

Solar competitiveness just arrived in Nigeria

In recent years, using solar energy has become cheaper than running diesel generators, even in Nigeria. Soaring fossil fuel prices have indeed resulted in a silent revolution where solar power has reached price parity with generator-based power generation in a growing number of geographies. Surprisingly, most Nigerians do not know yet about this major shift and consequently are not fully aware of the specific new competitiveness of solar power. To address this knowledge gap, Let's make solar work just launched the new online "PV-Calculator" on its website, www.letsmakesolarwork.com. The tool compares costs of solar power with the currently existing diesel generation costs for a planned PV project and generates an individual economic approximation for the considered solar investment.

This shift in competitiveness is good news for power consumers, especially for mid-sized power users such as companies and social facilities. It creates a tremendous market potential that will change the paradigm of how power is generated and used in Nigeria. Solar PV will account for most of the expected growth of renewables in the future, in Nigeria, in Africa and



'Let's make solar work' is an initiative of the companies SOLAR23, OneShore Energy, Solarmate Engineering and eclareon. It is co-funded by the German Federal Ministry for Economic Cooperation and Development under the DeveloPPP programme.

worldwide. This was also confirmed by respondents from a survey carried out in Nigeria by the NESP (Nigerian Energy Support Programme).

A survey among mid-sized power users

Recent visits to various mid-sized companies in Lagos by partners of the "Let's make solar work" initiative clearly confirmed their need for alternatives to diesel-based power generation because soaring energy costs are their most acute problem.

"We must fix this issue now," said the owners of Rite Foods, and they were not alone. On their perfectly

managed manufacturing site close to Lagos, Rite Foods is operating a diesel generator capacity of 15 MW. Two alternatives to cut energy costs are within reach: connecting to an announced pipeline bringing natural gas on-site; or erecting solar power plants on the large manufacturing halls' roofs and the factory premises.

A survey carried out by the "Let's make solar work" initiative among mid-sized power consumers such as SMEs and social facilities confirmed that the actors have to rely on diesel-generated power more than 75 percent of the time; the rest being provided by an unstable grid with long supply interruptions on a daily basis, even in mega cities such as Lagos. Half of the respondents stated that the costs of energy account for more than 35 percent of their overall operating expenses which is huge compared to European industries where the figure is around five percent on average. Consequently, all interviewed actors without exception are very much interested in cutting their energy costs by whatever means. Almost 40 percent of surveyed actors consider now investing in gas-fired generators, while 34 percent are planning to invest in solar power systems, and only 17 percent in grid connections or extensions.

Solar PV's image

The introduction of solar power in Nigeria stands at its very beginning. Solar systems that have been installed so far are frequently generating counter-references because of quality issues tied to poor engineering, low price and quality equipment, faulty installation, erroneous usage of batteries, as well as weak maintenance procedures and practices. This has consequently contributed to spoiling the image of solar power, thus hampering its acceptance and broader market introduction. Therefore, the supply side still lacks decisive selling

arguments and it can often be heard in Nigeria that "solar doesn't work". This is maybe one reason why none of the surveyed mid-sized industrial, commercial and social actors are using solar power today, although the supply situation with conventional power sources is extremely problematic.

Today, many mid-sized PV projects in Nigeria are failing due to an absence of proper planning process from the suppliers' side as well as from the clients'. The latter often demand PV systems without having a clear understanding of what their power requirements really are. Local EPC companies rarely request a detailed power demand analysis from their clients, nor perform power audits or even load measurements at the clients' premises. Hence, many PV systems are not well dimensioned, planned, installed or operated. Furthermore, the

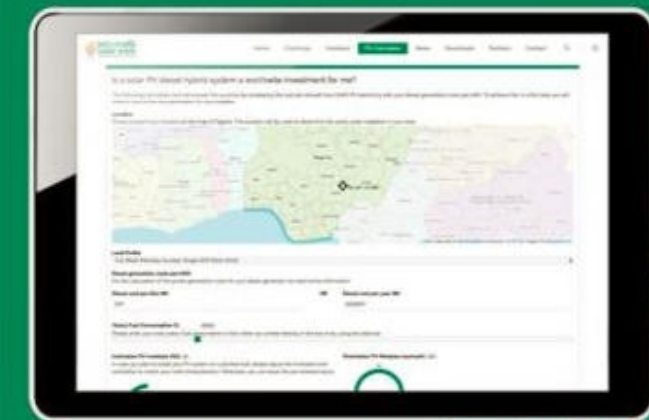
quality of PV equipment and systems is often poor because the lowest prices tend to drive purchase decisions.

This chicken-egg problem can only be solved by educating the suppliers on the one hand and raising the demand-side's awareness on the other hand. This is where the initiative "Let's make solar work", started by the German-Nigerian solar companies' consortium comes into play.

State-of-the-art solar power knowhow for Nigeria

"Let's make solar work" promotes and supports the market introduction of high-quality PV diesel hybrid systems to mid-sized power consumers, such as small and medium enterprises (SMEs) and social facilities. These actors are the true backbone of the Nigerian economy and they do not only require but deserve access to reliable and

PV-Calculator tool



The online PV-Calculator tool was jointly developed by the project partner, eclareon together with the German non-profit research Institute. The costs of tool development were co-funded by the German Federal Ministry for Economic Affairs and Energy and by the German Federal Foreign Office.

