



Solar Washington Newsletter

SPRING 2009

WWW.SOLARWASHINGTON.ORG

May Meeting Location:

The May 18 Solar Washington Meeting will be at the "Net- Zero Energy House", new home of the Northwest Solar Center at Shoreline Community College, 16101 Greenwood Avenue North, Seattle.

A Campus Map for Shoreline CC is at www.shoreline.edu/college/maps1.html and the Net-Zero Energy House is at the back of the Student Parking Lot, a hundred yards north of the West Gate. (The House is not listed on the map.) We'll tour the House, hear about the training program at Shoreline, and get updates on recent Washington legislation, beginning at 7 pm.

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News Briefly Noted

- * REC's new Moses Lake fluidized-bed polysilicon production plant, Silicon III, started production during the last week in March, only to be shut down April 2 for safety concerns. The following day, REC cut its second-quarter solar cell and module production by close to 50 percent, according to Solar Buzz
- * Oregon Energy Trust has set up a Solar Electric Buy-down Program with a maximum residential incentive of \$20,000 per site, based upon \$2 to \$2.25 per DC watt generated, and has also introduced a small wind program providing cash incentives up to \$35,000 for turbines up to 50 kW rated output. With the state energy tax credits, Oregon landowners can offset up to 50 percent of the cost of a turbine.
- * First Solar claims to have reduced its manufacturing cost for thin-film solar modules to \$0.96/watt, and reported 2008 fiscal year revenue of \$1.2 billion,

The President's Corner

Thanks for making me the new president of Solar Washington. I'm honored to work with such a fine group. The efforts of Past President Pam Burton and all of our active members over the years have helped get the solar industry off the ground in our state and positioned to play an important role in Washington's energy future. I've got ideas about what that role will be, but our success will depend on how well we tap the knowledge, skills and enthusiasm of our members. Please get involved and inspire others to get involved.



Our tone will be changing with the times. The solar industry is booming; Federal and State governments get the picture and want to help, and our families and friends suddenly want to know how PV and thermal systems work. Our past role doesn't fit neatly with this new reality. We have spent a lot of our efforts reaching out to the public directly through trade shows and festivals to explain how solar energy technologies work and why solar energy is going to be a major part of our future resource mix. Now the public is getting the picture and lots of our installer members are at the shows and festivals, spreading the word. While there are still contributions that Solar Washington could make through all these outlets, we're in a good position to accomplish more through other means.

First, we'll turn our meetings into can't-miss events with informative speakers from industry, government, energy and environmental organizations and utilities. That will serve our existing members and the public, and will help us grow. Second, we'll play a vital role in shaping solar policy (within the rules of a 501c3). Third, we'll reach a much wider audience through our website and newsletter. And fourth, we'll continue Pam's great efforts coordinating members across the state to put on the Solar Tour on Saturday, October 4. And, we'll have some fun along the way.

Again, it will take all of us, and lots of new members, to make the difference that we're capable of. I welcome your advice, support, initiative and thoughtful correction.

Thanks for the help.

Jason Keyes.

Board, Officers Elected At Annual Meeting

Candidates for the Solar Washington Board of Directors and Officers named on ballots circulated among member in early March were elected to two-year terms by a show of hands at the March 16 Annual Meeting at REI in Seattle.

With that, outgoing President Pam Burton passed the gavel to new President Jason Keyes, completing several years of exemplary service to Solar Washington. Many thanks are due her.

Following are brief introductions to the new officers and members of the board: President Jason B. Keyes, attorney, is a partner in the law firm of Keyes and Fox, Seattle, and represents the Interstate Renewable Energy

up from \$504 million in 2007.

* Pacific Gas Electric Co. (PG&E) plans a five-year program to develop up to 500 MW of PV power in its Northern and Central California service area.

* American Superconductor and NREL are planning a 10 MW wind turbine with a direct-drive system and high-temp superconducting wiring, for an estimated generator system weight of 120 tons, compared to 360 tons for a conventional design.

* Evergreen Solar plans to reach a manufacturing capacity of 40 MW per quarter, hopes to achieve a manufacturing cost of \$2/watt by the end of 2009, and has been awarded TUV quality certification of its "String Ribbon" solar modules. The Marlboro, MA firm manufactures wafers, cells and modules under one roof.

* In 2002, the latest year for which data are available, China produced about 25 million solar lights, 95 percent of the world's output.

* Karl Gawell, Geothermal Energy Association, notes that California produces more energy from geothermal energy than solar and wind combined.

* Researchers at the Fraunhofer Institute in Germany have achieved a record efficiency of 41.2 percent for the conversion of sunlight into electricity. Sunlight is concentrated by a factor of 454 and focused upon a 5 sq. mm solar cell made from GaInP/GaInAs/Ge (gallium indium phosphide, gallium indium arsenide on a germanium substrate).

* The Solar Energy Industries Assn. (SEIA) claims that 342 MW of solar PV were installed in the U.S. in 2008. Added to the 1,265 MW of water heating, pool heating and space heating and cooling, brings the total US solar power capacity up to 8,775 MW, an increase of 17 percent for the year.

* National Semiconductor Corp. has announced test results showing that their new "Solar Magic" technology can recover up to 57 percent of the energy lost to temporary or partial shading of solar PV modules.

* First Solar has entered into a 25-year power purchase agreement (PPA) with Tri-State Generation and Transmission Association for the output of a 30 MW thin-film ground-mounted solar PV system in northeastern New Mexico.

* For electrical vehicle (EV) enthusiasts: Norwegian manufacturer Think plans to open a new manufacturing plant and

Council (IREC) in rule-making proceedings across the country. He is also a Board Member of the American Solar Energy Society. Vice-President Matthew Metz, also an attorney, directs the Metz Law Group, Seattle, in the practice of business and real estate law. Treasurer Peter Barton, serving again, owns and manages Environmental Protection Associates, Inc., Seattle.

Chapter officers are also ex-officio members of the Board of Directors. Others elected to the Board include: James Avery, thin-film, solar cells and concentrated PV electrical engineer, Joe Heineck, ex-reporter, aerospace engineer and editor, Solar WA Newsletter, James Hunter, regional sales manager, Sunergy Systems, and David Kozin, Graduate of San Diego State University and employee-owner of A & R Solar, Seattle.

State Legislature Deep Into 4th Quarter

The 61st Washington State Legislature was convened January 12, and in spite of an environment clouded and constrained by a serious and growing budgetary deficit, set seriously to work. From about ten energy-related bills pre-filed for immediate action the list grew to about 70, some 30 of which directly affected solar and wind suppliers, installers and customers. Survival rate of these Bills through committee and house actions, house-senate interactions and legislative cut-off dates has been closely watched by Jeremy Smithson, his solar lobby and this Editor.

Key energy-related Bills which survived the April cut-off date for reading in opposite-house "money" committee reports (from House fiscal and Senate Ways and Means and Transportation) committees signed by or submitted to the Governor, or are otherwise alive at our April 12 press time, are:

* House Bill (HB) 1007, Creating a Sustainable Energy Trust. The most significant energy-related bill since SB 5101. Authorizes the state Housing Finance Commission to issue bonds to finance programs through mortgage lenders to promote energy efficiency and renewable energy technologies among an inclusive group of property owners. The Washington State Climate and Rural Energy Development Center will be the certifying authority for solar electric systems, based upon eligibility criteria established by the Commission, and any utility or other qualified institution, in consultation with the WSU energy extension program, will determine acceptability of other energy efficiency or renewable energy systems.

The bill is broadly written to provide low-cost financing on a least-cost competitive basis to home, farm and commercial property owners for any of a number of energy efficiency and renewable energy options, allowing them to tie the front-end cost of solar or other systems into mortgage-lender contracts.

The bill was sent to the Governor for her signature April 8.

* Senate Bill (SB) 5136, Regulating the use of solar energy panels by members of homeowners associations. The associations may not prohibit the installation of solar panels as long as they meet applicable health and safety standards and reasonable esthetic concerns. Solar water heaters must be certified by a nationally-recognized agency, and power-producing panels must meet certain performance standards including those of the NEC, accredited laboratories and safety and reliability rules of the state utilities and transportation commission.

The bill was signed by the Governor April 10.

* SB 5107, An Act Relating to Energy Overlay Zones. Provides an additional process under which a wind energy power project within a county energy overlay zone may be presumed reasonable under the land use petition act, if a local jurisdiction prepares an environmental impact statement, specific fish and wildlife issues are analyzed and critical areas requirements are addressed as required by the growth management act.

The bill has passed both houses, but had not yet been sent to the Governor on April 11.

Regarding Energy Efficiency in Buildings. Had passed both houses, but had not from House Rules Committee by April 11 and is presumed dead there.

technical center somewhere in the U.S. for their largely recyclable EV, according to *U.S. Waste & Recycling News*. The plant would have an initial capacity of 16,000 vehicles per year.

Coming Events:

* April 15, 7 - 9 pm. Shoreline Solar Monthly Meeting. Topics: Coal, the Dirty Side, and WA Coal Use. Info:

MaryW@aol.com

* April 16, Portland OR, "The Business of Renewable Energy Conference. Info:

www.nebc.org.

* From Power Trip Energy,

April 18: Bainbridge Island Solar Workshop. Info:

<http://powertripenergy.com/events.htm>

May 2, 3: Jefferson County Home Show.

Info: www.jeffcohomeshow.com.

* May 4 - 7. Chicago, IL. AWEA

Windpower 2009. T. Boone Pickens et al. Info: conference@awea.org.

* May 11 - 16: Buffalo Niagara, NY ASES National Solar Conference. Info:

www.ases.org.

* May 27 - 28, Wenatchee, 2009 Power Up! Summit, "Electrifying Transportation". Info:

www.PlugInCenter.com.

* July 24 - 26, John Day, OR.

SolWest Fair, Grant County Fairgrounds.

Beautiful area. <http://www.solwest.org>

We're Solar Washington

A state chapter of the American Solar Energy Society and a private, not-for-profit association of people and organizations interested in solar power, energy efficiency, and energy generated using renewable resources.

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* SB 5840, Modifying Energy Independence Act. Of interest because it was generally regarded as an 'I-937" killer. Substantially restored by amendment on the House floor and referred back to House Rules for 2nd reading on April 6. No further movement as of April 11 and the bill is presumed dead in Rules.

Several other key energy-related bills are reported below because they will probably be re-filed for consideration by the 2d session of this Legislature, beginning in January of 2010. Apparent disposition of some these bills as of April 11 is shown below.

* HB 1008, Concerning Permit Requirements for Small Wind Energy Systems. Passed both houses. Referred to Senate Rules Committee March 26 and is presumed dead there.

* HB 1009, Modifying Sales and Use tax Exemption for Certain Electricity Generation.

Passed House, referred March 26 by Senate committee to Rules; died there.

* HB 1191, Incentives to Support Renewable Solar Energy. Died in House Technology, Energy and Communications (TEC) Committee January 28.

* HB 1187, Requiring Installation of Solar Water Heating Systems in Single-family Dwellings. Died in Local Government & Housing Committee January 22.

* HB 2130 Concerning Tax Incentives for Renewable Energy Manufacturing Facilities. 2d Substitute passed House. Died March 27 in Senate Ways and Means.

* SB 5161, Extending Tax Incentives for Renewable Resources, Including Tidal and Wave Energies. Died April 3 in Senate Ways and Means. Refer to: www.leg.wa.gov.

Federal Stimulus Package Helps Renewables

The federal stimulus package enacted in February as H.R. 1, the American Recovery and Reinvestment Act of 2009, provides a broad range of benefits to the renewable energy industry and its focus: the interested homeowner.

The stimulus provides for a personal tax credit of 30 percent of the cost of new residential installations of any of a number of renewable systems: solar water heating, solar power, wind, fuel cells or geothermal heat. Newly installed systems have no cap; those installed in 2008 have a typical cap of \$2000. Credit for fuel cells is based upon \$500 per 0.5 kW rated output, and no credit is allowed for fuel cells installed in 2008. The federal tax credit beyond that needed in a given year may be carried forward to the succeeding year. Taxpayers eligible for these credits are not allowed to receive a U.S. Treasury grant instead of taking the credit.

The solar heating system must be certified by the SRCC or by an entity endorsed by the state, and the solar source must provide at least half of the energy used to heat water for the residence. Geothermal heat pumps must meet Federal Energy Star performance requirements, and fuel cells must have a generating efficiency of at least 30 percent.

The basic legislation includes several other provisions to promote renewable energy, including an \$8 billion green energy loan guarantee program, an option to carry back operating losses for five years, an additional year of bonus depreciation for 2009, and targeted provisions to foster development of transmission lines for renewable energy, according to the American Wind Energy Association.

For additional information, go to

www.dsireusa.org/library/includes/incentive2

Snohomish PUD Offers "Solar Express" Incentives

legislation, beginning at 7 pm.

Website and e-mail:

www.solarwashington.org

info@solarwashington.org

Phone: 206-333-5191

To Join Solar Washington:

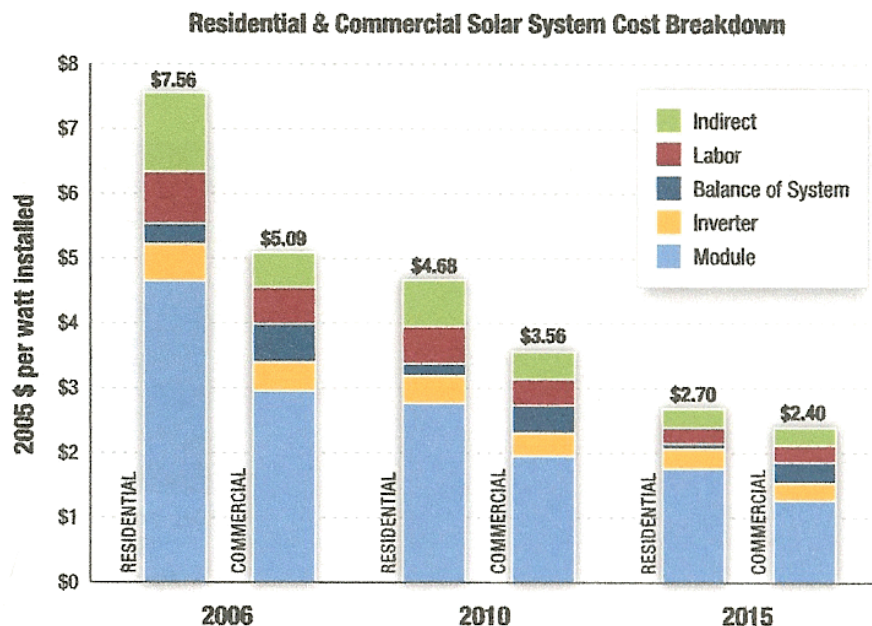
It's easy! Sign up at www.ases.org and select us as your local Chapter or go to our website and print up a form to mail in.

The Snohomish PUD has announced that effective March 26, cash incentives and educational support are available to their residential and commercial customers for the installation of solar power and water heating systems. Residential customers can receive a cash incentive up to \$2500 or a loan up to \$25,000 at 2.9 percent interest to finance qualifying photovoltaic systems. Cash incentives up to \$500 or similar low-interest loans up to \$14,000 are available for qualifying solar hot water systems, according to the PUD. The program is a response to increasing customer interest in renewable energy, says General Manager Steve Klein.

The PUD will also offer free workshops and technical advice and assistance in applying for Washington State (power) Production Incentives. A list of PUD-registered solar system installers will also soon be available. For further information, call the PUD Energy Hotline at 425-783-1700 or visit the PUD website at www.snopud.com/solarexpress.

DOE Program Goal: Drive Solar Cost Down

A DOE Energy Efficiency and Renewable Energy (EERE) invitation for proposals for programs to reduce the cost of solar PV power, closed at the end of January, set as a goal to reduce that cost to follow the trend illustrated by the graph.



Focus areas of the funding opportunity program, "Photovoltaic Supply Chain and Cross-Cutting Technologies" include the PV Module, Non-Module PV Systems, and PV Manufacturing Processes and Methodologies. Additional information may be obtained at:

www1.eere.energy.gov/solar/pv_supply_chain.html.

Welcome, *Sunrise* Magazine!

The first issue of what we look to as a big sister to this Newsletter was distributed at the March 16 Solar Washington Annual Meeting. Powered by the Northwest Solar Center, Shoreline Community College and the WSU Energy Program with the support of Outback Power Systems, Silicon Energy, the Washington PUD Association and Puget Sound Energy, **Sunrise** bears all the marks of a first-class magazine: quality paper, excellent color photography, attractive layout and cogent content. Congratulations and best wishes to Editor Jim Hills!

Letter to the Editor

WOW, I just love the glass is empty tone of the local article in the current (Ed. Note: Winter) newsletter! Great way to be supportive of Washington companies and Washington jobs! (that is a bit of sarcasm, if you did not catch it)

Why not report on the fact that we are growing the industry at 100% a year in Washington ever since 5101 went into effect.

Or, That there has been NO slow down in system approvals EVEN during this time of bank failures?

Or, that there has never been a better time to do solar than now with all the incentives that are currently available, and the future is uncertain,

Or, modules are cheap and plentiful, people are placing orders and installing systems (we are seeing 10 PV approvals a week, even as winter fades)

Mike Nelson

Our Response: Yes, we caught it, Mike. By watching national and international sources, we have missed much of the work of our installer-members at home. With 5101, Silicon Energy, the federal stimulus package, and now the "Berkeley Bill"

(HB 1007), we in Washington are probably in one of the best positions in the country to continue substantial growth. We'll be talking more with our Chapters, installers and the approval agencies. Thanks for the letter, Mike.

Joe Heineck, Ed.