World Business Council for
Sustainable Development

Case study
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ABB
Access to Electricity program eases poverty

A lack of basic infrastructure, for which electricity is a vital component, keeps nearly two billion people worldwide trapped in poverty. ABB's Access to Electricity program, designed to promote sustainable economic, environmental and social development in poor communities, is yielding its first concrete results in a remote village in southern Tanzania.

The 1,800-strong village of Ngarambe, on the edge of the Selous National Park, has received electricity under the program. Changes and improvements – in such areas as small businesses, education and health care - are already noticeable.

ABB, a leading supplier of power and automation technologies, and WWF, the global conservation organization, have teamed up to ensure the sustainable development of the village. The project is serving as a model for further, larger Access to Electricity projects aimed at easing poverty in other rural or semi-urban parts of Africa and Asia and helping ABB grow new markets.

The program

The Access to Electricity program is ABB's response to the United Nations Global Compact, which encourages companies and organizations to provide greater assistance to least developed countries. ABB was one of the first international companies to sign on to the Global Compact after UN Secretary General Kofi Annan launched it in 2000. ABB is an important private partner for development because the company can provide business competencies, local job creation, technology transfer and best practices, investment in local activities and a positive corporate citizen response in the countries where it operates.

The Access to Electricity program is much more than a rural electrification project. ABB works with other stakeholders – governments, companies, non-governmental organizations, aid agencies, civil society - with each partner bringing its core complementary skills to the project. It is not an "outside-in" program. Emphasis is placed on working with local authorities to establish villagers' needs, and ensure that whatever is introduced – such as electricity – is affordable long-term.

In Ngarambe, a village whose economy is based on agriculture, forest and wildlife management, power from a diesel-fired generator is now lighting up the school, dispensary, local government office, mosque, small businesses on the main road and a number of homes. The electricity – which is cheaper and cleaner than the kerosene used until now - is on for four hours a day after dusk.

ABB financed the installation of the mini-grid. The villagers contributed to lowering costs by building the generator house and digging trenches for power cables. The villagers decide, in consultation with the local authorities, how much they should – and can - pay for their power. A technical solution using current limiters ensures they do not exceed the amount of electricity they can afford.

The Ngarambe project is the result of lengthy and careful planning by ABB and WWF both at headquarters and on the ground. Both organizations jointly review progress and future plans.

The bottom line

The benefits of the Access to Electricity program for the local population are tangible:

- The local school now holds classes at night and students can also come in to study for their exams. The number of pupils has risen from 250 to 350 since the arrival of electricity in mid-2004.
- At the dispensary, the doctor can now also treat his patients at night and he intends to install a refrigerator for medicines. The measures will save some of his patients from making the lengthy journey to the nearest hospital, which is 70 kilometers – or a two-hour drive – from Ngarambe.
- With the installation of a water pump in the center of the village, local women no longer have to make the long climb to the sandy dunes to collect water from a well.
- The village now plans to install a small sawmill which will generate more income than what villagers currently earn from logging , and is studying the idea of automating the maize mill.
- Local stores and a teashop are able to stay open longer and provide cold drinks.

In the agreement with the local government and the villagers, the villagers will gradually take over the costs of the system. It is up to the villagers and the village leadership to agree on sustainable fees. In the meantime, the costs are subsidised by ABB.

The project is one of several under the umbrella of ABB's policy of pursuing "common efforts" with different partners. To quantify the results of the project, ABB measures the number of connections in the village and what development it sees in the village as a result of access to power. This is visible in the expansion of electrification to more houses in the village, as well as the increase in the number of pupils attending school.

ABB seeks to align its corporate social responsibility efforts with its business interests and core competence. For the company, the first result to come from this project is the implementation of a business model for its products and services, in this case rural electrification, that also works in low-income areas.

The key features of Access to Electricity so far are:

1. Providing access to electricity to low-income communities;
2. A bottom-up approach;
3. A strong focus on affordability;
4. Prioritizing the productive use of electricity in order to generate social and economic development;
5. Engagement with local partners to build know-how and best practices both for the company and for the local partners;
6. The company's contribution of commercial and technical expertise, technical design, consultation, training and local knowledge.

The partnership

The partnership between ABB and WWF works on the local level between ABB in Tanzania and WWF's local organization and on the international level between WWF International and ABB's headquarters. They assess, for example, how access to electricity will increase local incomes through the introduction of a sawmill.

In the Access to Electricity program, ABB focuses on the productive use of electricity in order to generate economic growth and social progress. The village, the government and WWF agree with ABB on this issue. ABB gains significant experience working closely with a small village and an NGO in a poor region. The prime benefit for ABB is to learn from this new business approach and refine its business model -- using low-cost ABB technology -- so it can be replicated elsewhere.

Concretely, ABB supplied the generator, installed underground cables and low-voltage equipment, and trained local people to run the power supply. WWF provides guidance on issues ranging from reducing deforestation and sustainable forestry to health care and environmental education, their contribution to going further than just supplying electricity.

Through the partnership, WWF aims to achieve good living conditions in the area for both the people and the wildlife, teach locals sustainable forestry and wildlife management practices in order to safeguard the environment, prevent uncontrolled migration to the village now that it has electricity, and arrange for HIV/AIDS education.

In general, the chances of success in a rural electrification project increase significantly if there is a certain level of development in the area and other development efforts are being made. With this in mind, the knowledge and experience of WWF was crucial to the success of the project in Ngarambe. Over many years, WWF has built up strong relations with the local communities in the area and conducted development projects with the villagers and governmental institutions.

Expanding the program

Further steps are planned. Feasibility studies are under way to introduce a wind power installation to replace the generator; to electrify a maize mill and a sawmill; and more homes are being linked to the mini-grid.

ABB and WWF plan to expand the collaboration in Ngarambe and in surrounding areas including nearby villages in the Selous game reserve. Because it is not feasible for a poor village to manage infrastructure investments of this type, ABB will seek to attract external funding.

ABB and WWF are exploring similar projects in other parts of Tanzania. ABB is also working with other partners on World Bank-financed electrification projects in Senegal and Uganda. Both of these projects are for considerably larger areas – in Senegal, the number of people to be brought within the mini-grid is 100,000; in Uganda, it involves a 20,000-strong town.

The Access to Electricity program is a commercial and social venture for ABB. It is about finding new ways to conduct business in low-income markets in a responsible way and increasing the socio-economic impact of electrification projects. The commercial perspective strives to break the traditional donor/receiver circle by ensuring the system stands on its own feet as a result of building the local economy.

"Together with the local community and authorities, WWF's field work in Ngarambe has focused on developing sustainable solutions to improve people's livelihoods. This first step in the cooperation with ABB resulted in a locally adapted solution. We look forward to the next step, with the implementation of a renewable energy solution." -- Claude Martin, Director General, WWF International.

More information

ABB
http://www.abb.com

WWF
http://www.panda.org

United Nations Global Compact
http://www.unglobalcompact.org/Portal/Default.asp

About the WBCSD

The World Business Council for Sustainable Development (WBCSD) is a coalition of international companies united by a shared commitment to sustainable development via the three pillars of economic growth, ecological balance and social progress. Our members are drawn from more than 35 countries and 20 major industrial sectors. We also benefit from a Global Network of 40 national and regional business councils and partner organizations involving more than 1,000 business leaders globally.

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