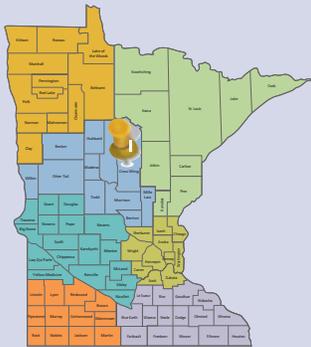




Minnesotans building a clean energy future



Crosslake, MN in Crow Wing County

CERTs PARTNERS

University of Minnesota Extension and Regional Sustainable Development Partnerships

Great Plains Institute

Southwest Regional Development Commission

The Minnesota Project

Minnesota Department of Commerce, Division of Energy Resources

LEARN



CASE STUDY: EFFICIENCY — CENTRAL REGION

The New Noah Project: Crosslake Church Adds Solar Photovoltaic Panels to Roof

By Kristi Loobeek • Oct. 2013

The story of Noah and the Ark, a man building a gigantic boat in preparation for a flood that no one else believed was coming, is familiar to most. Crosslake Presbyterian Church has recently taken a page out of Noah's book and begun their own major undertaking that was initially dismissed by some. Project proponents commissioned a research study on the building's efficiency to help sway doubters to install photovoltaic solar panels on the roof of the church. The project and study have hence been aptly dubbed "The New Noah Project."

Crosslake Presbyterian Church is no stranger to both preserving nature and energy efficiency. Roger Grussing, Chair on the Crosslake Energy Task Force explained, "When the church building was constructed it was designed not only to fit into the surroundings aesthetically, but also was relatively energy efficient and included ground-source heating and cooling."

The church recently completed the study analyzing the building's past and future performance. The study further explains the building's methods of energy conservation: "In order to minimize heat loss, a number of energy efficiency measures were also designed into the building. Some of these components include high R-value insulation in the walls and attic, low emissivity dual-pane thermal windows, and fluorescent lighting including compact fluorescent light bulbs throughout much of the church."

Although the plan to install the solar array is now moving forward, the steps to making the decision to install solar were not smooth. Many members of the congregation were hesitant and skeptical of the array's benefits and necessity. Crosslake Presbyterian Church Reverend Kate Stangl explained, "There were several loud voices in the congregation that felt the [solar] project was total folly. Thus came the title of the research, 'The New Noah Project.' The supporters of the project knew that to many it would look as fool-



The Crosslake Presbyterian Church did a series of energy-efficiency upgrades as well as a comprehensive energy audit to their building (photo courtesy Cross Lake Presbyterian).

ish as Noah must have looked as he built the ark when it wasn't raining."

Rev. Stangl continued by explaining the process the project followed, "The Session (church board) sanctioned an Energy Task Force to study and discuss energy stewardship. Once the photovoltaic system

Project Snapshot

Location: Crosslake, MN

Technology: Solar Photovoltaic, Energy Efficiency

Total Cost: \$26,214

CERTs Funding: \$4,000

Renewable Energy Produced: 7,400 kWh

Energy Saved: 2,600 kWh, 500 therms

Cost Savings: \$580 annually

People Involved & Reached: 280

was being researched and discussed, a wide range of people were included in open meetings. Supporters, dissenters, and fence sitters were always invited to the meetings.”

The project, to be installed on the building’s south-facing roof, will be a 5.6kW, 24-module photovoltaic solar array. Within the study, Grussing explained, “The installation of a 5.6kW photovoltaic system at the church could keep 5.1 metric tons of carbon dioxide from being released to the atmosphere that would otherwise be emitted from the burning of fossil fuels to generate the same amount of energy that would be provided by the solar array.”

When looking for a potential contractor, the church was drawn to the Rural Renewable Energy Alliance (RREAL). Jason Edens, RREAL Director expressed his excitement and hope for the potential project, “Although the installation at the Crosslake Presbyterian Church will substantially reduce the long-term operating costs of the church, it’ll do a great deal more.” He expanded by saying, “Visibly situated near the Crosslake Community Center with great solar exposure, the installation has the opportunity to introduce a broad demographic to an appropriate and effective technology.” He concluded by mentioning, “Additionally, the thousands of daily passersby will see the energy leadership of the congregation and realize the opportunity it presents to the region as a whole.”

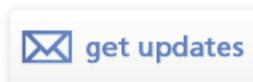
Good news for the project came in mid-August. “On Monday, August 12, 2013, the church board (session) approved the project, signed a contract with RREAL and made payment to RREAL for materials and all labor,” explained Rev. Stangl. With arguably the hardest part behind them, the church views the entire process as a learning experience. Rev. Stangl noted, “The most exciting way that the project engaged the church community was through many informal dialogues between people who were divided in support for this project. The church community benefited from this project as it successfully traversed this path through a potentially divisive issue. Each time a community successfully does this, it increases our experience with whatever the next potentially divisive issue is.”

*To learn more, contact Roger Grussing at (218) 855-1295 or [rcgruss@gmail.com](mailto:rcgruss@gmail.com).*



*The City of Crosslake, MN is home to the Whitefish chain of lakes. There are more than a dozen lakes that are all interconnected, including Dagget Lake, which is only a stone’s throw from Crosslake Presbyterian Church (photo courtesy Pete Markham).*

### GET SOCIAL WITH CERTs:



[updates.mncerts.org](http://updates.mncerts.org)



[on.fb.me/mn-certs](https://on.fb.me/mn-certs)



[twitter.com/mncerts](https://twitter.com/mncerts)



[linkd.in/mncerts](https://linkd.in/mncerts)



[youtube.com/mncerts](https://youtube.com/mncerts)



[flickr.com/mncerts](https://flickr.com/mncerts)