**Project Summary**

**Project Background**
While Nigeria offers great potential for renewable energy (RE), the centralized power supply system is unable to meet the increasing demand for electricity even in urban. About 70 per cent of the population in rural areas has no access to quality electricity. The Government of Nigeria (GoN) has initiated reforms supporting decentralized RE and the private sector with a strong focus on RE mini-grids.

**Project Objectives**
To allow the reforms to take hold, the regulatory frameworks and planning instruments need to be improved and successful business models for a massive RE mini-grid roll-out demonstrated and scaled-up. The Nigerian Energy Support Programme (NESP) advises the Federal Ministry of Power, Water and Housing and it partners along with the private sector.

**Project Results**
The project developed an internationally recognized mini-grid regulation, a state-of-the-art electrification modelling and data management system and implemented six private-sector based RE mini-grids, out of which three received support from a successful crowd funding campaign.

**Services Provided**
WP1: Framework for Rural Electrification
- Development of the endorsed "Regulation for Mini-Grids" with the Nigerian Electricity Regulatory Commission (incl. tariff model and stipulations)
- Development of a proven crowd-funding framework (see WP-4)
- Development of five state level RE strategies decentralized rural electrification

WP 2: Data Management System (DMS)
- Capacity development for state-level GIS centres, DISCO and advise for setting up the GIS department in Sokoto state
- Development of the SE4ALL DMS for Nigeria ([www.nigeriase4all.gov.ng](http://www.nigeriase4all.gov.ng)) based on CKAN (Comprehensive Knowledge Archive Network)
- Data gathering, digitalization and geo-referencing on population settlements and T&D as well as power generation systems
- Publication of all license free data on [www.energydata.info](http://www.energydata.info)

WP 3: Rural Electrification Planning
- GIS modelling of settlements into clusters for viable RE mini-grid development, automated modelling of demand profiles for each cluster based on disaggregated load profiles
- (Re-)modelling of the existing grid network (closing data-gaps) and development of a GIS based least-cost grid roll out plan
- Development of five State-level Rural Electrification Plans with the phased roll-out, RE mini-grid implementation and their interconnection (as foreseen in the regulation see WP-1) as well as small scale power systems

WP 4: Pilot Projects
- Launch of the “Mini-Grid Business Accelerator Facility” for business model development and technical support
- Implementation of the “Guided Idea Competition” as a help-desk and grant facility focussing on five competitively chosen mini-grid developers in business model development and site identification
- Project development and implementation support for six PV-hybrid mini-grids (100-150 kWp) and electrification of >10,000 rural inhabitants in the five partner states.