

**ASSOCIATION OF FEDERAL GOVERNMENT COLLEGE
ENUGU ALUMNI AMERICAS, INC.
(AFGCEAA) A 501(c)(3) NON PROFIT CORPORATION**



Installation Of Twenty Sustainable, State-Of-The-Art, Off-Grid, Solar Street Lights In FGCE

Project Objectives

To bring sustainable lighting to Federal Government College Enugu (FGCE) by installing 20 Solar street lights throughout the school to increase student safety.

Goals

- To bring about increased lighting to FGCE
- To improve student safety at night at FGCE

Scope of Work:

The following work shall be performed by the Vendor as part of the Installation of twenty solar street light systems at FGCE.

- Clear construction site and excavate foundations.
- Cast concrete foundations
- Allow time for concrete to set
- Fabricate 20 light poles
- Install 20 light pole in foundations.
- Install solar panels with attached base on poles
- Install LED light, solar controllers and other accessories
- Install battery boxes and batteries.
- Complete work and perform final walk through

The Vendor shall provide written, photo and/or video proof of work completion during each stage of the project.

Specifications:

Solar street light poles: Light poles will be manufactured to SON standards from high quality, corrosion-resistant, galvanized steel or aluminum with foundation kit.

- Height: The poles should be at least 6.4 meters (21 feet) high from ground level.
- Thickness: The poles should be at least 6 inches (15.2 cm) thick.

- Pole foundation: The foundation should be encased in concrete or steel base and have a total depth of 5 feet measured to the top of concrete\steel base.

Battery and battery box: This will be a deep-cycle, spill-proof, leak-proof, maintenance-free battery that can provide up to 3 days of backup power. Battery box will be made of corrosion resistant steel or aluminum, pole mounted along with the solar panel and come with security bolts\lock.

Solar panel and light: The Solar panel with attached base will be robust; LED solar street light will provide sufficient lumens of ambient lighting.

Solar controller: This will consist of an Intelligent, remote controlled solar controller with light dimming and dusk to dawn functionalities.

Hardware: All mounting hardware, wires and accessories will be included and installed by the Vendor.

Warranty: The vendor shall provide at least 2 years warranty for all materials along with free replacement labor. The vendor should be willing to enter into an extended maintenance service agreement with FGCE at the expiration of the warranty.

Guarantee: The solar panels shall be guaranteed for at least twenty (20) years by the Vendor.

Batteries: The batteries should have a lifespan of at least five years.

Solar Controllers: These should have a lifespan of at least ten years.

Bill of Quantities:

QUANTITY	ITEM		COST
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			(NAIRA)
1	6 inch thick galvanized steel solar pole at least 6.4 meters (21 feet) above ground with attached metal base for foundation		
1	Solar battery with corrosion-resistant box and lock, pole-mounted		
2	80 watts Solar panel with attached base rack		
1	36 watt LED street light		
1	24 watts intelligent solar controller		
	Copper cables, concrete foundation, accessories		
	Total cost per pole		
	Grand Total for 20 solar light poles		

FGCE site plan showing proposed locations of solar street light.



LEGEND:

- SOLAR LIGHT POINT
- CR DROP OFF SHELTER
- DOS COMMON ROOM