



# MAREA

MIDATLANTIC RENEWABLE ENERGY ASSOC.

P.O. Box 84 • Kutztown, PA 19530

## MAREA NEWSLETTER

May, 2009

Dear MAREA members and friends,



Spring is such a great time of year in southeast Pennsylvania (despite the occasional allergies). Young tender shoots of corn crisscross the landscape, the first cutting of hay is ready to be baled, the peas are climbing up their trellises, you can practically hear the asparagus growing — all wonderful reminders of nature's bounty and our relationship to the land.

Our organization is not only about that relationship and how to be good stewards of the earth and protect her bounty for future generations, it is about our relationship to each other — in a word, "community." From our annual festival to our monthly public meetings to our workshops, we invite everyone in to share their ideas about sustainability, to learn and to network. This newsletter represents one important way that we network, so by all means please feel free to forward it to your friends and family and invite them into our growing circle.

For those of you who couldn't make Dan Brown's talk about residential solar hot water systems — or who did and would like a refresher — you are in for a treat. Dan took time out of his busy schedule to revisit some of the highlights of that talk for our spring newsletter (keep on reading).

And as Archie elaborates below, even as we've barely begun to set out our tomato plants we are anticipating fall's bounty and gearing up big time for the Pennsylvania Renewable Energy and Sustainable Living Festival in September.

Check out our newly designed website: [www.paenergyfest.com](http://www.paenergyfest.com), buy some Toyota Prius raffle tickets, join us at our monthly public meetings and workshops (check out our calendar below) and help us network!

### President's Corner - Archie Follweiler

MAREA is networking. MAREA is growing. We are a humming. The Festival is being assembled. Samuel, Dan and Phil are aligning the speaker programs. Fifty vendors have reserved space (90 more spaces are up for grabs). Some are old friends...some are new friends. Exhibitor booths are filling up fast with a full third of our booths reserved by the time spring had sprung. We have quite a few new vendors this year and are very happy to have many returning vendors as well. Those vendors reserving a booth prior to June 2 will save \$60. In addition, any exhibitor can also choose to be a sponsor. **A sponsorship of \$500 will offers you a booth, an 1/8-page ad in the festival program, four one-day festival passes for family and friends, your logo on our website and a link to your website from our website (which received over a million hits last year!) Additional sponsorship levels are available as well.**

The music and art programs are also expanding. We are scheduling three full days of music on a solar soundstage featuring local, regional and even internationally renowned musicians (stay tuned for a big

announcement on that front). We are inviting a full display of area sustainable "eARTh" art. The organic fashion show will return.

We've acquired our permit for the Toyota Prius raffle, the tickets are printed and Internet sales have begun (buy raffle tickets as birthday presents and as thank-you gifts to friends, relatives and co-workers.) It is all available for viewing at the new PaEnergyFest website homepage: [www.paenergyfest.com](http://www.paenergyfest.com)



Win a 50mpg hybrid car!

Share the website with friends and coworkers. Share the meeting notices with friends and coworkers. Share this newsletter with friends and coworkers (and coworkers who are friends). Have your friends and coworkers join MAREA and get tuned in to our e-blasts. Support our community effort to promote renewable energy and sustainable living.

### Network!

**A hearty "thank you" from myself and the entire board to everyone for your support and community involvement.**

## No Time Like the Present to Install a Solar Hot-water System

By Dan Brown

In the past year or two the word “solar” has been flying through the media, showing up in political campaigns and hanging around the water cooler. The majority of people think the technology is a good idea whose time has not quite come, or there is a perception that it is too expensive and won't pay for itself. Most of this uninformed talk about “solar” is about solar electric, which uses PV panels to make electricity (something that we get very cheap already, at least in dollar terms). **Solar electric has a long payback and can be very expensive, especially before government incentives. But solar hot water, which very few people know about, is much more affordable.**

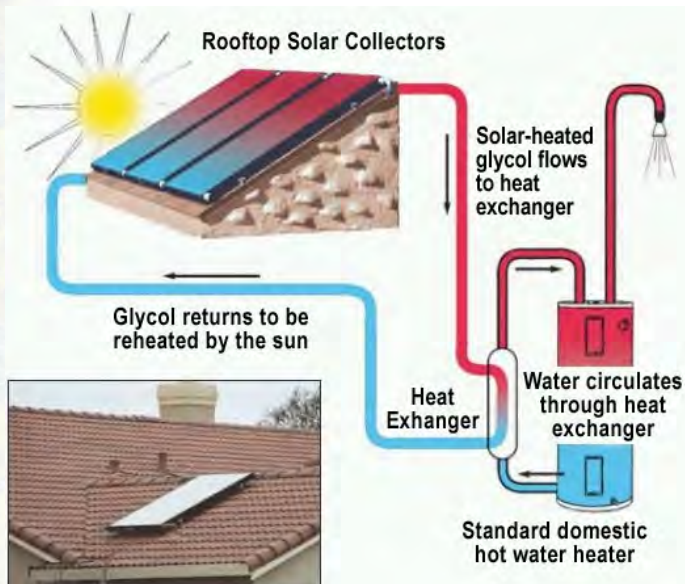


incentives, it's a no-brainer. Solar hot water will save you money and reduce your carbon footprint.

A basic system for a family of four consists of two 4-foot by 8-foot panels mounted onto the roof. This is plumbed to your utility room, which runs a pump that transfers the hot solar fluid to a heat exchanger, which transfers the heat to an 80-gallon solar storage tank. This storage tank is then plumbed directly to your existing hot water heater. If you have moderate hot water usage in your household, your existing hot water tank should not turn on 75 percent of the time with this basic system.

**In general if you have a roof line on your house that faces south or southwest or southeast you are a good candidate for solar hot water.** Other considerations are shading of trees, buildings that limit the sun or not enough space in your existing utility room for another 80-gallon tank. If these obstacles can be overcome, then by all means you should have a system installed.

**Then, just sit back, forget big oil and let the sun provide the heat!**



Solar hot water is used for heating our domestic hot water, such as for showers and dishwashing. It can also be used in home-space heating with the use of hydronic baseboards or radiant floors. In the summer months it can be used to heat swimming pools and hot tubs. Most all homes that have southern exposure can take advantage of this energy source. And most systems can affordably take care of all of your domestic hot-water needs and some of your home-heating needs. It has been a good economic choice in the past, and with the new Pennsylvania tax

## Muhlenberg Students Grid Tied on the Roof



A little rain never stopped the sun from going electric at Muhlenberg College last week, as 12 students worked long hours installing two pole-mounted arrays, hundreds of feet of conduit and two inverters.

**In addition to the MAREA PV installation workshop led by executive director Bill Hennessy, students at the Allentown college performed energy audits at two campus buildings. The group received guidance for the audits from MAREA board member Phil Jones, a mechanical engineer with EMS Environmental of Bethlehem.**

In his thorough presentation, Jones emphasized that conservation and efficiency are the foundation for effective solar installations.

The students produced professional quality electrical work in a timely manner under the guidance of Jesse Waters, the electrician-owner of EcoElectric of Breinigsville. His enthusiasm helped change the students, tentative at first, as several had never worked with tools, to a more confident group by Friday afternoon. A half-day of rain didn't slow the work of the class, who according to Dr. Jane Flood, the Muhlenberg professor coordinating the workshop, participated with the highest energy level seen in her 20 years at the school.



The economics of solar power was covered by Dr. Vera Cole, whose book encompassing the regulatory and financial aspects of photovoltaics in Pennsylvania will be published this summer with MAREA support.

Two nine-panel arrays, mounted on the roof of Seegers Union, provide the electricity that feeds two SMA inverters. A complete data collection kit was installed with the 3.2 kw system to provide opportunities for research projects and ongoing analysis.

The project was funded through Muhlenberg College and a \$15,000 Solar Scholars grant from the Sustainable Energy Fund, an Allentown nonprofit that funds solar projects for Pennsylvania colleges and universities.

As said in the workshop evaluations, "Installing the solar panels ourselves was definitely the



highlight of the course — I looked forward to going on the roof everyday."

And, "I LOVED the course; end of story!"

### Bill Hennessy, Executive Director of MAREA Receives NABCEP Certification



Bill Hennessy, Executive Director of MAREA and partner of Berks Solar (left) leads a solar installation workshop at Muhlenberg College, Allentown, PA.

Jesse Waters of EcoElectric (right) taught the electrical portion of the course.

The North American Board of Certified Energy Practitioners" (NABCEP) is a professional certification organization for solar electric installers. Our executive director, Bill Hennessy, completed the rigorous competency standards for the voluntary certification program in March. NABCEP's mission—to support, and work with, the renewable energy and energy efficiency industries, professionals, and stakeholders—is intended to develop and implement quality credentialing and certification programs for practitioners.

Bill is now one of only 10 NABCEP certified PV Installers in the entire state of Pennsylvania. This credential assures his placement on the qualified installers list for PA's new solar rebate program.

**Congratulations, Bill. MAREA is extremely proud of your leadership and accomplishments.**

# Be part of the solution!

## Join MAREA

### Join Us and be a Part of the Renewable Energy Revolution!

The Mid Atlantic Renewable Energy Association (MAREA) is a nonprofit, grassroots educational organization that was started in Pennsylvania in 2005.

The MAREA mission is to educate the public about renewable energy production, energy efficiency, and sustainable living.

We do this via an annual PA Energy Festival, monthly community meetings, ongoing educational workshops, and community involvement in the form of renewable energy and sustainable living projects (i.e. providing solar power to volunteer fire companies, installing a wind turbine at the local community center and working with professional faculty to educate local Pennsylvania college students on the newest renewable energy technology).

If any of these endeavors sound worthwhile or interesting to you, we ask you to join us! We are a member-based organization made up of about 200 active members.

Join now and be a part of this amazing group of people. You'll receive invites to our monthly meetings, hear about exciting community projects, and most importantly- you'll get an opportunity to become part of the solution. To learn more visit our websites.

## Come to the 2009 festival!



## Contact Us

Send your workshop ideas to:

Bill Hennessy: [wjhennessy@dejazzd.com](mailto:wjhennessy@dejazzd.com)

Newsletter contributions/suggestions to:

Dan Sullivan: [bedandy@dejazzd.com](mailto:bedandy@dejazzd.com)

Festival speaker, vendor and entertainment suggestions to:

Archie Follweiler: [kutztowndad@hotmail.com](mailto:kutztowndad@hotmail.com)

Dave Bascelli: [bascelli@ptd.net](mailto:bascelli@ptd.net)

## Calendar of events

### MAREA Board Meetings:

The second Tuesday of each month.

### Public meetings:

Last Tuesday of each month at 7 p.m. at Tek Park, 9999 Hamilton Blvd., in Breinigsville.

[\[GET DIRECTIONS\]](#)

### May 26 Monthly Meeting, 7 p.m. TEK Park

"The Costs of Photovoltaics and the PA Renewable Energy Credit System" Vera Cole, MAREA's renewable financial whiz, offers a multi-angled view of the costs of photovoltaics, explains the arcane Pennsylvania renewable energy credit system and reviews Sunny Money, her solar financial calculator that was developed with MAREA support.

### June 30 Monthly Meeting, 7 p.m. TEK Park

Subject to be Announced

### July 28 Monthly Meeting, 7 p.m. TEK Park

Jason Zerbe, Energys engineer, shows the Alteryg Freedom Power™ fuel cell system, a residential fuel cell system that is eligible for federal income tax credits.

### August TBA

Solar water heating installation workshop at Opportunity House, Reading.

[www.paenergyfest.com](http://www.paenergyfest.com)

[www.themarea.org](http://www.themarea.org)

Please forward this newsletter to you friends and relatives and encourage them to [\[JOIN MAREA\]](#)