Solar empowerment of Gwakwani

A rural village in South Africa

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Life Is On Schneider Electric

Gwakwani

Overview

Gwakwani is a rural village about 650km from Johannesburg, based in Limpopo in former Venda. It has about 30 households and 100 inhabitants with an income of less than R1, 500 per month per household.

There is no municipal infrastructure in the village, which gives rise to the daily challenges of obtaining basic services like water, electricity, cellular and transport. There is no grid electricity or piped water.

Impact through partnership

A successful and on-going partnership between the University of Johannesburg's (UJ) Department of Electrical and Electronic Engineering Science (Faculty of Engineering and the Built Environment) and Schneider Electric South Africa, since 2015, has ensured that Gwakwani has received basic services through sustainable interventions.

The collaboration between private industry and academia has had many advantages, and with the commitment to sustainable solutions, collective knowledge and skill sets, a legacy has been created to be proud of for many years to come – a future reimagined for Gwakwani.

"The success of community outreach projects not only depends on the technical solution provided, but also on the social and cultural acceptability of the solution and of the solution provider."

Prof. John Meyer
Head of the School of Electrical and Electronic Engineering at UJ

“We are very proud to have the opportunity to work so closely with the University of Johannesburg School for Electrical Engineering Faculty on this incredible project. A collaboration of this kind has had many advantages and thanks to our commitment to sustainable solutions, collective knowledge and skill sets, we have created a legacy we can be proud of.”

Zanelle Dalglish
Head of Sustainable Development for Schneider Electric Anglophone Africa

Social impact

Water supplied from a diesel-powered borehole was insufficient for daily use in the village; a second borehole pump and newly installed drip irrigation system now allows them to plant and grow vegetables to support themselves, and sell their produce to surrounding villages; malaria cases per year have been reduced significantly, as the villagers no longer need to walk to the river, where there is a high malaria risk, to fetch water.

Paraffin lamps and candles were the primary sources of lighting for the village, prior to the company’s donation of solar lights. The lamps provide a safe lighting alternative, and opportunity for cell phone charging; school children are also now able to complete their homework at night in better quality lighting; furthermore, a solar streetlight was installed to provide light in the pitch-dark evenings.

There were no facilities for preschool education in and around the village; a new containerised crèche now boasts the first television set in the history of the village.

The high unemployment rate and low social grants kept the village in an utterly poor state; the village was supplied with a solar powered off-grid bakery to supply the villagers’ needs, and it has also provided a successful business opportunity to sell bread loaves to surrounding villages.