

Energy Incentives from We Energies



S U C C E S S S T O R Y

Customer: Racine Dominican Ministries Eco-Justice Center, Racine, Wis.

Project: 11 kW Solar Electric Photovoltaic (PV) System

Total project cost: \$92,460

Incentive: \$28,730 from We Energies
\$35,000 from Focus on Energy

Estimated savings achieved: \$2,423 per year

Energy for Tomorrow participant: 100 percent

Why is this a success story?

The Eco-Justice Center is an environmental-education center dedicated to setting an example of living simply and using energy resources conservatively. In January of 2007, the center, which is located on a 19th-century-era farm in Racine County, decided to install a 55-panel solar electric photovoltaic (PV) system on the roof of its 1870s granary with the assistance of Full Spectrum Solar. In order to support the new panels, the project also required the addition of interior scissor beams to reinforce the old roof.

Sister Janet Weyker, director of the Racine Dominican Eco-Justice Center, is thrilled with the result. "For six months of the year, instead of paying for our electricity, we get a check back from We Energies." The system actually offsets most of the annual energy costs for the building on which it's located.

The solar electric panels attract attention to the Dominican Ministries facility, which helps Weyker and her staff teach people of all ages and all walks of life how to live more gently on the earth.

"The panels are attractive, and really stand out," says Weyker. "Unlike some of our other improvements made at the facility (such as geothermal heating and air conditioning), our solar project is easy to explain to our visitors."

We Energies will be providing the Racine Dominican Ministries with a Web-based monitoring system that will show real-time data output of the solar PV system. Web visitors from all over the world then will be able to see how much energy is being generated by the solar panels.

For more information about We Energies' non-profit program, e-mail connie.lindholm@we-energies.com, visit www.we-energies.com/RE, or call 800-714-7777.



What is solar or photovoltaic (PV) electricity?

When certain semi-conducting materials, such as specific kinds of silicon, are exposed to sunlight, they release small amounts of electricity. This process is known as the photoelectric effect. The photoelectric effect refers to the emission or ejection of electrons from the surface of a metal in response to light. It is the basic physical process in which a solar-electric or PV cell converts sunlight to electricity.

What are the components of a PV system?

A PV system is made up of different components. These include PV modules (groups of PV cells), which are commonly called PV panels; an inverter for a utility grid-connected system when alternating current (AC) rather than direct current (DC) is required; wiring; and mounting hardware or a framework.

How long do PV systems last?

A PV system that is designed, installed, and maintained well will operate for more than 20 years. The basic PV module (interconnected, enclosed panel of PV cells) has no moving parts and can last more than 30 years. The best way to ensure and extend the life and effectiveness of a PV system is by having it installed and maintained properly.

How much electricity does a PV system generate?

A typical, well installed PV system in Wisconsin rated at 2 kilowatts will produce around 2,450 kilowatt-hours a year.