

# SOLAR RISING

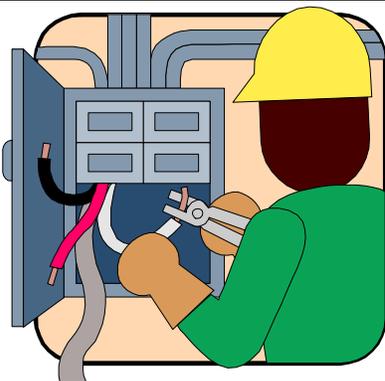
July 1999

Volume 2, Issue 3

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

## NET METERING BILL NEARS PASSAGE!

By Frank Vignola



Oregon's net metering bill (HB 3219) that sailed through the Oregon House with a 59-0 vote stalled in the Senate due to opposition from Idaho Power and the Co-ops. Through hard work by many but especially Peter West of the Renewable Northwest Project and Richard Perez of Home Power Magazine, grass roots support was brought to bear that resulted in a compromised net metering bill.

In the revised bill, utilities with less than 25,000 customers and headquartered in another state with a PV grid-tied tariff (Idaho Power) would be allowed to keep the same tariff that they have in their home state. We were not able to engage Idaho Power in early discussions and lack of follow up almost killed the bill. With this new language Idaho Power testified in favor of the legislation.

The Co-ops wanted several changes in the legislation. First they wanted language to make sure utilities were not the deep pockets that were sued if something went wrong with a grid-tied PV system, causing possible injuries. This is fair and reasonable and was readily

agreed to. Second, the Co-ops wanted the option to pay avoided cost instead of retail for the excess electricity sent back to utility grid. This seems patently unfair, since the customer-generator is spending \$10,000 or more to provide sustainable non-polluting electricity in exchange.

The utilities that pay avoided cost have to pay for extra metering as well as any extra cost associated with having two billings.

The avoided cost option was accepted for two reasons. First, without this option no net metering bill at all would be passed. Second, the cost of installing a second meter and the additional cost for two billing is probably equivalent to if not more than the difference between paying avoided costs and retail for the electricity. Utilities will eventually accept the net metering option as opposed to the avoided cost option because there is no real cost savings and adverse customer reaction for being paid only avoided costs.

*(Continued on page 3)*

## MESSAGE FROM THE PRESIDENT

By Frank Vignola

Being president of OSEIA has been exciting. There has been a lot of talk and finally some accomplishments are taking place. However, it is much too early to see any results.

The articles in this newsletter contain information of what has been happening. Rather than summarizing what has been happening, I would like to take this opportunity to express a few ideas of where the solar industry could be heading in the next few years.

The Million Solar Roof Coalitions from Oregon, Idaho, and Washington are producing a PV white paper proposing concerted actions to establish a sustainable PV industry and market in the Pacific Northwest. What could OSEIA be doing to promote the solar industry over the next several years and what can the future bring?

Without concerted effort, solar technologies can be forgotten like hoola hoops and disco. This has happened in the past. If solar isn't to sleep through another generation, it is necessary to place the foundations for our solar future now.

To properly set the foundation,  
*(Continued on page 10)*

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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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 Eugene, Oregon 97403-1274  
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Recognition should be given to Doug Boleyn of Cascade Solar Consulting, Chris Eames of Energy Service Company and Christopher Dymond of OOE for their contributions to the newsletter. Thank You!

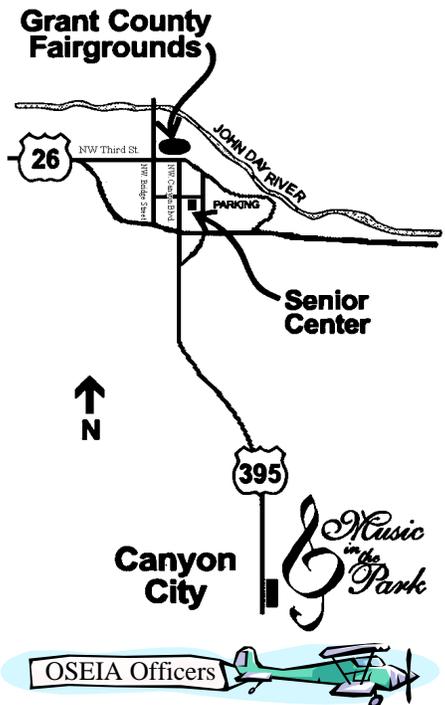
## OSEIA MEETING AGENDA

Senior Center  
 John Day, Oregon  
 3:00 - 6:00 PM  
 7/23/1999

1. Welcome and Introductions:  
Frank Vignola
2. Approval of Minutes: Chris Eames
3. Treasurer's Report: Ray Pokorny
4. OSEIA Corporate Status: Windy Johnson
5. OSEIA Bylaws: Doug Boleyn
6. Solar Legislation Update  
Frank Vignola
7. Million Solar Roofs Coalition Update  
Status of the 1999-2000 action plan:  
Frank Vignola
8. OOE Programs: Christopher Dymond
9. Northwest Solar Energy Alliance:  
Christopher Dymond
9. Other business
10. Adjourn

**The OSEIA meeting is at the Senior Center on NE First Street (See MAP).**  
 NW Third Street goes to the Fair Grounds from HWY. 26.  
 N. Canyon Blvd. runs north from 395.

## DIRECTIONS TO JOHN DAY SENIOR CENTER



**President:** Frank Vignola  
 Univ. of Oregon Solar Energy Center  
 Ph: (541) 346-4745

**Vice President:** Doug Boleyn  
 Cascade Solar Consulting  
 Ph: (503) 655-1617

**Secretary:** Chris Eames – Energy Service Company, Ph: (541) 302-6808

**Treasurer:** Ray Pokorny – Solar Interior Design, Ph: (503) 224-2322

## OSEIA MEMBERS ON THE INTERNET

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Eugene Water & Electric Board	don.speik@eweb.eugene.or.us	eweb.org
Renewable Energy, Inc.	DMZL49@ aol.com	.....
Stellar Processes	drobison@teleport.com	.....
Sunearth Inc.	sunearth@lava.net	.....
Heliodyne Inc.	heliodyne@worldnet.att.net	.....
Cascade Solar Consulting	Solarbee@aol.com	.....
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Solar Interior Design	solarint@imagina.com	.....
Bobcat and Sun Construction	bobcat@empnet.com	.....
Energy Outfitters	support@energyoutfitters.com	www.energyoutfitters.com
Home Power Magazine	hp@homepower.org	www.homepower.org
Mr. Sun Solar	70663.2146@compuserve.com	.....
The Energy Service Company	esco@efn.org	www.efn.org/~esco
UO Solar Monitoring Lab	fev@darkwing.uoregon.edu	solardata.uoregon.edu



# 1999 - SOLAR LEGISLATION

## NET METERING UPDATE

*(Continued from page 1)*

In the long-term it is envisioned that the PV electricity feed back to the grid will be bundled with other green electric products and sold at a rate that will enable PV customer-generators to be paid above retail for their excess PV electricity.

OSEIA still needs to educate utility engineers, inspectors and the public about grid-tied PV systems. This legislation allows the systems to be installed and this will increase the need for education.

Working on this legislation was truly an eye opener for me. It is really amazing how one group that opposes a bill can effectively stop the bill in its tracks. The legislators are mainly interested in making everyone "happy".

What happened with the net metering bill was that the legislators had the lobbyists come to agreement on the bill before it moved forward. Political pressure is always a key factor for the lobbyists and if political pressure can be brought to bear on the group giving the lobbyist instructions, it is easier to reach compromises.

Finding little support for their argument in the House, the Co-ops decided to press their concerns in the Senate. The Co-ops were able to stop the bill in the Senate until grass roots political supporters persuaded them of the need to compromise.

HB 3219 passed the Senate Public Affairs Committee with a do pass recommendation. The bill now goes before the Senate for a vote. If the bill passes the Senate, it will then be sent back to the House for their concurrence on the Senate amendments. Once the House and the Senate concur, the bill will be sent to the governor to sign into law.

Let us hope that no more hidden roadblock will occur.



## BILLS BEFORE THE LEGISLATURE

- SB 1149 - Utility Restructuring
- HB 3219 - the Net Metering bill introduced by OSEIA.
- HB 2954 - a bill that would repeal the solar energy tax credit.
- HB 2878 - a bill introduced by Brent Gunderson to increase the solar tax credits for grid tied residential PV systems to \$3 per peak watt installed.

## HOW TO INFLUENCE YOUR REPRESENTATIVE OR SENATOR

Personal contact always carries the most weight. To visit your representative, call the office and schedule a 15 minute appointment. Make it a friendly visit. Bring a copy of the information you want the representative to know. Next best is to hand write a letter and tell the representative what you would like them to support and why. Ask them what action they are planning to take on the measure. A phone call to your representative is always helpful. This is especially good if the issue is going to be in front of your representative. A fax is as good as a letter. This fax will go in the file on the bill. If the representative has not already made up their mind on an issue, they go to their file and review the information in the file before they vote. Currently email is the last resort. A staff person may or may not read their email. Remember, act now before it is too late!

## BILL TO REPEAL THE SOLAR TAX CREDIT

House Bill 2954 would repeal the solar tax credit. This bill passed the House with just the repeal of the solar pool tax credit in the bill. It was rumored that a rich neighbor of the committee chair bragged about getting a solar pool heating tax credit and this set the stage for the repeal.

In May the Senate Revenue Committee heard this bill. John Peterson, Andrew Koyaanisquatsi, Wendy Johnson, and Frank Vignola were among those who showed up to testify against the bill. The repeal of the solar pool heating tax credit was removed from the bill. We won't know for certain until the end of the legislative session if the solar tax credits are safe. However, it looks like we won another round.

## INCREASING PV TAX CREDITS

House Bill 2878 would significantly increase the solar tax credit to \$3 per peak watt installed for grid tied residential Photovoltaic systems. This bill passed the House Commerce Committee but is sitting in the House Revenue Committee. It is unlikely to get further consideration since the chair of the Revenue Committee introduced bills repealing many tax credits.

## UTILITY RESTRUCTURING

Senate Bill 1149 concerns restructuring of electric utilities. This is a complex bill that will change the way utilities do business in Oregon. This bill passed the Senate and passed the House on July 2. The bill now heads for a conference committee.

This bill is called restructuring lite. However, it does have a 3% system benefits charge and is supported by the environmental community.

# Oregon Million Solar Roof Coalition Quarterly Meeting

Thursday May 13, 1999 at the Eugene Water and Electric Board 10:00 AM -3:00 PM

by Chris Eames



*Taking a break in the sun. Jeff Keto, Don Larson, Steve Still, Doug Still, John Taves, David Parker, Andrew Koyaanisquatsi, Don Speik, Newt Loken, and Chris Eames. Who is the Bill Gates look alike in this photo?*

## 1. Welcome and Introductions

Members attending: David Parker, Chris Doig, Don Larson, Carrie McVay, Chris Pride (VITA-SUN, Inc.), Jennifer Williamson (CARES), Doug Still (EPUD), Jason Wilkenson (U of O Solar Information Center), John Taves (BPA), Margaret Lewis (BPA), Andrew Koyaanisquatsi, John Patterson, Newt Loken, Don Speik (EWEB), Steve Still (EWEB), Jeff Keto (OOE), Frank Vignola, & Chris Eames.

## 2. Report of Kansas City Meeting - SEIA

Frank reported that though there were 18 initial partnerships and now there are 41. Ours was not accepted - only 6 of 20 western proposals were selected. The specific reasons for our "failure" are not yet clear, but our experience may help our chances for the next

round. A tele-conference will take place soon to ask the selection committee exactly what their decision criteria are. Jeff Keto, Christopher Dymond, John Patterson, David Parker, and Frank Vignola will participate. An additional RFP is anticipated for October, 1999.

Frank spoke to Scott Sklar of SEIA about the idea of SOLTEC 2000 being held in Portland. Since no funding is currently available, about \$75,000-\$100,000 will need to be raised to make Portland a viable destination. BPA may help fund the Conference if combined with an Electric Revolution Symposium such as the one they supported this spring. Margaret Lewis offered to help direct inquiries within BPA.

Expectations for our next proposals

will include cost-sharing, quantitative goals, and realistic funding request: areas thought to be weak in the last effort.

There is a need to track installation of solar roofs that do not get tax credits or may otherwise be difficult to identify.

## 3. Setting a Vision for Oregon MSR Coalition

Frank speculated that by 2010, standard building practices might include one or more solar technologies and that our efforts ought to be directed toward that end.

Chris Pride spoke about his company in Las Cruces, NM that is building a stand-alone solar community there that capitalizes on the sun and on the earth via compressed earth blocks.

His company will manufacture large-format CIS2 PV panels that provide much more efficient & cost-effective generation (\$.67/Watt!). He is also evaluating a thermal PV product. His is currently exploring opportunities for building a manufacturing facility in Oregon (Salem, Eugene, & Bend?).

## 4. Committee Presentations

### a. Finance Committee

Jeff Keto reports good input from committee members regarding financing. Jeff has been researching program-financing providers - a list of which he provided. He reported on barriers to solar financing as well, noting that the solar market is so small that it is best grouped with other "conservation" financing sponsored by utilities. OOE's S.E.L.P. is geared more to large projects but does provide affordable money if payment-processing and credit-checking functions can be administered by some local entity. Jennifer Williamson offered to explore the possibility that CARES might be able to facilitate that aspect of the package

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## OREGON MILLION SOLAR ROOFS COALITION MAY 13, 1999 MEETING



(Continued from page 4)

inasmuch as they already do similar functions for their members.

### b. Marketing Committee

Doug Boleyn could not attend the meeting but provided a Marketing Plan overview which includes Objectives, Target Markets, Target Market Size, Market Barriers, Product Plan, Price Plan, Promotion Plan, Place Plan, and Performance Indicators. Much of the Plan needs fleshing-out, but it provides a framework for prioritizing our efforts.

### c. Net Metering & Codes Committee

Richard Perez provided a written report in lieu of his attendance. Oregon's net metering bill (HB 3219) passed the house and is now over at the Senate. Thanks go to Peter West for his lobbying efforts. Code officials "...are woefully ignorant..." and need educating.

### d. Training Committee

David Parker presented a report projecting the ramp-up of installations needed to meet the 50,000 goal by the year 2010. It shows that 500 technicians will need to be trained. He further pointed out that training needs to be combined with a licensing program to ensure that appropriate standards are maintained. Indeed, without the licensing the training would be somewhat undirected.

### e. Education Committee

Notes on interaction among Joe Savage, Steve Still, & Doug Boleyn were shared with the group including course outlines and examples of solar education pro-

grams in other states and foreign countries. SEA of O and the U of O Solar Information Center also have programs that are reaching out to educate students and community groups. Steve pointed out that education needs to include trade groups, code enforcers, lenders & appraisers, and realtors in addition to school programs.

### f. Utility Programs Committee

Don Speik submitted the UPC status report that highlighted the inclusion of several utility representatives from around the state. Don pointed out that the committee desires as many utilities as possible for participation. Jennifer offered the possibility that some Washington utilities might be approached to provide a cooperative regional position.

## 5. Prioritizing and Setting an Agenda for the MSR Coalition

Key Barriers that we face include:

Cost Effectiveness

High cost systems, low utility rates, cost of financing, few incentives

Financing/Incentives

Low-cost/long term financing

Lack of Knowledge

Lack of Technicians/License

Action Items that we need work toward in the next 1-2 years:

Web Page

Marketing Plan

SOLTECH 2000 in Portland

Net Metering

Solar Tax Credits - Pools

Education (Public, Targeted, Schools)

Training - Licensing

Loans (How to get what is needed.)

Who is involved? / How?

Advertising Campaigns

Committee members are requested to refine these barrier concepts, identify others, and formulate strategies that pertain to their committees and share them so that action plans can be presented at the July 23<sup>rd</sup> meeting.

If you wish to participate on any of these committees - CONTACT FRANK!

## 6. Next Meeting July 23, 1999 in John Day -

Joint meeting with OSEIA and possibly SEA of O.



*John Taves and Margaret Lewis from Bonneville Power Administration came to learn about the Oregon MSR Coalition activities.*

# OSEIA QUARTERLY MEETING MINUTES

TUESDAY APRIL 6, 1999 12:00-3:00 PM

OREGON OFFICE OF ENERGY SALEM, OR.

by Chris Eames

## 1. Welcome and Introductions

Members attending: David Parker, Ray Pokorny, Andrew Koyaanisquatsi, John Patterson, Joe Savage, Doug Boleyn, Andy Bortz, Christopher Diamond, Sylvia DeLa Rosa, Frank Vignola, & Chris Eames. *Several members sent proxies for purposes of voting.*

## 2. Minutes of the January 12, 1999 General Membership Meeting

Ray noted that receivable had been overstated by \$50.00. It was moved seconded and approved unanimously to approve the minutes as amended.

## 3. Treasurer's Report

Ray Pokorny reports balance on hand of \$1,330.05, receivables of approximately \$4,538.00, and \$2,324.67 in net metering fund. Several members have not as yet remitted their dues for 1999, accounting for the high level of receivables. Invoices will be mailed again soon. Questions AND dues payments can be mailed to Ray at his home address: 242 NE 61<sup>st</sup> Portland, 97213.

It was proposed by John Patterson and seconded by David Parker that OSEIA pay for the \$450.00 registration fee for President Vignola to attend the SOLTECH conference. This passed unanimously.

Several budget issues were discussed including eliminating participation in the Oregon State Fair, attending the Country Fair, organizing new Solar Home Tours, marketing (or eliminating) our "800" number, enhancing the OSEIA brochure, and encouraging the MSRI marketing committee to formulate plans for OSEIA to promote the industry. John Patterson volunteered to join the MSRI marketing committee.

Chris Eames moved and John Patterson seconded and all voted to accept Ray's

Treasurer's report.

## 4. OSEIA Corporate Status: Wendy Johnson

Wendy's could not present her report since she could not attend due to illness of her daughter. President Vignola directed the secretary to mail an expression of our best wishes for her daughter's recovery. Either Wendy or Frank will report on our Corporate status at the next meeting.

## 5. OSEIA Bylaws Status: Doug Boleyn

Doug reports that we are in substantial compliance with Oregon law regarding associations like ours. Once he has the Articles of Incorporation in hand, he will compare them against the Bylaws to determine whether they are consistent with one-another. He will update his findings at the next meeting.

## 6. Fuel cells and net metering

The net metering bill is in committee. PGE is "on board". There is pressure to include Fuel Cells in with renewables, but they will be treated somewhat differently, and as of this date the legislation will benefit renewables. If we oppose the Fuel Cells, Avista will oppose the bill altogether and the PUC and the Office of Energy will be pressured to remove their support as well. The advantage of have Fuel Cells included stems from their ability to lobby for passage of the bill. Most of the objection to the Fuel Cells is that it makes no distinction to "renewable" fuel cells as opposed to gas fuel cells. The disposition of the legislation will be know in the next few days, so a final report will be given at the Summer Meeting.

## 7. Solar Legislation Update: Richard Perez

Several members reported that they HAVE contacted their state representative and/or state senator in support of net metering and tax credits. Repeal of the Tax Credit Legislation is coming up for a vote this week and attending members were advised to phone or fax Ken Strobeck to express their support of tax credits for alternative energy.

Another bill to offer credits for PV systems under the residential tax credit program that make more sense for consumers has passed out of the energy committee and although it may face difficulty in the Revenue Committee, its sheer "smallness" may make it insignificant enough to avoid being killed.

Again, most of this will shake out in the next few weeks and will be reported on at the Summer Meeting in John Day.

## 8. Million Solar Roofs Update.

Discussion about how the OSEIA "sponsorship" has been modified onto a coalition of state, local, and industry groups. There is currently \$190,000 of DOE funds for 15 groups, of which we are one, to market the program to leverage more participation in the MSR Initiative. It is not for study nor is it for implementation of solar projects. A meeting in Portland on January 14 was held to "kick-off" the program and to delegate responsibilities within the coalition, to identify opportunities, develop strategies, define barriers and to formulate plans for overcoming them. Committee chairs from OSEIA are Richard Perez, Don Speik, David Parker, Joe Savage, Doug Boleyn, and Frank Vignola, chairperson. Other OSEIA members are welcome to attend and a report will be given in the next newsletter and at the next meeting. Christopher Dymond moved and Ray

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# OSEIA QUARTERLY MEETING MINUTES

(Continued from page 6)

Pokorny seconded that SEA of O be invited to become a member of the partnership and that other appropriate groups or members be included by vote of OSEIA's MSRI committee. This passed unanimously. Don Speik moved that any proposals for dispersal of DOE funds be submitted for approval by OSEIA's MSRI Committee. David Parker seconded. This also passed without dissent.

## 9. May 13, 1999 meeting of the Oregon MSR Coalition: Frank Vignola

Talk about budgets will take place at the meeting to be held at EWEB in Eugene @ 10:00 AM. Those with ideas on MSR registry issues must contact OOE where Christopher Dymond will manage that list.

## 10. Million Soar Roof Registry: Christopher Dymond

Christopher Dymond is working to bring together the many interested parties of interest in solar energy. Several education and solar implementation programs which may be funded by the

federal DOE are in the works and he will be reporting about those as they are approved. E-mail him with ideas for such project proposals.

## 11. Health and Disability Insurance: Andrew Koyaanisquatsi

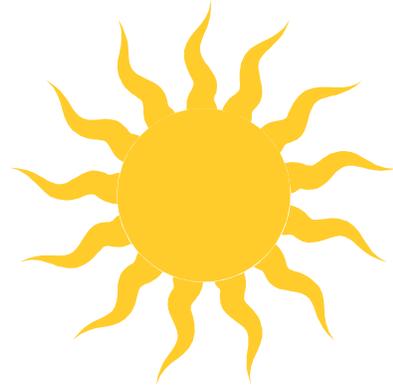
Andrew Koyaanisquatsi was unable to attend. \$30 per month will buy group disability insurance which provides \$1000/month. A questionnaire will be sent out by the company within two weeks to individual members to determine our group rate. An additional report will be made next meeting.

## 12. SOLWEST RE Fair as venue for Summer Meeting

Friday afternoon on July 23<sup>rd</sup> before the Saturday SOLWEST Fair! 3:00PM is the tentative time, and specific location will be announced. Contact Frank Vignola for specifics and directions. Frank Vignola at: Frank Vignola / Department of Physics / 1274 University of Oregon / Eugene, OR 97403  
Phone: (541-356-4745)  
email: fev@darkwing.uoregon.edu

## 13. Other Business:

Christopher Dymond suggested that conflicts arising between customers and member contractors adversely impacts both the industry and OOE. Frank suggested that we form an ethics committee to draft an article to address contractor responsibilities vis a vis the OOE.



# NEWS FROM WASHINGTON - SUNFLASH

**Residential Solar Tax Credits:** Rep. Matt Salmon (R-AZ) introduced H.R. 1465 and Senator Wayne Allard (R-CO) will introduce the Senate version. Hopefully, they may be included in the respective Chairman's tax bill to be decided respectively this July in Senate Finance Committee (Senator William Roth Chairman) and the House Ways & Means Committee (Rep. Bill Archer, Chairman)

**FY'2000 DOE Solar RD&D** programs action is underway with the Senate approving the Energy & Water Development Appropriations cutting all three solar programs (SB,CSP, PV) a total of by \$4.7 million reduction from last year's funding level and cut by \$35.8 million less than the Administration's FY'2000 request. The House Appropriations Subcommittee on Energy

& Water Development is expected to act on the FY'2000 budgets next week. Rep. Ron Packard (R-CA, San Diego) is Subcommittee chairman. Senator Reid (D-NV) and minority chair of the Senate E&WD Subcommittee used a parliamentary maneuver to stop a renewables amendment by Senators Jeffords (R-VT), Roth (R-DE) and Allard (R-CO) to get to the floor for a vote.

**Fannie Mae and the National Association of HomeBuilders (NAHB)** announced an Environmental Partnership in early June 1999. This \$100 million initiative recognizes the growing interest in environmentally responsible construction methods. Therefore the pilot project will test

and develop mortgage-financing products tied to green building criteria's with builders and lenders. The initial project is expected to take place in six pilot cities to include, Atlanta, GA; Columbus, OH; Albuquerque, NM; Denver, CO; Los Angeles, CA; and Seattle, WA.

**The Administration released an Executive Order** in June which sets in motion an increase in federal procurement of green power from renewable energy resources. The targets are wishy washy and there is no enforcement mechanism other than a yearly public report card. Three riders have been attached to ongoing bills by Republicans to undercut the new Executive Order.



## SOLWEST RENEWABLE ENERGY FAIR IN JOHN DAY, OR. JULY 24-25, 1999

### WIDE VARIETY OF EXHIBITORS COMING TO SOLWEST FAIR

A wide variety of exhibitors will be coming to SolWest Fair at the Grant County Fairgrounds in John Day on July 24 & 25 to show their wares and inventions. Over half the exhibitors will be retailers and installers of renewable energy gear. They will be selling products such as wind generators, solar panels, power inverters, micro-hydro plants, and deep-cycle batteries.

Information will be available from the Oregon State Department of Energy on tax credits for the installation of renewables or energy-conserving appliances. Book and magazine sellers will have a wide variety of titles for the independent-minded and the remote dwelling. Home Power Magazine from Ashland, Oregon will display their full range of back issues and CD-ROMs with articles for all skill levels on almost every topic pertaining to renewable energy.

A few manufacturers will be present offering a view of their popular products. Trace Engineering from Arlington, Washington, will display their DC to AC power inverters, which convert battery power to clean 110 volt electricity. Southwest Windpower will show their small wind generators suitable for battery-charging for remote homes, RVs, hybrid systems, water pumping, etc.

Local Realtors will showcase remote homes and land for those who are interested in trying out energy independence. Circle Dance Yurts will set up a traditional circular tent used for temporary or semi-permanent housing. If you

are building more permanent housing, you will want to check out the juniper flooring, wainscoting and cabinets by Juniper Northwest.

Several different types of efficient home heating will be on display, from geothermal heat pumps to wood or gas-fired hydronic heating. Even solar pool heating will be shown! A manufacturer of efficient lighting will show his fixtures designed for compact fluorescent bulbs.

Exhibitors will have solar cookers, books on how to use them, and storable dehydrated food to make the cooking easy. Look for small, portable solar gadgets like radios, flashlights, and battery chargers that fill special needs while camping or during a power outage. Check out the remote communications items at several booths.

Cost of entry to the fair is \$5 for a day pass, with youth, senior, family, and weekend discounts. Children under 12 and volunteers get in free. For more information, call Jennifer Barker at 542-2525 or Ken Primrose at 575-3145.

### ELECTRIC VEHICLES RANGE FROM SMALL TO LARGE

Efficient transportation is not left out of SolWest Fair, at the Grant County Fairgrounds July 24th and 25th. Anyone who has noticed Cindy commuting to work on her Zapbike, and wanted one, will be able to purchase the electric-assist bicycle from Bryan Electric Vehicles of Boise. Bryan even has an electric-assist scooter!

Mike Brown and Shari Prange of Electro Automotive in Felton, California are coming to SolWest to convert a beautiful mint-green Volkswagen Rabbit to electric on-site. They will strip the internal combustion system and clean the engine compartment just before the Fair. Then, during the Fair, they will be installing the electric drive system where ev-

eryone can watch and ask questions. By the end of the day Sunday, the Rabbit will move under electric power!

The finished Electric Vehicle (EV) will be for sale right off the exhibit. The EV's top speed is 65 mph, and range is up to 60-80 miles on a charge, with a full recharge overnight from regular household 110V current. Finished price for the "new" EV will be \$10,000, with any profits going to EO-Renew. Electro Automotive will be handing out information about their electric car components, kits, tech support, and design assistance services.

Extra hands will be needed with the Rabbit Conversion. Mechanical ability is desirable. If you would like to participate, please call Lance Barker at 541-542-2525.

### EDUCATIONAL WORKSHOPS

Educational workshops on topics of renewable energy and energy efficiency will be offered at SolWest Fair on July 24th and 25th at the Grant County Fairgrounds. The offerings are varied enough to interest almost anyone, and are included in the cost of entry to the fair (\$5 per person, with youth, senior, family, and weekend discounts). Workshops are ongoing all day, both Saturday and Sunday, with one to four at a time to choose from.

Here is a sampling of the topics offered in energy production, storage, and monitoring:

1. Electricity Basics for Women
2. Introduction to Photovoltaics
3. Grid Tied Photovoltaic Systems
4. Practical Windpower
6. Micro Hydroelectric
8. Batteries
9. System Metering

Various workshops will address the building and finishing of a home that is sunny and warm in winter, cool in summer, and uses less purchased energy than average to heat and light. The

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# SOLWEST FAIR

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fairgoer can start off by learning how to dry their own lumber for best quality! Alternative methods of building such as straw bale and earthen structures will be introduced. Information will be available about hydronic, or in-floor hot water heating techniques.

Living skills like gardening, solar cooking, and disaster survival will be discussed in several classes. Even living in a camper or RV can be more carefree with the help of technology. Presenters will teach how to power a computer, GPS, or cell phone from solar.

Ranch or farm residents will be interested in the workshop on solar water pumping. It is possible to have all the water needed in the uplands or away from streams, without hauling a gasoline generator around. Presenters will also discuss labor-saving devices like electric gate-openers and fences.

To receive a detailed listing of workshop topics and contents, call Jennifer Barker at 542-2525 or Ken Primrose at 575-3145.

## SILENT AUCTION FOR EORENEW

EORenew (Eastern Oregon Renewable Energies Non-profit) is sponsoring SolWest Renewable Energy Fair at the Grant County Fairgrounds in John Day on July 24th and 25th. During the fair, EORenew will have a booth inside the Pavilion on the east end. The booth will be selling memberships in the organization for those who want to support and learn about renewable energy. Individual membership in EORenew is \$10. T-shirts with the fair logo will also be available at the booth.

EORenew is offering a silent auction as a fundraiser. Items donated so far include a 12 volt DC to 500 watts @110 volt AC power inverter, a solar-powered dynamo radio, a flexible solar panel, a solar-cool cap and a compact fluorescent light fixture. Donations of goods or services to benefit EORenew will be accepted up to fair time.

Fairgoers can see a display of items

available for bid at the Silent Auction in the EORenew booth. Bid closing time is 2:00 on Sunday afternoon, and the bidder or their representative must be present to win. All items must be removed from the fairgrounds by 5:00 Sunday afternoon.

For more information about SolWest Fair, call Jennifer Barker at 542-2525 or Ken Primrose at 575-3145.

## OSEIA TO MEET AT SENIOR CENTER ON FRIDAY

The Oregon Solar Energy Industries Association (OSEIA) will meet Friday, July 23, from 3-6 p.m. in the game room at the Senior Center, 142 NE Dayton St. in John Day. OSEIA is comprised of members of the local solar industry, solar consultants, solar educators, utilities, and the Oregon Office of Energy. OSEIA promotes solar energy technologies and the safe reliable installation of solar systems. In January of 1999, OSEIA established the Oregon Million Solar Roofs (MSR) Coalition in partnership with the US Department of Energy to build the solar industry and install 50,000 solar roofs in Oregon by 2010. The Oregon MSR Coalition brings together those interested in solar energy creating a synergy that will effectively identify and address barriers to a sustainable solar future.

The July 23, 1999 meeting of OSEIA and the Oregon MSR Coalition will discuss the agenda for OSEIA for the coming year and evaluate an action plan for the Oregon MSR Coalition. Those interested in working with OSEIA or the coalition to help create a sustainable solar future are welcome to attend. For more information, call Frank Vignola at (541) 346-4745 or email: fev@darkwing.uoregon.edu.

## VOLUNTEERS NEEDED!

It takes many helping hands to run an event like SolWest Renewable Energy Fair, July 24th and 25th at the Grant County Fairgrounds in John Day. Hands are needed to herd traffic, rustle recycling, person the gates, and go-fer

the errands. The SolWest organizers are very grateful to all "hands" and provide free fair entry for a day in return for 2 hours' help. If you would like to help, call Jennifer Barker at 542-2525 or Ken Primrose at 575-3145.

## For More Information Contact:

Jennifer Barker  
EORenew/SolWest Fair  
PO Box 485  
Canyon City, OR 97820  
541/542-2525  
email: solwest@eoni.comw  
Web Page: www.eoni.com/~solwest

## TOUR THE CO-GEN PLANT IN PRAIRIE CITY

In conjunction with SolWest Fair, a tour will be offered to the Prairie City Co-gen plant at 10:30 on Saturday, July 23rd. Tour cost is included in the \$5 fair entry fee, and the tour will leave from the west gate of the Grant County Fairgrounds in John Day. Seating may be limited, and transportation will be provided on a first-come, first-served basis.

Co-Gen is an electric power generating plant. It recycles wood waste to generate electricity, and the electricity generated by the plant is sold to a local power utility. The company's goal is to use the entire log. After solid sawn lumber and wood chips, residual by-products are utilized as fuel to power co-gen. The plant, rated at 7.5 MW, burns waste at such high temperatures that the only emission is steam.

For more information about the tour, call Noelle Colby-Rotell at Prairie Wood Products, 820-3667.

# Some News from California – A Window into Oregon’s PV Future?

By Doug Boleyn, OSEIA VP

Let’s think about California as a good example for Oregon.

Terrified by the prospect? Well, then, let me just say let’s think about them as an example from which we can learn what to do (and not do) in OSEIA’s efforts at spreading solar PV around Oregon.

I have the pleasure (and challenge) in one of my paying jobs, to travel to California and verify the installation of grid-tie photovoltaic systems throughout Northern and Central California. I do this as part of my work for RER, Inc who has the contract with the California Energy Commission for work on California’s Emerging Renewables Program.

I get to visit every one of the homes, interview the homeowners, see/touch/feel the photovoltaic systems, provide a brief measurement of their output, and take some other data. This has been a unique opportunity for any one person.

I’ve been out visiting for three weeks as of writing this article, and have learned some important things about photovoltaic systems in California. I’m reporting this for you to ponder about what might be good lessons for Oregon and OSEIA.

My first observation is that not all the grid-tie PV owners are environmentally - driven. Many of them have power

reliability as their main reason for investing in a grid-tie PV system. About 60% of the systems I’ve seen (so far) have a battery bank for emergency/back-up. I might mention that the environment is their second or third most important reason for installing the system. Another important clue as to what drives these PV pioneers, was the joy many of them had in watching the utility electric meter running backwards. That was the first thing many of them wanted to show me as I arrived at their home!

Secondly, the \$3 per watt tax credit really gets people’s attention – but especially those who have already been thinking years about “going solar”. It provides the opportunity to get a “good deal” on what they’ve been thinking about doing for years. Also, some are driven by just the fact that annual net metering is available.

Thirdly, working with the myriad of local building officials is as much a challenge for PV dealers/ installers/ owners in California as it is here in Oregon. This is despite the fact that utility restructuring (which creates the source of the \$3 per watt incentive paid to PV buyers) has been the Law in California for a couple of years. The local code officials only START learning about PV when the first one hits their jurisdiction. There is no statewide

education program on PV that code officials take the time to attend.

Fourth, because utility districts in California are so spread out, utility engineers from the same utility are challenged to transfer information among themselves. This means that each PV dealer has to educate anew local utility engineers for the first time a PV unit is installed in a particular district. So for the first bunch of systems, this can be time consuming. Generally, however, once the first PV unit is installed in the district, the education travels fast. This is not so much a problem in Oregon, where most utilities are small. PacifiCorp is the only utility with a “non-contiguous” territory.

Thoughts for OSEIA: There are some great solar dealers in California. I have met a number of them on my visits. Close contact with customers, quick responses to problems/issues, and attractive materials (brochures, design drawings) seem to be keys for the successful dealer/installers.

RER Inc will be writing and issuing a Report to the California Energy Commission later this summer, so many findings of the verification work I have been doing will be available at that time.

## MESSAGE FROM THE PRESIDENT

*(Continued from page 1)*

it is necessary to define where we are going.

In the not too distant future, one will be able to purchase solar-green electricity. The solar portion of this electricity will be coming from people who are generating electricity from grid tied PV systems. Aggregators will be purchasing this electricity, mixing it in with other green power sources to provide a more salable product. Those willing to in-

stall PV systems will receive a more equitable price for the electricity they produce.

Before this can happen, a significant number of systems need to be producing solar electricity. These original systems can come from groups with insight who are willing to spend the millions of dollars necessary to start the industry moving.

Churches or schools could be the beneficiaries of these initial buys, with the money from the green pricing going back to install systems on other churches or schools.

This can happen if society wants it to happen. What is your vision and what help do you need to make it happen?

# DISCUSSION OF THE TECHNICAL SUPPORT NEEDS OF THE MILLION SOLAR ROOFS INITIATIVE

Notes from the June 2, 1999 Seattle meeting from USDOE Seattle office.

The meeting began with a short video of a Million Solar Roofs project dedication in Tucson, Arizona.

Curtis Framel discussed the MSR Action Plan which includes such issues as improving access to financing, increasing awareness of solar technologies, and obtaining commitments from builders and developers to include Solar in new developments.

Eileen Yoshinaka talked about expanding partnerships in Hawaii. She also requested that she be kept informed as to when people from the labs and other agencies are in Hawaii. She would like to have that information to maximize resources.

There is money available; however, the group identified needs and barriers that are out there.

Get commitment from federal and local governments, builders, and developers.

Need individuals knowledgeable in marketing.

Remove barriers to obtaining financing, make it available at a reasonable rate.

Integrate PV into design and retrofit.

Industry share risk, provide guarantee to lender.

Labs provide education material, cur-

riculum development

Encourage peer exchange.

Keep up with latest developments, encourage use of clearinghouse, report problems.

Address problems with MSRI registry.

Western Regional Summaries:

Randy Manion and Bob Parkins shares some ideas on education. They suggested bringing in foundations and industry; sharing more information with the public, and providing on-site technical expertise.

Michael Stenburg discussed community based activities

Mike Nelson described some actions that will support development of the PV industry in the Northwest.

National Summaries:

Chris Cameron identified some support available from Sandia.

Christy Herig discussed financial resources, technical resources, resources assessment, and value analysis.

Carol Tombari asked for feedback on some ideas NREL has for using a relatively small award. The consensus seemed to be; at this time NREL should consider increasing visibility and using the funds to create some long term priorities.

## SUMMARY MSRI NEEDS

### Financial Resources

- Infrastructure
- Cost of systems

### Utility Public Purpose Funds (liberation)

- Familiarity with technology
- Staff resources

### Financing

- Availability
- Understanding with financial institute
- Volume of financial systems
- Easy process
- Lack of risk sharing by solar industry

### Technical

- Design for PV in existing buildings
- System troubleshooting
- Fuel cell hybrid systems

### Net Metering

### Resource Assessments

### Clearinghouse

### Success stories

### Curriculum MH/Train the Trainers

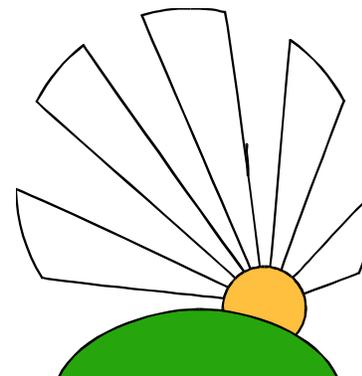
### Near term priorities

- Curriculum development Workshops
- Electronic information exchange
- Leverage regional resources (e.g. BPA, WAPA, SBC \$)
- Survey partnerships

## PV WORKSHOP - AUGUST 16-19

The Northwest Energy Efficiency Institute has a four-day PV workshop that it is doing here at Lane Community College on August 16-19. This will be an applications class taught by Greg Holder of Alternate Means. The class will end with an installation. Please refer interested folks to Roger

Ebbage @ (541) 744-3977 or if out of the local calling area 1-800-769-9687. They can also check the website at [nwwei.org](http://nwwei.org). The cost is \$390.





# A Northwest Perspective On PV Market Development



[The following information is extracted from a draft white paper written by Christopher Dymond for the Northwest Solar Alliance of MSR partners.]

Washington, Oregon and Idaho seek to spur the development of photovoltaic (PV) commerce. Efforts need to be coordinated to achieve maximum effectiveness with the least duplication. This paper describes actions that support effective development of a viable PV industry in the Northwest.

### NW Context

The Northwest is one of the few places in the world primed to become a major player in the photovoltaic industry. The solar industries of Oregon, Washington and Idaho show signs of significant development. For example:

IdaCORP Technologies owns the nation's second largest photovoltaic systems integrator.

Washington is home to the world's largest DC-AC power inverter company.

Twenty percent of the world's PV crystal-growing capacity is located in Vancouver, Washington.

Oregon has one of the oldest and most well established network of solar energy contractors and professionals. With their help, Oregonians have installed more than 20,000 solar water heating, space heating and photovoltaic systems over the past 21 years.

The Pacific Northwest presents a unique and fertile ground for being a photovoltaics leader.

Signers of this paper are committed to creating a stable, supportive early-adopter market for photovoltaics as a way to create a steady regional demand. This demand would be the best foundation for ensuring the Northwest's position as a major leader in the market for

photovoltaics.

Creating an early-adopter market can be achieved through:

- Providing financial incentives for early adopters of PV power
- Developing qualified solar technicians and technology innovators
- Creating a regional public awareness of PV value and potential
- Identifying and implementing viable projects

*Find out more about these ideas and what role you can play in PV market development at the next Oregon MSR meeting in John Day.*

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