



# African Solar Success Stories

## Blue Camel Works While the Sun Shines

I first met Suleiman Yusuf about a decade ago, shortly after he left Nigerian government service and started his own renewable energy company called Blue Camel. The name evokes things imagined but never seen before, and that spirit seems the driving force behind this interesting company.



Suleiman attended African Energy's solar training seminar in Abuja in 2008 and absorbed everything he could about how to do things differently and better than the status quo. By that time, many Nigerians were already suspicious of solar technologies due to inadequate designs, poor installations, and dodgy products used in very public projects like street lighting. Suleiman knew that his approach had to be as different as a blue camel.

Fast forward almost a decade - Suleiman and I are together again at an African Energy training in Abuja in October, 2017. This time some of his employees are attending the training and he is an invited expert, giving a presentation about a few of his recent successes.

Determined to show that it is possible to live in the heart of Abuja without using Nigeria's famously inadequate electric grid, Suleiman built the "Off-Grid Apartments" in a spot that was clearly not served by the electric grid at that point. "We wanted an opportunity to get first-hand experience and data about using renewables, and it also turned out to be a great place to test equipment and appliances", says Suleiman. The apartments opened in May of 2015 and are now 65% occupied, including Suleiman's family and his office. Residents have enjoyed uninterrupted power for 2.5 years now, living generator free in a country where the generators never sleep.



Building on the experience from the Off-Grid Apartments, Suleiman approached his friend who was just completing the Halibiz Shopping Center in Abuja. Rather than connecting to the national grid, they decided to try for an off-grid shopping center. They installed one circuit for a few large air conditioners on a generator, but put the rest of the loads, including a number of high efficiency air conditioners, on the solar





electric circuit. With 24kW of Suntech modules on the roof and 25kW of Schneider XW+ inverters downstairs, the shopping center has clocked 12 hours of generator time in the 18 months since opening. Suleiman points out that this is an example of an intelligent approach to a daytime load – the shopping center is open from 8am to 10pm, meaning that the battery bank can be small compared to the relatively less expensive solar modules

Earlier this year, Blue Camel found another opportunity to apply that same “daytime load” principle and take advantage of great pricing on solar modules and plentiful solar resource in central Nigeria. A poultry farm in Adamara state was spending about 1m Naira per month on a generator that was operating 12 hours per day. A close look at the farm expenses showed that power generation was one of the most significant costs. Happily, the power was mostly used for milling and grinding and feed preparation, in addition to running lights for incubators. Much of this could be done during the day, so Blue Camel proposed 32 kW of PV array and 1,000ah of storage at 48v, with 6 x Schneider XW+8548E inverters. Since the installation was completed in February 2017, the generator has run twice for a total of 12 hours.



For several years Suleiman worked on designs that could be attractive to the banking sector in Nigeria, which had a mixed record with solar and backup power installations. To build confidence, he offered a three year guarantee on any system that Blue Camel designed and installed. This proactive approach



allowed him to control the outcomes and avoid responding to tenders that had already been written. “That approach gives you the ability to do things your way”, said Suleiman. Sterling Bank accepted his offer and in July 2017 Blue Camel installed 24kW of solar array and 5 x XW+8548E inverters on a Lagos bank office with a load that peaks around 22kW during the day. This is a trial system and if it continues to operate as well as it has thus far, the future looks bright for Sterling Bank...and the Blue Camel.