

## SEEING THE LIGHT

FdL couple harnesses solar power, sells it back to the grid

By Monica Walk  
Special to The Reporter

Can you imagine watching your electric meter roll backward — legally?

Jeanne and John McDowell know that delight, thanks to the solar panels they installed on their home's roof last fall. The 18 panels on the back of their home generate more power than the couple consumes and the excess is sold back to Alliant Energy.

"We generate far more than we are using," Jeanne McDowell said. "The money we earn pays for our electricity, fees, charges and taxes, and some of our gas usage. This summer, we have earned a two-month credit and will apply that toward future bills."

The McDowells are among three households and one business in Fond du Lac currently generating solar power, said Alliant Associate Product Manager Traci Vail. It's a small but growing group, Vail said.

A bi-directional digital meter installed in the McDowells' laundry room clocks the electricity produced, as well as the amount the McDowells use. An inverter mounted in the same location hooks into the main fuse box and changes the current from direct (DC) to alternating (AC) for use in the home.

Nearby, the McDowells keep a daily log of their energy creation. By mid-July, they had saved 55,000 pounds of CO<sub>2</sub> and logged more than 3,300 kilowatt hours since the panels went live. For comparison, a watt is the gauge of how much energy an appliance burns in one hour, and a compact fluorescent bulb burns 12-14 watts in an hour.

"Eleven a.m. is the best time" for energy generation, John McDowell noted. "And a cool, sunny day creates more electricity than a hot, sunny day when the UV is blocked."

### Environmental conservatives

Their life experiences and current living situation influenced the McDowells' decision to install the solar panels. Together, the couple has lived and worked abroad as teachers for a number of years in Germany and Japan, where solar panels may be compulsory in all new construction by 2030, according to a May report in the Nikkei business daily.

"We've lived in countries where energy is more expensive," Jeanne noted. "And, we've always had an environmental conscience."

On a recent trip to visit John's family in England, the couple noticed solar panels on private homes and public buildings.

"Even older buildings with tile roofs," Jeanne reported. "And in Arizona, we have seen solar panels and rain gardens all over the area, with sunken rain tanks (for long-term water collection and storage)."

When the couple returned to the United States in 2006 to live in Jeanne's Fond du Lac hometown, they soon purchased an energy-efficient home built in the early 1980s during an earlier energy crunch. They added a tankless hot water heater, rain barrels, a vegetable garden, a rain swale garden certified as a wildlife habitat by the National Wildlife Fund, fruit trees, and native shrubs. Both are longtime volunteers at the Gottfried Prairie and Arboretum on the UW-Fond du Lac campus.

The solar panels seemed like a logical next step. "We consider ourselves conservatives," John Mc-



Jeanne and John McDowell stand in the backyard of their home at 77 Eastbrook Lane in Fond du Lac, WI. The McDowells are among three local households and one business generating solar power. (Patrick Flood/The Reporter)

## Earth-friendly yards on view via Zoopolis

For The Reporter

Rain or shine, folks can view the homes and yards of several Fond du Lac residents engaged in earth-friendly practices during the 2011 Zoopolis tour slated for 11 a.m. to 6 p.m. Sunday, Aug. 7.

Ticket prices are \$10, with a special \$8 rate for participants who bike the 5.6-mile route. Children under 12 are free.

Profits will be used for habitat restoration in the Fond du Lac area and for public environmental education opportunities.

The tour is self-guided and at participants' convenience during the scheduled hours. Tickets can be purchased at any of the featured sites.

For more information, call (920) 922-7931, email dbec7931@charter.net, or view the Audubon website [www.fldaudubon.org](http://www.fldaudubon.org). The featured sites are:

■ **Margaret Jank** — 120 E. Johnson St.: Featuring a wild kingdom of natural beauty on one of the busiest streets in Fond du Lac, the owner believes in "letting go and trusting in the innate wisdom of nature" coupled with a large container garden lining the driveway. Park on Amory Street, five houses west.

■ **Lisa and Bob Weber** — 242 E. Second St.: Behind a tall privacy fence, the owners honor nature with a magical garden dedicated to beauty, peace and symbols of earth.

■ **Marlene and Stephen Wirth** — 249 E. Second St.: An inviting deck overlooks a small pond, birds, stones and lovely plants.

■ **Margaret and John Nonetied** — 368 Third St.: Locate the outstanding front yard elm tree and wander through several gates in the deep yard to view a variety of flowers, vegetables and fruits for humans, birds and insects.

■ **Sue and Steve Hoepfner** — 386 Third St.: Over 20 years, these owners have replaced a solid turf lawn with native plantings, beginning small and incrementally increasing the habitat surrounding the home.

■ **Cheryl and Kevin McDermott** — 394 S. Park Ave.: Native plants along the side of the home offer habitat for wildlife, while the hidden backyard holds a pond, beautiful plantings and whimsical surprises.

■ **Nancy and Terry Thomas** — 959 Martin Ave.: Returning even part of a property to nature helps the eco-system. Closely view the natural habitat visible from the street, a natural complement to the back lawn maintained as a play area for grandchildren.

■ **Jeanne and John McDowell** — 77 Eastbrook Lane: View a rain garden and 18 roof-mounted solar panels installed by these earth-friendly home owners.

The couple, who both continue to teach part-time — John on the UW-Fond du Lac mathematics faculty and Jeanne as a University of Maryland online biology instructor and local yoga teacher — considered their retirement years when making their decision to install the solar panels.

"At the time we made the decision, the economy was so uneven," Jeanne said. "So we could use this as a solid investment. And the next couple of months, we won't pay electric bills and that's nice."

John added that the appreciation effect of solar on the value of a home averages 80 percent nationally.

"We felt like we took a risk and it turned out well, better than we thought," John said. "It's less risky than the stock market."

The couple turned to Jim Funk of Energize LLC in Winneconne to install the panels and the inverter. Funk will be on site when the McDowells' home is a featured stop of the 2011 Zoopolis tour. (See accompanying story.) A site study and series of sun-tracking diagrams steered the location of the panels to the back roof of the home.

"He advised us on two

types of panels and gave us a choice," John McDowell said of Funk. "We opted for the ones that are a little larger and generally slightly more expensive: the Sanyo 215w N Series. It is a 4 kilowatt system and is more efficient and gets more performance."

Funk also completed the grant paperwork.

"No glitches," John McDowell reports.

### Careful consumption

In conjunction with their solar panels, the McDowells have embraced Alliant Energy's time-of-day pricing plan. When they use electricity between 8 a.m. and 8 p.m., they are charged at a rate of about 19¢ cents per kilowatt hour. When they use electricity before 8 a.m. and after 8 p.m., their rate goes down to approximately 5 cents per kilowatt hour.

"Even without solar panels, the time-of-use plan has a lot going for it," Jeanne McDowell said. "Five cents versus 19 cents is a significant difference."

The McDowells have made a concerted effort to run the washing machine, clothes dryer, dishwasher and oven during off-peak hours.

John McDowell compares their increased appreciation for electricity to the appreciation they developed for water after installing rain barrels outside their home.

"It's the 'rain barrel effect,'" he said. "When you collect something like water, you don't dump it willy-nilly. You become mindful and use it carefully. Now that we make our electricity ourselves, we conserve it even more."

Freelance writer Monica M. Walk was raised in a Wisconsin family dedicated to the building trades. She has fond memories of a ribbon-winning, grade-school science project on solar energy constructed with her father's advice.

Have a Home topic you'd like covered? Email Monica Walk at [walkthetalk.com](mailto:walkthetalk.com) or [munications@gmail.com](mailto:munications@gmail.com).

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