

**GREEN ORGANIZING ACTION TEAM:
"GOAT NOAT" FOR JUNE by Cathy Hanson and Stephan Rogers**

The Homewood Friends Meeting House was a stop on recent inspirational bus tours with Interfaith Partners for the Chesapeake One Water Partnership. Why? To look at Homewood's solar panels (photovoltaic array).

And the Meeting House isn't the only building with a solar array.

Just this spring, we (Cathy and Stephan) had solar panels installed.

Currently, the solar electric installations that are offered typically require you to choose between **1.** being able to "net meter" or back-feed the grid (which means selling surplus power back to the utility company) or **2.** being able to use your system during a power outage. These net-metering systems are designed to shut down when there is a power outage so that line repair staff are protected from power unexpectedly flowing back to the utility (back-feeding) from buildings that produce their own power. If you want to be able to use your solar system any time, even during a power outage, current installation practices require that your system be set up so that it will not back-feed, and surplus power needs be stored on-site for later use.

We opted for a system that allows us to have back-up power from our photovoltaic (PV) array during grid outages as well as when the grid is available, even though it meant forfeiting having net-metering capability. The most practical way to arrange that was to install a battery bank along with the PV array, which permits use of stored solar-generated electricity when sunlight isn't available.

Eventually it will be commonplace to be able to do both: sell surplus power to the grid when the grid is available AND use the power created by your system when the grid isn't available. This kind of installation is possible now, but is mostly considered a special custom design and is expensive.

We have a 5.58kW PV array, a hybrid inverter-charger with capacity to supply 5kW of power continuously (about 10kW surge), and a 10kWh lithium iron phosphate battery. This system is unique in that **1.** the most common type of residential installation is one that creates power to supply the household and sends any surplus back to the grid, whereas ours doesn't back-feed the grid and **2.** in installations that do include a battery bank, two or three separate components are usually needed to manage the power created by the PV array and balance the distribution of power between house loads and battery charging whereas the unit we have consolidates these functions in one component.

We don't use much electricity (usually between 8 and 11 kWh per day during temperate months) so this system offsets our daytime power requirements pretty effectively, and the battery will support our typical overnight needs.

Other people from Homewood have installed residential solar power systems. Many of them are happy to speak with you about the options they chose. To learn more, talk to Stan Becker, Fannie Fonseca-Becker, Rachael Neill, Charlie Neill, Sarah Bur, Gary Gillespie - or talk to us, Cathy Hanson and Stephan Rogers.

Committee members: Polly Heninger (clerk), Carol Beck, Gary Gillespie, Cathleen Hanson, John McKusick, and Stephan Rogers. (This is an open committee - please join us!)