

Life Is On

Schneider
Electric



Rural Electrification

Providing power to an off-grid community in Kigbe, Nigeria

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Solar panel array at Kigbe, Abuja

Schneider Electric and Havenhill Synergy collaborated to build a mini-grid in a rural Nigerian community providing continuous access to electricity, using a cutting-edge model of community level electrification with decentralized power generation. Likely making this solution superior to most urban dwellings in the country.

Background

Kigbe is a suburb located in the Kwali local government in the Federal Capital Territory of Nigeria. It is situated 27km from the existing grid infrastructure. Prior to this project being commissioned, the residents of Kigbe did not have access to electricity and depended on candles, kerosene lanterns, and very few generators for their lighting.

This caused poor living standards for the inhabitants and made it virtually impossible to sustain businesses in the community.

Powering an off-grid community

The solution was setup in September 2017, with funding from the United States African Development Foundation (USADF) and Power Africa Initiative and generates power to over 145 homes and some businesses.

It provides households with enough electricity to power their basic needs like lights, fans and a TV. It has also been able to sustain the local barber salon, the grocery store, and other businesses.

This project has impacted up to 2000 people by providing clean, safe, and cost effective energy to the Kigbe community which has greatly improved the wellbeing of its residents.

Customer Profile

Havenhill Synergy Limited is an independent renewable energy service organization that uses solar energy to generate clean, safe, cost effective and sustainable electricity in urban and rural areas within the Federal Capital Territory of Nigeria and other states of the Federation. Website: <http://www.havenhillsynergy.com/>

Solution

Schneider Electric and Havenhill Synergy decided the best solution for this project would be to implement a DC coupled system using Conext™ XW+ multi-cluster system.

Results

Using a Schneider Electric 25kW multi-cluster system, Havenhill Synergy established a mini-grid that improved the living standards of the Kigbe community.



Havenhill Synergy also provided the residents of Kigbe community a DC solar water pump which now provides clean and easily accessible water to the community



Kigbe Community, Abuja with 25kW Off-grid Solution.

Solution: DC-coupled system

The solution was a DC-coupled system comprised of the following components:

- 3 Schneider Electric Conext XW+8548 Inverters
- 4 Schneider Electric Conext MPPT 80 600 Charge Controllers
- 80 Jinko Solar Modules at 260Wp each
- 16 Trojan 6V Batteries
- 1 Conext System Control Panel
- 1 Conext ComBox

Improving care and improving lives

The mini-grid in Kigbe was established to improve the living standards of its residents.

A place previously periled with no access to electricity now has access to a continuous supply of electricity, which is likely even better than what you might find in most urban places in Nigeria.

A testimonial from a Kigbe community member gives a better picture of the impact of this project. "Since my grandparents were born, they have never seen electricity. Thanks to Schneider Electric and Havenhill Synergy, we now have access to water and electricity. We don't know what to say other than thank you for giving us this great thing. We pray God continues to bless them."

From the Chief of the Kigbe community, "I encourage my people to take ownership and protect this project. We are very grateful to Schneider Electric, Havenhill & USADF for making this project happen. Before there were too many cases of infections and other water borne diseases due to the contaminated water from the stream and well, but since the provision of the solar borehole and electricity to power our homes, our lives have changed immensely."

"We chose Schneider Electric products because of their versatility and most importantly, they have been tested and proven to be of high quality"

– Olusegun Odunaiya, CEO, Havenhill Synergy

Residential Off-Grid Solution

Learn more about the [Conext XW+](#) and how its complete residential solution can help you gain energy independence.

Watch our Conext XW+ product video.



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Schneider Electric

Head Office
35 rue Joseph Monier
92500 Rueil Malmaison Cedex, France
Phone: + 33 (0) 1 4129 70 00

www.solar.schneider-electric.com

