

SOLAR FOR SCHOOL COMMUNITY PROJECT



PROJECT REPORT

**ITCHI COMMUNITY SECONDARY SCHOOL, IGBOEZE SOUTH LGA,
ENUGU STATE
OCTOBER, 2022**

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 School Community Project** under their **Solar UP Nigeria (SUN)** Program is installing a PV system to power the computer room of Community Secondary School, Itchi, Igboeze South Local Government Area of Enugu 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

1. 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, Itchi, Igboeze South Local Government Area of Enugu 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 ITCHI, IGBOEZE SOUTH LGA, ENUGU STATE

a. Description of Location

Itchi community is a remote community in Igboeze South Local Government Area of Enugu State, Nigeria. The town is about 18.6km from the prestigious University of Nigeria Nsukka and about 74.7km from Enugu the capital city of Enugu state.

The community secondary school Itchi 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 school relies on generators to power their computer room which had a big toll on the school's lean resources.



Project Team arrive Itchi community

b. Courtesy Visit to the Traditional Ruler of Itchi Community

The project team on arrival at Itchi community paid a courtesy visit to the traditional ruler of the community, Igwe Lazarus Ugwuoke . The team briefed the traditional ruler of their intention to install a 3.5KVA 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.



Project Coordinator meets the Traditional Ruler of Itchi Community

c. Installation of Solar PV system at community secondary school Itchi

A Solar PV system was installed at the Community secondary school Itchi. The school had never been connected to the national grid. Powering the computers at the school was only possible by the use of small generators. Funds were not readily available to purchase fuel to power the generator; as a result, students rarely had access to the computers in the school. 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 comprised of three **200watt solar panel** and **hybrid Inverter** with an inbuilt **Charge Controller** of **20AMPS** that enables solar to regulate its charging. The system also came with batteries. 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. This afforded them the opportunity to learn solar system installation from scratch to finish.



Students learning and participating in the solar installation process



Students installing a solar panel on a roof top under the supervision of the project engineer

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

The solar PV system installed at the Community Secondary School Itchi was formally commissioned and handed over to the community on Saturday 1st of October, 2022. 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 Lazarus Igwuoke expressed in heartfelt gratitude to Glow Initiative for Economic Empowerment and Access Bank for the bringing the project to his community. He assured the project team that he will do all within his power to ensure the safety of the system.

The principal of the school, Mr. Ezema Clifford also thanked Glow Initiative for Economic Empowerment and Access Bank for the project. According to him, powering the computer room was a big challenge for the school and students often took computer lessons without practical. "With the installation of this solar PV system, students can now have unhindered access the school computers. This will no doubt go a long way in helping them acquire relevant ICT skills that will enable them become productive and self-reliant," he said.

Access bank's representative at the event, Mr. Chigozie Nlemeke said that Access bank remains committed to helping solve developmental problems in Nigeria. He further said that Access is not just interested in making profits, but that it is interested in helping communities become better as seen in the various Corporate Social Responsibility initiatives which they have funded over the years. He charged the school to make optimal use of the Solar PV systems so that students can leverage on it to acquire ICT skills that will enable them become global stars.

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

Outcomes

1. The attention of stakeholders at the commissioning was also drawn to other challenges which the community school was facing.
2. The commissioning provided an opportunity to enlighten guest on Solar and renewable energy.
3. The leadership of the community pledged their commitment to putting in place adequate security arrangements to protect the solar PV system from theft.



Access Bank representative speaking to guests at the commissioning ceremony



The Igwe cutting the tape @ the commissioning ceremony



The Igwe, Access bank Rep., Project coordinator, the school principal and some students pose for photo.

Project Challenges and Lessons Learnt

1. The location of Community Secondary School Itchi posed a big challenge to the project team. The road leading to the school was not in good shape.
2. Security was also a huge challenge as the school had no perimeter fencing and this gave intruders unfettered access into the school premises.
3. Heavy downpours of rain during the project implementation slowed the pace of work.

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 School Community project in Itchi community was a step in the right direction towards helping students of Community Secondary School gets 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.

Solar 4 School 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 Itchi community.
3. The support covered the cost of design, installation and commissioning of the solar PV system.
4. The support covered the cost of transportation and accommodation of the 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



Students pose with placards



Students operate their computers

PICTORIAL EXCERPT



Picture showing the Inverter, charge controller and batteries of the system



Students pose with placards



Project Team Members pose with Access Bank Representative



Students coupling a rack during the installation



Female students watch closely as the Project engineer installs a charge controller

IEC MATERIALS



GLOW INITIATIVE FOR ECONOMIC EMPOWERMENT

P R E S E N T S

Solar Installation For Secondary Schools




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