

Life Is On

Schneider  
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# Powering rural clinics in Nigeria with solar microgrids

EM-ONE transforms aging power infrastructure in Africa into decentralized, decarbonized and digital energy systems, one solar microgrid at a time

[solar.schneider-electric.com](https://solar.schneider-electric.com)



EM-ONE deployed the EM-BOX to 13 rural hospitals in Nigeria including this rural hospital in Kaduna State.

EM-ONE, a Canadian-Nigerian engineering, technology and consulting firm, delivers sustainable energy to West Africa. They built the EM-BOX, a turnkey microgrids solution to address their fundamental belief that access to modern, affordable and sustainable power is a basic human right. In 2019, EM-ONE deployed the EM-BOX to 13 off-grid rural hospitals in Nigeria. The containerized solar microgrids power the health centers' critical functions such as lighting, X-ray machines and water pumping, improving the lives of the local residents.

## Challenges

Africa's power sector struggles with an unreliable electricity grid, which results in intermittent access, disrupted day-to-day productivity and stagnated long-term economic growth. Rural parts of the continent bear the brunt of this burden that severely affects their opportunities for development.

With these challenges in mind, EM-ONE designed a customized solution that would address the environmental and social challenges in Africa with the EM-BOX.

EM-ONE wanted to ensure that their solution is equipped with tier-1 products to reduce the long-term operation and maintenance costs. EM-ONE selected Schneider Electric's solar inverters and charge controllers for their robust and rugged system that withstands the harsh environment. Schneider Electric's track record in Africa was another reason why EM-ONE chose Schneider Electric over other competitors.

Inside of the EM-BOX



## Customer Profile

EM-ONE is a Canadian-Nigerian engineering, technology and consulting firm with over ten years of experience delivering sustainable energy solutions and smart electricity infrastructure to West Africa. They work closely with donors, private sector players and leading technology partners to build over 400 solar microgrids for both rural communities and commercial & industrial applications. [www.em-one.com](http://www.em-one.com).

## Goal

The objective of the program was to rebuild the critical social infrastructure that would meet the energy requirements of these facilities and improve the developmental outcomes for millions.

## Solution

Using the EM-BOX, EM-ONE's proprietary plug-and-play containerized solar microgrid, EM-ONE installed solar microgrids that provide uninterrupted power supply to 13 primary health centers, rural hospitals, and clinics in Kaduna State.

## Results

The health centers now can operate 24/7 and improve millions of people's lives thanks to the off-grid containerized solar microgrids EM-ONE deployed.



Waiting room in a rural hospital

In late 2019, EM-ONE, in partnership with UK Aid and the EU, has commissioned 13 off-grid containerized solar microgrids that power primary health centers across Kaduna State, Nigeria.

### Solution

In this project, EM-ONE deployed 13 systems (8 DC coupled and 5 AC-coupled), using the following Schneider Electric solutions:

- Conext™ CL 25E PV Inverters
- Conext™ CL 36E PV Inverters
- Conext™ XW+ 8548 E Storage Inverters
- Conext™ MPPT 80 600 Charge Controllers

### Results

Schneider Electric's technologies enable EM-ONE and the hospitals to run their systems smoothly and without interruptions. Eliminating the chance of power failure allows hospitals and clinics to continuously provide services to thousands of beneficiaries, ultimately improving health and education outcomes in Nigeria.

The 13 systems will generate over 1,300 MWh of energy annually, offset over 520,000 liters of diesel, and reduce nearly 1,400 tons of CO2 emissions per year.



Exterior of the ES-BOX

“Addressing Africa’s energy demand gap is an enormous opportunity for companies who believe in providing innovative and best-in-class solutions that are robust and resilient. Schneider Electric, our valued partner, shares this vision and their technologies continuously demonstrate their standard of excellence.”

— Mir Islam, CEO of EM-ONE Energy Solutions

## Off-Grid Solution

Learn more about the [Conext™ XW series inverter/chargers](#) and how its complete small commercial solution can help you gain energy independence.

Watch our Conext™ XW Pro product video.

# Learn More



Powering remote island with sustainable electricity



Viable electricity supply alternative in New Zealand



One Everton – A South African flagship for communal energy independence



A flexible and cost-effective battery storage solution for a high-end residential development



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



Going off-grid instead of living at the edge of the grid

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