

SOLAR OREGON

The Solar Energy Association of Oregon

To increase the use of solar energy in Oregon

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Check the SEAO Web site at
www.solaror.org for more!

THOUSANDS SEE SOLAR AT WORK IN OREGON

AS it has for more than 20 years SEAO offered a solar home tour in Portland in the fall. But this year, SEAO merged our annual solar home tour with the second annual Build It Green! Home Tour and Information Fair organized by the City of Portland Office of Sustainable Development. The tour was held on Saturday, September 20. SEAO picked the solar homes for the tour and city staff did the rest. Linda Barnes, SEAO tour coordinator said, "It made sense, since this tour attracted more than 700 paid participants, plus more than 300 volunteers, homeowners, installers, designers, etc. We more than doubled participation, exposed 1,000 people to solar energy, and collaborated in an outstanding energy fair. Participants saw that energy efficiency is the top thing they can do to affect their environment. Homeowners are making energy efficiency decisions and incorporating solar features. There were a lot of solar homes!"

Linda is considering other options for next year's tour. The City of Portland already has scheduled its Build It Green! tour for September 18, 2004. SEAO may offer one tour in conjunction with the city, and another one during the national solar home tour in October.



The Cunningham-Pinon home was part of September's solar home tour.

SOLAROREGONFILE PHOTO

Other Oregon Solar Home Tours

Tours also took place in a record number of other Oregon communities in conjunction with the eighth annual National Tour of Solar Homes sponsored by the American Solar Energy Society October 4-5. SEAO members in Eugene held their tour at that time. Oregon's tours lived up to the theme: "Real Places for Real People. Oregonians saw solar at work in homes, ranches, farms and other businesses. Most of the tours included brief workshops on a variety of solar and energy topics. For more information about the tours and solar energy use in Oregon, see the 2003 Oregon Tour

continued on page 4

Oregon Residential Solar Installations 1978-2002

A new Oregon Department of Energy (ODOE) analysis reports on the renewable energy installations in Oregon that received an Oregon Residential Energy Tax Credit from 1978 through 2002. ODOE reported that 385 solar domestic hot water systems, five solar space heating and 42 photovoltaic (PV) systems were



installed and received the credit in 2002. Overall, activity increased in 2002 over 2001. Installations of solar domestic water heaters were up by 17 percent in 2002 over 2001. However, solar space heating systems

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**Solar
Energy
Association
of Oregon**

SEAO News

SEAO has five projects for 2004:

- 1 organizing the annual tour of solar homes, which will be held in either September or October 2004, or both
- 2 serving on the Local Organizing Committee for the American Solar Energy Society's (ASES) annual conference to be held in Portland in July 2004 and organizing the workshops and tours that will benefit SEAO
- 3 the *Solar Oregon* newsletter
- 4 making presentations at local schools and for community groups
- 5 completing the Web-based speakers bureau database

The ASES conference will draw more than 1,000 people from around the world to explore the latest in solar energy. This conference last was held in the Northwest in 1987, so SEAO is proud to host this important gathering. Conference attendees and members of the public are welcome to participate in tours and workshops. We'll need your help! Volunteers will guide conference attendees, provide technical support and information, and greet attendees to Portland and SEAO. Volunteers will receive free admission to the conference. Watch for more information about the conference in the next few months. And contact SEAO at 503-231-5662 or info@solaror.org if you're interested in volunteering. *

Oregon Solar Groups

Central Oregon

3EStrategies

3Estrategies (formerly Earth Connections—Oregon) implements strategies that incorporate all three elements of sustainability: economy, ecology, and equity.

Mission: "To accelerate the transition to sustainable building, energy and economic practices."

Programs: Tour of Solar Homes, Renewable Energy as an Economic Development Opportunity, Green Building Program, Sustainable Economic Development (See Breakthroughs on p. 5 for more information.)

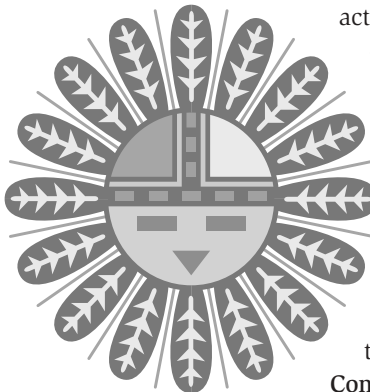
Contact: 3EStrategies, Cylvia Hayes, Executive Director, 16 NW Kansas, Bend, OR 97701, phone (541) 617-9013, fax (541) 382-2287, info@ec-o.org, or www.ec-o.org

John Day

Eastern Oregon Renewable Energies Non-profit (EORenew)

Mission: "To inform and educate on renewable energy production and energy efficiency through meetings, workshops, educational materials, and energy fairs."

Activities: EORenew has been keeping busy with educational programs for all ages. The free Winter Seminar Series early in the year included workshops on all kinds of passive and active solar, as well as energy efficiency. Staff has been making presentations in local school classrooms, with energy awareness games for younger children, and slide shows and participatory



activities for older children. SolWest Fair in July drew over 2,000 participants. September's Solar Potluck and Picnic saw solar cookery enthusiasts vying to see who could produce the best potluck dish. This winter will see more classroom presentations, and a series of energy efficiency workshops in small communities.

Programs and services: energy audits, Oregon energy tax credit help, referrals to renewable energy suppliers, member newsletter (See Breakthroughs on p. 5 for more information.)

Contact: Jennifer Barker, EORenew, PO Box 485, Canyon City, OR 97820, (541) 575-3633, info@solwest.org, or www.solwest.org.

Klamath Falls

Klamath Solar Association

Mission: To promote a coherent passage to a renewable energy-based economy for the viability of future generations; to advocate selecting smart, energy-efficient appliances and vehicles, and building energy efficiency into homes, offices and industry, by disseminating information through outreach.

Activities: Tour of renewable systems in Klamath Co., October Programs and services: Under construction

Contact: Philip Dussel, Klamath Solar Association, PO Box 1418, Klamath Falls, OR 97601, (541) 883-2318, dusselp@kfalls.net

Oregon Solar Energy Industries Association (OSEIA)

Mission:

- Promote the use of solar energy in Oregon
- Inform the public of the benefits of solar energy
- Serve as the central organizing association for Oregon solar energy professionals
- Establish and maintain a business code of ethics for the industry
- Sponsor legislation affecting solar energy in Oregon

Contact: Oregon Solar Energy Industries Association (OSEIA), Jon Miller, Executive Director, 503-236-0367, oseia@attglobal.net, or www.OregonSEIA.org.

Salem Solar Association

Contact: Christopher Dymond (503) 378-8325 or Ron Summers (503) 559-2840 *

Solar Oregon is a publication of the Solar Energy Association of Oregon. SEAO is a non-profit organization dedicated to increasing the use of solar energy in Oregon.

SEAO BOARD OF DIRECTORS

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SEAO is a member of these organizations:



American Solar Energy Society



a member of Earth Share
OF OREGON



NW Energy Coalition
For a clean and affordable energy future

NEW SOLAR PROJECTS



Kettle Foods' 114-kW PV Array Now Oregon's Largest

Description: Oregon's largest PV array, a 114-kW net-metered system consisting of 616 Sharp 185-Watt PV modules with a 100-kW commercial inverter with isolation transformer was installed on Kettle Foods' processing facility near I-5.

Design: Advanced Energy Systems

Installation: Solar Assist and Dell's Electric

Location: Salem

Contact: David Parker, Advanced Energy Systems, 541-683-2345 or david@aes4us.com



David Parker and Russ Read

Mr. Sun Solar Office



Description: This company's showroom features solar attic fans, a solar oven, solar skylight tunnel, solar pool panels, solar hot water panels and a solar domestic hot water system, and solar electric panels. Mr. Sun module manufacturing occurs on-site.

Contact: John Patterson, Mr. Sun Solar,

(503) 222-2468, john@mrsunsolar.com or www.mrsunsolar.com

Location: 3838 SW Macadam Ave., Portland



Oregon Department of Energy Gets PVs

Description: This fall, a 1320-Watt (DC STC) PV system was installed on the Oregon Department of Energy (ODOE) building. The system is unique for two reasons. First, it uses a new 1100-Watt inverter manufactured by PV Powered of Bend, Oregon. Second, the solar installer (Solect-systems) owns the system and is selling the power for 25 cents per kWh for the first three years. After that, ODOE may buy the system for \$2,000. If the system performs as expected Solect-systems will be paid about \$350 for the next three years for the energy the system provides the Department, and ODOE pays a net cost of less than \$3 per Watt for the demonstration PV system.

Installation: Solect-systems

Location: Salem

Contact: Christopher Dymond, Oregon Department of Energy, 800-221-8035 or www.energy.state.or.us.

UO Lillis Business Complex Integrates Four PV Systems

Description: A major remodel and addition to Gilbert Hall on the University of Oregon campus will include a grid-connected PV installation.

Funded by private donations.

Location: Gilbert Hall, Lillis Business Complex, Charles H.

Lundquist College of Business, University of Oregon

Description: 45 kWDC total, including 6 kWDC of glass curtain wall PVs, 2.7 kWDC of glass modules above the atrium, 6.2 kWDC of PVs laminated into the metal standing seam pent-house roof panels, and 30 kWDC of crystalline Sharp PVs installed at 0° on the building roof. SunnyBoy 1800 and 2500 inverters were used throughout.

Estimated Annual Output: 54,000 kWh

Design and Installation: SRG Partnership, PC, Portland; Lease Crutcher Lewis, Portland; Christenson Electric, Inc., Eugene; Solar Design Associates, Inc., Harvard, MA; New Path Renewables, Inc., Bend

Location: Eugene

Contact: Dan Stone, New Path Renewables, (541) 390-3626, www.newearthworks.com



THOUSANDS SEE SOLAR

continued from page 1

of Solar Homes guide, available from the Oregon Department of Energy, 800-221-8035.

Christopher Dymond, Oregon Department of Energy, commented that, "Each of the 10 cities hosted their own tour with their own style, promotion and features. Next year we hope to have more than a dozen cities and encourage cities to host more activities and presentations."

Here's a summary of these tours.

Ashland — 6 sites, including 4 homes, the Wilderness Charter School (straw bale, PVs), Ashland Civic Center; 100 participants. Cosponsors: The City of Ashland and *Home Power Magazine*. Contacts: Larry Giardina & Paige Prewett, City of Ashland, 541-552-2065, giardin@ashland.or.us; and Joe Schwartz, *Home Power Magazine*, 541-512-0201, joe.schwartz@homepower.com.

Central Oregon — 15 homes and 4 businesses; about 500 participants, including people from California, Washington, Nevada, Montana, Colorado, Arizona, Georgia, Delaware and Hawaii. Contact: Cylvia Hayes, 3EStrategies, 541-617-9013, info@3estrategies.org

Eugene — five homes and the Down to Earth retail store; 70 participants. Contact: Tom Scott, 541-302-6808.

Grants Pass — 3 homes; about 60 participants. Contact:

Paul Farley, Energy Outfitters Ltd., 800-467-6527, paul@energyoutfitters.com

John Day — 5 sites [Grant County Fairgrounds' grid-tied PV system, EORenew's independent solar-electric office, and three solar homes (one on-grid with PV backup system, one off-grid passive solar with PV, and one off-grid total PV with solar-powered garden irrigation)]; 15 participants. Contact: Jennifer Barker, 541-575-3633,

Klamath Falls — several buildings at 4 sites, only one of which was on the grid, and including a PV system supplemented by a small hydro plant on a manmade lake; about 55 participants. Contact: Mavis McCormic, Klamath Solar Association, mccormic@internetcds.com.

LaGrande — 6 sites, including geothermal exchange heating/cooling systems; about 55 participants. Sponsor: Oregon Rural Action. Contact: Brett Kelder, Oregon Rural Action (541) 975-2411, brett@oraction.org.

Roseburg — 3 buildings; over 60 participants. Sponsor: Renewable Energy Subcommittee of the Global Warming Coalition and Energy Independence Co. Contact: Al Walker, Umpqua Solar Association, 541-496-3987, alwalker@mcsi.net

Salem — 5 buildings including PVs on the Oregon Capitol, Thermomax solar water heating systems integrated with hydronic forced-air fan coil units; 45 participants. Contact: Christopher Dymond, Oregon Department of Energy, 800-221-8035, Christopher.S.Dymond@state.or.us *

Recommended Reading

Good Green Homes: Creating Better Homes for a Healthier Planet, by Gibbs Smith, October 2003, \$39.95, available in local bookstores or from www.gibbs-smith.com. *Good Green Homes* features new and remodeled homes that showcase innovative green building options. Historic homes, healthy and green urban homes, an artist's studio, a vacation retreat, green neighborhoods – these are places you'll want to live in — and that will be light on the land for years to come. You'll be inspired! For more information, visit www.goodgreenhomes.com.

Natural Home Heating: The Complete Guide to Renewable Energy Options, by Greg Pahl, Chelsea Green Publishing, White River Junction, VT, 802-639-4099 or www.chelseagreen.com, 2003, \$30.00.

How do you heat your home? It's a big decision; your heating system is the biggest energy user in your home. In this book, Greg Pahl can't possibly fulfill his promise to be complete in just 270-some pages, but he is comprehensive, informed, informative and entertaining. He describes the fundamentals of passive and active solar heating, and talks real about the pros and cons of wood heat, pellet heaters, corn- and grain-burning appliances, converting old oil burners to biodiesel and new geothermal (heat pump) systems. An invaluable overview!

Solar Means Safety Fact Sheets, by Interstate Renewable Energy Council, <http://www.irecusa.org/commout/about.html>
Interstate Renewable Energy Council's (IREC) Solar Means Safety

educational campaign offers a series of six fact sheets describing solar power's versatility and flexibility for a variety of uses. You can view the fact sheets on-line, and download and print them out. The fact sheets are also available in hard copy, though supplies are limited.

"Consumer Guide to Home Energy Savings" eighth edition, American Council for an Energy-Efficient Economy, 2003, \$8.95 (plus shipping and handling), ACEEE Publications, 1001 Connecticut Avenue, N.W., Suite 801, Washington, D.C. 20036-5525, 202-429-0063, <http://aceee.org>, aceee_publications@aceee.org. This annual report will update you about the latest and most energy- and cost-efficient techniques, systems and products. The "Checklist for Action" (see <http://aceee.org/consumerguide/chklst.htm>) can help consumers maximize energy and dollars savings, too.

<http://www.nytimes.com/2003/07/29/business/worldbusiness/29SOLA.html?ex=1061093979&ei=1&en=bb653e62a9193c54>
Japan produces the most PV panels in the world and half the world's solar electric power; it expects its PVs to produce more than 4.8 million kilowatts by 2010. This fascinating New York Times article summarizes Japan's commitment to developing its photovoltaic industry, and the challenges it faces. *

Breakthroughs!

Northwest Solar Co-op: 22 PV Systems and Counting!

Since June 2002, the Bonneville Environmental Foundation's (BEF) Northwest Solar Co-op has supported the installation of 22 new local solar electric systems, with a combined capacity of 75 kilowatts. That makes the program one of the region's largest sources of solar electricity. Residential and business-scale system owners sell the green tags from the installations to BEF through the Co-op for up to five years; ownership reverts to the system owner thereafter. Green tags are certificates that represent the environmental benefits of a specific amount of electricity produced using a renewable energy source. BEF resells the green tags to green power supporters, who share the facility's costs and environmental benefits. Since forming in 1998, BEF has partnered in the development of approximately 225 kilowatts of solar projects in the Pacific Northwest. Contact: Doug Boleyn, Northwest Solar Co-op, (503) 655-1617, doug@cascadesolar.com.

Solar Summit at Sunriver

On October 27-30, 56 representatives from public utilities, non-profit organizations and state and federal agencies, and the solar industry gathered at the sixth annual Northwest Solar Summit at Sunriver near Bend, Oregon. They discussed current solar programs, new technologies, and solar radiation and performance testing. A highlight was a presentation by Tom Starrs of RWE Schott Applied Power, who explained international solar industry activity and how to grow the U.S. solar industry. Richard Perez, a respected solar researcher from the State University of New York, showed that recent major power outages could have been avoided if just 2% of peak summer loads were provided by solar. There is growing support in the state of Washington to create a solar power program based on power production payments rather than rebates. Contact: Jim White, Chelan County PUD, 509-661-4829 or jamesa@chelanpud.org; or Mike Nelson, Western SUN, miknel@westernsun.org.

SolWest 2003 Hosts 2,100 Renewable Energy Enthusiasts

More than 2,000 renewable energy enthusiasts and technicians from all the western states and beyond gathered for SolWest 2003 in John Day in July. Fifty-four exhibitors participated. Some displayed their new inventions, including an efficient variable speed water pump controller, a large in-stream hydroelectric turbine, and a digital solar path imaging device. Keynote speaker John Patterson challenged listeners to take control of their energy future.

Experts from as far away as New Mexico, Canada, and Hawaii presented 50 workshops on topics such as "Solar Electric Power Systems: Expectation and Reality", "Principles of Passive Solar Buildings and Water Heating", and "Residential Sustainable Development." Participants in a hands-on workshop installed a stand-alone solar electric system at a nearby mountain residence. Vehicles powered by biodiesel, electricity,

hybrid power and vegetable oil were displayed; some raced in the SolWest Electrathon lightweight vehicle rally.

Contact: Jennifer Barker, EORenew, (541) 575-3633, info@solwest.org.

Central Oregon Renewable Energy Industry Forum

In late October, 100 industry representatives, elected officials, agency representatives and economic development interests attended the first comprehensive and industry-wide "Growing the Central Oregon Renewable Energy Industry Forum". Co-sponsors included 3Estrategies, a non-profit organization in Bend; Central Oregon Intergovernmental Council; Oregon Rural Development Council; Oregon Department of Energy; Oregon Department of Agriculture; and the Governor's Economic Revitalization Team. The final report will be available by the end of November. Contact: 3Estrategies, (541) 617-9013 or www.3estrategies.org.

Solar Is Hot!

Energy Outfitters of Grants Pass was recently recognized as the fastest growing small business by the Business Retention and Expansion Group in Southern Oregon. Energy Outfitters is a renewable energy system integrator and wholesale distributor specializing in photovoltaics, wind, and power conversion electronics. The company, founded in 1991, experienced sales growth of 20-25% per year, with a 300% growth from 2002 to 2003. From 2001 to 2003 the number of employees rose from 5 to 26. Energy Outfitters services over 350 solar contractors and electricians nationwide and has offices and distribution centers in Grants Pass, OR and Cedar Grove, NJ and field sales offices in San Diego, CA and Vancouver BC, Canada. Contact: Bob Maynard, Energy Outfitters, 800-467-6527, bob@energyoutfitters.com

Ashland's "Renewable Pioneers"

Ashland residents and businesses support the use of local and regional green power by participating in "Renewable Pioneers," a program developed by the City of Ashland and the nonprofit Bonneville Environmental Foundation (BEF). Participating residents and businesses buy green tags directly from BEF. Green tags support clean wind power and reduce the emission of CO₂, a harmful pollutant and greenhouse gas. One green tag is the equivalent of the CO₂ emissions produced by driving a car for six weeks! BEF returns a portion of its green tag revenues to the City of Ashland to fund renewable projects such as new PV systems at the Civic Center and Wilderness Charter School. Contact: 1) John Rankin, Bonneville Environmental Foundation, (503) 248-1905, (866) BEF-TAGS, johnrankin@b-e-f.org or www.greentagsusa.org, or 2) Paige Prewett, City of Ashland Conservation Commission, (541) 482-1084, pmprewett@yahoo.com *

Energy Trust Making Remarkable Progress

The Energy Trust of Oregon's solar electric program has dramatically increased the use of solar electric systems in Oregon, and is revitalizing Oregon's solar industry. Already, 57 solar electric systems have been installed, and over 50 more are in the works.

That's remarkable progress in just eight months.

Energy Trust Background

The Energy Trust is a unique public non-profit organization created expressly to improve energy efficiency and increase the use of renewable energy (solar, wind, biomass, geothermal and hydro) in Oregon. Its ambitious goal is to save 300 average megawatts of electric power and install 450 aMW of renewable energy generation by 2012. The Energy Trust receives funding from a portion of the 3% "public purpose charge" paid by the Oregon customers of PGE, Pacific Power and most recently, Northwest Natural. The Energy Trust invests these funds in targeted programs and projects, offering a variety of incentives and support.

Because the Energy Trust is investing ratepayers' dollars, all solar projects must:

- * be installed for PGE, Pacific Power or Northwest Natural customers in Oregon
- * be pre-approved by the Energy Trust
- * meet performance and longevity standards
- * reduce demand for electricity and/or natural gas
- * meet cost/benefit ratios established by the Energy Trust and Oregon Public Utility Commission
- * be installed by eligible solar contractors (called Trade Allies).

After a busy start-up phase, the organization is implementing a full menu of energy efficiency and renewable energy programs.

Solar Programs

Solar fits prominently in the Energy Trust goals. When combined with Oregon tax credits, Energy Trust incentives can lower the cost of new solar systems by 50%. "Our goal is to transform the market for solar in Oregon," explained Peter West, Energy Trust Renewable Energy Program director. "We know this will take time. However, our first-year results are stunning; we've exceeded our solar electric program goals, are about to launch a solar water heating program, and continue to receive interesting and viable solar proposals through our Open Solicitation program. We're also looking forward to the installation of larger-scale demonstration PV systems on public and non-profit buildings in Oregon in 2004. Obviously, we're tapping a significant demand for solar energy systems. All of these programs will support our market transformation efforts to prove that solar does, indeed, work in Oregon."

The Energy Trust continues to revise its solar programs. Here's the latest information, as of December 30, 2003. For further information, visit the Energy Trust website, www.energytrust.org.

Solar Electric Program

The Energy Trust launched this program in May 2003 to increase the use of solar electric (photovoltaic, or PV) systems by PGE and Pacific Power customers in Oregon. All systems installed under this program must be connected to the electric power grid.

Program results exceeded first-year goals. Demand by Pacific Power customers was particularly strong. In the program's first four months, the utility's customers exhausted the original incentive budget for the entire year — and an additional allocation approved by the Energy Trust board was committed two months later. A new budget was approved at a board meeting in December, allocating new funds for solar projects in 2004.

Incentives

Residential: \$3.90/Watt DC installed, up to \$12,750
Commercial: \$2.25/Watt DC installed, up to \$35,000
Incentives paid: \$604,000
Incentives committed: \$534,000
Total first-year incentives: \$1,138,000

Installations

Installations completed: 57
Installations committed : 50
Total installations: 107
Watts installed: 150,200
Watts committed: 133,800
Total watts:, 284,000

Solar Water Heating Program

The Energy Trust's new Solar Water Heating program adopted the technical specifications from BPA's program called The Bright Way To Heat Water™ ("Bright Way Program Specifications") as the framework for the electric water heating specifications for the Energy Trust Solar Water Heating (SWH) Program. This will maintain uniform standardization in the industry. Technical specifications for gas water heating were developed by Energy Trust.

Incentives will be available for PGE, Pacific Power and Northwest Natural customers who install approved solar domestic water heating and pool/spa heating systems. The program began in November 2003, with incentives for gas projects being approved in December 2003. The program is approved to run through the end of 2004, and will be reviewed for extension beyond that timeframe at a later date. (See chart on page 7.)

In addition to installation incentives, the Energy Trust offers up to \$500 for scoping studies and \$2,500 for technical and design services for qualifying commercial solar water heating projects. Energy Trust staff can also facilitate access to information on the Oregon Small Scale Energy Loan Program and other low-cost capital sources.

continued on next page

SEAO welcomes submissions to the calendar. For information, please see the submissions box on page XX.

SOLAR WATER HEATING PROGRAM INCENTIVES		
	PGE/Pacific Power	Northwest Natural
Residential		
Domestic hot water	\$0.02/annual kWh saved over 20 years, capped at \$1,500	\$0.20/therm over 20 years
Pools	\$0.01/annual kWh saved over 10 years (unglazed) or 20 years (glazed), capped at \$1000	\$0.10/therm over 10 years (unglazed) or 20 years (glazed)
Commercial		
Domestic hot water	\$0.02/kWh over 20 years, capped at 35% of project cost	\$0.20/therm over 20 years, capped at 35% of project cost
Pools/spas	\$0.01/kWh over 10 years (unglazed) or 20 years (glazed), capped at 35% of project cost	\$0.10/therm over 10 years (unglazed) or 20 years (glazed), capped at 35% of project cost

Open Solicitation Program

This program provides incentives for innovative renewable energy projects. So far, three PV projects and one solar water heating project are in operation: the Brewery Blocks PV project in downtown Portland, the Calapooia Crossing housing PV project in Sutherlin, Oregon's largest PV array, the 114kW system on Kettle Foods' facility in Salem, and the Bend Habitat for Humanity solar water heating project. Open Solicitation grants range from \$20,000 to \$1.5 million. Energy Trust board members and staff appreciate the "open door" the program offers, and the technologically and geographically diverse projects it has generated, and are looking for more good proposals.

Large-scale Community Solar Electric Demonstration Program

The Energy Trust issued a request for proposals for public agencies and non-profit organizations interested in installing grid-tied PV systems of at least 5kW. Proposals were due December 15, 2003; successful candidates will be selected by the end of January 2004. "This program allows the Energy Trust to demonstrate the viability of PV systems by supporting the installation of high-quality installations in visible public places in Oregon," said Char Rollier, Renewable Program manager. "We received 20 innovative and collaborative proposals that promise maximum public exposure to solar. This is one of the most effective ways to address our theme: 'Solar works in Oregon.'"

For more information about the Energy Trust energy efficiency and renewable energy programs, or to become an Energy Trust of Oregon Solar Trade Ally, contact Kacia Brockman, Energy Trust of Oregon, 733 SW Oak St., Suite 200, Portland OR 97205, 503-493-8888 or kacia@energytrust.org, or visit the Energy Trust website, www.energytrust.org. *

January

1/7 "Good Wood" Wood still is a wonderful, native building material. The "forest wars" of the past 20 years have prompted some people to think that building with wood is something to be avoided. However, some foresting techniques are not harmful to forest life and may actually be beneficial. Three sources of "good wood" will be discussed. Mike Barnes of Cascadia Forest Goods will cover commercial sources of certified wood. A representative of BRING Recycling will address salvaged wood. And, Matthew Hall of Aprovecho Research Center will describe his experience with wood harvested and milled at local small woodlands. Sponsored by the NW EcoBuilding Guild, Eugene Chapter. Free. To be held at 7 pm, at the McNail-Riley House, 13th & Jefferson, in Eugene. Contact: Bruce Sullivan, 541-767-0355 or sullivan@oikos.com.

February

2/4 The NW EcoBuilding Guild, Eugene Chapter, will sponsor a talk on rainwater management. Sponsored by the NW EcoBuilding Guild, Eugene Chapter. Free. To be held at 7 pm, at the McNail-Riley House, 13th & Jefferson, in Eugene. Contact: Bruce Sullivan, 541-767-0355 or sullivan@oikos.com.

March

3/3 Ecobuilding Guild members share many innovative "green remodeling" ideas to make your home lovely, healthful and environmentally OK. Sponsored by the NW EcoBuilding Guild, Eugene Chapter. Free. See 2/4 listing for time, location and contact information.

July

7/10-14 The American Solar Energy Society will hold its annual national conference at the Doubletree Hotel Lloyd Center in Northeast Portland. SEAO members are actively involved in planning tours and workshops, many of which are open to the public. Volunteers are welcome! Contact: SEAO, 503-231-5662.

The American Solar Energy Society's annual conference will be held in Portland in July, 2004. Over 1,000 people from around the world will attend to explore the latest in solar and renewable energy. We'll need your help! Volunteers will guide conference attendees, provide technical support and information, and greet attendees to Portland and SEAO. Volunteers will receive free admission to the conference. Contact SEAO at 503-231-5662 or info@solaror.org if you're interested in volunteering.

SEAO welcomes submissions to *Solar Oregon*, but cannot guarantee they'll be used. For photos, black-and-white or color prints are acceptable; digital photos are preferred. Digital photos must be 300 ppi, JPEG format only, and may be e-mailed. Please send materials to: Editor, *Solar Oregon*, 4303 SE Cora St., Portland, OR 97206, 503-775-8951, fax 503-775-4227 or e-mail marniemcph@aol.com. If you'd like us to return the materials, please enclose a self-addressed, stamped envelope. Submission deadlines are May 10, September 1 and January 10.

Oregon Residential Solar Installations 1978–2002, *continued from page 1*

decreased from 17 to 5 and PV installations dropped from 81 to 42 during the same period.

Since 1978, 17,462 solar domestic hot water systems (including pool heaters), 1,645 solar space heating systems, and 272 photovoltaic systems have received state tax credits totaling \$20,384,384. These projects cost a total of \$73,840,216, or about 79% of the total for all renewable resources projects that received the tax credit. The estimated annual energy savings during 2002 from all systems certified since 1978 was 30.65 million kilowatt hours of electricity and

0.69 million therms of natural gas. Passive solar energy systems are included.

It's interesting to compare 2002 statistics to 1982, when Oregon's solar industry was enjoying a short-lived peak. In 1982, 2,045 solar water heating systems, 250 solar space heating, and two PV systems received tax credits. Photovoltaics is the only solar category that has shown fairly consistent growth; in 2002, only the number of PV systems surpassed the 1982 figures. *

Contact: *Dave Barker, Oregon Department of Energy, 800-221-8035 or david.r.barker@state.or.us.*

Oregon Residential Solar Installations 1978–2002

	# of Systems		Estimated Tax Credit		Job Costs	
	1982	2002	1982	2002	1982	2002
Solar hot water	2,045	385	\$ 1,805,735	\$ 531,831	\$ 7,836,440	\$ 1,488,220
Heat pump DHW	0	0	0	0	0	0
Solar space heat	250	5	221,000	7,500	1,500,000	48,060
Wind	2	3	1,600	3,010	12,000	12,059
Geothermal	28	124	27,580	123,206	196,000	1,707,145
Hydro	2	0	1,830	0	12,000	0
Photovoltaic	2	42	1,838	53,668	12,000	350,682