

THE PRSEA SUN

Winter 2009

www.prsea.org



Greetings!

With the earth tilting into the winter solstice we find the PRSEA area at an average insolation on a horizontal surface of 1.8 kilowatt-hours per square meter per day (<http://rredc.nrel.gov/pubs/redbook/>). Here, the month of December, depending on cloud cover, may be considered the worst month for solar gain. If you're a solar homeowner of a tracking system, winter preparations include tilting the array to 62 degrees facing south,

complementing the solar elevation of 28 degrees above the horizon, and improving the system gain by 25-45% (information derived from www.energy-product-reviews.com). For solar hot water systems, tilting to 20 degrees greater than the area's latitude results in more vertical exposure to collectors and increases the systems efficiency during the colder months.

(<http://solarhotwater.siliconsolar.com/solar-collector-tilt.php>).

In the Potomac watershed region, nature quiets, reclaiming itself in its constant cycle of energy. PRSEA, too, is reclaiming itself, preparing for an exciting time as our country hinges on the cusp of a revolution in energy usage. Renewable energies are poised to be a significant force of change, calming the climate and moving us toward energy independence. PRSEA also is seeking to make major changes and invites you, as a member, to help shape the future. We need and value your input.

Board of Directors:	Jim Crowley, Chairman	Lisa Walsh, Treasurer
	Sergio Obadia	Elaine Sellers
	Jane Hager	Nelson Buck

General Meeting

Time and Date: Saturday, January 31, 2009, 4:30pm - 6:30pm

Location: George Washington University, Loudoun County Campus, Building 1, 20101 Academic Way, Ashburn, Virginia. This venue is near Rt. 7, about 12 miles west of the Capital Beltway. Visit <http://nearyou.gwu.edu/loudoun/directions.htm> (also see the PRSEA website for additional map links and details)

For the first time our general meeting is being co-sponsored by other local groups interested in solar energy and sustainability. These include Sustainable Loudoun (<http://www.lccss.org>) and the Electric Vehicle Association of Greater Washington, D.C. (<http://www.evadc.org>).

We have an interesting agenda planned for the meeting including two speakers:

Mitch King, President of Old Mill Power Company, in Charlottesville, Virginia, will discuss the potential benefits of residential solar energy systems for mitigating important energy problems in the Washington, D.C. region--namely, the unnecessary construction of new power transmission lines, the risks of power blackouts, and the soaring costs of new peak power generation facilities. Mitch has been a leading advocate of renewable energy in Virginia for over a decade, and has made many presentations at the State level regarding energy policy issues. Come find out how you can help focus the attention of your elected officials on the benefits of solar energy as an alternative to mega-utility business as usual.

Jim Crowley, PRSEA Chairman, will make a presentation on "Solar energy basics for homeowners". This will be the first of what we hope will be a series of similar presentations around the region to help educate the public concerning solar energy systems and options. Please come and give input so that we can make the presentation as interesting and responsive as possible to the needs of the public.

Viewpoint

by Nelson Buck

Why do I belong to an organization for promoting solar energy? Why do I believe we should be encouraging our country to convert from fossil fuels to renewable energy, and furthermore, to help other countries convert? The benefits as I see them are:

1. Heading off climate change that threatens to disrupt agriculture, flood coastal areas, destabilize the soil under arctic communities, and cause massive species extinctions. These rapid changes to the environment will cause a great deal of human suffering and can lead to destructive wars.
2. Reducing our dangerously large dependence on foreign countries for energy. Our inability to make any progress in this area over the past 35 years has left us

vulnerable to economic blackmail and has eroded the respect we receive from the rest of the world.

3. Reducing the incentive for exploiting fossil fuels that are environmentally dangerous to access: tar sands, oil shale, methane hydrates on the ocean floor, oil in the arctic, and strip-mined coal. There is already a competition developing between countries to lay claim to reserves in international waters of the oceans.

4. Offering countries alternatives to nuclear technologies that can expose them to radioactive poisons and can be used to make weapons. We cannot expect other countries to refrain from developing nuclear power if we insist on doing it ourselves. And even if we in the United States can be sure that our nuclear facilities are invulnerable to earthquakes, bombs, operational errors, sabotage, and theft of nuclear materials, can we be so sure about facilities in other countries? How about those in North Korea?

5. Help our economy recover. We have companies closing down and many people out of work, while a massive need for manpower and manufacturing is staring us in the face. We also need to regain our position of scientific leadership in the world by making long-term investments in renewable energy technology.

It has taken environmental crises like Hurricane Katrina and the melting of a large mass of polar ice to convince the general public that this transition is needed. These events also indicate that we have to move quickly. Still, the transition will not occur without finding ways to lower the costs of equipment for generating and storing renewable energy. There are two primary ways we can do this: research and mass production, both driven by a growing market for the products, and by government support.

So how can PRSEA help with this process? Here are a few possibilities:

- * Educate the general public and our lawmakers about the availability of renewable energy resources, the current state of solar technology, what is coming through the research and development process, and what is needed for future progress.

- * Show homeowners how to get the most energy savings for the buck - getting the low-hanging fruit while waiting for the price to come down on the rest. Not many people can build zero-energy houses or convert their existing houses to 100% solar.

However, we may be able to identify ways to get small solar energy systems for a few thousand dollars that will pay for themselves in 5 to 10 years and be compatible with future upgrades.

- * Help people enter the solar energy workforce. Point people to relevant training programs; encourage colleges to offer more solar programs; arrange internships with manufacturers and installers.

- * Encourage homebuilders to build solar features into their houses.

PRSEA needs members to get involved in conceiving and executing projects that support renewable energy. Share your experiences. Share your ideas. We have an email list that all members should access: PRSEA-Members@googlegroups.com. The PRSEA organization can assist projects in several ways. Many of our members either work in the solar energy field or have contacts in the field. Plus, we have contacts with MDV-SEIA, the American Solar Energy Society (ASES), and other ASES chapters around the country. PRSEA also has a limited ability to purchase materials and reimburse some of the volunteers' expenses.

Notes from recent Strategic Planning Meeting:

The Board of Directors held a planning meeting at Sun Edison's offices in Beltsville, Maryland, on November 15th, which was moderated by Michael Dalto, Jane Hager's husband. Some of the outcomes of the meeting are listed below:

- * There was a general agreement that PRSEA should be doing educational work at the local level, such as educating homeowners associations regarding solar energy systems, supplying information to county boards about renewable energy systems, and energy-smart building and zoning codes, writing articles for local newspapers, starting student chapters at colleges, and encouraging vocational technology schools to green their building trade curriculum and include the foundations of renewable energy technology. We also should be partnering with local organizations like Sustainable Loudoun, and serving as a resource for them.

- * As a step in that direction, we started a project to assemble a power point presentation and display materials about solar basics for homeowners. The initial presentation will be given at our January meeting. We will need to recruit member-volunteers to give presentations around the region (a "Speakers Bureau").

* We also agreed that PRSEA should be working to build our name recognition by having a presence at local fairs and other events.

* We recognized that it was very difficult to handle the expansion in our activities without paid staff who could afford to put in the necessary time. We are thinking to begin with a part-time staff person (10 hours/week), who will be responsible for general logistics, and for fundraising and writing grant proposals. Ideas for fundraising include seeking corporate sponsors and selling items to members and to people who visit our booths at local events.

Procurement of Kill-a-Watt Meters:

The Kill-a-Watt meter is a simple device that monitors power and total energy use at an electric outlet. The meter plugs into the outlet, and the appliance to be monitored plugs into the meter. Kill-a-Watt meters have helped a number of us discover some useful facts about where our electricity is being used. The board decided to buy a shipment of Kill-a-Watt meters from the manufacturer and to offer them at our wholesale cost to people who join PRSEA as a benefit of joining. If you re-join PRSEA through ASES you can also receive a meter at a price close to our wholesale cost.

Call for New Board Members:

We are currently seeking nominees for 4 new Board member positions coming up for election this spring. Please consider giving some of your time, energy, and ideas to help PRSEA move forward. Nominations can be offered at the January meeting or can be sent to PRSEABoard@yahoogroups.com.

Call for Feedback:

The board is asking people to provide ideas for projects, comment on the projects mentioned in the newsletter, volunteer to work on or lead project teams, and comment on the hiring of a part-time staff person. You may contact us by sending email to PRSEA-Members@googlegroups.com, which will reach all PRSEA members who have email addresses in that mailing group; or by sending email to PRSEABoard@yahoogroups.com, which will reach only the board members and a few additional people; or by sending regular mail to PO Box 809, Pasadena, MD 21123-0809.

To join, mail this form with your annual dues to:
Potomac Region Solar Energy Association (PRSEA)
attn: PRSEA Membership
P.O. Box 809
Pasadena, MD 21123-0809

**I would like to join the
Potomac Region Solar Energy Association.**

Enclosed is my check for one year annual dues:
(please check appropriate member category below)

_____ Student (\$10.00); _____ Educator (\$15.00);
_____ Individual (\$25.00); _____ Individual + Kill-a-Watt meter (\$45.00)

Please send correspondence to my _____ Home _____ Business address *(please check one)*.

Name: _____ Title: _____

Occupation: _____

Business Name (if applicable)

Work Address:

Street: _____

City: _____ State: _____ Zip/Postal Code: _____

Home Address:

Street: _____

City: _____ State: _____ Zip/Postal Code: _____

Phone: (____) _____ E-mail: _____

Primary areas of interest (include additional sheet if necessary): _____

Member of American Solar Energy Society (ASES) _____ Yes _____ No.