



Let's make solar work

A Nigerian-German Initiative

International Energy Transition Consultant, Olivier Drücke adopts Germany's 'the whole is bigger than the sum of its parts' ethos to encourage collaborative energy solutions in Nigeria - Africa's most populated, but one of its least efficient countries

By Olivier Drücke, Project Director, "Let's make solar work" for SOLAR25 GmbH and International Energy Transition Consultant.

Most of Nigeria's industry and critical infrastructures in both urban and remote areas suffer from unreliable grid power supply and poor power quality. To provide some autonomy from the instabilities of the grid, diesel generators are widely used, which is an expensive and unsustainable solution to provide electricity. Meanwhile, the erosion of international oil prices since 2014 has accelerated the domestic energy crisis in Nigeria, as the Government has been forced to cut back on fossil fuel subsidies for its own economy and population. This has led to soaring prices of fossil fuels in the country, resulting in greatly increased costs for all power consumers with their own generators; subsequently reducing operating times of diesel generators and ultimately reducing power availability.

Although fossil fuel-based power generators are widely used, they are unsustainable in many ways. Beside drastically increasing operation costs that have become unforeseeable, they are also loud and emit heavy fumes, resulting in very negative environmental and health impacts. Furthermore, diesel generators are regularly oversized by as much as 50 percent, often resulting in highly inefficient combustion processes. This costs a lot more money spent on power generation than necessary or originally planned. Further disadvantages include overspend on initial investments and replacement investments, avoidable fuel expenditures, downtimes, maintenance personnel and spare parts. The costly diesel-based power system is in fact parasitising Nigeria's economy, hindering its actors to build the future on solid, affordable and thus sustainable fundamentals.

Hostages of failed energy policies

In summary, the overall energy situation in Nigeria is looking shockingly grim to the country's many industrious common people who are working hard every day to feed their families. The obvious power crisis has rightly been qualified as a state of emergency by many leading civil society figures because it hinders the country's population to unlock and develop Nigeria's tremendous economic potential that could so much help modernise the wider African continent.

As a result, the demand for alternative power supply technologies which do not rely on expensive fossil fuels as well as solutions to save power, have increased tremendously lately, especially among commercial users. Solar energy, and in particular, photovoltaics (PV) is a great option to generate electricity on-site by harnessing the abundantly available solar resource.