The Arizona Solar Center’s mission is to present unbiased information about renewable energy in Arizona, particularly solar energy, its most abundant renewable resource. In conjunction with the mission, the Arizona Solar Center uses its website, www.azsolarcenter.org, to support commerce and industry in the development of solar and other sustainable technologies.

*** Featured Project ***

With a desire to make some contribution towards preventing global warming and with self-interest in reducing ever increasing energy bills, David and Betty Harris set out on a solar adventure over two years ago. The challenge they faced: could they reduce energy bills and also make some contribution towards reducing greenhouse emission at an affordable cost?

“Our challenge was to find a solar power system that would reduce our energy consumption by at least 50%. The other element was to identify a system payback that would equal our own invested capital within a ten-year period. We knew that the reduction in CO₂ would follow any installation. An added challenge was to find Arizona firms that had a track record for having engineered and installed quality solar generating systems within the state,” noted David Harris.

After having discussions with Arizona Corporation Commission staff members and APS officials, and spending extensive time researching and pouring over literature of solar generating systems, David and Betty selected American Solar Electric to design and install a 6.0 kW photovoltaic system at their Sun City West home.

“APS commissioned our residential power plant and we found that we were in the business of producing energy for our home and when not needed selling the surplus to APS.

The results of the first year of full operation more than met our most positive projections,” said David Harris.

In the first year, David and Betty’s system generated almost 12,000 kWh and saved some 9.3 Tons of CO₂ that would have otherwise been produced if they purchased electricity from the grid. Based on their calculations, they saved between $1,200 and $1,400. The percent savings of the Harris’ solar installation was between 55-60% for the first complete year of production.

“Given any reasonable projection of the normal surcharges and rate increases being factored into the APS charge structure, we have estimated the payback period between 8.5-9.5 years. This is very acceptable to us… We would strongly recommend such a system to those who desire to decrease their electric bills and make a small contribution to our environment,” added David Harris.

System Specification
System Capacity: 6.00 kWDC
PV Modules: 30 Kyocera 200 Watt modules
Inverter: 1 SMA SB7000US inverter
Estimated annual generation: 10,500 kWh
Installer: American Solar Electric, Inc.

Each AZSC Newsletter will showcase a Featured Project. If you would like one of your projects to be considered for this article please send a one page description of your project with four photographs to janet@cactusmooneducation.com

We thank the following AZSC Sponsors:
Seasonal Tip

At the start of this new year make a New Year Resolution to read your solar generation meter once a month. Calculate the number of kWh generated each month, divide the kWh by your solar system capacity in kW and compare your number with those in the bottom left corner of this newsletter. If your number is less than 90% of our number send us a description of your system and the kWh/kW numbers. You may need to have someone check out your system to make sure it’s performing as it should.

Around the State

The City of Peoria’s new Beardsley Water Reclamation Facility will generate a portion of its own electricity needs, thanks to a photovoltaic solar power array. The new solar power installation is Peoria’s first municipal solar project and includes a 60kW photovoltaic system designed by ETA Engineering and installed by Dependable Solar Products, Inc. The City of Peoria plans an open house in March to dedicate the solar array and help the public learn more about solar energy options. (For more information visit www.dependablesolarproducts.com)

Upcoming Events

February 1 – 3:
Energy & Environment Conference, Phoenix Convention Center. www.euec.com

February 17 – 20:
3rd Annual AEE Solar Dealer Conference in Mesa, AZ www.aeesolar.com/events/dealer-conference-10/

March 18-20:

March 30-31, 2010:
Greentech Media’s Solar Summit 2010, Sheraton Phoenix Downtown Hotel. www.greentechmedia.com/events/#/2010/01

For more information on upcoming events see the full calendar at www.azsolarcenter.org/events-calendar.html

Your suggestions are welcomed: If you have suggestions or ideas as to how we can make this newsletter more useful or interesting please let us know. Contact us at janet@cactusmooneducation.com with your ideas.