

Aid for community-led energy – written evidence

Community Energy Scotland

Introduction

Community Energy Scotland is Scotland's only national charity dedicated to supporting communities across Scotland to develop their own decarbonisation & sustainable energy projects. As a membership organisation representing more than 400 community energy groups across Scotland, we champion and advocate for community-led action in the transition to a low carbon future.

Over the 15 years since Community Energy Scotland was formed, we have seen countless communities of place and interest take action locally, whether that be setting up and managing large scale renewable electricity generating projects, initiating sustainable transport programmes, or providing energy advice and support to the most vulnerable people in their communities. The effect that these projects have on communities is profound. Aside from leveraging in millions of pounds of financial benefits into local communities, we have also witnessed wide-ranging social and economic benefits including improving skills, providing employment opportunities and bringing the community together, often leading to establishment of other local needed services.

Can you provide examples of successful programmes or initiatives that have enhanced access to clean, affordable and inclusive energy systems?

Community Energy Scotland (CES) has an active partnership with Community Energy Malawi, with whom we work to **support the development of community-led and community owned renewable energy initiatives in Malawi**. Our relationship began in 2011 when CES managed the Community Energy Development Programme (CEDP), within the Scottish Government-funded Malawi Renewable Energy Acceleration Programme (MREAP). **This project supported over 20,000 people in 12 districts of Malawi** and led to Community Energy Scotland helping to set up Community Energy Malawi. We have witnessed their development into an independent organisation with a busy work programme, working with government (national and district levels), funders and other partner organisations in Scotland. Community Energy Malawi has now been operating for ten years and benefited over 100,000 people in Malawi. **We therefore have first-hand experience of the benefits that community energy can bring as we strive toward the wider goal of global clean energy.**

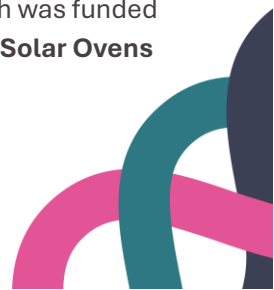
Context

Malawi is a predominantly agricultural based economy relying on subsistence agriculture and 85% of its 17.5 million population living in rural areas. Malawi relies heavily on hydropower for electricity—around 80–90% of the country's electricity is generated from hydro plants, and over 85% of Malawians use biomass (mainly firewood and charcoal) for cooking, especially in rural areas. This contributes to deforestation and environmental degradation.

Access to grid electricity is low (15-20% of the population) with the majority of connections concentrated in urban areas (40-50%) and rural areas only 5-15% although this is improving gradually as solar mini-grids gain popularity. This is due to limited generation capacity (less than 600 MW total), ageing infrastructure causing frequent blackouts and load shedding, and a high dependency on rainfall for hydroelectric power makes it vulnerable to climate change and droughts.

Projects

Between 2018 and 2021, CES supported the delivery of three CEM projects: The **Sitolo Mini-grid** which was funded by the GEF/United Nations Development Programme (UNDP) and the Government of Malawi; and the **Solar Ovens**



for **Cooperative Economic Growth** and **Building Community Climate Resilience through Sustainable Electricity for Enterprise** funded by the Scottish Government's Climate Justice Innovation fund.

Sitolo Mini-grid & Building Community Climate Resilience through Sustainable Electricity for Enterprise

Funding was secured for these projects in 2017. The solar mini-grid was successfully installed in December 2019 with the aim of supplying electricity to households and businesses in rural Malawi. The Building Community Climate Resilience through Sustainable Electricity for Enterprise project was developed alongside the mini-grid to provide capacity building to the local community with the aim of developing a sustainable mini-grid management system and business model that would ensure long-term viability and success of the installed system and strengthen local agriculture and local enterprise.

Project successes:

- At project end, the mini-grid was providing electricity (purchased via tokens) to 155 customers including two churches, a maize mill, a school and a health centre.
- By 2022 when a social impact assessment was undertaken, 724 customers were connected including 685 households (benefitting 3425 people), 7 social centres (including a primary school and churches), and 32 businesses (including 11 grocery shops, 5 barbershops, 3 mills and 7 ICT centres). Many of these businesses have diversified their activities (e.g. offering cold drinks) and extended their business hours due to access to electricity.
- Awareness sessions were provided on the Productive Use of Electricity to highlight what else can be used with electricity beyond lighting and phone charging. and has enabled the start-up of four businesses (a maize mill, welder, refrigeration service and hair salon); and six existing businesses (3 barbershops and 3 lighting shops) have increased their profits.
- 20 technicians were trained theoretically and practically in system installation, troubleshooting and repairs
- 20 entrepreneurs were employed and are now earning an income selling Pico solar products.
- When a social impact survey was undertaken in 2022:
 - 99% of respondents were satisfied with the micro-grid and said their lives had changed positively due to being connected
 - 57% of respondents said that schoolchildren in their householder were now studying for an average of 7 hours per week. The school being connected has led to more students attending night classes and in turn more students going to secondary school.
 - Use of kerosene or paraffin for lighting had reduced by 100% and 88% of respondents said that their monthly spend for lighting was now cheaper than for kerosene, candles and batteries for torches prior to the microgrid.
 - Respondents stated that the mini-grid had improved safety: *"We now feel safe. The street lights make our village roads safe at night. With the lights as well, we no longer experience cases of hyenas terrorizing our livestock as before. Even thieves think twice before entering this village because with the electricity everywhere is like day even if it is night"*

Solar Ovens for Cooperative Economic Growth

This project began in 2018 and focused on using solar ovens to cook in two biomass-dependent bakery cooperatives in rural Malawi. The key aims were to explore the potential of solar ovens to reduce reliance on biomass and potentially stimulate economic growth in the baking cooperatives.

Project successes:

- Both co-ops were fully trained on the safe use and maintenance of the solar ovens, business management, value addition and productive use of energy and as a direct result both co-ops diversified their businesses by opening tea rooms at their bakeries and completed business plans to help guide and plan future expansion.
- At project end both co-ops had reduced their dependence on firewood ovens by 40% and will have a knock-on effect of benefitting the health of co-op members by limiting their time spent in smoky work conditions.
- Two Forest committees – one in each co-op – were set up with responsibility for planting and managing the 19,000 tree seedlings planted by the two cooperatives and received specialised training to bridge their knowledge gaps in forest management.
- Strong relationships were formed between the delivery organisations (CEM and COMSIP) and the other key stakeholders involved, namely district councils, community leaders, universities/colleges, development workers and the ministry of energy, greatly improving the credibility and reputation of those involved in the project and providing a strong foundation for future collaborations.

Additional video links from Community Energy Malawi

- A Ted Talk by Edgar Kapiza Bayani, Country Director of Community Energy Malawi about the transformational impact of the mini-grids. <https://www.youtube.com/watch?v=FBkfhJ4j99Y>
- A Reuters Report on the mini-grid making the case for decentralised energy to increase access in remote communities : https://youtu.be/_ZVaAjcB6mo?si=DHewLzo5OEFZed6UV
- A BBC report that reports on twinning of Community Energy Scotland members Isle of Eigg and CEM's Minigrid site in Malawi, showing how global knowledge exchange can influence technology transfer, models development and development. https://youtu.be/apGEhHvu_0s?si=SMZGoRRn6-GVtQSH
- A Video on the Scottish Government funded Solar Energy Hub / cold storage facility deployed by Community Energy Malawi and the University of Strathclyde - <https://youtu.be/xOY9k9Q30ik?si=THNaBQQcuXIVColx>
- A video on how energy helped management of COVID 19 by installing solar in health centres <https://www.youtube.com/watch?v=W5AD4h4Q6YA>

What are the main challenges facing the deployment of decentralised energy systems? successful programmes or initiatives that have enhanced access to clean, affordable and inclusive energy systems?

The model of the work that we have undertaken in Malawi has significant potential to be replicated across other ODA-recipient countries. Community Energy Scotland is in a strong position to work to build capacity of a local organisation on the ground, supporting them to use a true community development approach to identify energy-related challenges and opportunities, develop projects and business models and build local skills to ensure the sustainability of the initiatives in the long term.

In parallel, there is significant potential for sharing learnings between UK community energy projects and projects in ODA-recipient countries. This could build on our existing membership as well as the Energy Learning Network, a partnership between Ashden, Community Energy Scotland, Community Energy England, Community Energy Wales, Action Renewables and the Centre for Sustainable Energy. The Energy Learning Network uses a variety of models including peer learning groups, a mentoring programme between experienced community energy practitioners and those new to the sector, and a wide range of support for community energy groups and stakeholders including municipalities.



However, since 2021, we have struggled to secure funding to continue and expand our activities with Community Energy Malawi, despite enthusiasm to continue to develop new projects from both sides. Likewise, we have not been able to replicate this model in other countries, despite our aspirations and the aspirations of organisations that have proactively reached out to us from countries including Zambia, Zimbabwe, Democratic Republic of Congo and Ghana.

We are heartened by the recognition of the potential of community energy in international development that this consultation represents, and **we hope that this call for evidence represents a turning point in the UK Government's approach to funding**, to make it more accessible to organisations like ours. We are not a large multinational charity but rather community energy experts who are passionate about what we do and the transformational potential of community-led energy projects in every corner of the world. Funding should be made accessible to organisations like Community Energy Scotland with genuine expertise and hands on community energy development experience to directly work with community organisations in ODA target countries to build their capacity.

Community Energy Scotland

May 2025