

SOLAR RISING

January 2001

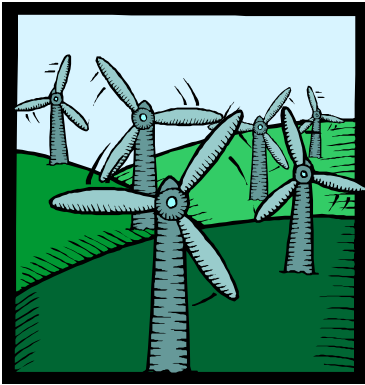
Volume 4, Issue 1

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

Bringing you tomorrow's sustainable energy technologies today!

Our Energy Future

by Frank Vignola



Recent shortages in the availability of electricity are speeding the planning and construction of new gas fired power plants. While these new plants may satisfy the current needs cheaply, planners and developers should be looking at the long-term and evaluating all options, especially conservation and renewables.

Use of natural gas for electricity is a good transition strategy, but it is not the real answer to our energy needs as there are only finite amounts of natural gas available and world supplies will run out in 60 years if usage increases by 3% per year. In the next 10 to 20 years, the supplies from Canada will be significantly depleted and the northwest will have to import liquid natural gas from other sources, mostly likely Russia. Building the infrastructure for the transportation and importation of liquid natural gas will be expensive and the cost of electricity from natural gas fired plants will have to increase significantly to cover these costs. In addition, burning natural gas still creates waste gases that are changing the world's climate.

Conservation and wise use of energy should be first priority. A lot of progress has been made over the past 20-30 years, but much more can be and should be done. New housing incorporates better insulation and more efficient appliances and lighting. Older housing can be upgraded with better insulation and solar water heating systems. Wind farms and some solar facilities are being planned and developed and currently are becoming more economical every day.

To make a wise choice today it is necessary to take a long-term look into the future. Thirty years from now, world oil production will be at least 30% below today's production levels and decreasing each year. Russia will be the world's main supplier of natural gas and the impact of finite natural gas resources will begin to have an impact on the world economy. The polar ice-cap will have melted and world will clearly see the impact of greenhouse warming.

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Message from the President

by Frank Vignola

2000 has seen much progress in solar energy deployment across the state and across the nation. Ashland has become a solar city by installing 30 kW of solar cell arrays. The BPA, Bonneville Environmental Foundation, state solar tax credit and Avista Corporation, City of Ashland and efforts of the city staff, and support by a large number of solar pioneers within the city of Ashland made this possible. The web site at <http://www.ascensiontech.com/RTD/ashlandrtd.html> shows the electricity produced at two of the Ashland installations.

Portland General Electric has started its solar schools program at Franklin High School and North Salem High School. Electric production from these systems can be found at <http://www.ascensiontech.com/RTD/pgepict.htm> and <http://www.ascensiontech.com/RTD/pgesalem.html>. More about the PGE solar schools programs can be found at PGE web page at <https://www.portlandgeneral.com/profile/default.asp>. The idea of putting solar in schools is expanding and both Emerald PUD and the Eugene Water and Electric Board (EWEB) are studying projects to put solar electric arrays on

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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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OSEIA Meeting Agenda

Oregon Office Of Energy
 625 Marion, Salem, Oregon
OSEIA/Oregon MSR Coalition Meeting
January 16, 2001 1:00 pm—4:00 pm

1. Welcome and Introductions: F Vignola
2. Approval of Minutes: Chris Eames
3. Treasurer's Report: Ray Pokorny
4. Election of New Officers
5. Contractor Licensing: Bob Maynard/
David Parker
6. Solar Tax Credit: John Patterson
7. OSEIA Corporate Status: David Parker
8. OSEIA Bylaws: Doug Boleyn
9. Adoption of OG300 rules: Christopher Dymond
10. Other Business
11. MSR Status and New Proposal:
Christopher Dymond
Tom Scott
Doug Boleyn
Joe Savage
David Parker
Frank Vignola
12. SEA of O/OSEIA relationship
13. Adjourn to Eng's Restaurant:

Directions to Eng's Restaurant

At 5:00 pm Jan. 16, after the OSEIA meeting at the Oregon Office of Energy, a joint OSEIA/MSR coalition, SEA of O meeting will take place at Eng's restaurant, 4645 Commercial St. SE (46 blocks south of downtown Salem on Commercial). Their phone number is (503) 585-8380. From I-5, take the Kubler exit (250?) just south of Salem and head west to Commercial St. Please let Christopher Dymond if you are coming so they can accommodate everyone.



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 Member	Contact	Phone Number	OSEIA Member	Contact	Phone Number
Heliodyne, Inc	Bieri	(510) 237-9614	Oregon Conservancy Foundation	Marbett	(503) 637-6130
Cascade Solar Consulting	Boleyn	(503) 655-1617	Energy Outfitters	Maynard	(541) 592-6903
Solar Design & Construction	Bortz	(541) 753-8725	Solar Depot	Mizani	(916) 381-0235
Bobcat and Sun Construction	Claridge	(541) 389-7365	Read Goods Trading Company	Musser	(541) 334-6962
Mainline Electric	Cordeiro	(541) 535-9862	Mr. Sun Solar	Patterson	(503) 245-3722
Solar Collection, Inc.	Dawson	(541) 535-5364	Home Power	Perez	(530) 475-3179
Oregon Department of Energy	Dymond	(800) 221-8035	Solar Interior Design	Pokorny	(503) 224-2322
Energy Service Co., The	Eames	(541) 302-6808	Sun Earth, Inc	Reed	(909) 605-5610
SolarTech	Elliot	(541) 545-3201	Stellar Processes	Robison	(503) 827-8336
Gen-Con, Inc.	Gunderson	(503) 245-7657	Emerald PUD	Savage	(541) 744-7448
Sunlight Solar Systems	Israel	(888) 787-6527	Eastern Oregon Solar Electric	Slater	(541) 576-2478
Oregon Solar and Water	Johnson	(541) 344-1594	EWEB	Spiek	(541) 484-1125
Solar Energy Solutions	Koyaanisqatsi	(503) 238-4502	Summers Solar Systems	Summers	(541) 683-4014
Renewable Energy, Inc.	Larson	(503) 287-4777	U. of O. Solar Monitoring Lab.	Vignola	(541) 346-4745
Solar Assist	Loken	(541) 338-4957	City of Ashland	Wanderscheid	(541) 552-2061

Call for a New MRSI Proposal



The Department of Energy's (DOE) Million Solar Roofs (MSR) Initiative has issued another call for proposals. The proposal have to be submitted by February 1, 2001. Christopher Dymond of the Oregon Office of Energy is again putting a proposal together for the Oregon MSR Coalition. Time to input suggestions is NOW! The OSEIA/MSR meeting on January 16, 2001 will discuss what to put into the proposal.

The MSR Initiative is an initiative to install solar energy systems on one million buildings in the United States (U.S.) by 2010. This effort includes two types of solar energy technology: 1) photovoltaics that produce electricity from sunlight, and 2) solar thermal panels that produce heat for domestic hot water, for space heating or for heating swimming pools.

A key strategy of the Initiative is to catalyze market demand in local areas through the establishment of State and Community MSR Partnerships. The overall goal of this solicitation is to assist State and Local Partnerships to contribute to the installation of one million solar energy systems on U.S. rooftops by the year 2010. These Partnerships bring together business, government and community organizations at the regional level with a commitment to install a pre-determined number of solar energy systems.

There were forty-eight such existing partnerships under the MSR Initiative, as of October 1, 2000. They received their MSR Partnership designation by writing a letter of commitment to DOE with their goal for actual installations by 2010. In return, DOE provides access to a variety of financing options;

training and technical assistance from DOE's existing infrastructure; recognition and support; and a link to solar energy businesses, associations and related industries that can provide assistance. New MSR Partnerships can declare their intent to join the Initiative by including such a letter with their application for this solicitation. A complete description of partnerships and their representative activities can be found in Appendix A and on the MSR website at <http://www.MillionSolarRoofs.org>.

DOE's Office of Energy Efficiency and Renewable Energy will only consider proposals from interested State and Local Partnerships to help fund their MSR program development and implementation activities.

Projects will be managed by the DOE Regional Offices. DOE intends to allocate a portion of total available funding to each of the six DOE regions based on a formula that considers existing partnerships. Applicants will only be competing against other partnerships in their DOE region.

The project or activity must be conducted in a designated MSR State and Local Partnership area. Any member of a State or Local Partnership, except industry associations, can apply on behalf of the Partnership, including builders, energy service providers, utilities, non-governmental organizations, local governments, or state governments. The different organizations/offices involved in a State or Community Partnership are encouraged to collaborate on their response to this solicitation. There is no cost-sharing requirement for these grants although cost-sharing will be considered in the selection process.

DOE will fund up to \$50,000 per project. Subject to the availability of funds, DOE anticipates funding approximately 20 to 50 grants in the amount of \$10,000 to \$50,000 each.

The following noncomprehensive list

provides examples of types of activities a Partnership may consider including in their application:

1. Study the Localized Barriers to Solar Energy Applications

Barriers can include restrictive codes and standards, lack of public awareness and education, prohibitive interconnection standards applied by energy service providers, lack of adequate financing options, and more. A community may choose to address one, or any combination of these issues depending on their local situation.

2. Support Net Metering for Photovoltaics (PV)

Net metering improves the economics of PV generation by allowing customers to capture the retail value of electricity for most or all of their PV generation. It is already an option in many states. States and communities might identify implementation of net metering as a critical issue to address in order to improve the economics of PV in their area.

3. Design Charrettes

Charrettes are intensive workshops involving a mix of professionals who work with a community to solve specific design problems. Design charrettes can be one day long or last a week depending on the scope and detail of the problems and issues tackled. Charrettes may be used to help create a framework for implementing solar energy installations in a community or state.

4. Develop And/Or Modify Codes and Covenants That Affect Solar Energy Installations

Many communities or developments have adopted restrictions that make it difficult or impossible for a homeowner to install solar energy systems on their roof. A partnership may choose to work with community groups, local governments, and/or developers to address these unnecessary restrictions.

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MSR Coalition-OSEIA Quarterly Meeting Minutes

Tuesday October 10, 2000 12:00 - 4:00 PM

State Lands Building 775 Summer Street, Salem, OR

by Chris Eames



1. Welcome and Introductions

Attending were: Andy Bortz, Dan Stiffle, John Patterson, Jim Brands (Northwest Public Power Association), Don Speik, Jon Biemer, Christopher Diamond, Doug Boleyn, Newt Loken, Howdy Reichsmuth, David Parker, & Chris Eames.

2. Minutes of the July 11, 2000 General Membership Meeting

It was moved seconded and approved unanimously to approve the minutes as read.

3. Treasurer's Report: Ray Pokorny

Checking Account has \$679.58. Net Metering Fund (savings) has \$5,897.59. Membership dues are largely current. Exceptions are those utilities that require us to be a non-profit organization in order for them to participate. These are the big utilities: PGE and PacifiCorp. It was moved seconded and approved unanimously to approve Ray's report as presented.

4. OSEIA Corporate and Bylaws Status:

David Parker reports that it would take \$800.00 to pay a lawyer to create a 501C-3 non-profit organization. It would take about 6 months. OSEIA has approved \$250.00 but this is not

enough. David will find out more on this.

5. Solar Licensing - "Renewable Energy Contractor"?: David Parker

John Patterson, David Parker, Christopher Dymond, Terry Swisher-State Of Oregon Plumbing Board, Gary Wilson-State Of Oregon Electrical Board, Brian Keri-IBEW, State Senator Ted Farrioli, and others met October 9, 2000 to discuss the issue. Senator Farrioli and State Representative Carl Wilson are interested in potentially sponsoring a bill at the next legislature to achieve a specialty license. Christopher Dymond circulated a draft of his notes of the meeting and discussion ensued. There is a law already on the books that allows the Plumbing Board to create a specialty license by administrative action which has not been done after years of sporadic effort by the industry. There is no such ability on the part of the Electrical Board. The next meeting to try to work out the objections voiced at yesterday's meeting and to specifically present our needs/expectations to the state regulatory groups will be held 10/25/00 at the State Capitol - Room TBA.

David Parker is currently involved in preparation of the report commissioned by grant through the Million Solar Roofs.

6. Committee Reports:

Tax Credits

Residential Credits are very popular with appliances and will likely remain in the next legislature. Commercial credits are also safe from elimination. Christopher Dymond will recommend that SDHW credits align with SRCC standards, \$3/watt for PV (max: \$1500), and a threshold of 10% for PV credits. Also, OOE will come out against any credits that pro-

vide more than 35% of the cost of the system. There will be a Rules Update meeting to be held 10/25/00 at OOE-contact Christopher Dymond (503-378-8325) for details about changes and clarifications that are being proposed.

OSEIA Brochure

Ray Pokorny brought some examples for a new brochure. Cost of professional copywriting, composition and graphic design, will run upwards of \$6,000 for a premium color, customizable package. It was generally decided to table consideration of brochure creation until such time that we have a definite message, targeted audience, and funding to print it.

Million Solar Roofs

Christopher Dymond reported that he expects an approximate doubling of funds available and also a doubling of eligible recipients. Doug Boleyn presented the results of his photographic record grant which documents a large number of well-installed PV systems. Joe Savage is proceeding with school programs in Elmira at Elmira High and Willamette High in Eugene.

7. Consolidating Solar Organizations in Oregon: "Solar Oregon"?

An idea that has been circulating proposes that since so many of the active membership of the boards of both OSEIA and SEA of O are the same people and since the overall goals of both organizations is the promulgation of solar technologies, it might be advantageous to both organizations to merge into a single entity, or alternatively, align with each other to work in concert under a mutual umbrella organization. SEA of O has offices, newsletter staff, and legal standing as a 501C-3 non-profit. Their board finds

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MSR Coalition-OSEIA Quarterly Meeting Minutes

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our separation to be unnecessarily duplicative of effort. Much discussion followed expressing concerns over how our strategic plans might conflict or enhance one-another. It may be possible to join on a trial basis to determine if there would be problems that could not be resolved. A vote to have joint meeting in January with the SEA of O board and to combine our newsletters for the next issue was moved by Ray Pokorny and seconded by David Parker. It carried without dissent.

8. Other Business

There was discussion about what to do Bradford-White solar tanks that have failed in the field. Ron Summers has filed a lawsuit against Bradford-White with no other contractor as co-complainant. Newt Loken will contact

Ron to see if others can join the complaint, assuming that an industry group may hold more sway. If you have installed any of these tanks, contact David Parker so that he can put forward the problem that OSEIA faces as a group.

Christopher Dymond will complete an Oregon Solar Electric Guide to send to consumers. Contact him for a copy of his draft.

The next meeting of OSEIA will be held sometime in January, 2001 probably in Salem. Location to be announced. [Ed. *The next OSEIA/Oregon MSR Coalition meeting will be January 16, 2001 at 1:00 to 4:00 pm at the Oregon Office of Energy in Salem.*]

9. Adjourn

Call for a New MSRI Proposal

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5. Training for Building Officials, the Construction Industry, Realtors, Solar Energy Installers and Utility Personnel

Providing information and education on solar energy technologies is often the easiest and most effective way to earn the support of related businesses sectors. A partnership may identify one or more groups of professionals as a priority for training and education.

6. Conduct an Economic Study of the Benefits of Solar Energy Technologies

A partnership may want to look at the economic benefits of using solar energy technologies in their state or community. This analysis can be critical to work with constituency groups, customers, legislators, and businesses.

Message from the President

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schools. OSEIA through the Oregon Million Solar Roofs Coalition has developed solar electric lesson plans for high school science students in conjunction with the PV for schools programs. These lesson plans are available through at <http://solardata.uoregon.edu/Education/LessonPlans.html>. Sample questions and suggested answers that go with these lesson plans are also available to teachers.

The University of Oregon, with the assistance of EWEB, is considering the integration of a solar electric façade in its plans to remodel Gilbert Hall. In Europe and Japan, companies are using solar electric panels to replace material used for façades on new buildings. The solar panels are less expensive than marble or granite and produce electricity to help offset the buildings energy load. It is expected that office buildings of the future will power their uninterrupti-

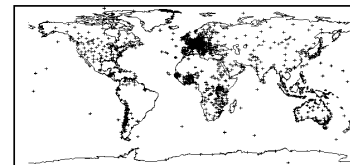
ble power supplies with solar electric panels on the façades of their buildings. Photovoltaics (PV) will serve many purposes: protecting sensitive equipment from power outages, replacing building material, sending an environmental corporate image, as well as producing electricity.

OSEIA and the solar community have a lot of work ahead for the coming year. Of major concern are the solar tax credits that will expire unless we can get the legislature to extend them. In addition, OSEIA member are working towards a renewable energy contractors license to ensure quality installation of solar electric and wind systems. Finally, much work still needs to be done to help small utilities with their implementation of Oregon's net metering law.

It has been quite a learning experience over the last two years being chair of OSEIA. I have been involved in many

activities I didn't envision when I took the job, but have meet many interesting people along the way. Passage of the Oregon Net Metering law, keeping the solar tax credit including pool heating on the books, and funding for the Oregon Million Solar Roofs Coalition have been major accomplishments over the past two years. The president may get credit for these results, but it was the work of all OSEIA members that really made it possible.

Besides the new legislative challenges, several tasks still remain from clearing up the OSEIA bylaws and corporate status to increasing OSEIA membership. I hope all OSEIA members will give the new set of officers at least the same level of support that I have received.



The Power Is Yours Feb. 13-15, 2001

Below is the information about a distributed generation workshop sponsored by Bonneville, DOE, and Western Area Power in Eugene, Oregon. This is one of three similar distributed generation workshops being presented on the west coast.

THE POWER IS YOURS

Distributed Generation Workshop

Feb 13-15, 2001 Eugene

Valley River Inn
1000 Valley River Way
Eugene, OR 97401
(541) 687-0123

Sponsored by:

Anaheim Public Utilities
Bonneville Power Administration
City of San Jose
Emerald PUD
Energy Co-Opportunity
Enron
IBEW
Silicon Valley Power
USDOE (FEMP)
Western Area Power

Day One

7:30 am Registration and Continental Breakfast

8:30 Welcome and DG Overview - Bob Parkins, Western, Curtis Framel, DOE

--Million Solar Roof Initiative
--Existing Capacity Shortfall
--T&D Constraints
--Geothermal Programs
--Windpower Initiatives

10:00 Break to Exhibits

10:30 Photovoltaics - Steve Johnson, ECO Bob Parkins, Western

Technology Overview

--Materials
--System Types
--System Components and Configurations
--Design Considerations

Noon Lunch and Vendor Presentations

1:00 PV Applications

--Residential and Commercial Facilities
--Water Pumping
--Portable Units
--Off Grid

2:30 Break to Exhibits

3:00 Field Testing at Western

3:45 Vendor Panel - Jeff Shields, Enron

(Hear presentations on DG products and services available)

4:30 Break for the Day

Day Two

7:30 am Continental Breakfast

8:30 Micro Turbines - Bill Cetti, ECO

Technology Overview

--Generator
--Control System/Electronics
--Fuel Delivery Systems
--Protective Relays
--Operating Modes
--Installation Guidelines

10:00 Break to Exhibits

10:30 Applications - 30 kW package example

--Hybrid Electric Vehicles
--Resource Recovery
--Combined Heat and Power
--Capacity Addition (T&D Deferral)
--Power Quality/Reliability
--Peak Shaving/Stand-By
--Larger Packages (1 mW and greater)

Economic Comparisons

Noon Lunch Show Me the Money - Andy Walker, NREL

--Financing and Funding DG Projects for Public Facilities
--Partnership Opportunities
--Procurement

1:30 Fuel Cells - Brian Wierenga, ECO

Technology Overview

--Fuel Source
--Membrane/Catalyst
--Stack
--Battery System
--Capacity/Efficiency

2:45 Break to Exhibits

3:15 Residential Applications - 10kW example

--Integration with PV Systems
--Water Heating
--Site Preparation
--Load Management
--Larger Fuel Cells (50 kW and greater)

Day Three

7:30 am Continental Breakfast

8:30 Case History Panel - Bob Parkins, Western

(Hear how DG works - the promises and the pitfalls)

10:00 Field Trips

Who Should Attend?

Bonneville and Western Area Power Customers, Utilities, Federal, State, and

Local Government Personnel, FEMP managers, Green Power and Distributed Power

Marketers, and Developers

About the workshops

The workshops describe DG technologies as dynamic opportunities for public agencies and the private sector to meet all or a portion of their energy needs in an economic and environmentally sensitive manner.

The Attendees have the opportunity to:

- Learn about the technologies,
- Understand how to make PV and other DG systems part of the business portfolio,
- Become comfortable with issues

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The Power Is Yours

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- such as maintenance, payback, net metering, and safety,
- Receive information on National, State, and Local programs promoting renewables, and
- Meet exhibitors who provide DG products and services.

Questions? Contact Linda Nelson - gnelson181@aol.com



Registration Form

San Jose Eugene Anaheim

Name(s) _____

Title(s) _____

Company _____

Address _____

City _____ St _____ Zip _____

Email _____

Registration Fees:

@ \$150 per person (DOE, Bonneville and Western Customers and Sponsors)

@ \$200 All others

Please make checks payable to UTILITY FORUM CONNECTION and Mail to Utility Forum Connection, 11230 Gold Express Drive # 310-341, Gold River, CA 95670

HARVESTING CLEAN ENERGY FOR RURAL DEVELOPMENT SUMMIT

January 29-30, 2001 in Spokane, Washington at the downtown Doubletree. View the agenda and REGISTER ONLINE now through the Conference Website: <http://capps.wsu.edu/programs/cleanenergy01.htm>

Explore economic opportunities to harvest new revenues and create vital jobs in the rural Pacific Northwest from a new "agricultural commodity" clean energy - at a major regional conference January 29 and 30 in Spokane.

Harvesting Clean Energy will present top experts and experienced leaders who have been at the forefront of the growth of clean energy production in rural America. It will also provide a forum for building partnerships to marshal the public and private resources and expertise needed to scale up clean energy development in the region.

The conference will be of interest to:

- Rural landowners, including farmers and ranchers
- Rural economic development leaders

- Rural electric utility representatives
- Agriculture organizations
- Tribes
- Bankers and other financing specialists
- Elected officials
- Local, state, federal & tribal agencies.

Farmers, ranchers and other rural landowners from the Midwest to the Northwest are discovering in the wind blowing overhead a new "crop" that integrates well with existing operations while providing a valuable, reliable source of additional income. Many landowners are gaining more revenue per acre leasing small portions of land for wind power turbines than they can earn from traditional crops.

There are also significant emerging opportunities for turning agricultural organic wastes into bioenergy -- for example, using wheatstraw to make cellulosic ethanol for transportation, and converting cow manure into bio-

gas from which electricity

can be generated. By turning wastes into resources, these technologies deliver environmental and economic benefits together.

Growth of clean energy production in the rural Northwest and BC will bring vital new revenues and jobs to parts of the region not enjoying the 'high tech' boom -- and help the region meet its growing energy needs with non-polluting sources of power.

Early registration (before Jan. 7) for the two day conference is \$50 US for individuals and \$150 US for professionals. The DoubleTree is offering a special conference rate of \$63 per night, first come-first served.

Harvesting Clean Energy will be followed on January 31 by a National Renewable Energy Lab workshop on wind energy opportunities for Northwest Tribes.

For more information, see the conference website or contact Conference Coordinator: Rhys Roth, Climate Solutions, ph. 360-352-1763; rhys@climatesolutions.org.

Our Energy Future

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In the future, price increases for energy from fossil fuels will eventually exceed the cost of energy from renewable sources. All new construction will include solar water heaters integrated into the building design. Passive solar design will be a necessity to help keep the building energy costs reasonable. Solar electric roof shingles or paneling will be integrated into all new building, not only to produce electricity but to provide higher quality, more reliable electricity to protect sensitive electronic devices and appliances.

Now how do we move to our solar energy future without jumping from one crisis to another. The answer is as simple as planning for the change and identifying and removing the institutional and financial barriers that exist. In fact, the Oregon Mil-

lion Solar Roofs Coalition composed of the solar industry, some utilities such as Ashland, Emerald PUD, EWEB and PGE, and some interested organizations and agencies is partnering with regional energy offices, Bonneville Power, and the US DOE to accomplish some of these tasks.

What is lacking is the public's concern that our society should be addressing the energy issue. Education, public health and safety, a strong economy, and a clean environment are all important issues. Energy that heats our homes, provides our transportation, and powers our economy is basic to many of these major issues. However, it is often ignored unless there is a problem or shortage. Now is the time to ask our leaders to address these issues and come up with a long-term plan and solution. The alternative is to let those with vested interests lock us

into their policies for their short-term gain and delay the long-term solution resulting in a vastly increased cost.



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