



GLOW INITIATIVE FOR
ECONOMIC EMPOWERMENT
PRESENTS



SOLAR INSTALLATION FOR SECONDARY SCHOOLS

SOLAR FOR SCHOOLS COMMUNITY PROJECT REPORT

PILOT PROJECT @

EBENEBE COMMUNITY, AWKA NORTH LGA, ANAMBRA STATE

Project Background

Inadequate infrastructure in rural areas and constant power outages in grid-connected areas prevent students from learning in optimal conditions. Further, students lack access to modern information technology which is crucial for educational and economic empowerment. Solar energy has the potential to power the education system in rural areas by providing adequate electricity as well as access to education. It helps in improving the living standards of rural households through solar energy-based interventions and learning facilities in the underserved community.

Access to solar electricity for a rural school will enable them to meet their electricity needs such as **Lighting, powering office equipment, ventilation etc.**

Our Solution

It is in the light of this that Glow Initiative for Economic Empowerment announces the **Solar for Schools Community Project** under their **Solar UP Nigeria (SUN)** Program is installing a PV system to power the computer room of Community Secondary School, Ebenebe, Awka North Local Government Area of Anambra State and promote awareness amongst students and school teachers on solar energy and sustainability ultimately supporting rural electrification and encouraging student interest in STEM.

Project Objectives

To provide electricity that will power computer centers of public schools by designing and installing of Solar PV System including solar panels, batteries, inverters and a charge controlling system to enable night time study and encourage more student participation in STEM subjects.

Project Activities

- 1) Design and installation of Solar PV System including solar panels, batteries, inverters and a charge controlling system to power Community Secondary School, Ebenebe, Awka North Local Government Area of Anambra State to provide electricity to power the school's computer center, enable night time study and encourage more student participation in STEM subjects.

Details of Project Activities

1. INSTALLATION OF SOLAR PV @ COMMUNITY SECONDARY SCHOOL EBENEBE, AWKA NORTH LGA.

a. Description of Location

Ebenebe community is a town in Awka North Local Government Area of Anambra State, Nigeria. The town is about 25km from Awka the capital city of Anambra state. Ebenebe is prominent because it is one of the highest agricultural producers in Anambra state. The town is made up of eight villages each of which contains hamlets. Ebenebe is bordered by Amansea to the south, Odoli River and Mgbakwu to the West, Ugbenu to the North and Eziagu (Enugu state) to the east.

The community secondary school in Ebenebe was established in the 1980s by the community and since its inception till date it has never been connected to the national electricity grid. The state government had previously provided a generating set for the school. Unfortunately this generating set was stolen and this had kept the school out of electricity for a long time.

Project Team arrive Ebenebe community



b. Courtesy Visit to the Traditional Ruler of Ebenebe Community

The project team on arrival at Ebenebe community paid a courtesy visit to the traditional ruler of Ebenebe community, Igwe Nnaemeka Christopher Nnegunba. The team briefed the traditional ruler of their intention to install a 2.5KVA solar PV system at the community secondary school. The traditional ruler expressed delight at the initiative and pledged the support of the community in ensuring the smooth implementation of the project. He also pledged his commitment to ensuring the safety of the solar system when installed.



A project team member addressing the Igwe of Ebenebe Community

c. Installation of Solar PV system at community secondary school E Ebenenbe

A Solar PV system was installed at the Community secondary school Ebenenbe. Prior to the installation, the school didn't have access to electricity. Powering the computers at the school was an uphill task as the school had to sell palm fruits to raise money to hire and fuel a generating set. It was also practically impossible for the students to study at night as there was no light to facilitate night time study.

The installed solar PV system capacity installed is 2.5 Kva. The solar system has the capacity to power 15 laptop computers and provide power for 20 light points.

Students of the school were part of the installation process. They were afforded the opportunity to learn solar system installation from scratch to finish.



Students learning and participating in the solar installation process



Two female students on a roof top screwing a bolt on a solar panel

Commissioning and Hand over of the Solar PV system to the community.

The solar PV system installed at the Community Secondary School Ebenebe was formally commissioned and handed over to the community on Friday 19th of February 2021. The commissioning was witnessed by members of the Igwe's cabinet, members of the Parents Teachers Association of the school, teachers and well-wishers.

The guests at the commissioning were taken round the installed facility and they were excited about the development.

Speaking at the commissioning, the Igwe Nnaemeka Christopher Nnegunba (represented) thanked Glow Initiative for Economic Empowerment and Access Bank for the laudable initiative. He expressed his delight at the intervention and

also said that the community will do all within its ability to ensure the safe keep of the facility.

Other key stakeholders at the commissioning also took turns to speak on the project.

Outcomes

1. Massive turnout of stakeholders at the commissioning ceremony which included the Igwe and council, leadership of Ebenebe town union, leadership of the Parents Teachers Association, representatives from Access Bank, teachers and students.
2. The attention of stakeholders at the commissioning was also drawn to other challenges which the community school was facing.
3. The commissioning provided an opportunity to enlighten guest on Solar and renewable energy.
4. The leadership of the community pledged their commitment to putting in place adequate security arrangements and construction of a burglary proof to protect the solar PV system from theft.



The representative of the Igwe speaking at the commissioning ceremony



The representative of the Igwe cutting the tape @ the commissioning ceremony

2. TRAINING OF STUDENTS OF COMMUNITY SECONDARY SCHOOL EBENEBE, AWKA NORTH LGA ON BASIC SOLAR TECHNOLOGY.

This project trained some students of Ebenebe Community School on basic concept of solar technology. The training introduced students to the fundamentals of solar power as it applies to solar panel system installations. They learnt how solar panels, or photovoltaics (PV for short), converts sunlight to electricity. The training also highlighted the basic components needed in a basic photovoltaic (solar panel) system and how to calculate the electrical demand of a building. The training also had a practical aspect where students participated in the installation of a solar PV system.

At the end of the training, certificates were issues to participants at the training.

- **Outcomes**

- i. The students had a good understanding of the basic concept of solar energy.
- ii. Students could identify basic components needed in a basic photovoltaic (solar panel) system and could explain the function of each.
- iii. Students at the training could calculate the electrical demand of a building.
- iv. The students also demonstrated a good competency in the installation of a solar PV system.

Project Challenges and Lessons Learnt

1. The location of Community Secondary School Ebenebe posed a big challenge to the project team. The road leading to the school was not in good shape. This led to the breakdown of project vehicle at some point.
2. Security was also a huge challenge as the school had no perimeter fencing and this gave intruders unfettered access into the school premises.

Conclusion

Electricity remains a vital tool in powering education. Without electricity it will be impossible to operate educational resources like computers, desktops, projectors, and printers; it will also be difficult for students to study at night. The implementation of the Solar 4 Schools Community project in Ebenebe community was a step in the right direction towards helping students of Community Secondary School Ebenebe get unhindered access to online educational resources through the use of their school computers. The students will also find the use of the school library more convenient with the availability of solar power to operate the fans at the library. One other highpoint of this project is that it guarantees a 24hour power supply for the benefitting school.

Students who undertook the solar technology training can also develop their skills around solar technology and become economically self-reliant.

Solar 4 Schools Community project is laudable and needs to be replicated across other energy deprived public schools in Nigeria.

Access Bank Support

1. Access Bank support covered expert designs for our IECs and publicity materials.
2. The support enabled the purchase of all the components used for the installation of the Solar PV System at Ebenebe Community.
3. The support enabled media coverage and newspaper publication of the project
4. The support covered for travel and accommodation including lunch for project team.

About Glow Initiative for Economic Empowerment and Climate Smart Nigeria

Glow Initiative for Economic Empowerment is a non-governmental organization set up to harness the economic potentials of communities by tackling problems like unemployment, poor electricity access and climate change through education and investments in renewable energy. We are focused on reducing unemployment and creating a sustainable society by supporting women and young people to become renewable energy entrepreneurs by helping them acquire solar technology, business and financial management skills to create and deploy solar solutions for individuals and companies in rural and urban areas. Our goal is to birth 10,000 renewable energy entrepreneurs in the next 5 years. Climate Smart Nigeria is the arm Of Glow Initiative which is set up to combat environmental problems like Climate change to improve the nation's power sector by spreading the awareness of Climate Change to curb climate illiteracy and promoting the intervention of

renewable energy. Through CSN, we use the tool of education to curb climate illiteracy. Our goal is to boost the economic development of Nigeria and attain

a Climate Smart nation come 2026 through pioneering investments in renewable energy, Climate education and agriculture.

PICTORIAL EXERCPTS



A Student displays a placard



At a roof-top for solar panel installation

PICTORIAL EXERCPTS



A Student displays a placard



Students pose with Glow Initiative's Executive Director

PICTORIAL EXERCPTS



Students pose with a solar panel



Project Team with Access Bank Representatives

PICTORIAL EXERCPTS



A school Teacher poses with a placard



A school Teacher poses with a placard



A student poses with an Access Bank Representative



Project team lead with Access Bank team

IEC MATERIALS



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Solar Up Nigeria (SUN)

- SOLAR FOR SCHOOLS COMMUNITY PROJECT (PILOT INSTALLATION AT COMMUNITY SECONDARY SCHOOL, EBENEBE).
- SOLAR PANEL INSTALLATION SKILLS TRAINING PROGRAM FOR YOUTHS OF EBENEBE COMMUNITY.

EBENEBE COMMUNITY, AWKA NORTH LOCAL GOVT. AREA.



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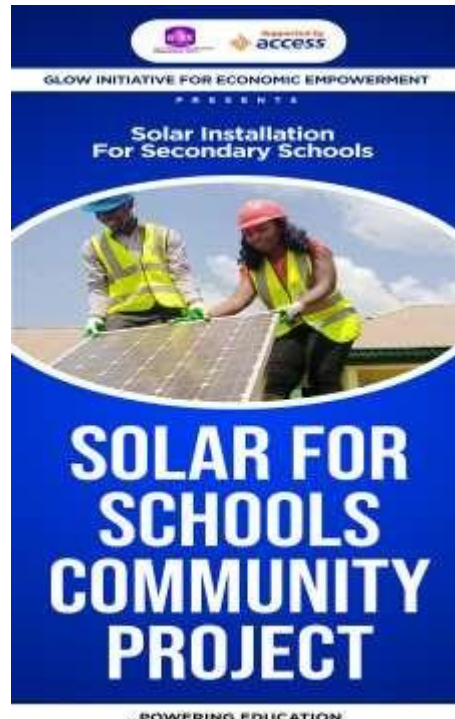
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POWERING EDUCATION

7th Community Secondary School, Ebenebe, Anambro State.




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Solar Installation For Secondary Schools

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**THANK YOU
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