



# Opportunities in Renewable Energy

*A Project of  
Eastern Oregon Renewable Energies Nonprofit  
(EORenew)*

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# Opportunities in Renewable Energy

## -Education

### Columbia Gorge CC Offers Degree in Renewable Energy Technology

Columbia Gorge Community College is the first community college in the Pacific Northwest to offer training programs for the wind power generation industry. Beginning fall 2007, CGCC is offering a one-year Certificate and a two-year Associate of Applied Science (AAS) Degree in Renewable Energy Technology.

This career ladder program was designed in collaboration with industry partners from the wind energy industry, power generation industry, Bonneville Power Administration, The Insitu Group, Intel, Cardinal IG, and Black and Veatch. It is designed to meet the growing need for wind energy and technicians for industry partners. For the one-year certificate, students should expect to take courses that include, but are not limited to: Math, AC Circuits, DC Circuits, Wind Mechanical Systems, and Electric Motor Controls. The two-year degree continues from the one-year certificate and includes, but is not limited to: Math, Digital Electronics, Semiconductor Devices, Industrial Control systems, Wind Mechanical Systems, and Programmable Controllers. The program may be completed on a full-time basis or a part-time basis.

Wind Industry Technicians should be able to:

- \* Climb 250 foot ladders and work at this elevation
- \* Work in confined spaces
- \* Work in adverse weather conditions
- \* Have the ability to lift 75 lbs.
- \* Work in and promote a safe environment
- \* Be prepared to work with electrical hazards

Students seeking admission must be ready for intermediate-level algebra, college-level writing, and college-level reading. Applications must be received by June 18, and admission to the program is limited to 32 students for the Fall quarter of 2007.

#### Resources:

CGCC Student Services at 541-506-6011, 541-386-3510, or [www.cgcc.cc.or.us](http://www.cgcc.cc.or.us).

Oregon Field Guide video about the program:

[www.opb.org/programs/ofg/videos/view/25-Wind-Turbines](http://www.opb.org/programs/ofg/videos/view/25-Wind-Turbines)



### Oregon Institute of Technology offers Bachelor of Science in Renewable Energy Systems

The promise of sustainable power depends on our ability to harness renewable resources like wind, sunlight, biofuels, geothermal heat and rivers. The technology needed to harness these natural energy resources is continually improving, but the demand for workers who can lead us toward a sustainable energy future has already exceeded the supply.

Renewable energy is a burgeoning industry, especially in Oregon, where public and private programs and incentives fuel rapid growth. Oregon Institute of Technology has long been an advocate and user of sustainable energy in the region. The Oregon Tech campus in Klamath Falls is the only geothermally heated university campus in America, is home to the Geo-Heat Center, a national resource for geothermal development. OIT hosts the Oregon Renewable Energy Center (OREC), which conducts applied research on photovoltaic power systems, ground-source heating systems, fuel-cell systems, wind, biomass and integrated systems.

In 2005, Oregon Tech furthered its commitment to sustainable power by introducing the first Bachelor of Science in Renewable Energy Systems in North America. Oregon Tech's renewable energy program establishes the engineering principles graduates will need to develop, promote, and implement sustainable energy technologies.

The degree program begins by establishing a solid foundation of physics, chemistry and mathematics, which pave the way for coursework in electrical and mechanical engineering. Upper-division courses in renewable-energy specific courses include photovoltaics, energy management and auditing, wind power, biofuels, renewable-energy transportation systems, green building and fuel cells. The Renewable Energy curriculum prepares graduates for careers in the energy sector in general, and the renewable energy in particular.

Graduates of the program will be prepared for graduate study or for immediate employment as field engineers, energy auditors, renewable energy system integrators for homes and businesses, manufacturing engineers for component and subsystem manufacturers, designers for components and subsystems, local and state government renewable-energy inspectors, planners and other positions in the energy field.

The program's major-specific courses are offered at the OIT Portland East Campus while lower-division, general education classes may be taken at Oregon Tech's main campus in Klamath Falls or at any community college.

#### Resources:

OREC/Portland 503-725-5924, [www.oit.edu](http://www.oit.edu)

# Opportunities in Renewable Energy

## -Education

### Lane CC in Eugene Offers 2-Year Renewable Energy Technician Program

The Energy Management Program was born in 1980 when Alan Gubrud, a physics instructor at Lane Community College, obtained a grant from the National Science Foundation to develop a curriculum that combined the principles of basic physics with energy analysis techniques. Students gained a working understanding of energy systems in today's built environment and the tools to analyze and quantify energy efficiency efforts. The program began with an emphasis in residential energy efficiency / solar energy systems and has evolved to include commercial energy efficiency and renewable energy system installation technology.

LCC is pleased to offer two 2-year degree programs (Associate of Applied Science) in the areas of Energy Management and Renewable Energy.

#### Energy Management

Students learn to apply basic principles of physics and analysis techniques to the description and measurement of energy in today's building systems with the goal of evaluating and recommending alternative energy solutions that will result in greater energy efficiency and energy cost savings.

Graduates find employment in a wide variety of disciplines and may work as Facility Managers, Energy Auditors, Energy Program Coordinators or Control System Specialists, for such diverse employers as Engineering firms, Public and Private Utilities, Energy Equipment Companies, and Departments of Energy.

#### Renewable Energy Technician

This professional technical program is offered as a second year option within the Energy Management Program. The coursework prepares students for employment designing and installing solar electric and domestic hot water systems. An advisory committee made up of renewable energy practitioners guides program development.

Renewable students, along with Energy Management students, take a first-year curriculum in commercial energy efficiency giving them a solid background that includes residential energy efficiency, HVAC systems, lighting, and the usual requirement of physics and math.



In the second year, renewable students diverge from the Energy Management curriculum and take coursework that starts with two courses in electricity fundamentals and one course in energy economics. In the following terms students learn to design, install, and develop a thorough understanding of photovoltaics (PV) and domestic hot water (DHW) systems.

This new program graduated its first class in June 2004. Expectations are that, even though LCC is training installers on DHW and PV systems, because of the extensive

program students will be attractive to a broader job market. They will work for installation contractors, to be sure, but they will have the background to seek employment in national and international marketing and sales, materials estimating, sizing and design, etc.

#### Resources:

Lane Community College, Eugene OR  
800-769-9687  
[www.nweei.org](http://www.nweei.org)

#### *Additional information from Energy Program facilitator Erik Westerholm:*

There are about 24 students a year in the energy program, 50% of those in Renewable Energy, and the rest in Building Energy Management. At the beginning of the first year, students do informational interviews (project what they would like to do). Next, they pursue internships and try to find a job in the area doing something they would like to do. These jobs are typically eight weeks as a temporary staff member, and may be paid or unpaid. About 25% of these internships turn out to be job opportunities and the students go straight from internship to employment, bypassing the rest of the degree program!

# Opportunities in Renewable Energy -Education



## Northwest Solar Expo 2008

Clean energy solutions for the home and business

April 16-20, 2008  
Portland, Oregon

[Learn More](#)

April 16-18 will have professional only training opportunities at the 2008 expo. See course list below.

The OSEIA Professional Training Conference will feature training for those already established and those looking to join the solar industry.

Contractors, installers, designers, and business owners interested in implementing solar energy projects should plan on attending the event. The Professional Training Conference will include panel discussions and classes featuring the industry's top professionals. It's a great opportunity to keep current on solar programs, incentives, codes and legal issues as well as to see what others in the industry are doing and what you need to do to remain competitive.

The OSEIA Professional Training Conference will include basic and advanced training for those interested in performing solar thermal and PV installations as well as feature seminars for those interested in becoming an Oregon tax credit certified technician and/or an Energy Trust Solar Trade Ally.

Contact info:

[www.nwsolarexpo.com](http://www.nwsolarexpo.com)

OSEIA  
(503) 236 0367  
[www.oseia.org](http://www.oseia.org)  
833 SE Main Street, #206  
Portland, OR 97214

### Wednesday, April 16th

PV NEC Code Course:

- Solar PV NEC 2008 Code Change (8am-5pm)

Intro to Solar HW Track:

- Solar Site Survey for Performance (8am-10am)
- Solar Hot Water Installations Introduction (10am-12pm)
- Solar Safety and Fall Protection (1pm-3pm)
- Solar Thermal Brightway Specifications (3pm-5pm)

Intro to Solar PV Track:

- Solar Site Survey for Performance (8am-10am)
- Solar PV Intro (10am-12pm)
- Solar Safety and Fall Protection (1pm-3pm)
- Solar PV ETO Technical Requirements (3pm-5pm)

### Thursday, April 17th

Solar HW Track:

- Solar Hot Water Best Practices (8am-10am)
- Solar Roofing Best Practices (10am-12pm)
- Solar HW Engineering (1pm-3pm)
- Solar HW Performance Evaluation (3pm-5pm)

Solar PV Track:

- Solar PV Best Practices (8am-10am)
- Solar Roofing Best Practices (10am-12pm)
- Solar PV Monitoring Systems (1pm-3pm)
- Solar PV Net metering & Interconnection (3pm-5pm)

Business Development Courses:

- Oregon Business Licenses and Practices Panel (8am-10am)
- City of Portland Permitting processes (10am-12pm)

### Friday, April 18th

- ETO Trade Ally Training (8am-10am)
- High Performance Homes (8am-10am)
- ODOE: Oregon Tax Credits (10am-12pm)
- NREL: Overview of Current R&D Efforts
- ODOE Tax Credit Certified Technician test (3pm-4:30pm)

# Opportunities in Renewable Energy

## Career Tracks

### If You Want to Install Solar as a Career

The Renewable Energy Joint Apprenticeship Training Committee (RE JATC) administers apprenticeship programs in solar photovoltaic and solar plumbing. There are 2 main requirements for the program: On the Job Training (OJT- the actual work) and Related Training (RT - required educational courses). These apprenticeships are intensive programs leading to licenses that allow the holder to seek work as, or further qualify to be a contractor in, solar installation work.

You can see if the programs are currently accepting applicants, and download an application, at the OSEIA (Oregon Solar Energy Industries Assoc.) website. Applicants are ranked according to their qualifications. Then placement with a training agent is done in rank order (not first-come first-served), so an interested apprentice will find it helpful to do everything he or she can to maximize their application score.

Between the two solar programs, there are currently about two dozen apprentices, and placement is normally found for 3-5 more per year. That number grows incrementally as more people become licensed as journeyman installers, but there are definitely more interested applicants than journeyman training agents available. There are currently around 25 qualified people in each pool, available for placement.

If someone is really interested in pursuing solar installing as a career, the best starting point is the two year Renewable Energy Technician associates degree at Lane Community College, or a similar program such as the one at Solar Energy International in Colorado or San Juan College in New Mexico. At the same time, they should try to work at a solar shop as a materials handler or, barring that, get some general construction experience. That will not only improve their score on their application, but also give them the skills and experience they'll need to be good at their future job.

*For a more comprehensive guide* on how to become a legal solar installer in the state of Oregon, please refer to the Solar Installations in Oregon white paper [www.oseia.org/downloads/OR\\_Solar\\_Installation\\_Info.pdf](http://www.oseia.org/downloads/OR_Solar_Installation_Info.pdf)

#### Resources:

Lane Community College, Eugene OR

- NEEI/Energy Programs  
800-769-9687  
[www.nweei.org](http://www.nweei.org)
- Apprenticeship Administration:  
Erik Westerholm, RE JATC Program Administrator  
541-463-5798 or toll free 877-447-4544  
[westerholme@lanec.edu](mailto:westerholme@lanec.edu)

and

Oregon Solar Energy Industries Association – OSEIA

- Joe Reinhart, Executive Director  
503-236-0367  
[joe@oseia.org](mailto:joe@oseia.org)

San Juan College, Farmington NM

800-241-6327

[www.sanjuacollege.edu/reng](http://www.sanjuacollege.edu/reng)

Solar Energy International (SEI), Carbondale CO

970-963-8855

[www.solarenergy.org](http://www.solarenergy.org)



**Oregon Solar Energy Industries Association**  
**Promoting Renewable Energy Since 1981**

**For information on renewable energy, Oregon incentives, finding a contractor, and more – go to:**

**[www.OSEIA.org](http://www.OSEIA.org)**

# Opportunities in Renewable Energy

## Career Tracks

### License issues in Oregon's solar industry

Date: Wed, 19 Sep 2007 16:11:53 -0700

From: Jon Miller <[oseia@oseia.org](mailto:oseia@oseia.org)>

Solar is becoming big business in Oregon. That's great news. This is attracting significant attention by many individuals and entities in Oregon.

Solar businesses must operate legally within Oregon statutes and rules. There are many licenses required in Oregon and this email will not explain all of them but I need to outline a few items:

1. You must have a CCB license to operate in Oregon (see ORS 701.055 below)
2. You must have an electrical contractor's license to advertise or perform electrical installations (see ORS 479.620 below)
3. You must have a plumbing contractor license to advertise or perform plumbing installations (see ORS 479.040 below)
4. You must have an installer journey license to do the actual installation work (plumbing or electrical, LRT or STL)

Companies will be fined for operating without the proper CCB license. Fines for advertising without proper licenses are about \$500-\$600 per occurrence. Fines for working without proper licenses are over \$1000 per occurrence.

**ORS 479.620** (electrical contractor license) states: you cannot "Without an electrical contractor's license, engage in the business of making electrical installations, advertise as or otherwise purport to be licensed to make electrical installations or purport to be acting as a business that makes electrical installations."

**ORS 447.040** (plumbing contractor license) states "A person may not work as a plumbing contractor, or advertise or purport to be a plumbing contractor, and a member or employee of a firm, partnership or corporation may not engage in the layout or superintending of plumbing installations, without having obtained the plumbing contractor license..."

**ORS 701.055** (CCB License requirement) states "A person may not undertake, offer to undertake or submit a bid to do work as a contractor unless that person has a current, valid license issued by the Construction Contractors Board. A partnership, corporation or joint venture may not undertake, offer to undertake or submit a bid to do work as a contractor unless that partnership, corporation or joint venture is licensed under this chapter..."

—  
Regards,

Jon Miller

Executive Director

Oregon Solar Energy Industries Association, OSEIA

503-236-0367

[oseia@oseia.org](mailto:oseia@oseia.org)

[www.OSEIA.org](http://www.OSEIA.org)

[www.NWSolarExpo.com](http://www.NWSolarExpo.com)

### What if You Are Already an Electrician or Plumber?

By Oregon law, journeyman plumbers and electricians do not need further licensing to perform solar installations. However, they may feel they need additional technical training to understand the specialized installation requirements and programming needed for solar equipment.

OSEIA sponsors training programs for renewable energy electricians and solar plumbers. Classes include basic and advanced level residential solar photovoltaics (PV) and solar plumbing, as well as best practices in solar hot water and solar PV. These courses are approved for continuing education (CE) credit in their respective professions.

Solar photovoltaic courses may also be obtained at the NECA/IBEW training center in Portland.

### Resources:

Oregon Solar Energy Industries Association (OSEIA)

[http://www.oseia.org/solar\\_training.htm](http://www.oseia.org/solar_training.htm)

NECA/IBEW Electrical Training Center, Portland OR

503-262-9991

<http://www.nietc.org/classes/list/all.php>

Oregon Building Codes Division

503-378-4133

<http://www.cbs.state.or.us/external/bcd>

### Installations on Your Property

As a side note, property owners in Oregon are not required to have a license to make an electrical installation on residential or farm property that is owned by you, or a member of your immediate family (if the property is not intended for sale, exchange, lease or rent). You are still required to obtain a proper permit. Contact the Building Codes Division (BCD) if you have questions regarding homeowner installations.

The Oregon Solar Energy Industries Association notes that solar systems installed in the state of Oregon require proper permits, and systems installed by contractors require properly licensed businesses and installers. If you are a consumer, you should verify the licenses of the people doing work on your home to protect yourself and your investment. You should always ask for references in addition to proper licenses.

# Renewable Energy Jobs with Oregon Companies

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info@solwest.org • www.solwest.org

## Technical Jobs in Renewable Energy

Job Title	Entry level?	Job Description	Education Requirements	Other Qualifications Needed	Employer (if position is open) & Salary
Power system electrician - apprentice	✓	<ul style="list-style-type: none"> <li>• Power System Electrician Apprentices are trained to perform a variety of tasks that typically involve the construction, installation, maintenance, and repair of high voltage power system electrical equipment.</li> <li>• Maintenance tasks typically include the routine inspection, modification, installation, and troubleshooting of electrical equipment and facilities. The type of equipment maintained may be electrical, hydraulic, mechanical, pneumatic, and/or electronic.</li> <li>• Apprentices work from sketches, drawings, blueprints, wiring diagrams, instruction books, and equipment manuals.</li> </ul>	<ul style="list-style-type: none"> <li>• Be enrolled as a degree-seeking student in an accredited technical school, vocational school or 2 year college in a course of study leading to a degree or certificate related to the electric utility industry (such as electrical theory, electronics, industrial arts, or industrial technology).</li> <li>• Be in your last academic year and expect to meet your academic requirements for graduation prior to start of BPA's next Apprentice class</li> <li>• Taking at least a half-time course load as defined by the school</li> <li>• A student in good standing with a minimum 2.5 cumulative GPA</li> <li>• Eligible to participate in a work study agreement between the school and BPA</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to completion of your degree/certificate program you will be required to complete 640 hours of career-related work experience.</li> </ul>	1
Solar Energy Technician		<ul style="list-style-type: none"> <li>• Install and service residential and/or commercial solar hot water and PV systems.</li> <li>• Oversee solar electric system design, and some aspects of installation, including assisting with the panel racking system and mounting balance of system components.</li> <li>• Perform site-surveys for potential new customers, clerical duties including ordering and tracking of inventory, fielding technical questions.</li> <li>• Coordinate installations with AC electricians, contractors, or homeowners.</li> </ul>	<ul style="list-style-type: none"> <li>• Any sort of renewable energy or electrical training is beneficial.</li> <li>• Some training and use of tools provided.</li> </ul>	<ul style="list-style-type: none"> <li>• Some construction, HVAC, plumbing and/or electrical experience required.</li> <li>• The candidate must possess general knowledge of roofing/building construction, and AC and DC electricity.</li> <li>• Installers must be comfortable at heights and/or steep roofs.</li> </ul>	2

Solar/HVAC Technician		<ul style="list-style-type: none"> <li>Duties include installation of solar and HVAC equipment in residential and commercial buildings, equipment requiring soldering of copper pipes, installing equipment on roofs and in buildings, duct work, thermostat and control wiring.</li> </ul>		<ul style="list-style-type: none"> <li>Applicant should be able to read schematics, and have 1 year of experience as a carpenter, roofer, plumber, electrician, HVAC installer or similar field. A plus if you have STL or LRT, low voltage, plumbing, or refrigeration license.</li> </ul>	Sample job descr
Energy Management Technician		<p>Responsible for field work supporting Energy Efficiency engineering, planning, program, marketing, and contracting staff. Provides support for core EE technical functions including estimation of energy use and analysis of energy use patterns including: measurement and verification of energy savings; inspection of efficiency measures and projects; and tracking and reporting energy savings. Performs energy audits of residential/commercial/industrial electric end-uses using site visits, standard techniques and software tools. Records metering data and presents results using spreadsheets, databases, and various specialized energy conservation-specific software tools. Operates, installs, configures, troubleshoots and removes metering equipment. Assists with installation inspections of energy efficiency measures for compliance with technical requirements and specifications.</p>		<ul style="list-style-type: none"> <li>Must have one year of specialized experience at a level close to the work of this job that has given you the particular knowledge, skills, and abilities required to successfully perform. Typically we would find this experience in work within this field or a field that is closely related.</li> </ul> <p>SPECIALIZED EXPERIENCE for each grade level is defined below:</p> <ul style="list-style-type: none"> <li>GS-7: Experience with energy conservation technologies and field work.</li> <li>GS-8: Experience with an energy conservation organization utilizing principles and concepts in basic work assignments. Experience assisting with basic energy audit tasks.</li> </ul>	1
Senior Mechanical/Thermal Engineer		<ul style="list-style-type: none"> <li>Contribute as a Systems Engineer with a mechanical engineering focus</li> <li>Participate in all product life-cycle phases, from concept to end-of-life</li> <li>Thermal and airflow design, measurement and modeling</li> <li>Structural modeling and analysis of components</li> <li>Lead commercial and residential cabinet design</li> <li>Produce detailed, product-quality 3D and 2D drawings</li> <li>Assist in developing reliability metrics</li> <li>Create detailed technical specifications and documentation</li> <li>Stay abreast of latest technologies and trends</li> </ul>	<ul style="list-style-type: none"> <li>BS Mechanical Engineering required, MS preferred</li> <li>Expert in SolidWorks design software</li> </ul>	<ul style="list-style-type: none"> <li>Thermal and airflow measurement and modeling experience</li> <li>Proven productization experience</li> <li>Experience with sheet metal fabrication techniques</li> <li>Reliability theory, implementation, and test experience</li> <li>Ability to multitask and balance multiple projects</li> <li>Strong leadership and communication skills</li> <li>Good time management skills with project management experience a plus</li> <li>7+ years experience in the field of mechanical engineering</li> </ul>	Sample job descr

Product Line Manager	<ul style="list-style-type: none"> <li>Establish a product lifecycle roadmap based on an understanding of internal capabilities, business strategy to market, and customer requirements</li> <li>Provide technical leadership, architectural direction, and development expertise</li> <li>to ensure consistent delivery of world-class quality products</li> <li>Balance speed-to-market, product quality and scope, to create realistic yet aggressive development timelines</li> <li>Conduct market analysis for projection of demand and competitive capabilities and strategic moves</li> <li>Establish relationships with customers and industry experts to maintain a pulse on the competitive landscape of the market</li> <li>Maintain revenue forecasts, pricing strategy and account-level implementation</li> <li>Develop and manage budgets; justify investments including R&amp;D and capital</li> <li>Provide support to the sales and marketing teams</li> </ul>	<ul style="list-style-type: none"> <li>Minimum four-year college degree</li> <li>Proficient in Microsoft Office</li> </ul>	<ul style="list-style-type: none"> <li>Experience selling commercial products to engineering, financial and executive level decisions makers</li> <li>Proven project management abilities</li> <li>Strong problem solving and decision-making skills, with a style that promotes collaboration, consensus and innovation</li> <li>Knowledge of photovoltaic systems a plus</li> <li>Excellent time management skills, including the ability to manage multiple projects</li> <li>Strong knowledge of financial systems and accounting principles</li> <li>Outstanding interpersonal skills with an ability to work effectively with a diverse team</li> <li>Superior verbal and written communication and presentation skills</li> </ul>	Sample job descr
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## Administrative and Sales Jobs

Job Title	Entry level?	Job Description	Education Requirements	Other Qualifications Needed	Employer (if position is open) & Salary
Customer Service Professional	✓	<ul style="list-style-type: none"> <li>Respond to customer service inquiries and ensure that customers receive prompt, accurate technical information</li> <li>Develop and continually update complete working knowledge of products and services</li> <li>Maintain a detailed technical support log of all customer interactions, including resolution of detailed technical issues and questions</li> <li>Interact with customers and colleagues with a focus on resolving issues</li> <li>Maintain clear and organized reference documentation to support customer response activities</li> <li>Produce and update FAQs to reflect current info</li> <li>Escalate service inquiries to appropriate departments as required</li> </ul>	<ul style="list-style-type: none"> <li>Associate's degree (A.A.) or equivalent, or at least six months of related experience and/or training</li> <li>Proficient in Microsoft Office and online customer support tools</li> </ul>	<ul style="list-style-type: none"> <li>Experience in the renewable energy industry; knowledge of photovoltaic systems is an asset</li> <li>Superior interpersonal, listening, written and verbal communication skills</li> <li>Ability to maintain composure while managing time-sensitive and/or stressful situations</li> <li>Excellent problem-solving skills and attention to detail</li> <li>Ability to prioritize and make rapid decisions</li> </ul>	Sample job descr
RE Installation		<ul style="list-style-type: none"> <li>Solar electric system sales and system</li> </ul>	<ul style="list-style-type: none"> <li>Proficiency in MS Word, Outlook,</li> </ul>	<ul style="list-style-type: none"> <li>Applicants should have experience</li> </ul>	Sample job descr

Sales		design, creating quotes and financial scenarios for potential customers. <ul style="list-style-type: none"> <li>• Creating innovative ways to educate the public on Solar Electric (including giving presentations, business luncheons, etc.).</li> </ul>	Excel and Microsoft PowerPoint. <ul style="list-style-type: none"> <li>• Some training (and future educational training) provided.</li> </ul>	in sales and some working knowledge of the technical side of photovoltaics. Communication, organizational, writing and multi-tasking skills are also desired.	
Solar program specialist		Support solar campaign, which promotes the use of solar energy systems, with goals to increase market demand for solar energy systems, provide policy support to promote solar adoption, integrate solar energy systems into City energy planning and streamline existing regulations that affect solar adoption. Duties include developing a strategy for working with businesses, organizations and industry sectors that are interested in adopting solar technology; developing financing options for solar energy systems; coordinating with internal OSD programs and services; monitoring and assisting high-profile solar projects and providing customer service, research and resource referral; and refining the marketing campaign, including print, Web, email and display booth. Other duties include reviewing solar-related codes and regulations and interfacing with the City bureaus that administer and implement them; assisting the City energy manager in increasing the number of solar installations on municipal facilities; ongoing program development, evaluation, data tracking and analysis; and ensuring compliance with US DOE grant requirements.		<ul style="list-style-type: none"> <li>• Knowledge of basic energy conservation and waste prevention methods and techniques.</li> <li>• Knowledge of program evaluation and implementation methods and techniques.</li> <li>• Knowledge of principles and practices of education and outreach.</li> <li>• Ability to analyze issues and problems, develop alternatives and make sound, appropriate recommendations.</li> <li>• Ability to communicate clearly and effectively, orally and in writing.</li> <li>• Ability to maintain effective working relationships with bureau managers, staff, community and industry groups, customers and others encountered in the course of work.</li> </ul>	\$4,222 - \$5,628/ mo after six years

## Advocacy/Nonprofit Jobs

Job Title	Entry level?	Job Description	Education Requirements	Other Qualifications Needed	Employer (if position is open) & Salary
Utility Outreach Project Coordinator		<ul style="list-style-type: none"> <li>The Project Coordinator will manage outreach to Northwest utilities in order to initiate a dialogue on issues pertaining to Columbia and Snake River salmon restoration and the removal of four dams on the lower Snake River. This position involves outreach to utilities, coordination of meetings, member relations and developing and communicating information and messages on these issues. The Project Coordinator will work closely with Coalition partner group Save Our Wild Salmon Coalition on this project. The position is very social, involving frequent contact with the project's team members, Coalition member organizations and direct communication with Northwest utilities. The position will require occasional travel throughout the Pacific Northwest region.</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor's degree in a related discipline and one to two years of relevant experience. Experience substitutes for education.</li> <li>Proficiency at word processing and e-mail basics.</li> </ul>	<ul style="list-style-type: none"> <li>Previous experience with project management, meeting coordination or event planning.</li> <li>Ability and interest to quickly acquire a working knowledge of fish and wildlife and energy issues, and to communicate these topics effectively to others.</li> <li>Ability to communicate effectively on the phone and in writing.</li> <li>Strong organizational and time management skills.</li> <li>An independent and resourceful worker; able to take initiative, follow up and pay attention to details.</li> <li>Experience organizing in a public interest advocacy organization or trade association desirable.</li> <li>Experience with fish and wildlife issues, the energy sector or utilities a plus.</li> </ul>	Sample job descr
Senior Policy Associate or Policy Associate		<ul style="list-style-type: none"> <li>Analyze and critique utility, state and regional electric, natural gas and climate policy proposals.</li> <li>Represent the Coalition in legislative, regulatory and utility proceedings.</li> <li>Educate policymakers on energy efficiency, renewable energy, consumer protection and climate policies.</li> <li>Prepare materials and conduct briefings for policymakers, Coalition members and allies.</li> <li>Write articles and reports for publications.</li> <li>Assist outreach staff in mobilizing Coalition member organizations and community activists for public hearings and related public involvement.</li> <li>Share in the administrative responsibilities of a cooperative and informal work environment.</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor's degree in a relevant discipline and two years (for Policy Associate level) or six years (for Senior Policy Associate level) post-college experience in public policy work. Experience may substitute for education.</li> </ul>	<ul style="list-style-type: none"> <li>Relevant professional experience includes (but is not limited to) work in political, policy, legal or government settings. Expertise in economics, statistics, financial analysis or engineering is desirable.</li> <li>Position requires excellent written and oral communications skills, especially the ability to communicate effectively with a wide range of audiences from technical experts to the general public.</li> <li>Must be able to juggle multiple tasks and to produce quickly in time-sensitive policy deliberations.</li> </ul>	Sample job descr

## Electrical or plumbing professionals wanted:

Solar Contractors looking for journeyman electricians:	Solar Contractors looking for journeyman plumbers:	Looking for Electrical Contractors:
<p>Mr. Sun Solar            John Patterson            6125 NE Portland Hwy, Portland OR 97218            888-765-7359            Hugh@MrSunSolar.com            www.MrSunSolar.com            \$25-\$35/hour</p>	<p>Mr. Sun Solar            John Patterson            6125 NE Portland Hwy, Portland OR 97218            888-765-7359            Hugh@MrSunSolar.com            www.MrSunSolar.com            \$25-\$35/hour</p>	<p>Edgewater NW            Robert vanCreveld            POB 130, Newport, OR 97365            541-563-4227            robert@edgewaterNW.com            www.edgewaterNW.com</p>
<p>SunEnergy Power Corporation            Doug Parsons            1133 NW Wall Street, Suite 305, Bend OR 97701            503-922-1548            dparsons@SunEnergyPower.com            www.sunenergypower.com</p>		

## **Employers by code:**

1. Bonneville Power Administration  
[http://www.jobs.bpa.gov/Job\\_Search/index.aspx](http://www.jobs.bpa.gov/Job_Search/index.aspx)

2. Cascade Sun Works  
2444 SE 1st St.  
Redmond, OR 97756-8686  
Office: (541) 548-7887  
Fax: (541) 548-6978  
[accounting@sun-works.com](mailto:accounting@sun-works.com)  
[www.sun-works.com](http://www.sun-works.com) Fax resume to: (541) 548-6978 or email (with position mentioned in subject line) to [info@sun-works.com](mailto:info@sun-works.com).

3. PV Powered  
Bend, Oregon  
To submit your application, email cover letter and resume to:  
[humanresources@pvpowered.com](mailto:humanresources@pvpowered.com).