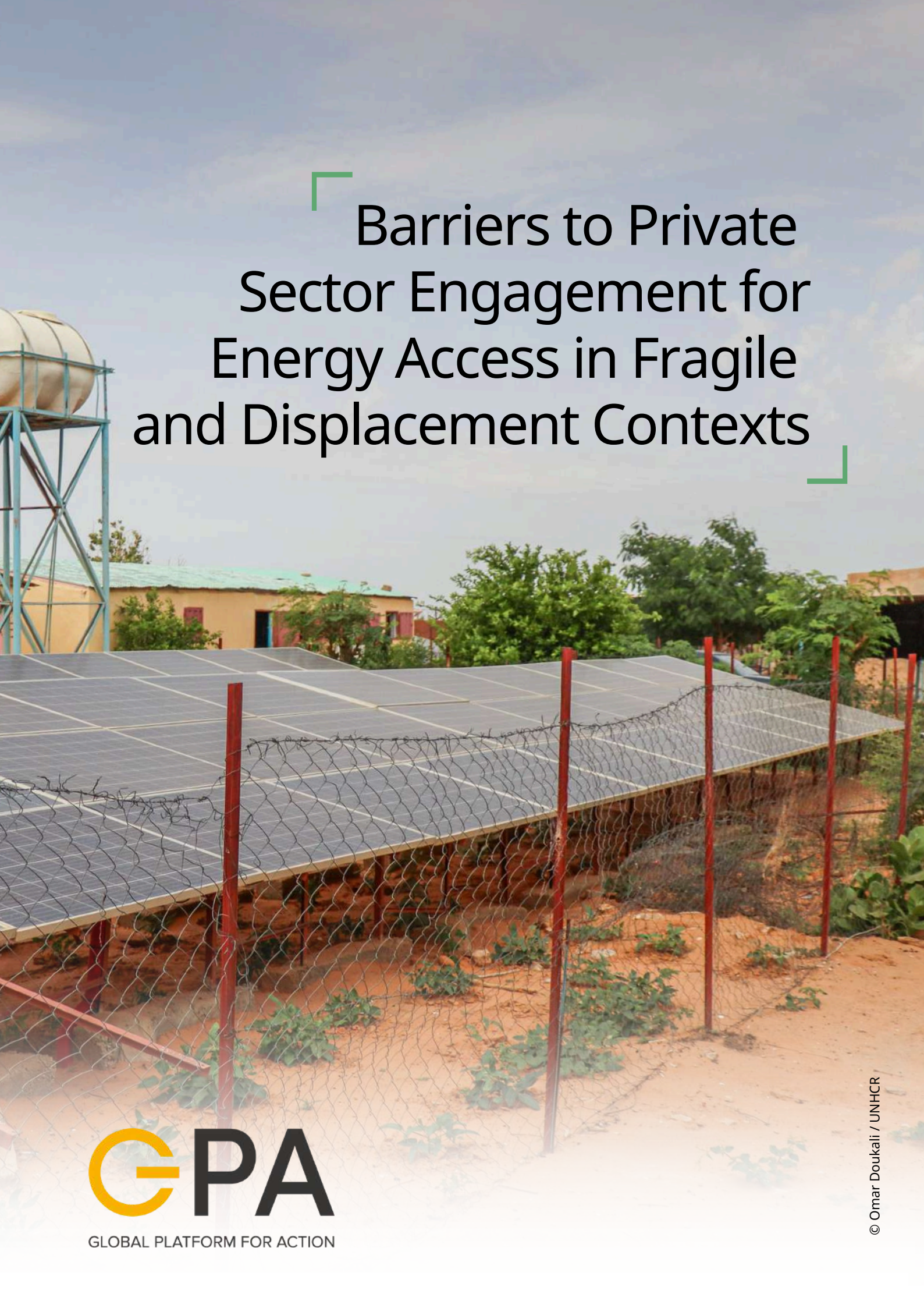
Barriers to Private Sector Engagement for Energy Access in Fragile and Displacement Contexts



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Executive Summary

At a glance

- Private sector engagement is essential to closing the energy access gap in fragile and displacement settings.
- The main barriers are affordability, higher risk and cost of business, limited finance, inadequate technical assistance (TA), and weak enabling environments.
- No single intervention will be enough; progress depends on coordinated action across governments, donors, investors, humanitarian actors, and private companies.
- The most promising responses combine public and private financing, infrastructural approaches, demand and supply-side subsidies, along with locally-grounded design and implementation of inclusive policies and programmes.

Globally, approximately 700 million people live without access to electricity, the vast majority in fragile states, 37 million of whom are displaced [1] [2]. More than 1.8 billion people will still lack access to clean cooking by 2030, with the poorest and most vulnerable most affected [3]. Notably, 83% of displaced people without access to energy live in rural or remote parts of Sub-Saharan Africa (SSA), where they are more than four times as likely to lack access to clean cooking and almost twice as likely to lack access to electricity than host communities.

This report affirms that private sector engagement can expand energy access in fragile and displacement settings, but only if barriers related to affordability, operating risks, finance, technical assistance, and the enabling environment are addressed cohesively. The analysis draws on interviews, surveys, literature reviews, and workshops with international and national stakeholders, with a focus on Ethiopia, Kenya, and Uganda.

Key Barriers Identified

- Low levels of consumer affordability.
- Higher risks and costs of capital and operations.
- Difficulty accessing finance for Micro, Small, and Medium Enterprises (MSMEs).
- An ongoing need for technical assistance (TA).
- Weak enabling environments, challenging contexts and low levels of infrastructural financing.

The report finds that energy access and poverty are deeply interconnected, with almost 80% of households without electricity unable to afford pay-as-you-go (PAYGO) repayments for a Tier 1 solar home system. Low affordability constrains demand, while high costs, limited finance, and weak enabling conditions constrain supply. As a result, isolated interventions are unlikely to succeed; progress depends on coordinated, long-term, multi-sectoral action that combines public and private financing, ongoing support for sustainability, and locally grounded design and implementation.

[1] IEA, IRENA, UNSD, World Bank, WHO, 2025. Tracking SDG7: The Energy Progress Report.
[2] Philip Sandwell and Paul Quigley (2026) Quantifying the global sustainable energy access gap amongst forcibly displaced people. Geneva. GPA Secretariat, UNOPS.
[3] WHO, 2025. Household Air Pollution Factsheet.

Although hard-to-reach and displacement-affected markets can offer significant business opportunities, companies face higher operating costs and greater uncertainty because of low consumer purchasing power, weak infrastructure, service gaps, and, in some contexts, political, economic, and social instability.

Table 1: Overview of Energy Sector Barriers & Solutions

Barrier	Why it matters	Main response area
Affordability	Low and unpredictable incomes suppress demand for energy products and services.	Consumer support, longer-term subsidy design, and context-appropriate business models.
Project costs and risk	Poor infrastructure, higher logistics costs and political risks raise prices and deter investment.	De-risking instruments, subsidies and shared business platforms to lower costs.
Access to finance	MSMEs struggle to secure capital because of collateral, ticket size, and credit constraints.	Patient capital, blended financing and business training.
Technical Assistance	Companies often lack the internal systems and capabilities needed to develop and attract finance.	Longer-term tailored TA, mentoring, and national support facilities.
Enabling environment	Policy, regulation, infrastructure, and coordination determine market and business development.	Long-term public financing, inclusive policies and programmes, and stronger coordination.

To operate sustainably in these settings, companies need patient capital, subsidies and incentives, de-risking mechanisms, and tailored technical assistance to establish operations, manage logistics, build distribution channels, and strengthen sales and customer support.

The report also finds that increasing energy access in fragile and displacement settings requires stronger enabling environments and long-term infrastructural approaches. Access to electricity and clean cooking across Europe and North America was achieved over several decades through large-scale public financing, subsidies and continued consumer and industry support.

Governments, donors, investors, humanitarian actors, and private companies each have a role in creating the policy, financing, infrastructure, and coordination conditions required for markets to develop and sustain in more challenging contexts. Inclusive policies and programmes, effective regulation, reduced administrative barriers, infrastructural financing, and strong community engagement can all enhance energy access interventions.

Key Recommendations

1. Integrate fragile and displacement settings into national and international energy plans, programmes, and investment portfolios.
2. Adopt longer-term, infrastructure-led approaches that improve the enabling environment, strengthen political commitment, and crowd in financing through public-private partnership and concessional support.
3. Address the affordability gap through context-appropriate business models and project structuring, targeted consumer support, supply and demand side subsidies, blended finance, and de-risking mechanisms that reflect lessons from existing programmes.
4. Promote the role of humanitarian and peace actors in facilitating energy access through convening local communities, government and other stakeholders, in addition to aligning peace, humanitarian and development objectives and policies.
5. Expand tailored technical assistance for MSMEs and explore national TA facilities that provide continued, practical support in business development, financial management, and investment readiness.
6. Support the development of collaborative platforms where companies, MSMEs and other stakeholders can share learning, reduce operating costs, strengthen marketing and customer engagement, and advocate collectively for policy and financial support.
7. Engage impact investors to increase the availability of patient capital for MSMEs and social enterprises in these settings, using structures that reward demonstrated impact over time rather than short-term sales alone.
8. Strengthen coordination by aligning objectives, planning jointly, and implementing programmes collaboratively to reduce duplication, improve learning, and streamline monitoring and evaluation.
9. Support the transition from short-term assistance models toward development-led approaches that enable private-sector solutions, strengthen local economies and expand the role of fragile communities as entrepreneurs, workers, and consumers.

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Introduction

Energy Access Situation

Progress on achieving Sustainable Development Goal 7 (SDG7) is being made through new access measures in many countries, targeting around 60% of people without electricity. These include consumer and tax incentives, national electrification programmes and strategies, results-based financing (RBFs) and other targeted actions, reinforced by international initiatives such as Mission 300 (M300).

Despite this progress, approximately 700 million people globally currently live without access to electricity, with the vast majority living in fragile states[4], 37million of whom are displaced[5]. Although standalone solar systems are estimated to have brought electricity to over 560 million people[6], attaining universal access will take many more years and requires effective, sustainable approaches to overcome the challenges of energy access in hard-to-reach, fragile locations, including displacement contexts.

Access to clean cooking presents even greater challenges, with over 2 billion people worldwide continuing to use polluting fuels which harm their health. It is estimated that the SDG7 target will fall short and 1.8 billion will still be without clean cooking by 2030, the poor and vulnerable being most affected. The majority live in Sub-Saharan Africa (SSA), where 93% of people in rural areas are without clean cooking, making them harder to reach than those in urban settings [7].

The IEA reported that $150 billion in investment is needed to achieve universal access in the next 10 years, about $15 billion per year. However, less than $2.5 billion was committed for new electricity access connections in SSA in 2023. Over 70% of the investment in 2023 was from international public finance, with less than 30% contributed by the private sector. Half of this financing was channelled to six countries and heavily focused on urban areas, even though 80% of those remaining without electricity are in rural areas [8].

Notably, 83% of displaced people without access to energy live in rural or remote parts of SSA, where they are more than four times as likely to lack access to clean cooking and almost twice as likely to lack access to electricity than host communities.

For the most vulnerable, the increasing pressure just to meet basic survival needs makes households and small businesses more risk-averse and affects their ability to pay for energy access. In conjunction with population growth in SSA, the gap to achieving universal energy access is growing rather than shrinking [9].

[4] IEA, IRENA, UNSD, World Bank, WHO, 2025. Tracking SDG7: The Energy Progress Report.
[5] Philip Sandwell and Paul Quigley (2026) Quantifying the global sustainable energy access gap amongst forcibly displaced people. Geneva. GPA Secretariat, UNOPS.
[6] IEA, IRENA, UNSD, World Bank, WHO, 2024. Tracking SDG7: The Energy Progress Report.
[7] IEA, IRENA, UNSD, World Bank, WHO, 2024. Tracking SDG7: The Energy Progress Report.
[8] IEA, 2025. Financing Electricity Access in Africa Report.
[9] IEA, IRENA, UNSD, World Bank, WHO, 2025. Tracking SDG7: The Energy Progress Report.

Approaches to date in displacement and fragile settings have been short-term, including free distributions, which do not enable long-term energy access. Greater private-sector engagement is essential to expanding energy access in fragile and displacement settings. These barriers that increase cost, risk, and uncertainty for companies need to be effectively and systematically addressed if we are to achieve SDG7 and leave no one behind.

About this report

While earlier studies have described barriers to private sector engagement in broad terms, more detailed analysis is needed to understand how they affect different actors and how tailored support can be designed more effectively. This report examines the constraints that limit business development in fragile and displacement contexts and identifies practical responses that could enable increased energy access.

For these settings, this study aims to answer these questions:

- What barriers inhibit companies from providing energy goods and services?
- What emerging solutions can help to overcome these barriers?
- How can different types of stakeholders support multiple actors, including energy companies, to sustainably provide energy access?

The information for this report was gathered from public and private stakeholders through interviews, literature reviews, a survey of 31 energy MSMEs operating in Uganda and workshops in Addis Ababa, Kakuma, Kampala, London and Nairobi. Stakeholders included companies, investors and financing institutions, governments, displaced entrepreneurs, locally-led organisations, donors, representative bodies, humanitarian and development agencies.

The following key barriers were identified in fragile and displacement contexts:

1. Low levels of consumer affordability;
2. Higher risks and costs of capital and operations;
3. Difficulty accessing finance for MSMEs;
4. An ongoing need for technical assistance (TA);
5. Weak enabling environments, challenging contexts and low levels of infrastructural financing.

Each of these barriers is examined alongside emerging solutions and actionable recommendations. These barriers are closely interconnected, and the responses required to address them are similarly interdependent.

The report concludes that private sector engagement can expand energy access in fragile and displacement settings, but only if the key barriers of affordability, risk, finance, technical assistance, and enabling environment are addressed collectively.

Request from an energy company in Uganda on potential measures to improve energy access in refugee hosting areas:

"Legal & Policy Support: Allow refugees to work, move, register businesses, and access banking/credit."

" Infrastructure & Market Access: Invest in roads, electricity, internet, and marketplaces to link refugees with wider markets."

"Finance and Inputs: Provide microfinance, savings groups, guarantee funds, and affordable access to raw materials and equipment."

"Skills & Business Support: Offer entrepreneurship training, mentorship, incubation, and market information."

"Private Sector Engagement: Incentivise companies to invest, create jobs, and include refugees in value chains."

"Social Cohesion & Fairness: Encourage refugee-host business partnerships, ensure fair regulation, and resolve disputes."

"Digital Solutions: Expand e-commerce, mobile money, and online work opportunities.**"**

Figure 2. Allan Henry Malish, the director of Ocean Energy Kiosk, standing outside Akita Mungu Fun & Friendship found at Ocea, Rigbo Sub-County in Madi Okollo District on October 4, 2021. Malish started out at Akita Mungu before expanding the business with the energy kiosk. © GIZ/ Malaika Media / Nazil Muzungu.

Barrier overview

The role of Energy Companies and Overcoming Barriers

Many of the challenges for companies providing energy access to communities affected by conflict and displacement are also present in remote and rural settings, including limited income-generating activities, inadequate services, and low levels of infrastructural financing. Depending on the context, however, there may be some additional challenges which further increase cost and risk, including political, economic and social factors that must be fully understood in each individual setting.

MSMEs find it more challenging to access finance and require greater levels of TA than larger, more established companies. However, they are uniquely placed to provide sustainable access to people living in hard-to-reach (H2R) areas, including those affected by displacement and fragility, conflict, and violence (FCV). These energy companies are well positioned to use their experience, community partnerships and local knowledge to develop sustainable markets with low overheads, even in very challenging environments. However, they face multiple barriers to developing business operations in these contexts due to various factors that increase costs and risks [10].

Despite these challenges, participants in the workshops, surveys and interviews proposed several pathways to strengthen financing ecosystems. These include blended financial instruments that pair concessional lending with TA to de-risk investment, dedicated inventory financing schemes, and guarantee facilities to ease collateral requirements. Participants also emphasised the importance of targeted business development support such as marketing assistance, new market identification, and brand-building to help MSMEs grow sustainably. For example, 96% of MSMEs surveyed in Uganda already operate in remote or rural areas, and 67% sell energy products and services in displacement settings.

[10] GDC, 2026. 2026-2030 Strategy: Embed, Scale, Impact.

Barrier 1: Low Levels of Consumer Affordability

What this barrier means for stakeholders

- **Governments and donors**: Affordability support needs to be treated as a structural requirement, not a short-term add-on.
- **Investors and financiers**: Consumer demand will remain constrained unless subsidy, credit and business models are designed for very low-income settings.
- **Companies and MSMEs**: Market design must be grounded in local socio-economic realities rather than assumptions about fragile or displaced communities.

Energy companies identified low consumer affordability as the primary barrier to developing energy markets in both remote and displacement settings. Recent cuts in humanitarian and development assistance have further reduced affordability and impacted access to energy.

While the off-grid solar market has seen enormous growth and investment potential, the fact remains that almost 80% of households without electricity cannot afford PAYGO repayments for a Tier 1 solar home system [11]. Effectively addressing this affordability gap is key to achieving SDG7.

Energy access and poverty are deeply interconnected, with the lack of affordable, sustainable energy restricting basic living standards, health, education and economic opportunities. This can only be addressed through shifting from short-term humanitarian interventions to long-term, multi-sectoral and multi-stakeholder approaches that combine international support and localised design and implementation.

Low and unpredictable incomes are common across hard-to-reach, displacement, and fragile contexts, leaving many households unable to afford even basic energy products and services. Although this report does not seek to address poverty, it is essential to understand local socio-economic conditions for designing effective supports that improve affordability.

Findings from interviews, workshops and surveys showed that external stakeholders often have a limited understanding of local socio-economic conditions and associated affordability constraints in these contexts, particularly in displacement settings.

"Nationals have predictable sources of income like farming, whereas refugees are largely living on donor support. Refugees expect only subsidised items, or free items."

– Company in Uganda, which does not operate in refugee settlements

This misunderstanding can lead to perceptions that displaced communities have no access to income, are not willing to pay for services or have much greater poverty than adjacent host communities. While this varies greatly across contexts, displaced populations are not always the poorest sections of a country's population, particularly when humanitarian assistance is

[11] World Bank, 2024, Off-Grid Solar Market Trends Report 2024.

considered. On average, 60%-70% of rural populations in SSA are considered multidimensionally poor, and this approaches 95% in some countries[12]. The situation for refugees is similar, where approximately 80% are considered multi-dimensionally poor, most of whom also reside in rural and remote areas[13]. Another common misconception is that displacement settings are temporary, and while people affected by conflict can be forced to relocate more than once, displacement on average lasts over 20 years for refugees and more than 10 years for most internally displaced people [14]. This misperception acts to hinder longer-term development approaches and financing for services and infrastructure.

Therefore, fully understanding the socioeconomic context is crucial for business and investment in these settings, including designing effective supports to address affordability. This requires a thorough knowledge of the specific location, engaging multiple local stakeholders in preparing and implementing programmes, and taking care not to automatically apply assumptions from other settings.

"The issue is not the refugees' lack of money to buy these products. Look at the smartphones they are holding. If people value products, they will find a way to pay. Sell the value, not the product."

– Refugee entrepreneur

Affordability, and associated ability to access energy, is also affected by seasonal and cyclical fluctuations leading to unpredictable income levels. These variations in consumer demand create challenges for energy providers in forecasting demand, managing operations, and ensuring stable revenue streams.

[12] UNDP, OPHI, 2022. OPHI and UNDP Regional MPI Brief. Leaving No-one behind: Poverty reduction in Sub-Saharan Africa.
[13] World Bank, 2020. Poverty and Equity Brief: Sub Saharan Africa.
[14] European Commission, 2025. Forced displacement: Refugees, asylum-seekers, and internally displaced persons.

Uganda

In Uganda, while the poverty rate is reducing, there are still over 7 million people living in poverty (16.1%), with approximately half of the 2 million refugees also living below the poverty line [15]. Both Ugandan nationals and refugees in various parts of the country have very different income levels and opportunities. Those living in the West and South-West have more income-generating opportunities, better infrastructure and access to services than in the West Nile[16]. However, the highest poverty rates in Uganda are experienced in Karamoja and Busoga regions[17], neither of which host refugees. Notably, practical evidence reveals that default rates for PAYGO repayments among displaced communities have been found to be similar, and sometimes lower than their host counterparts[18]. 43% of Ugandans (19.8 million people [19]) are living without access to electricity, compared to approximately 65% of refugees [20].

Kenya

For Kenya, poverty levels are rising, with over 23 million people (46% to 50% of the population) living below the poverty line and surviving on less than 390 KES (3 USD) per day[21]. Despite economic growth, increased wealth is not reaching most Kenyans, with women most affected by the widening inequality [22]. Turkana and Garissa counties, which host the country's largest protracted refugee settings, rank 1st and 4th highest in national poverty rates, respectively[23]. Approximately 24% of Kenyans do not have access to electricity[24] compared to an estimated 65% among its refugee populations[25].

Ethiopia

In Ethiopia, poverty rates are increasing, with more than 40% of people living in poverty in 2025 and 72% considered multi-dimensionally poor[26]. This includes approximately 4.5 million internally displaced people, who are likely to be living in increased poverty, though no specific data is available. Of the 1.1 million refugees in Ethiopia, 84% are reported to be multi-dimensionally poor [27]. 45% of Ethiopians, over 60 million people, live without access to electricity [28], compared to an estimated 85% of displaced people, or 4 million people, who do not have access to electricity [29].

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[15] UBOS, 2025. Uganda National Household Survey Report.
[16] IFC, 2021. Consumer and Market Study in Southwest and West Nile Refugee Hosting Areas in Uganda.
[17] UBOS, 2025. Uganda National Household Survey Report.
[18] Findev Gateway, 2024. Getting Financial Service Providers "Refugee-Ready": Four Lessons from Uganda.
[19] IEA, IRENA, UNSD, World Bank, WHO, 2025. Tracking SDG7: The Energy Progress Report.
[20] GPA, 2026. Summary Brief: The Sustainable Energy Access Gap Amongst Forcibly Displaced People.
[21] KenyaMoja, 2026. Report Shows nearly half of Kenyans living below the poverty line.
[22] Oxfam, 2026. Kenya's Inequality Crisis; The Great Economic Divide.
[23] KNBS, 2022. The Kenya Poverty Report 2022.
[24] IEA, IRENA, UNSD, World Bank, WHO, 2025. Tracking SDG7: The Energy Progress Report.
[25]GPA, 2026. Summary Brief: The Sustainable Energy Access Gap Amongst Forcibly Displaced People.
[26] Ethiopian Policy Institute, 2025. World Bank: Policy Increasing Sharply in Ethiopia.
[27] UNHCR, 2025. MPI Evidence Brief. Ethiopia: multidimensional poverty of refugees in and out of camps, relative to host communities.
[28] IEA, IRENA, UNSD, World Bank, WHO, 2025. Tracking SDG7: The Enpriceergy Progress Report.
[29] GPA, 2026. Summary Brief: The Sustainable Energy Access Gap Amongst Forcibly Displaced People.

Emerging Solutions

Affordability is a key issue which cannot be met by MSMEs or development finance institutions (DFIs) alone – it requires long-term, infrastructural approaches that blend end-user subsidies with other public financing mechanisms[30] to lower capital costs, leverage investment and reduce risk. This has had some success through RBFs and other programmes that subsidise the price paid by the consumer, provide incentives to companies and enable easier access to affordable finance. While consumer price subsidies provided through RBFs have been somewhat effective, affordability still remains an issue, even with the subsidies, and improvements can be made to RBF designs [31] [32].

High operating costs in these settings also worsen the affordability challenge. Interviews with people involved in RBF design showed broad recognition that businesses need support to maintain lower prices in difficult markets. Existing approaches include supply and demand-side incentives, guarantees, insurance, tax exemptions, and targeted marketing support, as with UECCC, Endev and BGFA RBFs in Uganda.

Discussions with energy companies highlighted that PAYGO pricing can make products more than 50% more expensive for consumers than paying cash upfront. In some cases, it would be cheaper for customers to access conventional credit, even at relatively high interest rates. Organisations such as the Micro Asset Finance Lab [33] are working to separate product distribution from lending, allowing energy companies to focus on sales and service while financial partners manage consumer credit. Early evidence is promising, but an Acumen study indicates that highly subsidised cash sales, RBFs, or Energy-as-a-Service models would be the most effective approach for reaching the extremely low-income rural households[34].

[30] World Bank, 2022. Designing Public Funding Mechanisms in the Off-Grid Solar Sector.

[31] World Bank, 2024. Designing Responsible End-User Subsidies for Energy Access: A toolkit featuring case studies for the design of subsidies in off-grid solar and clean cooking.

[32] Endev, 2025. Endev: Driving Change through Results Based Financing. Lessons and Insights from over a decade of RBF experience.

[33] MAF Lab, 2026.

[34] Acumen, 2026, PAYGO at a Crossroads.

Figure 3. Kambia district of Sierra Leone, where the REAL Programme Catalyst supports the Lite Salone programme in partnership with Easy Solar, the Government of Sierra Leone, Irish Aid, Trocaire, and other stakeholders. © REAL. Programme Catalyst.

Real Programme Catalyst

REAL Programme Catalyst is pioneering an Energy-as-a-Service (EaaS) model that expands energy access for extremely poor and remote communities without requiring consumer financing or direct subsidies.

Under the EaaS model, households pay a small, affordable monthly fee for energy services such as solar home systems, with local operators installing, maintaining, and replacing them under long-term performance-based contracts. Unlike retail approaches, households are not required to purchase energy equipment or infrastructure, which eliminates the need for upfront payments, loans, exclusionary credit checks, or complex verification processes.

REAL treats solar home systems as infrastructure assets, enabling bulk procurement and standardised deployment and long-term operations. With affordability and high penetration as two key pillars, this approach reduces costs, accelerates electrification, achieves higher community-wide coverage, and improves system reliability. Asset ownership is separated from service delivery, allowing operators to focus on providing durable, high-quality energy services while reducing equipment failures and e-waste.

Programme Catalyst works with governments, funders and development partners across SSA to design and implement large-scale, sustainable energy access programmes that prioritise hard-to-reach populations. Early pilots in Sierra Leone, Malawi, and Senegal have demonstrated high connection rates, strong system usage, and low repossession rates, showing that the EaaS model can successfully reach communities underserved by conventional market-based approaches [35].

[35] REAL, 2026. White Paper: Why Energy As A Service work,s for the Hardest to Reach.

Recommendations

1. Advocate with multiple stakeholders to recognise that enabling affordability is essential to achieving energy access and that effective support mechanisms are needed for as long as the affordability gap persists.[36]
2. Apply a range of business models, financial instruments, and de-risking support mechanisms designed for the context, learning from what has worked best – there is no 'one-size-fits-all' solution with so many diverse contexts and different consumer segments.
3. Support companies to maintain lower prices in more challenging, costly markets through concessional financing, outcome-based incentives and de-risking instruments.
4. Work with financial institutions to improve financial inclusion for remote and displaced communities, using de-risking mechanisms and other supports to enable easier access and lower interest rates. Engage local communities and savings groups to build recognised credit ratings.
5. Advocate with humanitarian agencies to provide direct cash assistance instead of distributing free energy products, particularly in contexts where multiple actors are simultaneously trying to create self-reliance, resilience and a shift away from dependence on humanitarian aid.
6. Fully engage local communities and leadership structures in developing targeted support frameworks, especially the methods to identify the most vulnerable within those communities.
7. Challenge the perception that displaced communities cannot be viable customers by advocating for socioeconomic research to demonstrate their purchasing power and unlock private sector investment.
8. Embed operational flexibility into support programmes to allow for rapid alterations in response to changes in situation, such as humanitarian crises, market fluctuations, or shifting political dynamics.

[36] GOGLA, 2025. Keeping the Lights On: A Study of Repayment and Impact in the PAYGo Solar Market.

Barrier 2: Higher Capital, Operating Costs and Increased Risk

What this barrier means for stakeholders

- **Governments and donors:** Sustained market-building, de-risking and financing support is needed where costs and risks remain too high for fully commercial approaches.
- **Investors:** Risk-sharing and longer time horizons are essential to make these markets investable.
- **Companies and MSMEs:** Collaborative approaches can lower costs in sales, marketing, and last-mile distribution.

Most commercial enterprises and investors view fragile and humanitarian settings as too risky, operationally difficult, and unprofitable for business development. At the same time, donors and investors seek high returns within short time frames, which is often incompatible with the financing approaches required to build viable markets in these very challenging locations.

However, these markets continue to present meaningful business opportunities. The challenge is that operating costs and risks are typically higher because of weak infrastructure, service gaps, low consumer purchasing power, and, in some cases, political, economic, and social instability.

MSMEs reported that transport, sales and marketing are more expensive, uncertain and challenging, and it can be difficult to find reliable local agents and technicians. Ultimately, these higher risks and operating costs are passed on to consumers who already need financial assistance to afford basic products and services. Without support to address these increased costs and risks, this reinforces a negative cycle where few companies are willing to reach these markets and higher prices reduce the addressable consumer market, limiting business development and energy access.

Consumers in these locations have low and unpredictable incomes, minimal access to affordable finance, along with limited awareness of the benefits and costs of energy products and services. Considerable work is required by companies, social enterprises, humanitarian and development organisations to market appropriate products and raise awareness, which relies on building trust and relationships with local communities.

Emerging Solutions

Companies require patient capital, financial incentives, blended financing support, de-risking mechanisms, and TA to expand into challenging locations and establish sustainable distribution, sales, and marketing operations.

To date, these needs have been met through supply-side incentives, guarantees, and government support like tax exemptions. However, there is a significant opportunity to reduce these operational burdens by increasing shared learnings and collaborative platforms. As an

example, 95% of MSMEs who participated in the survey in Uganda reported they would consider shared sales outlets, and 100% would consider shared marketing and awareness campaigns.

Results-Based Financing (RBFs)

RBF designs in Mozambique and Uganda applied incentive structures for companies to encourage operators to develop businesses in the more remote, challenging locations.

In Mozambique, the BRILHO programme pays a Vulnerability Access Incentive based on socioeconomic conditions and market infrastructure conditions for each of its 10 provinces. There are five different levels of increasing incentive, with no incentive for the capital province of Maputo. There is a special priority category that provides the highest incentive to serve communities in selected locations, including humanitarian settlements.

In Uganda, the UECCC RBF applies a similar incentive structure based on four different geographic regions, with no incentive for Kampala. There is an additional specific incentive in each region to serve refugee settlements. Varying amounts of incentive are applied to different technologies, some of which are more difficult to sell than others. 50% of all incentives are paid upon verification of sale, the remaining 50% being paid only when the company remains operational in that region 12 months after the product sale.

Recommendations

1. Advocate with donors, investors, government and other stakeholders to recognise the need for financial support to develop markets in challenging locations which are not yet ready for entirely commercial approaches.
2. Provide effective support to improve operational efficiencies for the development of sustainable operations in fragile and displacement markets – enhancing market penetration and revenues through concessional or blended financing, outcome-based incentives and de-risking instruments.
3. Support the development of platforms that promote collaborative learning across companies and other stakeholders, provide a shared voice to advocate for effective regulatory and financial support from government and investors, and to create mutually beneficial ways to reduce costs and strengthen opportunities.

Barrier 3: Access to Finance and Alternative Business Models

What this barrier means for stakeholders

- **Governments and development partners:** Energy enterprises need finance products designed for their scale and operating context.
- **Financial institutions and investors:** Collateral, tenor, and ticket-size barriers need targeted solutions if MSMEs are to access capital.
- **MSMEs:** Financial readiness, accounting, and business records remain critical to unlocking investment.

According to the Global Distributors Collective (GDC) State of the Sector 2025, 89% of last-mile distributors in 60 countries identify access to finance as their main obstacle and only 24% have successfully secured debt financing over the past two years.

MSMEs in workshops, interviews and the survey identified four primary challenges to accessing finance. In order of importance:

1. Lack of collateral;
2. High interest rates;
3. Tenor too short; and
4. Absence of credit rating or business accounts.

When asked what this finance would be used for, MSMEs outlined their needs in order of priority:

1. Buying inventory;
2. Staff recruitment and training;
3. Storage and transport; and
4. Sales and marketing.

In Uganda, surveys found that 96% of MSMEs require additional finance to develop their businesses in remote areas. Despite this high demand, 82% of MSMEs reported facing difficulties in accessing finance as they often do not have the collateral, robust accounts, or business strategies to attract investment or access credit. Refugee-led organisations in particular reported great difficulty obtaining finance, even with complete accounts and credit ratings.

From an investor's perspective, financing smaller companies in fragile markets carries relatively high risk and often offers limited returns at small scale. As a result, standard investment ticket sizes (minimum investment amounts) tend to favour larger, more established energy companies. MSMEs that lack collateral, reliable financial records, or recognised credit histories struggle to attract capital, and those that do qualify often face prohibitively high interest rates.

Emerging Solutions

Alternative sources of finance are required in the shorter term to bridge the gap between products offered by financial institutions and what MSMEs need to develop their businesses in hard-to-reach communities. Many such innovative financing models are being tested in these markets, combining concessional and impact financing to overcome the higher costs and risk associated with doing business in these settings, also increasing speed and ease of transactions.

Combined with technical assistance and enabling ecosystems, these financial models can allow companies to reach the business maturity required to attract investment through financial markets to access debt and equity.

Table 2: Examples of models already being implemented in fragile and displacement settings.

Model	What it Does	Examples
Energy As A Service	Users pay small regular amounts for energy service rather than owning equipment; an infrastructural approach can enable financing and allow companies to focus on customer service.	REAL, FRES, Mooka
Inventory Financing	Provides working capital to energy businesses in the form of inventory, enabling them to stock and sell products.	GGF
Aggregator Funds Using Carbon Financing	Pools smaller, fragmented projects into investable transactions and uses carbon revenue to support them.	EPP-PAF, REP Fund
Separating Operations from Assets & Lending	Structures the business so assets can be financed separately from operations, making lending easier.	MAF Lab
Outcome / Impact-Based RBFs	Provides demand- and supply-side subsidies through releasing finance against verified outcomes or impact delivered.	ENDEV
Tailored Support to Energy Companies	Hands-on technical assistance and financing support tailored to energy companies in fragile and displacement contexts.	Humenergi, GDC Investment Catalyst Fund, ACUMEN

In Uganda, 74% of respondents were signed up to the RBF program, including UECCC, Endev, BGFA and UNACC. While these RBFs have been successful in increasing sales in remote communities, including refugee settlements, they could be improved through faster payment structures and adapting to the needs of smaller companies, in addition to more targeted support to reach more difficult consumer segments.

Some RBFs are providing performance or impact payments upon business development milestones linked to market development and sustainability, or for achievement of predetermined impacts, not only for numbers of sales. It is also possible to cross-subsidise gains made in more accessible markets to incentivise market development in more remote, challenging areas. For instance, aggregator funds, including crowdfunding, are providing smaller ticket sizes to MSMEs from investments by multiple stakeholders into a managed fund.

When energy products are sold or distributed as assets, the responsibility for maintenance effectively transfers to the end user, who typically lacks both the technical capacity and the financial means to sustain system performance over time. Emerging service-based models offer a structural alternative. By retaining ownership of the energy infrastructure and contracting for the delivery of an energy service rather than the sale of a product, energy service companies preserve both the financial incentive and the contractual obligation to maintain systems throughout their operational life. Integrating maintenance obligations into the financing structure from the outset, rather than treating them as a secondary operational concern, is essential to shifting to longer-term, sustainable energy access.

Carbon credits were sometimes mentioned as a potential source of finance. While the continually shifting carbon credit market cannot be relied on to completely support a business model, there appears to be some potential for part financing of projects, as being explored by EPP's P-Rec Aggregation Facility and UNHCR's REP Fund. However, ownership of attributes is under discussion in many countries, along with regulation, monitoring and compliance so that carbon market development remains uncertain at present.

Recommendations

1. Work with local financial institutions to develop the de-risking mechanisms and other support they need to provide easier, more affordable finance to MSMEs.
2. Provide support to MSMEs to improve business skills and accounting so that they become more attractive to investors (see Barrier 3: Technical Assistance Needs).
3. Improve support mechanisms by learning from programs (RBFs, EaaS, impact investing, etc) to take account of cross learnings from fragile and displacement settings (Endev, BGFA, SEforAll RBF Tracker, Climate Compatible Growth, Energypedia, 60dB PUE Kenya).
4. Encourage impact investors (social, environmental, health, etc.) who can provide patient capital with a primary focus on impact – suiting the smaller MSMEs and social enterprises which require smaller ticket sizes, with incentive structures based on the impacts they achieve over time, not only on sales numbers.
5. Advocate to include fragile and displacement settings into investment portfolios and international programs.
6. Foster partnerships for collaboration through aligning multiple stakeholders, inclusive planning and coordinated implementation of programs.
7. In each country, a central coordination mechanism between all the different financial support initiatives in these areas would help to reduce duplication, improve collaboration, support monitoring and evaluation. Combined with a central credit rating system, this would also help coordination at international levels and would increase involvement of MFIs & SACCOs when designing and implementing financial support initiatives for MSMEs in-country.

Barrier 4: Technical Assistance Needs

What this barrier means for stakeholders

- **Programme designers:** One-off TA workshops are not enough; sustained and tailored support delivers more value.
- **Investors and support agencies:** Stronger internal systems and financial management are central to investment readiness for energy companies.
- **Companies and MSMEs:** Practical support in sales, budgeting, strategy, and agent management can accelerate growth and encourage investment.

To improve access to finance and strengthen business performance, MSMEs need practical, sustained TA rather than short-term, one-off support. MSMEs identified their highest priority needs for TA as:

1. Investment readiness and building credit rating;
2. Sales and marketing;
3. Budgeting and financial planning; and
4. Business strategy.

Finding and training reliable local sales agents was also reported as a key issue, and this requires support for both the companies and the sales agents.

In a workshop for energy companies in Kampala, three overarching themes emerged in relation to becoming investment ready, highlighting areas for support:

1. **Strong conceptual understanding, but weak internal systems**
   Participants generally understood what it means to be investment ready but highlighted gaps in internal management, financial documentation, and operational controls.
2. **Consistent demand for foundational financial and sales capacity**
   Bookkeeping, financial management, and sales training were repeatedly identified as essential areas of support. Most participants acknowledged that financial literacy is limited in their enterprise.
3. **Financial constraints remain a major bottleneck**
   High procurement and sales costs, lack of bridge financing, and delays in subsidy processing hinder the growth and scale of renewable energy distribution businesses.

In addition to TA for developing profitable businesses, participants in a business roundtable in Kakuma, Kenya, including refugee-led organisations, were also interested in learning about how to create impacts for their communities as part of their business strategy. Entrepreneurs mentioned they were motivated by creating safer environments, eliminating pollution, improving livelihood opportunities, and reducing cooking times for women through their work on energy.

"MSMEs are struggling to make their businesses work, and many don't have time/capacity to pursue opportunities, even if low-hanging fruit – many of them don't have the relevant skills or business records to apply for these opportunities."

– SOLCO partnership

Emerging Solutions

To date, most TA has been short-term and tied to specific programmes such as RBFs, which limits support to only those companies selected, and often ends when the programme closes. Standardised workshops and webinars can be useful, but participants reported that tailored assistance, delivered over time and combined with training and mentoring, has much greater value.

Some initiatives such as the Global Energy Alliance for People and Planet (GEAPP PUE) are developing ways to better support companies operating in these contexts, so that they build revenue streams and attract investments.

Recommendations

1. Explore the potential to develop national TA facilities where MSMEs could access continued tailored support and training. This could be implemented by several agencies, funded from multiple sources and supported by industry associations. Such a TA facility could serve MSMEs across all sectors, including energy, with active, shared, inter-sectoral learning.
2. Support the development of collaborative platforms to promote learning across companies and other stakeholders to lower costs, improve marketing and customer relations and strengthen business operations. This could also be used to share learnings, investment opportunities and to advocate for effective support mechanisms to MSMEs.

Barrier 5: Enabling Environments, Context and Infrastructural Financing

What this barrier means for stakeholders

- **Governments:** Inclusive policy, infrastructure, and predictable regulation are foundational to sustainable market growth.
- **Donors and development partners:** Short-term, fragmented projects should give way to longer-term, integrated programmes.
- **Private sector and humanitarian actors:** Stronger local relationships and coordination improve delivery, trust, and long-term viability.

Despite the challenges, there are considerable business development opportunities in hard-to-reach locations, with 44% of over 300 last-mile distributors who are GDC members

already operating in displacement settings. However, increasing energy access in fragile settings requires dramatic improvements to the enabling environment so that businesses thrive, investor confidence is increased and consumers can more easily access energy goods and services.

Such environments are shaped by multiple stakeholders, led by government, and depend on concessional finance, de-risking mechanisms, inclusive policy, effective regulation, streamlined administrative processes, infrastructure financing, and meaningful community engagement.

Access to electricity and clean cooking across Europe and North America was achieved over several decades through large-scale public financing, subsidies and a range of other consumer and industry supports, many of which continue today to maintain universal access. Private sector companies and investors operate successfully in these markets because this enabling ecosystem was developed, promoted and financed at national and international levels.

In locations such as Uganda, Ethiopia and Kenya where the government has an open, inclusive policy towards refugees, the barriers to energy access are similar when serving both displaced populations and their local host communities. In places where national policy restricts movement, employment and inclusion, serving displaced populations can be much more challenging. In such locations where the environment does not enable market-based approaches, due to factors such as restrictive government policy or escalated security challenges, direct humanitarian assistance may be the most appropriate response. It is important to fully understand the context from the political, socio-cultural and economic perspective when evaluating the barriers to doing business in specific locations.

Local governments will also provide approvals for companies to operate within their administrative area (districts, counties, woredas, etc.) and permits to access refugee or IDP settlements where required. Companies in Uganda who operate in refugee settlements reported that access to settlements or permissions from the government is not a major barrier to doing business.

Projects to date in displacement settings have generally been small-scale and fragmented, usually not linked to wider energy initiatives or development programs. Energy initiatives are mostly short-term with limited resources, supporting only one or two companies for 6-12 months to work in specific settlements, with impact ceasing as soon as the program ends. Larger-scale and longer-term programs which include displacement and hard-to-reach settings can have much better outcomes.

Private companies and investors need ecosystem support that lowers risk, improves access to finance, and creates the conditions for sustainable market development. Commercial viability and sustainable impacts take several years and, in fragile and displacement settings, successful outcomes may also be dependent on the resolution of wider issues related to conflict, climate, politics, infrastructure and service provision.

Energy regulation can also drive or hinder energy access developments. While reforms have created new opportunities, frequent changes in policies, requirements, and institutional roles can create uncertainty for private investors. Such unpredictability affects investment planning and can undermine confidence, especially for projects with long payback periods, such as

mini-grids. Strengthening regulatory stability and clarity would be critical to attracting sustained private sector engagement.

Emerging Solutions

Favourable policies towards serving fragile locations and inclusion of displaced populations in policies and programmes have a huge impact in driving energy access. Research estimates that economic inclusion of refugees in Uganda has reduced the current total aid required by 45% or $225 million. Though markets have grown considerably since the last socio-economic study for Kakuma in Northern Kenya, in 2018 the IFC valued the Kakuma market at $56.2 million annually, with refugee-run enterprises constituting 30% of all businesses in Turkana County [37]. Studies such as these help demonstrate the extent of economic development created through the creation of enabling environments.

Shifting towards longer-term development

Linking energy initiatives for displaced people into larger-scale and longer-term development programmes can have better outcomes than those focusing on displacement or hard-to-reach settings alone. In Uganda, the World Bank-supported RBF, implemented by UECCC, has demonstrated large-scale success through including refugee settings into national programmes to achieve energy access for all communities. Government refugee departments and humanitarian organisations had a primary role in facilitating companies to do business in these settings.

Recent programs implemented by Mercy Corps, Endev, SNV and others have used this development-led approach to build sustainable markets across wider areas and this has led to more companies doing business in refugee hosting districts, including with refugee consumers.

The successful outcomes of these programmes, when compared to the low levels of impact from short-term humanitarian interventions, help to highlight the importance of shifting towards the development mindset. This can help to support collaborative and broader energy programmes that develop sustainable markets, promote increased investment, and enable energy access for all communities.

It is not the responsibility of humanitarian or peace actors to enable energy access across fragile and displacement settings; this is the role of the government, with support from international actors. However, humanitarian and peace actors do play a very important role in facilitating energy access by convening local communities, government and other stakeholders, in addition to aligning peace, humanitarian and development objectives and policies.

There is also an opportunity to use humanitarian and peace actors as anchor loads for mini-grids, providing a predictable revenue stream and reducing risks so that developers have an opportunity to also address the electricity needs of local communities. However, funding cuts and policy shifts towards humanitarian approaches in protracted situations mean that many operations are being reduced or closed. This demand uncertainty poses a substantial risk and

[37] Refugee Investment Network, 2018. Kakuma as a Market Place.

can discourage investment, particularly in areas where community demand alone may not be sufficient to ensure financial viability.

Differences in culture and language are usually easily overcome through engaging with local communities and employing local sales and customer service agents, allowing open communication and trust-building. This is facilitated through local government and humanitarian organisations who work closely with both displaced and host communities.

Recommendations

1. Apply a longer-term, infrastructural approach to fragile and displacement settings so that the enabling business environment can sustainably drive increased energy access. Building upon M300 and other initiatives, it will be important to strengthen political will and increase public-private partnerships, while accepting that concessional financing will be required in the short term to leverage investment and build viable markets in our most challenging contexts.
2. Advocate for inclusion of displaced populations in policies and programmes, and integrating fragile locations into investment and company portfolios.
3. Create regional, multi-year, area-based plans integrated with multiple stakeholders and sectors, using long-term, infrastructural approaches.
4. Private sector enterprises establish meaningful local connections with local communities, government, humanitarian and development actors in order to build the relationships needed for sustainable business development and to properly understand the context and their customer base.
5. Support stakeholders to transition from humanitarian assistance models towards development-led approaches, through aligning stakeholder objectives and outcomes, improving coordination of planning and collaboration of implementation. Humanitarian actors will become active facilitators, providing ecosystem support to enable development-led, private sector solutions which promote local economies, reduce dependency and transition displaced communities from aid recipients to active entrepreneurs and consumers.

Conclusions

Low consumer affordability remains a major structural barrier to energy market development in displacement and fragile settings. Addressing this requires a fundamental shift away from short-term humanitarian assistance and towards long-term, multisectoral approaches. This could be achieved by prioritising locally-led design, applying a range of financial and business models, improving financial inclusion, and allowing operational flexibility in programming.

Overcoming the barriers of high capital investments and operational challenges inherent in these settings will require a transition from short-term funding to patient capital, de-risking instruments, and supply-side incentives to improve commercial viability. Advocating for donors and investors to recognise the need for financial support to develop markets which are not yet commercially viable (especially to overcome higher operational costs) will be critical.

Improving access to finance will be central to bridging the gap between the current capabilities of most MSMEs and the maturity required for mainstream investment. Traditional financing remains difficult to access, but alternative business models (such as EaaS) combined with tailored support for companies (such as inventory financing and aggregator funds) have shown promise. Working with national financial institutions, which best understand the local conditions, could help to provide more accessible financing to MSMEs and build credit ratings.

Aligned with this, MSMEs identified that their highest priority for technical assistance is for securing investments. Moving from one-off training to tailored programmes can help to achieve this, especially if focused on investment readiness, financial management, and business strategy. This could be supported through new national technical assistance facilities or collaborative platforms for shared learning.

Finally, strengthening the enabling environment for energy access will be foundational to sustaining long-term market growth in displacement and fragile settings. Shifting from fragmented project cycles to integrated development programming requires strong political commitment, inclusive policies, and effective regulatory frameworks. Explicitly including displaced populations in national policies, developing multi-year area-based energy plans, and supporting all stakeholders to transition to development-led approaches can help to build supportive ecosystems in which MSMEs can thrive.

Governments, donors, investors, humanitarian agencies, development organisations, and companies each have a role to play in overcoming the barriers to greater private sector engagement. Working together through coordinated approaches – for policies, financing, technical assistance, and more – will help to build stronger market systems and increase access to energy for people living in displacement and fragile settings.

About the GPA

The Global Platform for Action (GPA) on Sustainable Energy in Displacement Settings is a global initiative aiming to ensure SDG 7—access to affordable, reliable, sustainable, and modern energy for all—is inclusive of humanitarian and displacement contexts. The GPA Secretariat convenes a global network of over 100 partners working collectively toward this shared objective. It is financially supported by the IKEA Foundation and the European Union's Civil Protection and Humanitarian Aid Operations (DG ECHO), and receives in-kind support from NORCAP and the UK Foreign, Commonwealth & Development Office (FCDO) through the Transforming Energy Access (TEA) platform. The GPA is advised by a group of 14 global humanitarian and development partners, including UNHCR, IOM, WFP, FAO, UNDP, UNEP-CCC, Mercy Corps, Practical Action, SNV, GIZ, NORCAP, MECS, SEforALL, and the Clean Cooking Alliance.

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