

Bowling Green Independent Schools Solar Project Dishman-McGinnis Elementary School

Project Description

The Bowling Green City Schools received a grant to install a 5 kilowatt solar array and a solar hot water system on its new school, Dishman-McGinnis Elementary, which will be completed in the summer of 2014. The new school is designed to use about 50 percent less electricity than an average school built in Bowling Green, Kentucky. The school will use solar photovoltaic (PV) panels to produce about 6,000 kilowatt hours of electricity. The solar hot water system will provide the hot water for the kitchen and the energy produced will avoid the purchase of about 32,500 kilowatt hours of electricity. These two projects combined will meet 5 percent of the school's energy need.

The school will use these projects as teaching tools to help the students understand the role of renewable energy in meeting energy needs and reducing the environmental impact of energy consumption. Solar panel installation will begin in early 2014 and be completed by spring of that year. Total project cost will exceed \$67,400 with the Cabinet providing a \$33,700 matching grant.

Project Objectives

- Installation of a solar thermal domestic hot water system which will produce all domestic hot water for the kitchen.
- Installation of a 5 kilowatt solar PV system, which will offset a portion of total building energy.
- Utilize the solar project as a teaching tool for the school's science curriculum as well as the school's student energy club. Students will learn about how renewable systems and grid tied power can work together to provide an ideal solution with minimal costs.
- Reduce the emissions associated with the school's energy consumption.

Time-line

Construction on the new school will begin April 2013 and will be completed August 2014. Between January and April of 2014 the solar energy systems will be installed.