

Life Is On

**Schneider**  
Electric

# Nigeria's blueprint for a brighter tomorrow

Schneider Electric and African Energy collaborate to realize UK Aid's vision of tackling Nigeria's power challenge

African Energy  
Lagos State, Nigeria

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





One of three Primary HealthCare Centers (PHC) in Ibeju Lekki with 25kW of solar installed

## Solution

To bring this electrification initiative into fruition, **African Energy** brought on highly trained local Nigerian partners to lead this project with the Lagos State Electricity Board (LSEB) throughout 170 sites. The solution was carried out in two phases. In phase one, African Energy supplied all products directly, while phase two was run through a bidding process directed by Crown Agents for DFID.

Schneider Electric's **Conext family of solar and battery-based inverter/charger system** with online monitoring was selected as the most reliable technology for this initiative. It offers an integrated solution that is:

1. Modular and flexible to adapt to various power sizes and applications
2. Highly robust that handles the harsh and demanding environmental conditions of Africa
3. Simple to install, monitor and service by local technicians without any overseas transport or extensive training
4. Patented feature (US20100033124) for grid-connected solar and battery systems that maximizes the use of solar while maintaining batteries to be fully charged. Thus extending the useful life by as much as 2-3 additional years



Interior view of solar powered container built with a modular system of battery-based inverters and charge controllers

“Conext XW+ models were selected for this project by LSEB because of their long-term record of reliability in Nigeria’s rugged market, as well as their patented technology to improve battery life in a solar and storage system.”

- Lincoln Dahl, Principal, African Energy

## Conext XW+ System

- Conext XW+ battery-based inverter/chargers
- Conext XW+ MPPT 80 600 solar charge controllers
- Conext XW+ MPPT 60 150 solar charge controllers
- Conext System Control Panel (SCP)
- Conext ComBox



Learn more about the Conext XW+

## 132 of the 170 solar and storage systems installed

| Size of Installation | Badagry | Ikorodu | Ibeju Lekki | Ikeja |
|----------------------|---------|---------|-------------|-------|
| 5kW                  | 6       | 29      | 9           | 18    |
| 7.5kW                | 2       | 8       | 3           | 1     |
| 10kW                 | 5       | 9       | 2           | -     |
| 12.5kW               | 4       | 3       | 1           | 1     |
| 15kW                 | 10      | 7       | 5           | -     |
| 10kW (PHC)           | -       | 3       | 1           | -     |
| 25kW (PHC)           | 3       | 1       | 1           | -     |

For the complete list of sites, visit: <http://lagossolar.com/location>

### Impact

By 2020, DFID estimates that solar powered schools and hospitals are expected to benefit 190,000 school pupils and 4.7 million clinic patients, and create more than 3000 jobs.<sup>1</sup> These numbers represent the remarkable impact that solar will bring to the future of Nigeria. This project has proved to be a blessing to every community that has received a solar PV system. Since the completion of this project, immediate changes have already been witnessed by local community members.

Residents of Epe, a suburban town and Local Government Area (LGA), can now pump water for days and health centers can accept baby deliveries in full force because power is now available at night. Doctors and staff no longer have to refer expecting mothers to more expensive hospitals, and costs of buying fuel for dilapidated generators have been eliminated.

Furthermore, some schools have been fitted with socket outlets to allow

<sup>1</sup> Solar Nigeria Programme, DFID Development Tracker  
<http://devtracker.dfid.gov.uk/projects/GB-1-203674/>



Installation consisting of MPPT 80 600 charge controllers and XW+ inverterchargers



Secondary school located in LGA town, Badagry

students to charge their tablets, phones, and personal night lights. Students can now read well into the evening hours to prepare for exams. Science and computer laboratories are operating full-time instead of sitting idle for long periods.

### Life is on

Lagos has set an electrifying example of how sustainable solar power is changing lives at this very moment. Reliable access to clean power is no longer a dream, and this project has paved the way towards a model of sustainability for the rest of Africa to follow.



Full exterior view of solar and storage solution for schools and PHC's throughout Lagos State, Nigeria

