



Portable Photovoltaic System

This Portable Photovoltaic System was constructed as an educational tool to expose the public to a working photovoltaic system. All of the components are arranged in such a way as to allow easy viewing and to allow for a better understanding of their relationship to one another. The system consists of four 120 watt single crystalline solar panels, and a battery bank that is sized to deliver 1500 watts of output @ 120 volts AC. The system's battery bank will provide the 1500 watts of power for up to eight hours continuously, without any sun present. With the addition of five hours of sun during this eight hour span, this continuous power interval is increased to about 10 hours. If the load is reduced to 800 watts, the system will provide 18 hours of continuous power. If you would like more information about this system, or about photovoltaics contact the Department of Natural Resources Technology Assessment Division.

DNR displayed their Portable Photovoltaic System at Southeastern Louisiana University's annual Earth Day celebration held on their Hammond campus on April 22nd 2009.



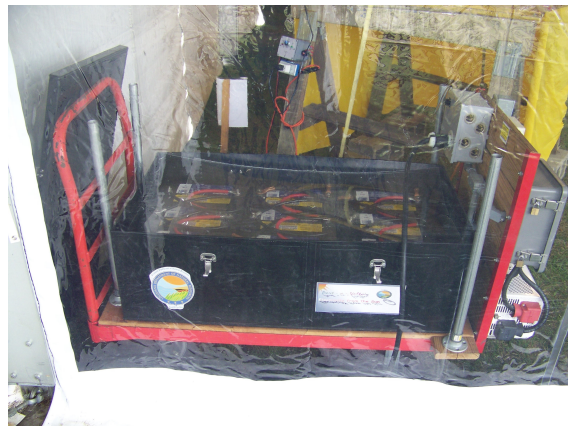
The system was used to provide electricity to the DNR information booth at the celebration. Students and faculty visited the booth as they moved around campus between classes during the day long event.

Previous Events

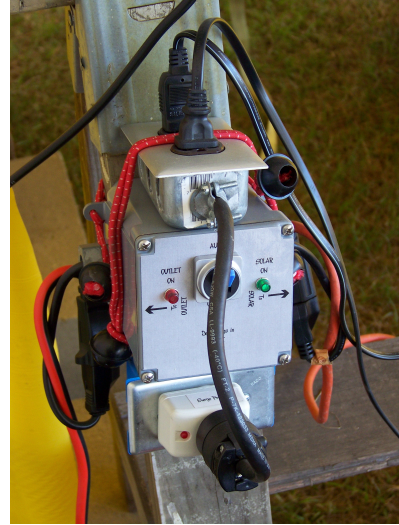
DNR's Portable Photovoltaic System kept the football crowd happy on game days at the 43rd Annual Greater Baton Rouge State Fair over the entire length of the event from October 23rd through November 2nd, 2008



The system was used to power a 52" HD-LCD TV and Direct TV Satellite Receiver for the entire length of the Greater Baton Rouge State Fair



The photovoltaic controls were set up directly behind the wide screen tv for easy viewing by interested patrons visiting the beer tent. The tent featured a see through partition which allowed a close examination of the controls without touching while provided protection from the outside elements



The photovoltaic panels were set up just outside the beer tent and received good sun on all but one of the 11 days in which it was set up. The battery bank reserve was sufficient enough to make it through this 36 hour time span. Since the costs of the devices being powered were of such a considerable amount, the photovoltaic system was set up with an automatic switching system that would instantly shift from pv power to grid power in the event that the pv system would encounter a problem. The pv system operated without interruption for the entire event and in fact provided uninterrupted game coverage of two separate football games despite power interruption to the fairgrounds complex – not a single play was missed.



DNR's Portable Photovoltaic System was a hit at New Orleans's Build Smart Expo





The system was used to power a small air conditioning window unit in a Structural Insulated Panel (SIP) Display building at the Expo

April 22nd, & 23rd, 2006 were the dates for the Build Green Expo held in New Orleans at the Ashé Cultural Arts Center & Barristers Gallery. The Expo featured energy efficiency and modern, environmentally-responsible building concepts and materials that are recommended for the rebuilding efforts underway in New Orleans after Hurricane Katrina devastated so much of the housing stock in the New Orleans area. With so many homes expected to be rebuilt or renovated the event featured workshops, demonstrations, and technical resources to promote the idea of incorporating energy efficiency and sustainability into the reconstruction of their homes.



With so many people remaining without electricity for such a long time in the New Orleans area after Hurricane Katrina the portable photovoltaic system display booth was a very busy place.



In addition to powering the SIPs building air conditioner, the portable photovoltaic system was also used intermittently to provide electrical power to an onsite DJ who played 1960's era music for the patrons of the expo.



Considering the federal tax incentive that is currently in place as a result of the newly passed Energy Policy Act of 2005 which awards a tax credit of up to \$2,000 for the purchase of photovoltaic equipment, and the newly passed Louisiana legislation which adopted net metering for the state – there has never been a better time for incorporating photovoltaics into residential construction, and particularly into the reconstruction of New Orleans.



April 22, 2000 was the official day designated for Earth Day 2000 celebrations. New Orleans Mayor Marc H. Morial hosted his Earth Day celebration within the Crescent City Farmer's Market, located near the Warehouse District in New Orleans. Along side of the usual produce and seafood vendors normally plying their trade in the market were 25 booths that focused on environmentally friendly devices such as solar cookers, recycling equipment, and energy efficient products. The Mayor's Office of Environmental Affairs contacted DNR, interested in powering the Mayor's event stage with clean power. The Portable Photovoltaic System powered the Mayor's event stage, as well as the booth of

The Alliance for Affordable Energy. The Mayor's event stage hosted a live band and entertainment for the entire length of the celebration. All of the electricity used in this endeavor was produced by energy captured from the sun.



Buddy Justice of DNR demonstrating and explaining the system