SUBMISSION TO THE INTERNATIONAL DEVELOPMENT COMMITTEE OF THE UK PARLIAMENT

IN RESPONSE TO THE CALL FOR EVIDENCE

ON

AID FOR COMMUNITY-LED ENERGY

by

OMONIGHO ERIGHA

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About Climate and Energy Policy Initiative

Climate and Energy Policy Initiative is an independent think tank which advocates for a global clean energy transition through research and policy advisory. Research areas include clean energy transition, climate finance, climate adaptation and development of carbon markets.

About the Author

Omonigho Erigha is a Founder and Policy Director at Climate and Energy Policy Initiative, where she engages in research to promote a global energy transition and accelerate climate financing for mitigation and adaptation projects globally.

Comments

If you have any comments or questions about this submission, you may reach the author via email at omonigho.erigha@gmail.com.

Executive Summary

Community energy has the potential to play a transformative role in accelerating the energy transition, expanding access to clean, reliable power, and promoting renewable energy uptake in underserved regions. By placing ownership and decision-making in the hands of local people, community-led energy projects can deliver not only electricity but also wider social benefits including improved health services, better education outcomes, cleaner cooking solutions, and greater inclusion of women and marginalised groups in governance. When properly supported, these initiatives can become powerful vehicles for delivering climate-aligned, inclusive development in line with global energy and equity goals.

However, in many ODA-recipient countries, particularly across sub-Saharan Africa, scaling decentralized energy faces persistent challenges. These include limited access to local currency financing, weak technical and manufacturing ecosystems, fragmented regulatory frameworks, and lengthy due diligence processes that slow down investment. Despite these barriers, community energy offers a unique opportunity: if properly structured and financed, it could become a cornerstone of sustainable energy access strategies, unlocking local innovation, creating jobs, and driving forward a just and equitable energy transition across the region.

Responses to Specific Questions

1. **What is ‘community energy’ in the context of aid? What are the environmental, economic and social benefits of community-led energy initiatives? What are the risks and shortcomings?**

‘Community energy’ in the context of aid refers to energy initiatives that are initiated, owned, or managed by local communities, often with technical and financial support from donor agencies, non-governmental organisations, or development partners. These initiatives typically use renewable technologies such as solar mini-grids or solar home system solutions to provide reliable and sustainable energy access to underserved communities especially within rural areas. A hallmark of community energy projects is the involvement of the members of the communities in the projects. Some communities could form cooperatives who would then partner with local developers to execute the projects., The local communities would remain responsible for the ownership and governance of the projects. This aligns closely with broader development objectives such as climate justice, local empowerment, poverty alleviation, and inclusive energy access.

The energy communities could be categorised based on the ownership models. i.e. whether they are fully owned by the communities, jointly owned by both the communities and private project developers or fully owned by the project developers. In community-based ownership models, the community is the owner of the renewable

energy project and employs a private company to construct the renewable energy facility and maintain the facility on behalf of the community. In this model, the community retains greater control over the project and is able to ensure that the project remains operational for a long term for the benefit of the local community.

In the co-ownership model, the community contributes to the project by the provision of land or other monetary contribution to project developer for the development of the projects. In this model, the project risk is shared by both the community and the project developer.

In the project developer owned model, the community does not own the renewable energy projects but works with the private develop to ensure the success of the project. This could be in form of providing loans to cooperative members to ensure that they are able to afford the energy supplied by the private developers.

Energy communities could also be examined based on the consumption models adopted i.e. whether the energy to be provided would be for a community-based projects only e.g. for a community school or hospital; or provided to local businesses to deploy towards productive uses only. The consumption model selected by the energy communities will typically determine how contributions would be made by the local community members i.e. whether it would be a fixed membership fee or a pay-as-you-go fee model.

Benefits of Community-Led Energy Initiatives

Community-led energy initiatives offer a range of environmental, economic, and social benefits. Environmentally, these projects are often centered around clean, low-carbon energy sources. They help reduce greenhouse gas emissions, displace polluting fuels like kerosene or diesel, and support climate adaptation by building energy resilience in rural or climate-vulnerable communities. Because they are locally designed and managed, these projects are often better suited to address the specific energy needs of the communities.

Economically, community energy stimulates local development. It can create both skilled and unskilled jobs during construction, operation, and maintenance phases. With access to electricity, communities can engage in income-generating activities such as agro-processing, refrigeration, and small-scale manufacturing. Households also benefit from reduced spending on fuel and lighting, enabling savings and investment in other areas. From a development perspective, community energy supports the growth of micro-enterprises and fosters greater energy security.

Socially, these initiatives are transformative. They expand access to energy in regions typically left out of national electrification plans, especially in off-grid and remote areas. Community ownership builds local capacity, fosters civic engagement, and could empower marginalised groups to participate in governance and decision-making

Risks and Shortcomings of Community Energy

Despite their many benefits, community energy initiatives also face notable risks and limitations. One of the most significant challenges lies in governance and institutional capacity. Many communities lack the technical expertise or financial management skills required to sustain energy systems over the long term. Without adequate training and support, systems can fall into disrepair or become financially unviable. In some cases, power structures within communities can lead to elite capture, where the benefits of the energy project are monopolized by a few, undermining equity and inclusion.

Financial sustainability is another key concern. Many community energy projects rely heavily on grants or donor funding, and lack clear models for generating long-term revenue. Once external funding ends, the absence of a viable business model can lead to service degradation or system failure. Maintenance is also an issue as projects often suffer from equipment breakdowns due to lack of spare parts, inadequate technical support, or insufficient maintenance budgets.

Social risks can also emerge if participatory processes are not genuinely inclusive. Marginalised groups, including women, ethnic minorities, or the elderly, may be excluded from decision-making or benefit-sharing if governance structures are not carefully designed. Furthermore, disagreements over tariffs, revenue distribution, or system use could create conflict within communities, particularly where trust or accountability mechanisms are weak.

2. **How does the UK's ODA support decentralised energy initiatives? How effective is this support?**

The United Kingdom's Official Development Assistance (ODA) has played an important role in supporting decentralized energy (DE) initiatives across sub-Saharan Africa and other developing regions. These interventions have helped catalyse early-stage innovation, improve policy environments, and crowd in private sector investment. However, while the UK has made meaningful contributions to expanding energy access, more can be done to deepen its impact and ensure sustainable, locally driven energy transitions.

One of the critical areas requiring greater attention is local currency financing. Most UK-supported energy programmes still operate in hard currencies, which exposes developers to exchange rate risks and makes it difficult to scale projects sustainably. Unlocking domestic capital markets and working with local financial institutions to provide affordable, long-term finance in local currencies would significantly enhance the resilience and bankability of decentralized energy initiatives.

Similarly, the UK's support could be more impactful if it placed greater emphasis on developing local renewable energy manufacturing capacity and technical skills ecosystems. Building local supply chains, not just importing solar panels and batteries, will create jobs, reduce costs over time, and enhance the economic multiplier effects of energy access. Investment in local technical training and vocational programmes can also address skills shortages and ensure that communities are equipped to manage and maintain decentralized energy systems over the long term.

Another area for improvement lies in the transaction process. While UK programmes often bring high standards of due diligence, the procedures can be lengthy and resource-intensive, particularly for small and medium-sized enterprises. Transactions often take a long time to close, leading to lost momentum and higher costs. Introducing more standardised transaction templates, along with a more streamlined and harmonised due diligence approach across UK funding agencies, could reduce bottlenecks and accelerate deal flow.

In sum, the UK is making a meaningful contribution to the decentralised energy sector, but to be truly transformational, it must go beyond innovation and de-risking. It must also address the systemic financing, manufacturing, and institutional barriers that still limit the scale and sustainability of energy access in the communities that need it most.

3. **How are development finance institutions engaging with the potential of community energy and provide examples of successful initiatives?**

Development finance institutions (DFIs) are playing a growing role in unlocking the potential of community energy, small- to medium-scale, locally driven renewable energy systems that empower underserved communities. By shifting from a traditional focus on centralised infrastructure to more inclusive, decentralised models, DFIs are enabling community ownership, catalysing private capital, and strengthening energy access at the last mile. Initiatives like CEI Africa, the African Development Bank's Sustainable Energy Fund for Africa (SEFA), and the World Bank's Mission 300 illustrate this evolving approach.

a. **CEI Africa: Blended Finance for Decentralised Energy**

The Clean Energy and Energy Inclusion for Africa (CEI Africa) Foundation, initiated by KfW with support from other European donors, focuses on de-risking investments in mini-grids and solar systems that serve off-grid and peri-urban communities. It provides results-based financing, concessional loans, and technical assistance to developers working in hard-to-reach markets.

A core priority of CEI Africa is to create viable and scalable business models for community-based energy provision. The foundation encourages local employment, gender inclusion, and sustainable operations by offering financing tailored to the

unique cash flow challenges of rural, community-led systems. By targeting underserved regions and building local ecosystems, CEI Africa demonstrates how DFIs can structure financing instruments around the social and economic dynamics of community energy.

b. **SEFA: Catalytic Capital for Mini-Grids and Local Systems**

The African Development Bank's Sustainable Energy Fund for Africa (SEFA) is one of the continent's leading clean energy funds, designed to unlock private sector participation in energy access. SEFA provides early-stage capital, concessional loans, and grant funding to a range of actors, including mini-grid developers and community energy enterprises.

SEFA also supports policy reform and enabling environments, helping countries design regulatory frameworks that support rural electrification, energy cooperatives, and public-private partnerships. In countries like Benin, Mozambique, and Sierra Leone, SEFA-backed projects are helping to electrify villages through community partnerships that incorporate local governance and productive energy use. This approach demonstrates how DFIs can balance financial viability with community empowerment.

c. **World Bank's Mission 300: Scaling Energy Access Through Mini-Grids**

The World Bank's Mission 300 is a flagship initiative launched to support the deployment of 300,000 mini-grids by 2030, with the goal of connecting 300 million people in Africa and other developing regions. Central to this mission is the recognition that community-centered mini-grids, designed with local participation and aligned with development priorities, are among the most effective tools for accelerating energy access.

Mission 300 supports mini-grid scale-up through:

- concessional financing and technical assistance via the World Bank and its partners (e.g., ESMAP, SE4All),
- policy dialogue and reform to streamline licensing and tariff regulation,
- market development by standardising procurement processes and aggregating demand.

Critically, Mission 300 seeks to integrate community energy into national electrification strategies, ensuring that local needs and institutions are part of long-term planning. It also promotes productive uses of energy, gender equity, and integration with public services such as schools and clinics.

In conclusion, community energy is increasingly viewed not just as a grassroots initiative, but as a viable, investable pathway to universal energy access. DFIs like KfW (via CEI Africa), the African Development Bank (via SEFA), and the World Bank (via Mission 300) are helping shift the landscape by providing blended finance, technical assistance, and market-building reforms. These initiatives reflect a broader recognition that empowering communities to co-create, own, and manage energy systems is key to achieving inclusive, resilient, and climate-aligned development.

4. **What are the main challenges facing the deployment of decentralised energy (DE) systems in ODA-recipient countries? How could they be overcome?**

There are several barries to scaling the deployment of decentralised energy systems in Sub-Saharan Africa. They include:

a. **Lack of Local Currency Financing**

A critical barrier to scaling decentralized energy (DE) systems in sub-Saharan Africa is the lack of long-term, affordable financing denominated in local currencies. Most DE developers depend on debt and equity financing in foreign currencies, while revenues from consumers are typically generated in local currencies. This currency mismatch exposes projects to significant foreign exchange risks, especially in markets characterized by inflation and exchange rate volatility. Without concessional finance, grants, or government-backed guarantees, these risks can severely undermine project viability.

Moreover, local financial institutions often lack the technical capacity or risk appetite to support renewable energy investments, particularly in rural or off-grid contexts. Even when local banks are willing to lend, the financing terms tend to be short-tenured and carry high interest rates. Local capital markets remain shallow and illiquid, further constraining access to affordable long-term capital. While domestic pension funds could offer a source of stable, long-dated finance, regulatory limitations and risk perceptions frequently prevent their participation in decentralized energy investments.

b. **Policy and Regulatory Uncertainty**

Decentralized energy solutions operate in a complex policy and regulatory environment that varies significantly across countries. In many jurisdictions, energy regulations are outdated and primarily designed for centralized utilities. Developers face lengthy and opaque licensing processes, unclear tariffs for mini-grids, and uncertain rights to sell electricity or interconnect with the national grid.

In addition, the absence of clear policy signals or long-term national electrification plans that incorporate decentralized approaches could disincentivise private investments in the sector. Regulatory reversals or changes in subsidies, feed-in tariffs, or rural electrification priorities introduce political and financial risks. These uncertainties deter investors and hamper market confidence.

c. **Interconnection Challenges**

Utilities across sub-Saharan Africa are frequently burdened by inefficiencies, significant revenue losses, and chronic undercapitalisation. These structural challenges can lead utilities to perceive decentralized energy (DE) solutions—particularly in peri-urban areas with existing but unreliable grid infrastructure—as competitive threats. In some cases, this has resulted in resistance to interconnection agreements with mini-grid operators, as utilities seek to protect their customer base and revenue streams.

However, emerging models of collaboration suggest that decentralized energy and utility partnerships can be mutually beneficial. In Nigeria, for example, initiatives to integrate interconnected mini-grids (IMGs) have demonstrated that such cooperation can enhance service delivery and improve financial outcomes for all stakeholders. DE providers often maintain stronger customer relationships and higher collection rates, while distribution companies benefit from more predictable revenue flows through bulk payments from the DE operators. Ultimately, this alignment can lead to improved reliability and expanded access for end users.

d. **Limited Demand and Affordability Constraints**

While decentralised energy systems can extend access to remote areas, their financial viability often depends on sufficient and predictable demand. In many rural communities, household energy consumption is low, primarily limited to lighting and mobile charging. The absence of productive uses, such as irrigation, agro-processing, or small manufacturing, reduces revenue potential and increases the payback period for investments.

Affordability also poses a significant barrier. The upfront costs of solar home systems or mini-grid connections can be prohibitively high for low-income households, even with pay-as-you-go (PAYG) models. Without targeted subsidies or concessional finance, many consumers remain excluded from access.

e. **Lack of Data and Planning Tools**

Successful deployment of decentralised energy systems requires reliable data on energy access, consumption patterns, population distribution, and local economic activities. However, many countries lack up-to-date geospatial data, energy demand forecasts, or integrated energy planning tools. This information gap hampers developers' ability to identify viable project sites and optimize system sizing and location.

The lack of harmonised data also prevents effective coordination between public and private actors, leading to missed opportunities for synergies. Better data infrastructure would improve transparency, planning efficiency, and investment attractiveness.

f**. High Upfront Capital Costs**

Decentralized energy technologies such as solar mini-grids and standalone systems have high initial capital costs relative to average incomes in many African countries. Although the levelized cost of energy (LCOE) is competitive with grid extension or diesel generation in many areas, the upfront investment required for hardware, installation, and system integration remains a key constraint and can be excessive for local communities without funding support.

5. **How does the FCDO ensure that the voices and rights of women, older people and marginalised communities are heard and protected in funded energy projects?**

The UK's Foreign, Commonwealth & Development Office (FCDO) integrates gender and social inclusion into its energy programmes to ensure that women, older people, and marginalised communities are meaningfully included and protected. This begins at the design stage, where funded projects are required to conduct gender and social impact assessments and identify specific barriers to energy access. FCDO also promotes inclusive participation by supporting community engagement processes and governance structures that give voice to underserved groups. Projects are also monitored to ensure that gender considerations are incorporated during implementation stages.

Economic empowerment is a key focus, with many FCDO-supported initiatives providing targeted training and opportunities for women and youth in the renewable energy sector.

6. **How can the value for money of community-led energy projects be evaluated to account for their full environment and social benefits?**

Evaluating the value for money of community-led energy projects means looking beyond just the cost of installing solar panels or connecting homes. These projects bring lasting change to communities, especially when they are designed and led by the people who live there. Access to energy doesn't just light homes, it transforms lives.

When a health clinic has reliable electricity, mothers can give birth safely at night, and children can be vaccinated on schedule because vaccines are kept cold. In many communities, this has led to reductions in maternal mortality and improved immunisation rates. With lighting in schools, children can study after dark and attendance often improves, especially for girls who otherwise stay home to help with chores during the day. Clean cooking solutions reduce the use of wood and charcoal, leading to fewer respiratory illnesses, especially among women and children who spend more time around the fire.

Perhaps most importantly, community-led projects give people a voice. They create space for women, older people, and marginalised groups to participate in decisions that affect their lives, from how energy is used, to who benefits. This sense of ownership builds stronger communities and ensures that the benefits of energy access go beyond electricity, contributing to better health, education, livelihoods, and dignity for all.

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