



# Productive Use Promotion for Rural Entrepreneurs and Smallholder Farmers

in 25 Newly Electrified Villages, Lamwo District

**GRÜNE BÜRGERENERGIE  
(GREEN PEOPLE'S ENERGY)  
RESULTS CASE STUDY**

<b>Country</b>	Uganda
<b>Implementer</b>	Association of Volunteers in International Service (AVSI) Foundation
<b>Target groups</b>	Rural entrepreneurs and smallholder farmers
<b>Other stakeholders</b>	Financial institutions, providers of electric appliances and equipment, the international mini-grid operator Winch Energy, Ministry of Energy and Mineral Development (MEMD) of Uganda, GIZ Promotion of Mini Grids for Rural Electrification Program (Pro Mini Grids)
<b>Project duration</b>	11/2021 – 03/2023



## PROJECT APPROACH

Prior to the Green People's Energy (Grüne Bürgerenergie, GBE) project described in this case study, the GIZ Promotion of Mini Grids for Rural Electrification Project team had supported the

establishment of 25 solar-based mini grids in Lamwo, one of Uganda's poorest districts. It is a common challenge for mini grid providers that daily customer consumption is at least maintained at the level of the pre-installation predictions of consumption. The promotion of productive use of energy (PUE) for rural

entrepreneurs and smallholder farmers is one way to address this challenge, through generating the demand and ability to pay for electricity and thereby also ensuring the sustainability of the mini-grids. Although access to electricity is given, many rural entrepreneurs and smallholder farmers lack the knowledge and skills needed to use effectively energy to improve their businesses and farming practices.

Against this background, the GBE productive use project has two main objectives:

- (1) to increase entrepreneurial skills and competencies of new and existing businesses, and
- (2) to promote the development of start-ups and strengthen existing energy-intensive businesses.

The project approach is to train and/or coach up to 150 new or existing rural entrepreneurs and smallholder farmers in entrepreneurial skills and assist them in implementing business development for the productive use of energy. This is complemented by the establishment of a matching grant scheme for the target group to co-finance the purchase of productive use appliances and equipment, and the creation of an enabling environment for improved access to such financial services.

The project approach focuses on women in that it tries to foster greater participation of women in the implementation. This is done particularly in the selection of the rural entrepreneurs and smallholder farmers through a business idea competition where emphasis is laid on the selection of women entrepreneurs. The business idea will be assessed against several criteria, one of them the ability to offer equal opportunity to men and women. The training of entrepreneurial skills, coaching, and training of trainers is carried out by experienced local trainers of which 50% are women.



Picture 1: Female participant, business training

## METHODOLOGY OF DATA COLLECTION

The data for this case study report was collected through a review of project documents, 5 qualitative interviews with representatives of GIZ, AVSI Foundation, MEMD, Pro Mini Grids, and the mini grid operator: Winch Energy, as well as a quantitative survey in which 145 out of 167 contacted enterprises participated.

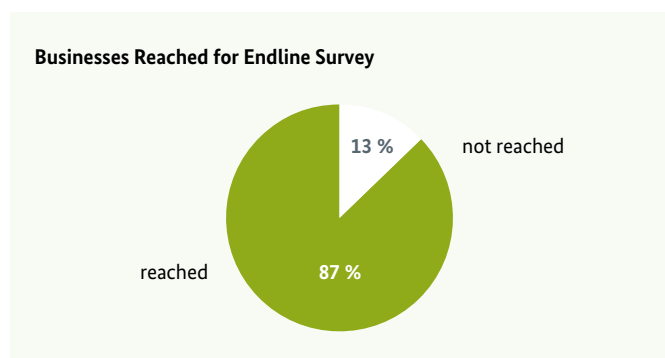


Figure 1: Participation in Endline Survey

The case study was conducted between March and April 2023.

## KEY FINDINGS

### Project Achievements

The project's main achievement is that by the end of the project more than 80 businesses in 25 villages in the Lamwo District now use electricity for productive purposes. Specifically, 112 new, productive and efficient electrical appliances have been brought into use, mainly freezers, milling machines, juice blenders and dispensers, computers and printers, electric razors, flat TV screens and security lights. More than 80 grants have been awarded for the purchase of these appliances. 144 out of 145 businesses report that they have increased their competencies and are applying skills, tools and methods acquired in the trainings.

The project facilitated access to 90 electrical appliances within the 25 villages. A restaurant owner has, for instance, purchased a deep freezer and can now serve cold drinks, a welding business can now use electric welding machines, and a hairdresser has electricity and can extend working hours to darkness and can work with hairdryers.

Despite an approach that has supported female entrepreneurs, less than 25% of the beneficiaries are female business owners.

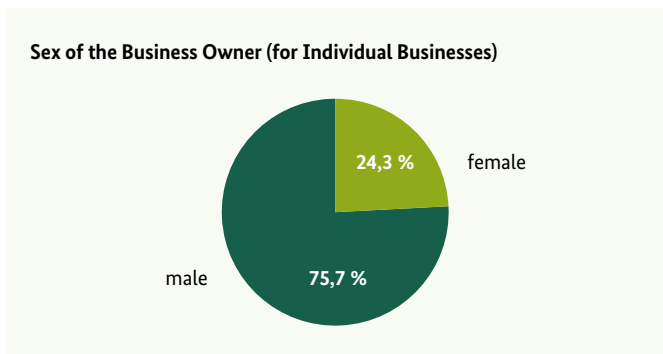


Figure 2: Sex of Business Owners

## Intermediate Impact

Through support from the project, 94% of the business owners use the power provided by the mini grids. This proves that the project has significantly increased electricity consumption in the villages showing that PUE promotion as an accompanying measure to mini grid installation is successful.

From April 2022 to January 2023, 83% of the active businesses have been able to increase their revenues through the productive use of the newly purchased electrical appliances and the corresponding increase in sales.

The trainings on the topics of financial management have been of particular relevance for the entrepreneurs. They report that they are already applying the training content on accounting and customer relations in their everyday work, thus making their work more efficient.

The project has empowered women to start their own businesses or expand their existing ones. For example, one female entrepreneur can now offer her customers cold drinks from a new efficient freezer. As she can serve more clients at the same time, her turnover and ultimately profit is increasing.



Picture 2: Female entrepreneur with a new efficient freezer

## Challenges in Project Implementation

Due to previous delays in the commissioning and installation phase of the mini grids by the Pro Mini Grids project, business skills training and coaching also started later than expected.



Picture 3: Business training

The project has not been able to fully adjust its time schedule to the delays that occurred. The time pressure has severely affected the application process for the grants, the selection of beneficiaries and ultimately the purchase of the equipment, as the whole process could not be carried out as thoroughly as planned. As the grants were only available during project implementation, the purchase could only be started in the last months of the project duration, and thus could have reached even higher numbers if particularly the hesitant and/or undecided entrepreneurs had more time to reconsider their decision and make their investments.

Another challenge raised was that the electrical equipment mostly comes from traders who are based in Kampala and only come to exhibit and showcase their products. If appliances are of inadequate quality and/or do not meet the specifications, the entrepreneurs have (logistical) difficulties in returning them to the dealers. If the targeted increase in turnover is not or only partially achieved, they will not be able to pay their electricity bills and rather be forced to return to their old business models.

## Lessons Learned

In terms of time constraints, the lesson learned is that projects that promote productive use of energy in mini grids in rural areas should be planned to start only when the commissioning and installation of the mini grids is finalised, and electricity is available to customers. This requires flexibility in timing to adapt to possible delays in implementation.



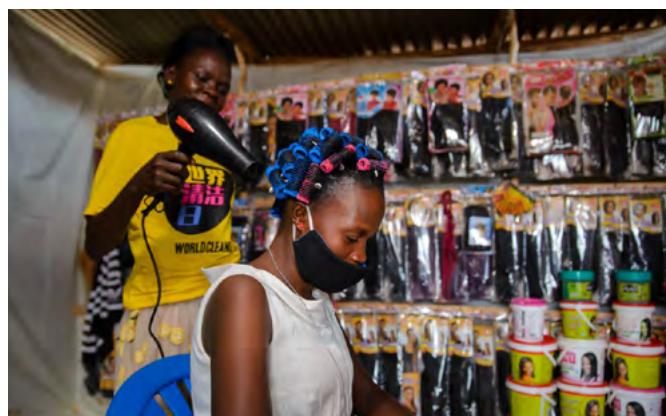
Picture 4: Stationery shop, beneficiary of printer and laptop

Although the project was designed to target women, the results do not reflect this effort, since only 25 % of the beneficiaries are female. This can be partly attributed to the lack of time during the project period, but also to the methodology chosen, which is not adequate to reach out and engage more women and to “address the cultural hurdles that help to free women from domestic work and give them more room for entrepreneurial engagement”, as one interviewee put it. This shows that there is room for improvement in future projects which should be more tailored to female entrepreneurs.

On a positive note, it was found that rural entrepreneurs can make their purchases much quicker and easier than expected, as they all have mobile money services on their mobile phones, which saves money and time. The lesson for future projects is that projects no longer need to plan for purchasing agents in the villages during the project design phase, but can rather build on mobile money systems to purchase appliances.

Future projects should give preference to selecting local traders. If no local traders are available, more attention should be paid to the logistical problems of returning goods and how to improve rural sales.

The key finding is that demand in rural areas can be increased, if the mini grid construction is accompanied by an access to finance component. This could be a matching grant combined with training and coaching, which in turn decreases the debt risks of micro financiers.



Picture 5: Beneficiary working with solar-powered hair dressing productive use appliance

### Sustainability of the Intervention

The main reason why existing businesses do not expand or try to benefit from the newly established grid-services is the limited (access to) capital. Therefore, almost 60% of purchases have been financed exclusively through the project’s matching grant system, which has subsidised 70% of the purchase of higher-value products, such as milling machines and 50% of the purchase of lower value products, such as hair dryers.

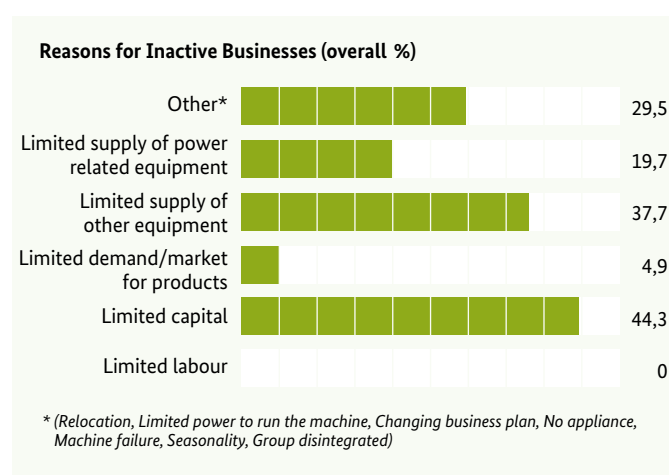


Figure 3: Reasons for Inactive Businesses

This points to the conclusion that without access to subsidised financing schemes or other forms of third-party support (e.g. micro financiers), the sustainable acquisition of equipment and thus the expansion of business activities is very likely to come to a standstill for those businesses that suffer from limited capital.

## CONCLUSION AND OUTLOOK

The project has stimulated demand of electricity by training existing and new entrepreneurs in productive use in a district that is one of the poorest in Uganda. More than 80 matching grants have been awarded in 25 villages in Lamwo district and have been used to finance 112 new, productive, and efficient electrical appliances.

The approach has been adequate to achieve the overall results. Nevertheless, the time for training has been very short with each entrepreneur having received only a few days of training. This is sufficient for promoting business ideas which only need a few days of training, but not enough for areas that require more in-depth training such as welding, nut grinding, or tailoring.

The investments lead to higher revenues for the business owners. The business owners are thus able to pay the (increased) connection fees and have additional income. Growing demand makes the emerging market more attractive to micro financiers who have been reluctant to develop financing models because the risks of failure have been too high.

The project has therefore created a cooperation model and a business case for further projects and can be recommended for replication if the lessons learned are taken into consideration. In particular, the following aspects should be considered:

With the end of the project, the availability of the subsidies has also been terminated. Therefore, existing or subsequent projects have to find ways to establish a more sustainable financing approach that might be less donor-driven and more market-driven, e.g. by focusing more on existing micro financiers.

Future projects should try to deepen the content of business training and coaching, e.g. by complementing it with vocational training courses, especially in welding or other crafts where a few days of training are not enough. Additionally, instead of a uniform training model, specialised training should be offered for the specific skills.

In the long term – and particularly with a view to potential follow-up projects – consideration should also be given to how entrepreneurs can be given easier access to suppliers of electrical appliances in rural areas in order to improve customer relations and enhance value creation (e.g. by promoting investment in more local open outlets and/or repair shops).

## MORE INFORMATION

Energypedia:  
[Green People's Energy Knowledge Hub](#)

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