

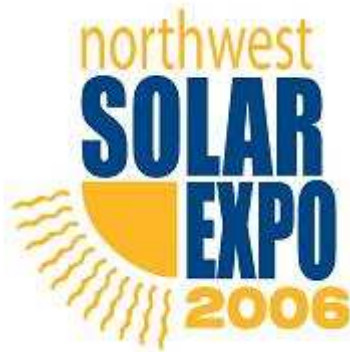
SOLAR RISING

September 2006

Volume 8, Issue 2

Quarterly Newsletter of the Oregon Solar Energy Industries Association (OSEIA)

OSEIA - Promoting Oregon's largest natural resource since 1981 - solar energy



Northwest Solar Expo

Sept. 29th - Oct. 1st

Oregon Convention Center
Portland, Oregon

by Ken Harper

Oregon Solar Energy Industries Association (OSEIA) hosts three days of Exhibits from 40 Companies and Renewable Energy organizations, as well as Workshops and Classes Taught by Solar Experts for Consumers, Commercial Property Professionals, Professional Installers, Educators, and Investors

(September 8, 2006) Portland, OR – The Oregon Solar Energy Industries Association (OSEIA) is hosting the

first Northwest Solar Expo from September 29 to October 1, 2006, at the Oregon Convention Center in Portland. The Northwest Solar Expo is intended for consumers, commercial building owners and developers,

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Jackson County Fairgrounds Solar Pavilion

by Bob-O Schultze

Here are some pictures of the grand opening, commissioning of the Jackson County Fairgrounds Solar Pavilion. As usual for these solar events, it was overcast. Sigh... At least the PVs weren't dusty.

Sen. Wyden spoke and all manner of local officials, mayors, etc. All the folks who were NOT involved

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Senator Wyden and Central Point Mayor Hank Williams

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SOLAR RISING is the newsletter of the Oregon Solar Energy Industries Association (OSEIA). OSEIA is Oregon's local chapter of the Solar Energy Industries Association. The information presented in this newsletter reflects the opinions of the authors and not necessarily those of OSEIA.

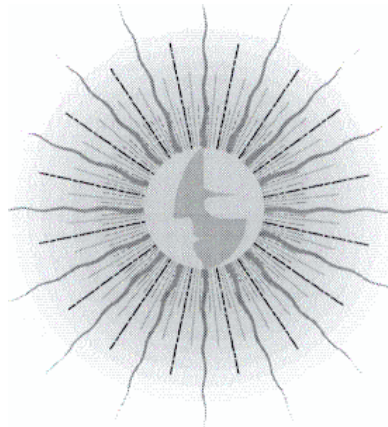
The success of the newsletter depends upon your contributions. This is an opportunity to tell the OSEIA members about your activities and to express your opinions. Photographs or figures to accompany articles are most appreciated. Articles of current and timely interest will be given highest priority. Otherwise, articles will be published on a first come basis as room allows.

Send your contributions to:

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Northwest Solar Expo 2006 Workshop & Forum Schedule

Friday, September 29, 2006

		Exhibit Hall		Classrooms	
	Main Stage	Demo Area1	Demo Area2	Class 1	Class 2
9:00 AM				Efficient lighting	Commercial & Industrial Solar electric systems
10:00 AM	Expo Opens			Lighting controls	Commercial & Industrial solar hot water systems
11:00 AM	Keynote Speaker			State of the art daylighting for worker productivity	Financial incentives and ROI for commercial solar
12:00 PM					
1:00 PM	Portland 's Renewable Energy Investment			Commercial & Industrial solar hot water systems	Implementing commercial energy projects
1:30 PM		Residential solar electric systems			
2:00 PM	Public Policy Forum	Residential solar hot water systems	Commercial solar electric case studies	LEED EB Case Study	Solar PV equations for professional installers
2:30 PM		Residential wind energy systems			
3:00 PM	Solar Construction Safety	Solar pool heating	Financial incentives and ROI for commercial solar	Metering and Submetering Loads in commercial Buildings	Building controls optimization
3:30 PM					
4:00 PM	Solar schools program	Saving Energy in your home	Residential solar electric systems	Lighting controls	Commercial & industrial solar electric systems
4:30 PM		Going Solar with PGE			
5:00 PM	Teachers/Students Activity	Cost and incentives for residential solar	Residential wind energy systems		
5:30 PM			Solar pool heating		
6:00 PM		Residential solar electric systems			
6:30 PM		Residential solar hot water systems			
7:00 PM	Expo Closes				<i>Continued on page 3</i>

Northwest Solar Expo 2006 Workshop & Forum Schedule

Saturday, September 30, 2006					
	Main Stage	Demo Area1	Demo Area2	Class 1	Class 2
10:00 AM	Expo Opens			Current PV Code issues	
10:30 AM	Policy Forum		Residential solar electric systems		
11:00 AM	Saving Energy in your home	Residential solar testimonial	Residential solar hot water systems	Solar Site Survey's & Sun Charts	PV Powered Inverter Training
11:30 AM			Residential wind energy systems		
12:00 PM	Policy Forum	Cost and incentives for residential solar	Solar pool heating	Roofing Best Practices	
12:30 PM			Radiant Floor Heating with Solar		
1:00 PM	Zero Net Energy Homes—21st Century Power Plant	Buying a solar electric system for your home	Going solar with PGE	Sol-Reliant Installers Class	HVAC Incentive Requirements for contractors
1:30 PM		Choosing home electronics & appliances wisely	Oregon Solar Electric System Results		
2:00 PM	The road ahead	How to Select a Contractor	Solar cookers for kids!	SDHW Best Practices	Duct Incentive Requirements for contractors
2:30 PM		Residential solar electric systems			
3:00 PM	PGE Renewable Energy Options	Residential solar hot water systems	Washington State Renewable Production Incentives	Solar PV Best Practices	Energy Star Home Requirements for contractors
3:30 PM		Residential wind energy systems	Green ideas for the Home		
4:00 PM	Passive Solar Home design Principles	Solar pool heating	Cost and incentives for residential solar	Oregon tax Credit Certified Solar Contractor Training	
4:30 PM		Radiant floor heating			
5:00 PM			Residential solar electric systems		OSEIA Member meeting
5:30 PM			Residential solar hot water systems		
6:00 PM			Solar pool heating		
6:30 PM					
7:00 PM	Expo Closes				
Sunday, October 1, 2006					
	Main Stage	Demo Area1	Demo Area2	Class 1	Class 2
10:00 AM	Expo Opens				
10:30 AM	Policy Forum				
11:00 AM	Policy Forum	Solar cookers for kids!	Residential solar testimonial	Solar PV equations for professional installers	
11:30 AM	Residential solar electric systems				
12:00 PM	Saving Energy in your home	Cost and incentives for residential solar	Buying a solar electric system for your home	Solar PV Best Practices	
12:30 PM	Solar pool heating	Residential solar electric systems			
1:00 PM		Residential solar hot water systems	How to Select a Contractor	Solar Construction Safety	
1:30 PM		Residential wind energy systems			
2:00 PM	PGE Renewable Energy Options	Solar pool heating	Choosing efficient home electronics & appliances		
2:30 PM		Radiant Floor Heating with Solar	Residential solar electric systems		
3:00 PM		Going Solar with PGE	Residential solar hot water systems		
3:30 PM					
4:00 PM	Expo Closes				

Jackson County Fairgrounds Solar Pavilion



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in the project stepping up. All the folks who WERE directly involved in the installation remained unmentioned. Same old, same old.

In any event, the installers were Bob-O, Kerry Whitehead, Eric Grisen (my apprentice) and Paul Kincaid, Kerry's apprentice. Kerry's biz name, BTW, is Renewable Energy Systems. All the gear was sourced through Energy Outfitters and Electron Connection. The general contractor was S&B James Construction of White City who have a 17.75KW array on their office that I did a couple of years ago. The owners of S& B, Rob and Tom, are very open and enthusiastic about solar, but the real instigator and enabler @ S&B

is their architect, Steven Miller (stephenmiller@sbjames.com).

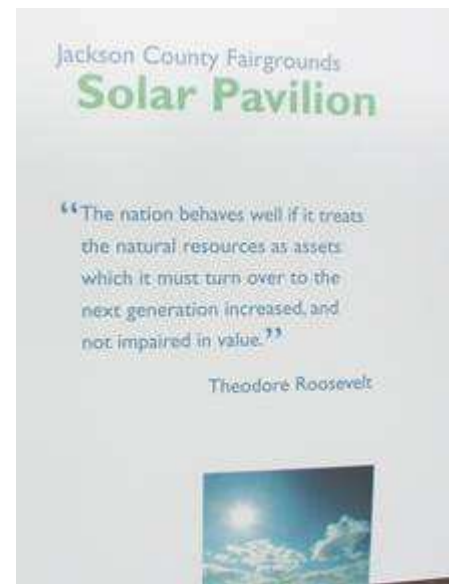
The mover and shaker from Pacific Power for this project was Claudia Steinbroner (claudia.steinbroner@pacificcorp.com). Yet another unsung heroine.

The system is 165 Mitsubishi 150s feeding into five Fronius IG4500 inverters. We've seen overall efficiencies as high as 88% (PV nameplate to ac watts) in cool sunny weather so far. The building itself is an open structure designed specifically as a solar demo and shaded picnic area. The metal roof was chosen to allow the attachment of S5! Solutions clips to the standing seam. The array structures bolt to these. There is only one hole in that roof

where the home run comes down.

Best,

Jimmy Olsen, cub reporter



Statement in the solar pavilion

West Wind Forest Products 65 KW PV Installation

by David Parker



Fig. 1: 65 kW PV installation at West Wind Forest Products.

are laminated beam plants, wholesale distributors, and industrial manufacturers.

In June of 2006 West Wind Forest Products installed a 65 KW Solar Electric System on the roof of their Eugene warehouse facility, with the goal of generating all the power required to run the operation annually from solar energy. This "net zero" energy facility features 370 Sharp 175 Watt mono-crystal modules, totaling 64,750 Watts. The modules are mounted on a Unirac HD tilt rack system. The output of the PV array is fed to a Satcon 75 KW 3 phase inverter, which then

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West Wind Forest Products, Inc. was founded in 1992 by Pete and Deborah Noble as a wholesale distributor of Douglas Fir structural laminating stock for the Glulam Beam industry. The company has grown along with the increased demand for high quality Engineered Wood Products worldwide. In 1998, West Wind purchased the former Georgia-Pacific Distribution Warehouse in Eugene, Oregon. The facility includes offices, 100,000 sq. ft of secured warehouse space, 8 acres of paved secured yard storage, and a BN/UP rail spur. The warehouse and yard allow us to carry a significant inventory for Just-In-Time shipments to our customers anywhere in the world. The

2005 acquisition of Pacific Rim Manufacturing, LLC., Jasper, OR has increased West Wind's ability to deliver high quality products to their customers. West Wind's primary customers

West Wind Forest Products *Live Monitoring*



Fig. 2: Output of PV system at West Wind Forest Products generated by Fat Spaniel.

Bob Maynard Testifies before Senate Hearing on Solar Energy

by Frank Vignola



Bob Maynard testifying for a senate hearing on solar energy. A camera projected Bob image on a screen above Senator Smith who is shown listening to Bob. Another panel member is sitting to the right.

A Senate hearing on renewables was held in Eugene August 16, 2006 at the Lillis Center on the University of Oregon campus. Senator Smith, who is sponsoring the extension of the solar tax credits used his time in Oregon and as chairman of the subcommittee to hold the hearing. Eight people testified about the value of renewables including Bob Maynard, president of Energy Outfitters, who spoke for solar energy.

The testimony from these hearings goes into the congressional record. Additional solar advocates in attendance were Jon Miller, Frank Vignola, and Dick Lowry.

Oregon SEIA has a good working relationship with Oregon's congressional representatives. This has developed through continuing contacts. This is one more example of how these contacts are helping to guide legislation.



After the hearings, Senator Smith posed with Bob Maynard for this photo.

Dedication At Camping World



Kiosk showing kWhrs produced for viewing by Camping World customers

Lane County Commissioner Bill Fleenor, State Representative Paul Holvey, and Eric Nill, proud owner of a new PV system at Camping World at the dedication of the 61 kW PV system on the roof of Camping World

In a May, 2006 issue of Solar Rising, pictures of the Camping World system were submitted by David Parker. On June 23, 2006, the system was dedicated. This was a festive occasion with ice cream and food that brought out a lot of the community. Also attending were numerous elected officials from Emerald PUD board members to elected state representatives.

These occasion help bring recognition to the solar pioneers of the community and represent a good chance to show community leaders that the community responds favorably to solar installations.



The crowd at the dedication had a good time. There were many people who were responsible for this system in one way or another. Five people are shown during the unveiling of the plaque.

Emerald PUD Installs 3 PV Systems at Local High Schools

by Frank Vignola



PV system mounted on the roof a bus stop at Pleasant Hill High School. Note that the modules have transparent backing allowing the student to see the back of the solar cells why their wait for their rides. Joe Savage of Emerald PUD is talking and students involved in preparing the site and helping to put together the bus shelter are seated in the bus shelter.

Emerald People's Utility District has been working to install solar electric systems on all the high schools in their service territory. The installation of the photovoltaic (PV) systems, spearheaded by Joe Savage, has finally been completed. Two years ago Elmira High School was the first to get a

PV system and this summer, Solar Assist installed systems at Pleasant Hill, Cottage Grove, and Mohawk High Schools.

Local officials, Emerald PUD board members, teachers and students attended opening ceremonies. The events were also cov-

ered by local television channels.

The installation at Pleasant Hill high school is unique in that a surplus bus shelter was modified to serve as the frame for the PV modules. Students helped pre-

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Emerald PUD Installs 3 PV Systems at Local High Schools

(Continued from page 8)

pare the site for laying the concrete and helped to modify the bus shelter to suit their needs. It was decided to use solar modules with transparent backing to help show off the solar cells to the students.

A local business used its tax credits to help reduce the cost of the systems and en-

able Emerald to install all three systems in one year.

Plans are underway to develop lesson plans utilizing the systems in education as well as producing electricity. Teachers from each high school Joel Bradford, Dick Erickson, Jim Settlemeyer and I are working on lesson plans that utilize data from the PV systems.

Each system consists of seven modules Isofoton 150 Watt modules connected in series to a SMA 1100 inverter. The systems are monitoring by Fat Spaniels and performance data are viewable at <http://view2.fatspaniel.net/FST/Portal/> under Emerald PUD.

Northwest Solar Expo

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solar professionals and manufacturers to experience a range of mainstream clean energy solutions from photovoltaic (PV) solar electric systems, solar hot water systems, passive solar design, pool heating, and specialty solutions as well as green building designs and other energy efficiency options.

“The Northwest Solar Expo is all about equipping consumers, contractors, developers, and business people with what they need to apply solar energy right now,” said Jon Miller, OSEIA’s executive director. “The technology and products are mature, the business conditions are great, and the tax incentives are in place. Clean energy solutions are available today that fit virtually every budget. North-

west Solar Expo visitors can learn about utility portfolio options, energy efficiency and green buildings, as well as producing their own clean energy with the products and services on display.”

The three-day Expo features workshops and classes taught by local solar experts. Friday has special workshops for professionals interested in learning more about this growing industry. Saturday and Sunday will have workshops ranging from solar basics to more advanced topics for consumers, schools, investors, and commercial developers.

Approximately 40 companies have signed up to exhibit at Northwest Solar Expo. Sponsors include Platt Electric, Energy Out-

fitters, Energy Trust of Oregon, International Brotherhood of Electrical Workers (IBEW/NECA) Mr. Sun Solar, Oregon Department of Energy, Pacific Gas and Electric, Bonneville Power Authority, Emerald People’s Utility District, and Eugene Water and Electric Board, among others.

Governor Kulongoski and other elected officials were invited to attend and speak on Friday morning, but scheduling conflicts resulted during the campaign season prevented most from attending. “We want to emphasize that Northwest Solar Expo is about *doing* clean energy today, not just talking about it,” said Miller.

For more information on

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West Wind Forest Products Installation

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supplies power to the building's switch gear. The system is monitored by Fat Spaniel Technology and includes building demand and a weather station (see monitor page).

This is currently the largest net metered photovoltaic installation in the city of Eugene. It is also the first major commercial PV system installed under Eugene's Sustainable Business Initiative. This makes West Wind Forest Products a local leader in renewable energy generation.

Northwest Solar Expo

(Continued from page 9)

the Northwest Solar Expo, including the workshop schedule, go to: www.nwsolarexpo.com. Or call: Jon Miller at 503-236-0367.

About Oregon Solar Energy Industries Association (OSEIA) Oregon Solar Energy Industries Association (OSEIA) was formed in 1981 to promote the use of renewable energy in Oregon, inform the public of the benefits of renewable energy, serve as the central organizing association for Oregon renewable energy professionals, establish and maintain a

business code of ethics, and sponsor legislation affecting renewable energy in Oregon. In 2005, OSEIA was instrumental in working with the Oregon State Legislature to pass tax credits for solar electric systems. OSEIA currently has over 50 business members. For more information or to join, go to: <http://www.oseia.org>.

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