**SOLAR FOR EDUCATION**

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| **Project title**  | **SOLAR FOR EDUCATION** |
| **Duration** |  **12 Months** |
|  |  |
| **Location** |  **Nigeria** |
| **Proponents** |  |  **GIFSEP** **Global Initiative for Food Security**  **And Ecosystem Preservation** |
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| **Website** |  **www.gifsepclimate.org**  |
| **Event budget** | **100,000** |
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**Introduction**

Solar for Education program is an initiative aimed at powering schools and communities without electricity with solar to enable the students read and do their homework at nights. The program will also train the students with skills in installation and maintenance of simple solar systems while providing educational benefits for students in learning about renewable energy and environmental stewardship.This exciting program will provide at least 200 watt of solar powered system to 500 selected secondary schools spread across Nigeria and 5000 solar lanterns to selected female students in day schools.

**The Challenge**

Over 40% of the Nigerian population do not access to grid electricity. For the over 60% that are connected to the grid more than 35% do not have steady and affordable power supply Invariably over 75% of Nigerians do not have access to regular power. Over centralized and dependency on Gas to power 80% of Nigeria’s grid electricity comes from Gas thermals and 20% from Hydro. Gas thermals are faced with problems of Insufficient gas supply, poor gas infrastructure, no cost reflective gas price and tariff, pipeline vandalism and militancy. Although Nigeria is blessed with abundant renewable energy resources with great potential for energy generation there has been no concerted efforts in this regard.

Many primary and secondary schools in Nigeria have no electricity; boarding schools are not left out. Where there is electricity it is unreliable, students are made to study at nights with kerosene lanterns. In day schools female students are most affected because they spend the day light helping out in the home with domestic chores and are unable to do their homework or read at night. The use of kerosene causes degradation of air quality inside a home while producing toxic and carcinogenic [gases](http://energyeducation.ca/encyclopedia/Gas). In developing countries, the widespread use of kerosene comes with numerous different issues. Hazards of kerosene use include poisoning, fires, and explosions. As well, some kerosene lamps emit fine [particulates](http://energyeducation.ca/encyclopedia/PM), [carbon monoxide](http://energyeducation.ca/encyclopedia/Carbon_monoxide), nitric oxides ([NOx](http://energyeducation.ca/encyclopedia/NOx%22%20%5Co%20%22NOx)), and sulfur dioxide when [burned](http://energyeducation.ca/encyclopedia/Combustion). These by-products may reduce lung function and increase risks of asthma and cancer. In addition to this, handling the fuel can be dangerous as kerosene is irritating to eyes, skin, and the respiratory system.

Taking into account the risks of using kerosene, cleaner alternatives to kerosene technologies are the best option.

**The Opportunity**

Climate change is a treat but also an opportunity. For a country like Nigeria that is faced with an army of unemployed youth, Climate action could generate a veritable bounty of clean energy employment.

This project therefore seeks to encourage and demonstrate the essence of collective measures in the fight against climate change primarily by promoting technical skills in solar systems design, installation/maintenance and environmental stewardship thereby creating jobs and building a generation of skilled manpower and bridging the technical skill gap that currently exist.

**Why now?**

Climate change is an area that is currently in dire need of a wide range of publicity and other measures among students and youths in order to mitigate its effect on the society. This is more so in the sense that informed students, youths and the general public will make wiser and more accurate decisions and response to climate change issues. Climate specialists have reportedly pointed out that a solution to the climate change problem will require climate change awareness, education and proper understanding of the phenomenon by all actors. In order to fast-track this awareness and education towards climate change, it is necessary to know people’s level of awareness so as to ensure effective planning. Many Nigerian school children are aware that some changes occur in the environment year in and year out but lack knowledge of the reasons for such change. They are also aware of increased disease, food shortages, and extreme flooding at various localities during certain periods of the year. Yet there have been little or no efforts towards involving and enhancing the capacity of the school children and youths towards climate change adaptation measures.

In Nigerian, students are not engaged in practical demonstrations which will enable school children actively use their acquired knowledge and skills to improve environmental stewardship and climate change awareness/ adaptation programs. It must be noted that although children and youths are among the most vulnerable to climate change, they must not be considered passive or helpless victims. Through education, projects and action, children can contribute to every aspect of climate change awareness, mitigation and adaptation. When empowered and educated on climate change, children can reduce the vulnerability of themselves and their communities to risk and contribute to environmental stewardship and sustainable development. There is therefore an urgent need to educate the school children on the signs of climate change and build the capacity of the students towards a practical application of the theories of climate change as well as mitigation and adaptation strategies. It is also important to note that as agents of change, school children can assist in educating their communities and peers in their various localities to adapt to climate change and promote environmental sustainability.

**Rationale for Proposed Actions**

* A clean energy source of light for studying is a vital component in ensuring equal rights to education for children
* Increasing school Teachers and students awareness and knowledge on climate change and environmental issues.
* To equip the students with necessary skills in installation and maintenance of Solar system
* Improving students study time and grades
* To improve environmental governance by promoting a participatory model that gathers stakeholders and encourages them to share perspectives on climate change

**ACTIVITIES**

1. Awareness creation, selection of participating schools and Launch of program
2. Capacity Building and training
3. Installation of solar systems
4. Distribution of Solar light

**Budget**

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| **Item** | **Unit cost USD** |
|  Capacity building and Awareness creation  | 10,000 |
| Training on installation and maintenance | 20,000 |
| Solar panels, batteries and accessories | 60,000 |
| Management/Monitoring and Evaluation | 10,000 |
| **GRAND TOTAL** | **100,000** |