



Energy Incentives from We Energies

November 2008



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

Customer: Unitarian Universalist Church West, Brookfield, Wis.

Project: 8 kW Solar Electric Photovoltaic (PV) System

Total project cost: \$73,410

Incentive: \$25,811 from We Energies
\$21,787 from Focus on Energy

Estimated savings achieved: \$2,173 per year

Energy for Tomorrow participant: 100 percent

Why is this a success story?

The Unitarian Universalist Church West (UUCW), located in Brookfield, Wis., felt that the time was right to make a statement on reducing greenhouse gases. They decided to generate their own pollution-free energy with a solar electric or photovoltaic (PV) system. The primary motivation for putting a plan into action was the church's religious values, best stated in one of the seven principles of the Unitarian Universalist Association: to affirm and promote respect for the interdependent web of life, of which we are part.

The church regularly teaches its members about sustainability from a spiritual and practical standpoint, and had already implemented energy efficiency measures. They also were already purchasing 100 percent renewable energy through the We Energies Energy for Tomorrow program. A solar electric system seemed like the next logical step and a way to express their values to the surrounding community in a more tangible way.

When asked about UUCW's commitment to installing the system, Rev. Suzelle Lynch said, "We hope that by installing a PV system at the church, it can serve as a beacon or role model, not only to our members, but to the greater community. We strongly believe that it's time to act and to be more aware of what human habits are doing to our planet and our future."

Other motivating factors for the installation that were important to the fundraising committee included:

- The opportunity to leave a legacy.
- Being a model to the community.
- Having a visual for potential new members.
- The good of the many over the good of the few or the one. (*over*)



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.

The church fundraising committee launched a campaign that focused on participation from members. They developed an educational exhibit, which included photos of solar PV systems, a copy of the church's site assessment report, and a full-size solar PV panel that could be touched and examined.

The church felt strongly about installing the system, but it would not have been economically possible without the incentives available through the We Energies and Focus on Energy programs. Ultimately, member donations combined with the incentives paid for the project.

The church now benefits not only from the environmental effects of the solar PV system, but also from the We Energies solar buy-back program, which provides a small income to offset energy costs in the church operating budget.

To increase awareness of energy use and the importance of energy efficiency, UUCW continues to educate their congregation about solar PV systems and energy generation in general. Amy Taivalkoski, a UUCW member and a certified renewable energy site assessor, commented, "Energy generation has costs beyond the economics - pollution, habitat loss, healthcare issues, etc., and churches have an obligation to put values and the true cost above the bottom line."

"Our hope is that the congregation, now armed with this information on energy, will go home and work on their own energy-efficiency measures and perhaps even consider a solar PV system for themselves. We also hope that they will share their knowledge with their neighbors, family and the wider community," Rev. Lynch emphasized.

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.