



Case Study
October 2019

LEDS Global Partnership Case Study:

Community engagement as key component of successful mini-grid development

Experiences from Nigeria and Sierra Leone

Ieva Indriunaite and Sara Engstroem
LEDS Energy Working Group / SD Strategies

Community engagement is essential to ensuring the sustainability of mini-grid projects and enabling communities to reap the full benefits of electrification, including improved livelihoods, health benefits, new employment opportunities, empowerment of women, and more. This strategy has also been tagged a high-priority concern by government members of the Low Emission Development Strategies (LEDS) Global Partnership's Africa Mini-Grids Community of Practice (AMG-CoP). This case study builds on experiences shared by AMG-CoP members and further explores best practices for community engagement in the design and implementation of mini-grid projects. It draws particularly on recent activities in Nigeria and Sierra Leone.

Key messages

- Community engagement is key to ensuring mini-grid project sustainability and realizing the full socio-economic potential of rural electrification programs.
- Governments across Sub-Saharan Africa are exploring ways to incorporate community engagement activities into their programs—effectively learning by doing.
- The experiences from Nigeria and Sierra Leone offer useful lessons for designing and implementating community-engagement programs and activities.
- Multi-stakeholder partnerships and inclusive approaches form the basis of effective implementation; gender mainstreaming should be considered a crucial component.
- Past community engagement programs have been successful, but continuous community engagement activities through long-term engagement programs are needed to fully capture the long-term development benefits of mini-grid electrification.

Context

Mini-grid technology offers a cost-effective solution for extending high-level electricity access to rural areas—a key priority for many African governments. It allows remote communities to produce and utilize sustainable electricity, creating opportunities for social and economic development. However, limited buy-in from local communities, low electricity consumption, and inadequate productive use of electricity (PUE) uptake threaten mini-grid project sustainability and increase investment risks. Effective community engagement can mitigate these risks by strengthening local support and ensuring communities have the capacity to reap the benefits of electricity access.

¹ More information on the AMG-CoP can be found at http://ledsgp.org/resource/introducing-african-mini-grids-community-practice.

For developers, community engagement facilitates rapid customer sign-ups, increased demand for energy, and willingness to pay for services. For governments, increasing productive power usage and stimulating complementary entrepreneurial activity leads to economic development, improved social indicators, and decreased outward youth migration.

Governments are increasingly incorporating community engagement in their rural electrification strategies; however, limited information on best practices, including the need to contextualize activities for specific environments, complicates the design of community engagement. Actors are currently exploring different approaches to meet community needs, effectively learning by doing.

This case study highlights recent community engagement activities in Nigeria and Sierra Leone. Both governments have acknowledged the role of mini-grids in their rural electrification strategies and explored ways to incorporate community engagement activities into their ongoing programs.

Table 1 summarizes the main interventions in both countries:

Nigeria

Program: Rural Electrification Fund's Competitive Procurement Call 1.

Background: The Rural Electrification Agency (REA), which leads mini-grid development, has conducted several community engagement activities. The most recent outreach took place through support from the African Development Bank (AfDB) and as part of the design of a quality assurance framework for mini-grid development.

Objective: Set the mandate and develop capacities of private mini-grid developers to conduct community engagement activities.

Scope: The outreach covered engagement with 12 local developers and 12 mini-grid beneficiary communities.

Sierra Leone

Program: Rural Renewable Energy Program (RREP).

Background: Sierra Leone's Ministry of Energy, together with the United Nations Office for Project Services (UNOPS) and the Electricity and Water Regulatory Commission (EWRC), has carried out several community engagement activities within the RREP, including informational outreach and consultation with communities. The EWRC led the latest activities, which focused on electricity tariffs.

Objective: Consult beneficiary communities on the proposed tariffs.

Scope: The outreach covered meetings with 13 communities over a period of two weeks.

Table 1. Overview of recent community engagement activities in Nigeria and Sierra Leone

High-impact activities

Community engagement encompasses a wide spectrum of activities and tools. The level of engagement ranges from basic information provision and consultation to inclusive, participatory project planning and implementation (Best, 2016). Outreach and engagement methods are tailored to program needs and context-specific conditions in a given community. Key aspects to consider in selecting appropriate engagement tools include:

- Level of community engagement the program aims to achieve
- Existing level of energy access
- Existing level of knowledge and literacy
- Local opportunities for productive uses of power

In Nigeria and Sierra Leone, recent community engagement programs largely focused on informational activities, such as town hall meetings with key community leaders and representatives.

Nigeria: The most recent outreach activity in Nigeria was a program to train private developers in implementing community engagement activities. The goal was for developers to empower communities to become active users of mini-grid-supplied electricity who fully understand their rights and obligations and can share feedback and report

technical issues. Supported by the REA team and external consultants (TFE Energy), developers conducted meetings with local community representatives to establish relationships and build a foundation for continuous engagement. A methodology and teaching materials were designed for the private developers' training program.2 In this case, the government (through the REA) both set the standard for mini-grid, developerled community engagement activities and supported private developers in the first steps of organizing engagement activities. This method could be replicated in other countries that are using a public-private partnership or a private sector-led mini-grid business model.



Community engagement activities take place under the Implementing a Quality Assurance Framework project in Nigeria.

Sierra Leone: The latest outreach activity in Sierra Leone was devised to inform and consult communities about the design and pricing of electricity tariffs. The government-led team gathered representatives from local-level governance and key stakeholder groups in town hall meetings to present project benefits and answer questions. While the core focus was tariff design, the content also included broader information about the RREP. The meetings also included question-and-answer sessions in which community members could ask questions, raise concerns, and learn more about the mini-grid project. The communities' active interest in all aspects of project development and their keen participation implied a demand for further engagement.

Stakeholder partnerships

Community engagement activities should leverage valuable knowledge and experience through partnerships among relevant stakeholders, such as community members, government agencies and municipal governments, project developers, NGOs, donor agencies, and others (see Figure 1). Multi-stakeholder partnerships are important



Figure 1. Key stakeholders for community engagement

²The training guides will be made available on the Green Mini-grid Helpdesk database at https://greenminigrid.se4all-africa.org.

throughout the process, especially where continuous engagement is envisioned. Partnering with mini-grid developers, NGOs, and local actors can optimize program delivery by pooling skills and resources. Mini-grid developers and governments are both strongly incentivized to carry out effective community engagement activities, creating opportunities for collaboration. Whether mini-grid deployment is led by government or private-sector actors, the government plays a role in coordinating community engagement and associated partnerships.



Community engagement activities in a rural community in Nigeria

The engagement activities carried out in both Nigeria and Sierra Leone involved

a team of multiple stakeholders, including community leaders, representatives from government agencies and ministries, donor agency representatives, and mini-grid project developers. In Nigeria, local focal points working with mini-grid developers led community engagement efforts and preparation for community meetings. Such a multi-stakeholder approach increases the quality and credibility of the outreach, benefitting both communities and project developers. Having a community's trust and knowledge of the local environment are key to successfully organizing engagement activities.

Success factors

To reap the full benefits of community engagement in rural communities, consider the following dimensions while designing and planning engagement programs and activities:

Inclusion

To maximize engagement impact, it is important to ensure no one in the community is left behind. Women and other marginalized groups often face social and cultural barriers to public participation. These barriers should be identified and addressed in the design of community engagement programs. Such an approach is relevant for all levels of engagement, from initial informational activities to deeper-level participation. For example, a gender mainstreaming approach could be applied in the design of public outreach, feedback sessions, productive use support activities, and decision-making.

Partnerships

Effective collaboration across sectors is a pre-condition to leveraging valuable skills, knowledge, resources, and influence from relevant stakeholders. Government-led community engagement can greatly benefit from partnerships with those who bring local perspectives and know-how, such as local officials or NGOs.

Early Start

It is particularly important to hold the first community engagement activities at the early stages of mini-grid project development. This will enable the gathering of useful feedback from project beneficiaries that can be successfully incorporated into the design of the mini-grid.

Continuous Engagement

A one-off engagement activity may not be sufficient to deliver sustainable benefits for minigrid users. While informational activities are a good start, they are not enough to ensure that communities benefit from potential economic development associated with mini-grid arrival. It is widely acknowledged that productive-use activities are not developing organically; they require active and continuous support. Programs should be built on the principle of long-term engagement with capacity development and guidance, as well as financial support for existing and new local entrepreneurs to establish businesses that harness the potential of electricity access.

Monitoring & Evaluation

A monitoring and evaluation system should be established to track the application of success factors in community engagement programs. This will support continuous improvement of program design and generate valuable lessons for other countries that are working to integrate community engagement activities into their rural electrification practices. In addition, an M&E system will ensure that community feedback gathered through engagement activities is captured and incorporated into the mini-grid project design. Where community engagement is led by mini-grid developers, the monitoring and evaluation of engagement activities should be incorporated into the broader mini-grid project monitoring systems.

Overcoming challenges

Carrying out community engagement in rural areas is challenging on multiple levels, presenting structural and practical challenges.

Structural challenges			Practical challenges		
SOCIAL BARRIERS	GENDER INEQUALITY	LOCAL CREDIBILITY	LIMITED RESOURCES	TIME SCOPE	LOGISTICS

- Socio-cultural barriers based on social or cultural norms may undermine the active participation of
 marginalized groups, including women, disabled people, and senior adults. In cases where engagement
 activities are delivered by external team members, socio-cultural aspects may also present a barrier to effective
 engagement. Designing diverse teams who integrate local representation is key to overcoming this barrier.
- Gender inequality in communities with strong patriarchal structures may impede women's active participation in community engagement. In Sierra Leone, the engagement team reserved a section of the Q&A sessions for women only, to encourage their participation in town hall meetings. In Nigeria, the engagement team found it would be useful to arrange sessions with women-only participation, where they could receive information and provide feedback in a safe environment.
- Lack of local credibility can lessen a community's receptivity to outreach activities. Including local actors or representatives on the activity team is important for overcoming trust or communication issues. Nigerian

experience has highlighted how a strong understanding of local environments is critical to achieving successful community outreach.

- Limited resources can compromise the quality and coverage of outreach activities. Resources may not be sufficient to extend activities into all beneficiary communities or to invite all members of selected communities. In this case, it would be important to identify key individuals who can effectively disseminate information to the broader community and relay collective feedback. In Sierra Leone, the EWRC widened the reach of information dissemination by inviting members from nearby communities to participate in a joint meeting. The meeting targeted representatives of key stakeholder groups, including the highest levels of local officials and representatives from businesses, women's associations, youth groups, schools, and health authorities; these representatives then facilitated strategic dissemination of information throughout the community.
- **Time limitations** may be a challenge to national-level teams who must travel long distances. In Sierra Leone, the outreach team scheduled two town hall sessions per day over a period of 10 days in order to minimize the time spent in the field.
- Logistical challenges may occur when covering large rural territories with rugged terrain. In Sierra Leone,
 an outreach team struggled with vehicle breakdowns and team members becoming ill. In the future, the EWRC
 believes that dividing the team to cover smaller territories and planning for delays would better facilitate the
 implementation of community engagement activities.

It is important to design strategies to address these challenges, especially in continuous, long-term community engagement programs that go beyond informational activities to include productive use support or more comprehensive capacity-building.

Development impacts

Community engagement activities have strong links—both directly and indirectly—to many sustainable development goals (SDGs). Introducing mini-grid-based electrification in rural communities constitutes a major opportunity for social and economic development. However, the benefits may not fully materialize if project beneficiaries are not adequately educated about the use of electricity for personal needs and correlated economic activities.

Continuously engaging communities creates an enabling environment for PUE, directly contributing to the achievement of SDG 8 (Decent Work and Economic Growth). The adoption of strategies for gender-mainstreaming and inclusion of marginalized groups in community engagement program planning contributes to the objective of SDG 5 (Gender Equality), as well as the overarching aim of leaving no one behind.

More broadly, the importance of community engagement for ensuring the sustainability of mini-grid projects underscores the implementation of SDG 7 (Clean and Affordable Energy) (Eales et al., 2018; Madriz-Vargas, Bruce and Watt, 2015; United Nations, n.d.). Similarly, in the case of green mini-grids, community engagement has an indirect impact on SDG 13 (Climate Action).

Bibliography

Baudish, I. & Bruce, A. (2015). Maximising sustainability and transformative potential via community engagement in mini grid deployment models. Paper presented at Proceedings of the 31st European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC 2015), Hamburg, Germany, Sept. 2015.

Best, S. (2016). Energising local economies: Experiences of solar start-ups in Kenya's small-scale fishing and agriculture sectors. International Institute for Environment and Development. Retrieved from: http://pubs.iied.org/16620IIED

Eales, A., Walley, L., Buckland, H., Frame, D., & Strachan, S. (2018). Social impacts of mini-grids: Towards an evaluation methodology. Paper presented at IEEE PES Power Africa Conference 2018. Cape Town, South Africa, June 2018. Retrieved from https://pureportal.strath.ac.uk/en/publications/social-impacts-of-mini-grids-towards-anevaluation-methodology.

Frame, D., Tembo, K., Dolan, M. J., Strachan, S. M., & Ault, G. W. (2011). A community-based approach for sustainable off-grid PV systems in developing countries. Paper presented at IEEE Power and Energy Society General Meeting. Detroit, Michigan, July 2011. Retrieved from https://ieeexplore.ieee.org/abstract/document/6039593

Madriz-Vargas, R., Bruce, A., & Watt, M. (2015). A Review of factors influencing the success of community renewable energy minigrids in developing countries. Paper presented at 2015 Asia-Pacific Solar Research Conference, Brisbane, Australia, Dec. 2015. Retrieved from http://apvi.org.au/solar-research-conference/wp-content/uploads/2015/12/R-Madriz-Vargos_Peer-Reviewed_FINAL.pdf

TFE Energy (2019). Quality Assurance Framework - Community Training Guides: Basic Training Guide; Complete Training Guide; Training Materials. To be made available: https://greenminigrid.se4all-africa.org

United Nations. (n.d.). Sustainable Development Goals. Retrieved from https://sustainabledevelopment.un.org/sdgs.

Case information was gathered through interviews and documents shared by:

- Dr. Sam Duby, TFE Energy GmbH / Implementing a Quality Assurance Framework in Nigeria / African Development Bank
- Dr. Victor Osu, Special Advisor to the Executive Director, Rural Electrification Fund / Rural Electrification
 Agency, Nigeria
- Kelcise Sesay, Head, Electricity Department, Sierra Leone Electricity and Water Regulatory Commission,
 Sierra Leone

To learn more about the LEDS GP and how you can get involved, please visit our website at **www.ledsgp.org** or contact the Secretariat at **secretariat@ledsgp.org**.







