**Policy Development Facility** 

# RESULTS





PDF II

## **ABOUT US**

Policy Development Facility Phase II (PDF II) is a flexible, rapidresponse programme funded by the UK Aid Department for International Development (DFID). The primary objective of PDF II is to provide targeted assistance to support Nigeria's 'champions of change' across the Federal Government to implement economic and social reforms that lead to poverty reduction. This is done through the provision of high quality organisational support and high quality policy research to build the evidence base for this support.



## **Energising Education Programme**

The Energising Education Programme (EEP) is an intervention by the Federal Government being implemented by the Rural electrification Agency to rejuvenate the education system by providing uninterrupted electricity supply to thirty-seven Federal Universities and seven Teaching Hospitals across the country. An estimated 89.6 mega watts will be generated by this project. The programme will enable the institutions to benefit from world-class training schools, for training students in renewable energy as well as extend electrification to rural and underserved areas in which the selected institutions are located. The EEP is one of the programmes designed to implement the energy access and sufficiency action point of the Economic Recovery and Growth Plan (EGRP) and Power Sector Reform Programme (PSRP). Its implementation will also enable Nigeria meet its Paris Climate Change Agreement for reducing "Green House Gas Emissions unconditionally by 20 per cent and conditionally by 45 percent" in line with Nigeria's nationally determined contributions.

To support the Government in implemention of these projects, five project team members were transferred in February 2017 to PDF II from NIAF II, another DFID funded programme that was involved in the design and preparatory phase for the project. Subsequently, PDF II support was extended to the Head of Rural Electrification Agency and the team lead in April 2017 bringing the total number of Advisors to seven. The Federal Executive Council gave its approval for the implementation of the programme on December 17, 2017.



## **IMPLEMENTATION**

For proper management of resources, the project has been categorized into phases. Phase I targeted 10 beneficiaries (9 universities and one teaching hospital). Of these beneficiaries, two universities have been commissioned and the others are undergoing installation. The universities commissioned are Federal University, Ndufu-Alike Ikwo (FUNAI), Ebonyi State which received a 2.8 MW Solar Power Plant in August, 2019. The second university commissioned also in August is Bayero University Kano which received 7.1 MW Solar Power Plant. 55,815 students and 3,077 staff will have access to electricity. 11.41 KM of solar powered street lights as well as a world class renewable energy training center were also provided. 20 female students have been trained in the female STEM student internship programme where they received practical training through the development of the project.

#### PHASE ONE BENEFICIARIES



- ★ Abubakar Tafawa Balewa University –Gubi Campus, Bauchi, Solar Hybrid (0.50 MW)
- 🛧 Bayero University–New Campus, (7.1 MW)
- ★ Usuman Danfodiyo University–Main Campus, Sokoto, (2.00 MW)
- ★ Federal University of Agriculture Makurdi, (3.50 MW)
- 🔶 Federal University Ndufu-Alike Ikwo, Ebonyi, (2.80 MW)
- Nnamdi Azikwe University, Awka Campus, Anambra, (2.00 MW)
- Federal University of Petroleum, Delta (0.50 MW)
- Obafemi Awolowo University and Obafemi Awolowo University Teaching Hospital, Osun (8.03
- 💢 MW)
- University of Lagos, (8.03 MW);

### KEY CONTRIBUTIONS OF PDF II TECHNICAL ADVISERS

This 26-month long support from February 2017 to March 2019 provided technical advisory to the Honourable Minister of Power, Works and Housing through the Rural Electrification Agency by:

★ Overseeing the pre-construction works such as site clearing, fencing and other related activities,

★ Obtaining all required approvals and tests including factory acceptance tests, topographical, geotechnical and geophysical reports, relevant building permits, detailed designs for civil, electrical and mechanical works;

ENERG VING EDUCATION

🛧 Supervising construction of civil works, mechanical & electrical installations;

★ Conducting baseline studies of power situations on campuses prior to EEP Phase I;

★ Procuring all necessary equipment for Phase I Projects;

- Developing the operation & maintenance contract for Phase I projects and;
- ✤ Facilitating the payment of contractors upon completion of second milestone across all projects.



#### **PROGRESS REPORT**

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The EEP feeds into PDF II's outcome statement of providing relevant and high-quality PDF II organisational support to beneficiaries to enable Nigeria's 'champions of change' to pursue vital economic and

The Energising Education Programme Phase I kicked off with the commissioning of a Solar Power Plant at FUNAI in August 2019. Eight Universities and one teaching hospital are currently being worked on. In view of the above, the delivery team of advisors supported by PDF II continued to provide project management support to the EPC contracts across all nine Federal Universities and teaching hospital. The team members recommended two gas-fired plants in the south of Nigeria, where the sun yield is very low and will not be able to satisfy the energy requirement of 8MW of energy for a plant. They also recommended seven solar hybrids for the remaining universities mainly across the north and middle belt of Nigeria where there is adequate sun yield which is most ideal for solar technology solutions in addition to the large land sizes needed for the deployment of solar solutions.

To expedite the implementation of the EEP Phase I, N7.5bn out of the N10bn raised from the pilot issue of the green bonds in December 2017 was invested in the solar phase I project. This will help Nigeria meet its commitments under the Paris Agreement to promote renewable and cleaner energy technology, towards reduction of hazardous emissions. The universities will enjoy cleaner environment after eliminating air and noise pollution from diesel and petrol generators.

The energy audit conducted in preparation for the EEP indicated that 1,068 generators currently provide alternative power sources for the universities, which indicates the potential impact and environmental benefits of the programme. The programme will facilitate growth in economic activities. Currently FUNAI enjoys;

– Clean, safe & reliable power supply 24/7 from a solar hybrid power plant with a total installed capacity of 2.8MW.

– An environment free from generator noise and carbon dioxide emission.

 Academic growth & uninterrupted power for 7,700 students & 1,819 staff members of the university.

-streetlights to enhance security within the university campus

- a world class workshop/training Centre to train students in renewable technology

- Girl-child empowerment through the REA STEM internship which currently enrols 20 female students in the university, and a total of 180 students selected across 9 universities; 20 per university.

#### **NEXT STEPS**

Following the success in the implementation of the phase I projects and the level of support given by various stakeholder groups such as the universities and government institutions, the World Bank and African Development Bank (AFDB) undertook to support the implementation of the phase II and III projects respectively.

Seven universities have been selected for Phase II as verification of energy audit data is on going while eight other universities have been identified as potential beneficiary universities for the Phase III. This will however be confirmed following complete site visit to determine pre-feasibility issues such as land availability, requirements for the project, buy in from the university management etc.

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The issue of sustainability is considered very key to the EEP. To ensure that the projects are not abandoned, and are effectively built, operated and maintained, highly skilled and experienced personnel are used, including state of the art technology. Consequently, a provision for one year Operations and Maintenance (O&M) of the Projects, has been incorporated into the project contracts. This one year O & M forms part of the ten 12-year O&M plans that have been developed for the projects. It is expected that the EPC Contractor will also undertake the O&M for the remaining nine years of the O&M plan to ensure seamless operation and maintenance of each projects. It will also avoid finger pointing and transfer of blame between contractors in the event issues arise with the operation of the technology, which could potentially result in the halt or delay in services.

