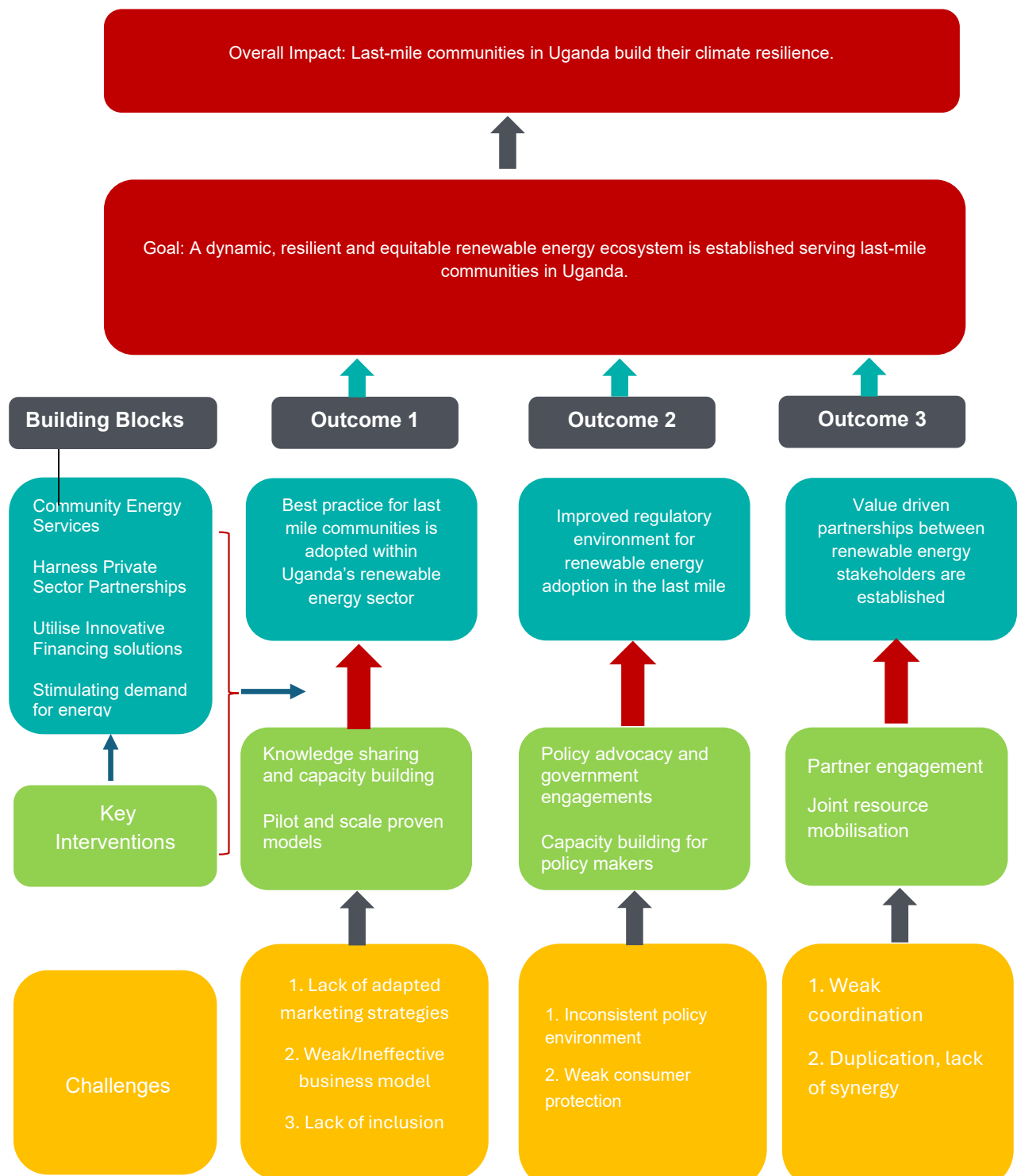


Economic empowerment: The Uganda country strategy targets that, by 2027, economically marginalized populations in Uganda will have access to inclusive and equitable financial services and diversified livelihood opportunities. Renewable energy plays a significant role in the economic development, to support this MCU aims at increasing access to affordable and reliable energy to empower communities to be able to engage in economic activities contributing to broader economic growth and development.

Food security: The Uganda country strategy targets that, by 2027, targeted marginalized populations will benefit from increased sustainable production, access to, and consumption of safe and nutritious food. MCU will aim to integrate renewable energy solutions into agricultural practices to enable marginalized populations in Uganda achieve greater food security through improved production, processing, storage and enhanced sustainability in their food systems.

Peace and good governance: The Uganda country strategy targets that, by 2027, men, women, and youth in Uganda advance meaningful engagement in peace and inclusive governance systems. Use of Renewable energy reduces the impacts of climate change which can be a driver of conflict due to resource scarcity. MCU will improve access to renewable energy for cooking, lighting, and productive use of energy to build communities that are resilient to environmental shocks and stresses, reducing the potential for conflicts over the limited natural resource.

VIII. Theory of Change



IX. Goals and Objectives of the Renewable Energy Strategy

This section details the overall impact, goals and objectives of the renewable energy strategy. Priority actions are listed under each objective.

Overall Impact: Last-mile communities in Uganda build their climate resilience.

Overall Goal: To create a dynamic, resilient and equitable renewable energy ecosystem in Uganda that empowers communities to transition to renewable energy.

Objective 1: Best practice for last mile communities is adopted within Ugandas renewable energy sector

Under objective one, MCU will drive the integration of proven, scalable renewable energy solutions and approaches across the energy sector. MCU will promote the adoption of best practices to enhance the efficiency, sustainability, equity and impact of renewable energy programming, ensuring they meet the needs of vulnerable and underserved communities.

Priority Action 1.1: Knowledge Sharing and Capacity Building

MCU will capitalize on sector-wide knowledge exchange through internal and external capacitybuilding, technical trainings, webinars and working groups to drive sector knowledge sharing and dissemination of learning products and best practices from renewable energy programming, focusing on innovations in technology, financing, and service delivery models.

MCU will also facilitate peer-to-peer learning by creating platforms where stakeholders can exchange lessons learned and solutions that address sector challenges such as affordability, reliability, and access to energy in the hard-to-reach regions.

Key activities:

- Develop platforms for sharing energy learning products for the ongoing energy projects in Uganda such as community of practice for sharing best practices both at regional and national levels.
- Partner with various organizations to establish the requisite information management infrastructure and knowledge hubs that facilitate best practice sharing.
- In collaboration with other peer organizations, lead the process of creation and sustenance of the linkages between academia, research institutions, private sector and government by developing a guiding framework for knowledge sharing on energy programming.
- Secure leadership positions in working groups and the different energy association in Uganda.

Priority Action 1.2: Scaling Proven Models

MCU will identify high-impact renewable energy solutions (e.g., productive use of energy (PUE), PAYGO clean cooking technologies, e-mobility) and pilot these models in targeted communities, with a focus on scalability and sustainability. This effort will build on ongoing initiatives such as PUMP-UP, E-waste, and SUSTAINED. In partnership with Energy 4 Impact, MCU will continue to provide technical assistance and support to local and international energy service companies, including financial institutions, to help them adopt and scale clean energy models, particularly in last-mile communities where access to energy is limited.

Key activities:

- Develop a clear roadmap for scaling viable renewable energy technologies, detailing the sector challenges, roles of stakeholders, required resources, and necessary collaborations this will also help to enhance the capacities of local NGOs, private sector actors, and communities to implement and sustain renewable energy technologies at scale.
- Develop and operationalize innovative blended financing mechanisms, such as HumEn to support energy companies operating in last-mile markets to tackle supplyside challenges and approaches to de-risk investments, enabling financial institutions to extend credit to energy companies and end-users in rural markets.
- Intensify resource mobilization efforts to secure international and local funding to support the scale-up of renewable energy technologies this will be achieved through partnerships with government agencies, peer organizations, and private sector actors to accelerate the adoption and scale-up of renewable energy solutions.
- Collaborate with financial institutions to develop affordable financing products, such as micro-loans and lease-to-own models, to make renewable energy technologies accessible to low-income households and small businesses.
- Collaborate with the government in creating enabling policies that encourage public and private investments in renewable energy technologies. Including supporting offseason production, targeting domestic and export markets for horticultural products to increase demand for PUE products such as solar irrigation pumps.

Objective 2: Improved regulatory environment for renewable energy adoption in the last mile

MCU will work to strengthen the regulatory and policy frameworks necessary for expanding access to renewable energy for last-mile communities. By advocating for favorable regulations and supporting government capacity-building, MCU will create a more enabling environment that accelerates the deployment of clean energy technologies and solutions at scale.

Priority Action 2.1: Policy Advocacy and Engagement

- MCU will engage with government agencies to advocate for policies that prioritize renewable energy development, such as tax incentives, subsidies for renewable energy technologies, and simplified licensing procedures for energy companies.
- Through a legitimized partnership founded on an MoU, MCU will engage with the MEMD to participate in the review and development of national energy policies,

ensuring that last mile communities are positioned as a key customer segment in Uganda's energy market.

- MCU will facilitate multi-stakeholder forums involving government, private sector, civil society, and development partners to discuss and propose regulatory reforms that support renewable energy adoption in the last mile.

Priority Action 2.2: Support Institutional Strengthening: MCU will assist government ministries and regulatory agencies in improving their capacities and skills in engaging the private sector in the deployment and implementation of renewable energy projects in the last mile. This support will include targeted interventions aimed at enhancing institutional performance, policy implementation, and public-private collaboration to accelerate renewable energy access in the last mile.

Key activities;

- MCU, in collaboration with Energy 4 Impact, will provide specialized technical support to government ministries and agencies on best practices for engaging the private sector, focusing on collaboration models, public-private partnerships (PPPs), and identification of shared goals and co-creation of renewable energy solutions for last mile communities.
- MCU will assist government agencies in operationalizing renewable energy policies by providing technical support in designing implementation guidelines, setting up institutional frameworks, and developing operational plans.
- MCU will support the government ministries in accessing international donor funds and Development Finance Institutions (DFIs) to co-finance renewable energy projects and strengthen the institutional frameworks, for implementation of renewable energy projects, whilst ensuring these funds are targeted to last mile communities.

Objective 3: Value driven partnerships between renewable energy stakeholders are established

MCU will build and sustain partnerships with and between key stakeholders, including the private sector, government agencies, civil society, and international organizations. These collaborations will be focused on leveraging resources, expertise, and networks to catalyze innovation, drive investments, and ensure the long-term success of renewable energy projects.

MCU will implement a range of strategies to establish and strengthen partnerships including facilitating PPPs to enable collaboration between government entities and private companies in designing, funding, and implementing projects, with an emphasis on co-financing arrangements to pool resources. Partnerships with the private sector will foster innovation and market expansion by connecting energy companies, financial institutions, and technology providers. Cross-sector collaborations will also be pursued to integrate renewable energy into other areas such as agriculture, healthcare and economic development activities. MCU will also work with local and international NGOs to co-create inclusive energy solutions, ensuring accessibility for underserved and hard-to-reach populations.

Priority Action 3.1: Engagement and Relationship Building

This priority action will be addressed through fostering meaningful connections and collaborations with key stakeholders to achieve shared renewable energy goals. This will be done through the following key activities;

- Continuous Stakeholder Mapping and Assessment; MCU will identify and assess potential partners based on their resources, expertise, and alignment with MCU's renewable energy objectives. Stakeholder mapping and engagement will be an ongoing process to build and maintain a comprehensive database of key stakeholders, enabling a clear understanding of their interests and priorities.
- Formalizing Partnerships: MCU will establish formal Memoranda of Understanding (MOUs) with key stakeholders to solidify mutual commitment to shared goals and objectives.
- Act as intermediary: MCU will act as an intermediary through facilitating dialogue and collaboration between diverse actors, particularly bridging gaps between government entities and private sector players.
- Training and Capacity Development will leverage its existing network to advocate and facilitate training programs for local partners, especially local ESCOs and community-based organizations. These programs aim to enhance their technical, operational, and financial capabilities to actively participate in renewable energy initiatives.
- Leveraging Strategic Partnerships: MCU will collaborate with partners such as SOLCO, the Global Platform for Action (GPA), and Energy for Impact to provide training and development opportunities. These partnerships will support the localization strategy by fostering knowledge transfer and capacity building among local stakeholders.

X. Key Stakeholders

MCU recognizes the importance of collaboration and cooperation in addressing energy access challenges. Strategic partnerships play a pivotal role in amplifying our capacity to accelerate progress towards a more sustainable and equitable future and are part of our efforts to harness collective strengths, resources, and expertise to drive positive global change. MCU has conducted a comprehensive stakeholder mapping and identified potential partners in supporting the MCU vision for improving energy access for the vulnerable communities;

Table 2: List of the key stakeholders in Energy ecosystem

Category	Stakeholders	Roles and Responsibilities
Government	Ministry of Energy and Mineral development	Mandated to provide policy guidance on all energy projects.
	Ministry of Water and Environment	Provides policy guidelines on water and environmental issues and Oversees implementation of NDC. MCU will collaborate with the MoWE in fundraising opportunities for renewable energy projects targeting global climate change opportunities such as GCF (Green Climate Fund) and Adaptation Fund
	Uganda Energy Credit Capitalization Company (UECCC)	Provides financial, technical and other support for Renewable Energy Projects and Programmes. MCU will collaborate with UECCC in implementation of the Energy Access Scale Up project.
Donors		
	GIZ/Endev	Technical and financial assistance, grants, market development, and RBF
	World Bank/ EASP	Financial assistance and RBF
	SNV	Technical and financial assistance, grants, market development, and RBF
	USAID/POWER AFRICA	Technical and financial assistance, grants, and RBF.
	Embassy of the Kingdom of Netherlands (EKN)	Grants.
	IKEA	Grants.
Membership Organisations		
	National Renewable Energy Platform	NREP Coordinates efforts among different stakeholders namely; central government,

		local government, development partners, private sector and civil society organizations, financing, academic and religious institutions for renewable energies in Uganda.
	Uganda Solar Energy Association (USEA)	USEA is an independent nonprofit association dedicated to facilitating the growth and development of solar energy business in Uganda and the East African Region.
	Solar Electric Cooking Partnership (SOLCO)	Coordination of Solar Electric Cooking Partners in Displacement setting
UN agencies		
	UNHCR (United Nations High Commissioner for Refugees)	Co-manages the refugee settlements in Uganda together with OPM. They provide protection and assistance for displaced people throughout Uganda, including the delivery of critical services such as for water, sanitation, health, shelter, and nutrition. They support coordination among different partners.
	World Food Programme (WFP)	Providing food assistance in kind or in cash. The agency is exploring how to support clean cooking programming, for example by including end user subsidies and voucher schemes and is part of the School Feeding Coalition in Uganda.
	The International Organization for Migration (IOM),	Technical and financial support on E-waste management.
Refugee Led organizations		
	Community Empowerment for Creative Innovation (CECI)	Advocacy and Community awareness raising in northern Uganda.
	African Youth Action Network (AYAN)	Advocacy and Community awareness

Energy companies		
	Solar Energy Companies	A detailed mapping of the energy companies has been done Energy Partners Mapping Tool_Master.xlsx
Financial Institutions		
	Equity Bank	Credit support to off-grid companies and endusers
	FINCA	Credit support to off-grid companies and endusers
	Vision Fund	Credit support to off-grid companies and endusers
Research Institutions		
	Centre for Research in Energy and Energy Conservation (CREEC)	CREEC is a non-profit research organisation which provides research on approaches to renewable energy interventions and provides technical expertise.
	Uganda open market accelerator (UOMA)	Technical assistance to financial institutions and Market intelligence reports.
Local Communities		
	Agriculture cooperatives	End users/customers.
	SACCOS/VSLAS	End Users/Customers.

XI. Greening Mercy Corps Uganda

MC global in achieving its environmental sustainability has committed to shifting its programming and operations to meet our ambitious climate commitments. By 2030, we aim to reduce our carbon emissions by 50%, from 63,309 metric tons with an interim target of 25% by the end of FY2024, inclusive of both per capita and total emissions to account for any growth or reduction in our size over this period.⁹

In FY23, Uganda was the third-largest contributor with a total emission of 9,637 metric tons. The largest single source of emissions for the Uganda team was vehicle fuel. To contribute to the global commitment, MCU will develop an environmental sustainability guideline that includes transitioning her infrastructure to renewable energy sources.

High level guidance on greening MCU

- Measure MCU energy consumption by installing energy metering systems in all the offices.
- Carry out energy audits at MCU offices and prepare business cases with feasibility analysis for e.g., connecting to mini-grid, solar systems, etc. for transition to clean energy.
- Develop innovative financing model(s) to support the transition to renewable energy.
- Create a centralized database capturing accurate information on selected sustainability indicators of MCU offices, allowing us to define a baseline, benchmark, and measure progress.

Continuously promote energy efficient practices and eco-conscious behaviors to create a culture of energy efficiency.



XII. Internal Capacity building

MCU will focus on strengthening internal capacity across key areas, including technical expertise, policy development, advocacy, and innovation. This will be accomplished by:

- **Providing targeted training and skill development programs for staff.** This will be achieved through organizing in-depth training sessions, both in-person and virtual, covering areas such as renewable energy technologies, clean cooking solutions, climate financing, and monitoring and evaluation for energy projects.
- **Facilitating knowledge sharing through internal workshops and cross-functional teams.** MCU will establish internal knowledge platforms where staff can access energy resources, case studies, toolkits, and research papers related to energy technologies, innovation and policies. This will be done in collaboration with Energy TRaQ team and Energy4Impact. MCU will also organize learning exchanges between teams across countries and regions where MCU operates, allowing teams to share lessons learned from their respective energy projects.
- **Engaging in external partnerships and networks to stay at the forefront of emerging trends and best practices.** MCU will collaborate with other organizations such as research institutions to conduct research, share insights, and access the latest findings in renewable energy policy and technologies. MCU will also actively engage in global, regional and national networks, such as the Renewable energy coalitions such as USEA, Gogla, SOLCO, GeCCo, Clean cooking alliance to stay updated on best practices and innovations. Including participating in key global forums and conferences (e.g., Conference of Parties (COP), SEforALL) to gain insights into policy shifts, emerging funding opportunities, and technological advancements.
- **Encouraging a culture of continuous learning and innovation** within the organization through conducting quarterly or annual learning reviews within the energy teams to assess program outcomes, challenges, and opportunities for improvement, feeding this back into future projects

XIII. M&E, Learning and Knowledge Management

A robust Monitoring and Evaluation (M&E) plan will be developed to establish key performance indicators for MCU's renewable energy interventions. The Energy team will work in close collaboration with the M&E team to create a comprehensive database of existing energy assessments, identifying and analyzing data gaps in alignment with the strategic outcomes. This evidence-based approach will ensure that project design and programming are tailored to the needs of end-users and grounded in reliable data.

Regular data collection and periodic reviews will enable adaptive programming, ensuring energy interventions remain responsive to evolving community needs. Additionally, this process will promote accountability and transparency in reporting outcomes while maintaining alignment with strategic objectives. The flexibility embedded in this approach will allow energy initiatives to address specific challenges and opportunities within target populations effectively.

Below table outlines the suggested key indicators for each of the strategic objectives and their outputs, designed to track progress and measure the success of the initiative:

Table 4: Suggested key indicators for the Renewable Energy strategy

Objective	Key indicators	MoV
Best practice for last mile communities is adopted within Uganda's renewable energy sector	Number of knowledge sharing platforms established	Number of knowledge sharing platforms established
	Number of stakeholders participating in peer-to-peer learning events	
	Number of learning products disseminated	
	Number of renewable energy models piloted and scaled up	Number of scaled technologies,
	Amount of financing mobilized for scaling renewable energy project	Financing agreements, records of partnerships with financial institutions, and investment reports.
	Number of policy recommendations	Official policy documents, government

Improved regulatory environment for renewable energy adoption in the last mile	submitted to government agencies	implementation guidelines Standards and regulations.
	Number of multistakeholder forums conducted	
	Number of policies influenced or enacted based on advocacy efforts	
Strong, value-added partnerships are established	Number of partnerships formed with private sector, government, or civil society organizations	Signed MoUs, partnership agreements, and activity reports from collaborative projects.
	Percentage of renewable energy initiatives co-funded by multiple stakeholders	
	Number of new joint initiatives launched through partnerships	

XIV. Risk and Mitigation Measures

The successful implementation of Uganda's Renewable Energy Strategy requires proactive identification and management of potential risks that could impede progress. The table below presents a proposed **Risk Matrix**, categorizing key risks, their descriptions, potential impacts, and mitigation measures.

Table 5: Proposed Risk Matrix for the Renewable Energy Interventions

Risk Category	Risk Description and potential risk	Mitigation Measures
Political and Regulatory Risks		
Uncertain Policy Environment	Delays or inconsistency in renewable energy policies and regulations as well as high import taxes on renewable energy equipment could lead to slowed market growth, reduced investor confidence.	Advocate for clear, consistent policies; engagement of stakeholders in policy formulation and advocate for tax reductions or exemptions for renewable energy technologies
Weak Enforcement of Standards	Poor enforcement of standards and regulations allows substandard products to proliferate leading to market distortion and reduced consumer trust.	Strengthen quality assurance systems and conduct capacity-building for regulators
Subsidy Phase-Outs	Dependence on unsustainable subsidies especially considering the different subsidy programmes that are ongoing in Uganda has the potential for market disruption when subsidies are removed	Promote market-driven solutions and phase-out subsidies gradually.
Stakeholder Coordination	Weak collaboration between government, private sector, and NGOs leads to fragmented efforts and duplication of efforts and resources	Facilitate coordinated frameworks and partnership agreements.
Market and Financial risk		
High Upfront Costs	Capital-intensive nature of renewable energy projects limits adoption among low-income populations	Introduce innovative financing models like PAYGo, asset financing, and subsidies for first-time users. Partner with financial institutions to develop tailored financial products Foster multi-stakeholder platforms for dialogue and partnership.
Scalability Challenges	Over-reliance on external funding such as dependence on donor	Develop private-sector partnerships and blended

	funding undermines sustainability of renewable energy projects. This also poses difficulty transitioning from pilot projects to broader programs.	financing approaches to ensure sustainable financing and design scalable pilot programs with clear frameworks for replication.
Operational and Technical Risks		
Infrastructure Limitations	Poor road networks and distribution channels in remote areas leads to increased supply chain costs.	Develop decentralized supply chains and engage local distributors.
Technological Mismatch	Renewable energy technologies not adapted to local needs or conditions leads to dissatisfaction among the users and poor adoption.	Conduct feasibility studies and involve communities in technology selection.
After sale Maintenance Challenges	Lack of technical expertise to provide after-sales services and spare parts for clean energy products leads to poor adoption.	Build partnerships with partners (private sector and Civil society organizations) to build local capacity for maintenance and ensure spare parts availability.
Environmental Risk		
E-Waste Management	Improper disposal of solar products and batteries leads to Environmental pollution, health risks.	Develop e-waste recycling systems and promote circular e-waste management
Deforestation for Biomass	Continued reliance on biomass due to affordability challenges has the risk of increasing environmental degradation and loss of biodiversity.	Promote affordable clean cooking solutions and community awareness programs.
Social and Behavioral Risks		
Low Awareness	Limited consumer knowledge of renewable energy technologies leads to reduced demands for clean energy products.	Implement education and awareness campaigns including behaviour change.

XV. Resources

The resources required to support the implementation of this strategy will vary significantly based on the specific actions and initiatives MCU undertakes to advance its renewable energy strategy. Factors such as the extent of capacity-building efforts, the human resources allocated for the process, and the regions targeted for the selection of complementary partners will significantly influence the required budget. To ensure effective allocation, a costed road map will need to be developed, detailing the financial and human resources required for each key step, enabling us to meet MCU commitments outlined in this strategy. Resources towards delivering against this road map will then need to be integrated into proposal budgets as standard.

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About Mercy Corps

Mercy Corps is a leading global organization powered by the belief that a better world is possible. In disaster, in hardship, in more than 40 countries around the world, we partner to put bold solutions into action — helping people triumph over adversity and build stronger communities from within. Now, and for the future.



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