

Sustainable Oregon Workforce Initiative



Oregon State Workforce Focus

- Health Care Industry
- Manufacturing
- Clean Energy

Oregon State Strategies

- Strengthen employer consortia and industry-led training to produce highly skilled and innovative workers.
- Prepare an agile and innovative workforce able to continuously adapt to technology changes.
- Build a flexible, demand-driven workforce education and training system that is outcome-based, customer-focused, accessible, adequately funded and grounded in public-private partnerships.

Oregon Workforce Investment Board Targeted Private-Public Partnerships

- **Oregon Healthcare Workforce Institute, Oregon Simulation Alliance and partners** – developing statewide policies and targeted investments to overcome the healthcare workforce shortage.
- **Oregon's Manufacturing Workforce Strategy** – Led by Northwest High Performance Enterprise Consortium to expand career opportunities and the economic value of manufacturing to Oregon.
- **Clean Energy** – Led by the Business Alliance for Sustainable Energy (BASE) in partnership with the Oregon AFL-CIO to assist education and workforce partners in developing training programs for the clean energy industry.

SOW Phase 1

- Goal: To accelerate development of the sustainable energy industry in Oregon by coordinating and enhancing clean energy workforce development programs across the state.
- First deliverable: Gap analysis study.

Methods Used

- Heavily reliant upon direct contact with clean energy businesses of diverse size across the state.
- Information gathered through a combination of regional focus and feedback meetings, electronic surveys, phone interviews and direct research.

Key Findings

- Significant shift from service to production. Solar and fuel cell in need of machine operator skills.
- Wind industry is in need of meteorologists with wind resource expertise. Need for 600 wind technicians over the next four years – Columbia Gorge CC is able to turn out 34 per year at current capacity.
- Geothermal industry is in need of geologists with specific geothermal resource expertise.

Findings (cont.)

- Demand for solar hot water growing, but solar industry is challenged to find plumbers to install the systems. Employers resistant to paying journeyman plumber rates and there isn't yet full-time demand for solar hot water installers so limited license plumbers have not got on board.
- Everybody needs people who know how to work and hold basic job discipline.

Findings (Cont..)

- Community Colleges and Universities excited about the industry, but having a hard time grappling with diversity of industry.
 - Which sectors to target
 - Is there demand enough to invest in entire new curriculum and program?
 - Will the graduates really be able to get good jobs?
- At least 18 Current Training Programs

Training Programs

Lane Community College

- Energy Management Program: 2 year. Energy Efficiency emphasis.
- Renewable Energy Technician: 2 year. Solar PV and thermal.

Columbia Gorge Community College: Renewable Energy Technology 1 and 2 year programs. Heavy wind emphasis.

Oregon Institute of Technology (OIT): Renewable Energy Systems. 4 year BS degree. Includes solar thermal photovoltaics, ground-source heat pumps, geothermal resources, hydroelectric power, wind power, biofuels and fuel cells.

Training Programs (cont.)

Portland Community College

- Facilities Maintenance. (45 credit hours). Includes environmental issues and resolutions, solar applications, LEED building operation, and maintenance planning methodologies.
- Planning for Renewable Energy Systems option in their 2 year EET engineering degree.
- Planning: Photovoltaic Electrical Installation, LEED Building Operation and Maintenance Certification, Passive Solar Home Design

Mt Hood Community College: Sustainable Building Advisors Program

OSEIA

- Limited Renewable Energy Technician (LRT) apprenticeship allows for the installation and maintenance of solar electric systems up to 25kW and excluding the AC connection.
- Solar Heating and Cooling (STL) apprenticeship program yields an STL license, which allows for the installation and maintenance of solar thermal systems, excluding the final connection to potable water.
- Combined Renewable Technician (CMB) apprenticeship program combines both of the above and yields both licenses.

Training Programs (cont..)

Clackamas Community College: Energy, Water and Environmental Technology in Engineering Program

Central Oregon Community College: Sustainable Building Advisors Program

Portland State, OSU, UO: Architecture, Engineering, Urban Planning, Grad certificate in Sustainability

Training Programs - Union

- Registered with the State of Oregon
- Funded by negotiated employer contributions (“cents per work hour”)
- Fulfill licensing requirements (electrical, plumbing, and others)
- Provide training in a variety of areas, for example:
 - Heat and Frost Insulation** (heat loss prevention, energy conservation)
 - Electrical Linemen** (build and maintain transmission/distribution lines)
 - Carpenters** (install insulated concrete forms, siding, and thermal barriers)
 - Renewable Energy Technicians** (solar installation at less than 25 KW)
 - Electricians** (solar installation at greater than 25 KW, connection to the grid, etc.)

<u>Position</u>	<u>Wage</u>
Wind Technician	\$22 / hr possibility of six figure income, full benefits
Energy Management	\$35-45k/year, full benefits
Renewable Energy Tech	\$20 / hr
Renewable Energy Systems BS degree holder	\$45-55k

Challenges We Faced

- Clean energy industry is extremely diverse.
- How do the construction / green building sectors fit into clean energy workforce?
- Clean Energy industry is not tracked by Employment Department because the codes don't align. No baseline.
- Some sectors are reluctant to share wage information.
- How to ensure that training programs lead to family wage jobs with advancement opportunity?

Recommendations/ Updates

- Strengthen, expand and integrate existing programs before creating new
- Establish industry internship programs
- Use Community College Customized Training Program to ramp up for immediate manufacturing needs
- Add capacity to the Columbia Gorge Wind Technician Program

Recommendations (cont.)

- Improve communication between trade associations, union training programs and employers
- Implement mechanisms for Employment Department to be able to track clean energy industry
- Establish a statewide, collaborative training program that utilizes existing regionally-specific programs and resources

What We're Doing Now

- Green Jobs Initiative – 2009 Legislature
- Stimulus Coordination
 - All about jobs
 - Multi-agency
 - Multi-industry
 - Local pilot projects



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