

# Creating Energy Solutions



*WSU Energy Program staff have assisted in developing and preparing a clean energy workforce.*

The **Washington State University (WSU) Energy Program** is a self-supported department within the University. Operating much like a consulting firm, we provide expert technical assistance to help our customers address energy challenges.

## Our Expertise

**Building Efficiency** • Provide technical support on residential sections of the Washington State Energy Code. Design and evaluate energy-efficient homes. Support residential and small commercial energy efficiency retrofits and upgrades.

**Industrial Efficiency** • Provide technical assistance to maximize the efficiency of industrial resource use. Lead the Northwest CHP Technical Assistance Partnership, promoting technologies and practices useful for industrial and commercial facilities.

**Our Mission** • To advance environmental and economic well-being by providing unmatched energy services, products, education and information based on world-class research.

**About Us** • Our staff of energy engineers, energy specialists, technical experts, software developers, and energy research librarians work out of our Olympia and Spokane offices. To learn more about the WSU Energy Program, contact:

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**Agricultural Efficiency** • Implement the Washington Farm Energy Program with federal, state and industry partners. Perform energy assessments for agricultural operations and develop farm energy software that identifies energy-saving measures.

**Renewable Energy** • Help certify solar energy systems that qualify for state production incentives. Lead the Pacific Region Bioenergy Partnership. Support the use of biofuels and electric vehicles.

**Public Facilities Support** • Home of the Plant Operations Support Consortium, which advocates best practices, organizational standards and use of surplus/salvage materials. Facilitate Resource Conservation Management programs. Assist schools and Pacific Northwest tribes in improving energy efficiency and indoor air quality.

**Software and IT Services** • Develop software to evaluate potential energy savings and greenhouse gas emissions reductions. Design and implement websites and databases.

**Workforce and Economic Development** • Evaluate workforce, education and training policies that support energy workforce development. Guide state-wide Community Energy Efficiency Programs that provide energy-efficiency upgrades and develop the energy workforce.

**Research and Evaluation** • Contract with the Bonneville Power Administration to identify new technologies that save electric energy. Research cost-effective ways to upgrade and prepare biogas to meet standards for use as vehicle fuel. Partner with the WSU Composite Materials and Engineering Center's laboratory to test the heat, air and moisture-transport characteristics of exterior walls.

**Energy Information** • Home of one of the nation's few full-service energy libraries. Operate national and regional energy information centers. Compile research about emerging energy trends of interest to industrial, agricultural, and public sector customers.



# IN THE SPOTLIGHT

## Workforce Development

*Providing research expertise and technical assistance to prepare the workforce for a clean energy future*

### Highly skilled energy professionals are the key to achieving clean energy goals

A clean energy future that integrates renewables, energy efficiency and grid modernization is supported by government policy, private investment, and the public. As the energy industry grows, the workforce must grow also.

But energy employers struggle to find workers with the skills and experience that they require now and for the future. Employers' capacity to provide education and training is limited, and other industry and labor market trends – such as predicted retirements and sweeping demographic changes – pose formidable staffing, economic and energy security challenges.

Our workforce development specialists craft effective strategies to address workforce concerns. We work with:

- **Industry** to define current and anticipated workforce needs.
- **Education** to develop and implement training programs that address workforce needs.
- **Policymakers** to help shape the economic environment.

*As members of the Evergreen Jobs Leadership Team, our staff members advise the Governor and policy makers on federal investments in green economy and energy-related research, workforce education, and training investments.*



*Our workforce team serves on the advisory board of the Pacific Northwest Center of Excellence for Clean Energy at Centralia College.*

### Research and analysis are customized for clients to increase understanding, inform decisions and strengthen program results

- Organizational development consulting and facilitation
- Policy and program analysis
- Collaboration-based project management
- Focus group processes
- Occupational analyses
- Industry-defined skill standards and job profile development
- Industry and labor market research
- Green and sustainable policies and business practices
- Program evaluation
- Education and training standards
- Program development for new and incumbent workers

### Recent clients and projects

**U.S. Department of Energy Smart Grid Workforce** – Developed a career lattice for 10 energy craft and professional occupations; conducted a five-state labor market study of electric power employers; created skill standards for utility customer service representatives; reported on workforce implications of smart grid demonstration projects in the Pacific Northwest.

**National Science Foundation** – Developed industry-defined job-skill profiles for two energy management occupations: *Energy Conservation Program/Project Manager* and *Commercial Building Analyst*.

### WSU Energy Systems

**Innovation Center** – Conducted a labor market study of power engineering employment and workforce trends in the Pacific Northwest.

### Washington State Legislature

– Produced analytical reports on green and clean energy economic development, innovation, and workforce education and training policy.

### Washington Workforce Training and Education

**Coordinating Board** – Conducted industry research and developed a job skills profile and policy recommendations for energy efficiency managers in manufacturing.

### California Community Colleges Central Region Consortium

– Created *Skill Standards for Maintenance Mechanics for Food Manufacturing*.

Reports and research products are available at <http://www.energy.wsu.edu/ResearchEvaluation/WorkforceDevelopment.aspx>

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