

Scaling up University Electrification in Nigeria

Improving the access of selected universities to solar power supply and developing solar modules for engineering curricula and training courses

Background

With more than 180.000 Million inhabitants Nigeria is the most populous county in Africa. Currently, Nigeria has an installed electricity generation capacity of around 13,700 MW of which in 2018 only 4,500 MW were available due to gas constraints, grid constraints and other technical issues. In comparison to these figures, South Africa generated 51,000 MW for around 50 million inhabitants.

The lack of reliable power and frequent power shortages affects amongst others the education sector in Nigeria. Local universities and other educational institutions, especially in rural areas have limited access to on-grid electricity and rely on environmentally harmful diesel generators. In 2016 several schools and universities did not have enough power to provide hitch-free lessons. As a result, some universities even had to close partially.

The use of decentralised, modern energy services can contribute to increasing the electrification rate in Nigeria. Furthermore, the renewable energy sector offer medium and long-term job prospects for the Nigerian population. However, the implementation capacities of the actors are weak and knowledge about the potentials of renewable energy as well as technical skills on the use of solar technologies in Nigeria are not sufficiently widespread.

In order to increase the electrification of Nigerian universities and qualify students of engineering careers to use solar technologies, the German Foreign Office funded the Scaling up University



Project Name	Scaling up University Electrification in Nigeria
Commissioned by	German Federal Foreign Office
Implementing Organisation	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Area	Ibadan, Nigeria
Target group	University of Ibadan
Project Duration	12/2017 - 08/2020

Electrification in Nigeria Program in 2017. The program forms part of the Nigerian-German Energy Partnership (NGEP), a bilateral commission between the Nigerian and the German Government.

Project Objectives

The objective is to improve the access of selected universities to solar power supply and to develop solar modules for engineering curricula and training courses at the solar training centre in the University of Ibadan.

In the long term, the project makes a significant contribution in creating job opportunities in the growing future market of renewable energies.



First meeting between GIZ, the Integrated Expert, the VC and the DVC Academics of the University of Ibadan



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Photos left and right:
University of Ibadan

Target Group

The project's direct target group are engineering students of the University of Ibadan. Furthermore, the project targets electricians who can apply the learned methods in the solar energy for their daily work life.

Special attention is paid to female students and female training participants to increase the share of women working in the renewable energy sector.

Our Approach

The project operates in two main areas of intervention. Both measures are supported by an integrated expert (IF) which is placed at the University of Ibadan, one of the NGEF pilot universities.

1) Solar electrification at Nigerian Universities

The integrated expert supports the development of a solar power supply model at the University of Ibadan. In a second step the model will be implemented in two additional universities which are not yet part of the NGEF University Network. Initial feasibility studies on the implementation will be carried out to identify them.

2) Solar Lab and Integration of solar modules into the academic curriculum

A Solar Lab financed by private investments will be established at the University of Ibadan. The technical management of this lab will be led by the integrated expert. The expert develops teaching approaches on how solar content can be embedded into the curriculum of engineering sciences. Furthermore, the expert will carry out trainings on solar energy.

The project is implemented under the Nigerian Energy Support Programme (NESP). The programme is co-funded by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ).

Expected Outcomes

1. In medium and long term, the project provides a significant contribution to the training of Nigerians and thus fosters job creation in the growing future market of renewable energy and energy efficiency.
2. At least 60 engineering students from the University of Ibadan and 60 students from other universities participate in solar energy trainings.
3. Teachers of the University of Ibadan are able to carry out solar trainings in the Solar Lab and integrate their knowledge into their lectures.

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