

**AFRICA CLEAN ENERGY (ACE)
TECHNICAL ASSISTANCE FACILITY (TAF)**
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Seizing the opportunity in Nigeria's USD 9.2 billion solar market

Mr Ope Olawale, 40 years, is a farmer who lives with his wife and three children in Madi village, Iwajowa local government area about 170km from Ibadan city, Oyo State, Nigeria. There is no electricity in his village. About a year ago, he noted that more people in the village had bought mobile phones but were struggling to charge them. Most households in the village also did not have television sets mainly because there was no electricity to power them. Yet, the youth in the community liked to stay updated on local and global events primarily football leagues. He saw an opportunity in using solar to address these challenges but first needed to save up enough money.

In early 2020, he had a good cassava harvest and from proceeds made from selling part of the harvest, he got some money to purchase a solar system. A friend had told him about the pay-as-you-go payment plan that some solar retailers were offering. He first checked out the retailers near his hometown of Iware-ile but most of them were only selling solar lanterns and other multi-light systems that did not have a television. Mr Ope then set out for Ibadan city where he visited several shops to first understand the range of solar products and payment plans available. Eventually he settled on a brand that had a solar panel, satellite television, four LED bulbs, a rechargeable radio, torch and a phone charging unit. Luckily, he was eligible for pay-as-you-go payment plan because he provided details of his residence and economic activities that convinced the sales agent that he had the ability to make monthly repayments. He made the down payment and returned to the village a happy man, carrying the system he would use to set up a business.

Since purchasing the solar system, Mr Ope has been charging his neighbors phones and made it possible for the youth in his village to watch the English Premier League on the television at a fee. The business enables him to keep pace with the repayments and he is optimistic he will clear the remaining balance ahead of schedule.

Before buying the solar system, Mr Ope was one of the 77 million Nigerians who are unelectrified. The solar system has changed his life by enabling him to diversify his sources of income, and encouraging his children to study at night using brighter lighting.

The Powering Opportunity in West Africa report by the Global Off-Grid Lighting Association shows that one in every five people who purchase a solar home system have at least one person undertaking additional economic activity. In total, these economic activities translate to eight full-time equivalent jobs.



However, there are a few things that need to be addressed for more people to benefit from solar systems in Nigeria. Mr Ope had to travel 170km to access the kind of solar system he was looking for. This scenario reflects what is currently happening in much of Nigeria. A recent market survey by ACE TAF showed a high concentration of solar traders in urban areas despite 72% of the potential customers being in rural and peri-urban areas¹. Only a few traders have agents in rural areas which also affects the nature of after-sales services available to consumers. Furthermore, only 25% of the traders offer after-sales support.

Mr Ope is also one of few people who can afford the lump sum down payment especially for a system that includes a television. In the ACE TAF survey, up to 72% of the consumers noted affordability as a key barrier to uptake of Solar Home Systems (SHS). Other recommendations made by consumers were increased lighting hours (54%), increasing the brightness of the products (41%), more bulbs/lighting points (32%), and systems that can power appliances such as radio and television at 24%.

Mr Ope learnt about quality-verified brands through talking to the different retailers as he did window shopping. This means the solar system he got will serve him for longer, as opposed to the low-quality products that take up to 78% of the market share in Nigeria. Many of these low-quality products are cheaper and likely to malfunction or stop working after a few months. Consumers need to be educated on what constitutes quality products as only 15% know that a good-quality product should have a warranty.

Access and affordability of quality verified SHS are key things that Stand Alone Solar (SAS) providers need to bear in mind as they target the Nigeria market. The country presents a market opportunity of USD 9.2 billion annually and the government has already launched a plan to deploy 5 million connections through SHS or mini-grids by 2023^{2,3}.

¹ ACE TAF (2021) Nigeria Deep Dive (Unpublished report). The survey was conducted in 10 states including Abia, Ado Ekiti, Bauchi, Cross Rivers, Ebonyi, Edo, Kano, Kogi, Oyo and Plateau – all representing six different zones in Nigeria.

² ACE TAF (2021) [Stand-alone solar market update: Nigeria](#)

³ ACE TAF (2021) [Stand-alone solar investment map: Nigeria](#)