

**Bethel College Mennonite Church Creation Care Committee**  
**Creation Stewardship Notes # 20, July 2006**  
**Learning Creation Care by Small Steps (Small Solar Electric System)**  
**by Marv Dirks**

A few months ago a small tornado, or large microburst, went through our six-year-old grandson Gavin's backyard in Lawrence, Kansas. It rolled his family's gazebo into the neighbor's backyard, going through the neighbor's new backyard fence on the way. Slippery slides, jungle gyms and backyard equipment from other friends and neighbors ended up on Gavin's family's roof, and in their backyard. The whole place was a mess. All of a sudden Gavin became very aware of storms, and is now fascinated by the weather channel on TV. He learned very quickly about the potential destructive power of the natural order as it relates to his outdoor toys and living area.

As it turns out, each of us is learning about God's creation every day, sometimes intentionally, and sometimes like Gavin unintentionally. Our congregational creation care goal is to think together about how we can relate to the creation in ways that are positive and hopefully less destructive to the natural order in the long run. And, we don't want to wait for a catastrophe to teach us. Perhaps sharing our personal experiences within the congregation will help each of us learn to take possible, practical, and positive creation care steps.

Right now at our house, the most interesting little ecology-related project is our solar electricity generating system. With three 2' x 5' solar panels we generate enough electricity on a daily basis to power about half of the lights in our house, run the wash machine, power a window air conditioner, and run various fans and electric heaters. The payback period financially in dollars saved on our electric bill is expected to be about 3 - 5 years, depending on how cloudy it is at different times of the year. Funny huh. All of a sudden we're interested in how heavy the cloud cover is on any given day. It's positively fascinating.

Our ecological goal is to decrease our use of pollution generating electricity. The "charge day" for our solar electricity generating system starts about an hour after sun up and for all practical purposes stops about an hour before sunset. As it turns out there is a huge difference in the number of photons hitting the solar panels from the sun at noon, when compared to the hours just after sunup and just before sunset. Sure we all know it's hotter in the summer at noon than early in the morning or late in the evening. Or, we've known most of our lives that it's easier to get a sunburn from 11 am to 2 pm, than early in the morning or late in the afternoon. But, seeing it on the solar system digital readout makes it all so much clearer. Back to the effect of clouds: a good big cloud can take the electricity generated at noon back down to the 10 am or 3 pm level, just like that.

And how did we ever get to be our age without being intensely aware of the fact that the sun rises in the northeast and sets in the northwest in the summer, while it rises in the southeast in the winter and sets in the southwest in the winter. Who cares you say? Well, the solar panels do. They are much more effective if they are faced directly at the sun than if they are not.

So we've learned a little bit about the sun's cycle and about the effect of clouds on the sun's rays reaching the earth. What else have we learned? We've learned that it's fun on a daily basis to be aware of the effect of sun and clouds on when we can do the wash. We actually can have fun waiting until the storage batteries reach 25.6 volts in the morning before we do the wash. The lights we can run anytime.

Now, it's your turn to share your creation care stories.