PACE

Public Private Partnerships for Access to Community Electricity

Case Study: Private Off-Grid Electrification, Bonna, Ethiopia

Background

Since its introduction in Ethiopia, electrification has always been a dream for the residents of the remote southern town of Bonna. Many of them earn their income from trading farm produce bought from farmers in the surrounding villages. The most populous of the Ethiopian towns studied under this project, Bonna, has always had little prospect of getting connected to the national electricity grid, just like the other remote towns. Available data (see table below) indicate that the town has more men than women, and most of them are petty traders.

Table 1: Bonna town details

Total population	10,004
Number of Households	3,120
Electrified establishments	180
Men as percentage of total population	53%
Women as percentage of population	47%
Monthly income for most people	500Birr ($58)
Cost of electricity	USD 2.33 per bulb a month

The Bonna community has displayed remarkable entrepreneurial skills, through afforestation and other community development programs. This has not only encouraged a sense of collective action among the people, but has also improved their ability to raise funds for the electrification program.

A fundraising drive in 1994 enabled the community to raise USD 17,791 in only a few months, mostly from community contributions. Unfortunately, however, the Bonna community lacked access to information on how to proceed with implementing the electrification project and nine years later, they still have their money deposited in the bank waiting for someone to lead them in making the electrification dream a reality.

Despite this, a short term solution has been found, and Bonna is currently receiving electricity from a 12kVA diesel genset owned by a local businessman who reached an agreement with the community two years ago to supply the town with electricity for five hours every day.

Financing

The electrification of Bonna town was wholly funded by a private businessman after reaching an agreement with the community on how he would go about supplying the much needed electricity. Apart from purchasing the genset, he was also responsible for establishing a distribution line and constructing a powerhouse. However, new customers are required to pay for house wiring, poles and the cables that run from the distribution line to their houses.

Community representatives meet in Bonna town

Public-Private Partnerships

The process of electrifying Bonna town has had three main actors: the owner of the genset; Bonna Town Council and the community. The tariff was initially set in conjunction with the community at USD 1.4 per bulb per month but, since then, the genset owner has raised it to USD 2.33 per bulb per month.

Table 2: Key players in Bonna

Stakeholder	Key actors	Role
1.Owner of the genset	The manager and operator of the genset	Financing and installation of the complete system
2.Bonna town Council (or Kebele)	The chairman and development committee members	Provided permission and facilitated the electrification process
3.Community	Residents of the town	Participated in tariff setting in the initial stage of the project

Despite the involvement of both public and private sector actors, the electrification process has mainly been dominated by an unchecked private sector – leading to a very unsatisfactory situation for all

parties. The electrification scheme is characterised by a poor standard of power supply, hazardous equipment and a lack of response to problems and complaints – all leading to a generally unsustainable situation.

Access to Electricity

Livelihood benefits – *Direct Consumers*

Although many household consumers felt that service delivery was poor and unreliable, mostly through frequent and unexplained power interruptions, they all agreed on the fact that it is better than using candles or kerosene wick lanterns in terms of quality of light, price and cleanliness. Due to high voltage losses and the fact that the capacity of the system is too small, users cannot utilise the power for anything other than lighting. Only those residing near the powerhouse are able to play radios or cassette players. Livelihood benefits have been felt across the genders in nearly all the connected households, with most people mentioning smoke-free lighting as the main benefit.

Domestic Benefits: The light, though dim, provides enough power for the children to study and the parents to read books and socialise at night. Soot and smoke levels have also been reduced, improving hygiene in the home.

Both men and women mentioned that it is easier to entertain and to have family gatherings in the evenings. Their only regret is that electricity is only available five hours a day, and can be used for no more than just lighting bulbs. Connected households were also riled by the power interruptions, which occur on average eight times a month; moreover without any compensation for the days they have to go without power. There were also complaints about lack of prompt replies to complaints, and delays in restoring broken distribution lines.

Commercial and institutional users

Since electricity in Bonna town is just enough to power bulbs and nothing more, commercial users said they have not benefited that much from having electricity in the town. None of the commercial users who participated in this study were able to use the available power for radio and cassette players, which means they cannot provide their customers with any entertainment. Moreover, the voltage often drops along the transmission lines making it impossible to use the radio. Institutions like the health centre use electricity but only for indoor lighting. Only the municipality uses electricity for street lighting, and even then the security lights can only be found at the centre of the town which is close to the power house.

Livelihood benefits – *Indirect Consumers*

Even though the power provided is only used for lighting, 70 per cent of the unconnected households said they have benefited from having electricity in Bonna town mainly because the shops, pharmacies and clinics remain open for longer hours. Interestingly, none of the unconnected households listed street lighting among the benefits, although they all agreed that local entertainment places are offering better services with better lights.

Bonna Town Centre

Conclusions

The experiences of the Bonna community stand in sharp contrast to the other electrified Ethiopian towns in this study. The town has not enjoyed the fruits of electrification even though they have USD17,791 in the bank ready for use. With this capital, the community has the potential to establish its own diesel power supply option. To increase the chances of success with any future venture, it is important to heed some key lessons that can equally be applied to communities elsewhere:

- Rural communities need better access to information on how to go about the electrification process.
- Public sector involvement is required to ensure the regulation of private-sector led initiatives.
- Even when tariffs are set in consultation with the community, this can still lead to dissatisfaction if the quality does not live up to the agreed tariff rate.
- If tariffs are adjusted without transparency, this can lead to mistrust.
- Entrepreneurial aspirations may be wasted if communities can do little more with the electricity than light their bulbs.

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