

The Solar Array Project – How to Create Learning Opportunities

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UNIVERSITY

of ARKANSAS

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Ground-Mounted Solar PV Array



Project Specifications and Modeled Results

Solar PV Site	Panel Quantity: 988	12 Inverters converts	Annual Production
Wattage: 321.6 kW		DC to AC	estimate 485,620 kWh
Panel Style: 72 Cell	25 year panel warranty	Solar PV Array serves JBJ Complex (11 Bldg)	Annual solar power offset = \$53,243



Alternative Energy – Undergraduate Catalog 2017 - 2018

TECH 3399 - Alternative Energy

Credits: 3

This course will cover Photovoltaic concepts both in theory and hands on skills; then it will be continued with Solar Technology, Wind Technology, and Energy Auditing Technology. Students will also learn the affect of light intensity and heat on solar cell performance; measure and calculate current, voltage and power for single, and multiple solar panel combinations; calculate wind generated power and calculations for energy audits.





Solar Cell Research

UNIVERSITY OF ARKANSAS AT PINE BLUFF



UAPB students tracking the sun with the Solar Cell





The Green Mobile – Winnebago Turned Solar Energy Laboratory

University of Arkansas at Pine Bluff









The GREEN Mobile was created through an Arkansas Energy Office grant and support from the Arkansas EPSCoR Program, ASSET Initiative II. The Energy Office is a division of the Arkansas Economic Development Commission.

The mobile lab features six 235-watt solar panels mounted on the driver's side that can power all elements of the lab and can be used for solar energy demonstrations. The GREEN Mobile has been based at the University of Arkansas in Fayetteville for the last three years, but in 2015 was transferred to the University of Arkansas at Pine Bluff.

The GREEN Mobile was created to expose Arkansas students to fun and interactive projects in the science, technology, engineering and mathematics fields.





Solar Car Challenge (High School Competition)



The Solar Car Challenge is the top project-based STEM Initiative helping motivate students in Science, Engineering, and Alternative Energy. The SCC Education Program developed in 1993 as a high school extra-curricular program, and later evolved into the Solar Car Challenge Foundation.

The end product of each 15-month education cycle is the Solar Car Challenge: a closed-track event at the world famous Texas Motor Speedway, or a cross country event designed to give students an opportunity to show the country the product of their efforts.





Obtain Energy / Alternative Energy Internships

Step 1: Network with companies in the Energy industry.

Step 2: Investigate if there are any internship opportunities for Winter and Spring.

Step 3: Have our STEM Students develop speaker bureau for K- 12 and other Community Organization to learn about Alternate Energy.

Step 4: Get our Students active in ASHRAE, AEE and USGBC for more exposure..