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#### **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, Spokane, and satellite offices.

Operating similar to a consulting firm, the WSU Energy Program is a self-supported department within the University.

#### **Within WSU**

As a part of the College of Agricultural, Human, and Natural Resource Sciences, we report directly to the Dean of the College.

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Energy Program  
WSUEEP16-001 • January 2016

## **Community Energy Efficiency Program in Washington State**

The **Washington State University (WSU) Energy Program** executes and manages the Community Energy Efficiency Program (CEEP). Designated by the Washington State Legislature in 2009, CEEP provides support to homeowners and small businesses across the state so they can make energy efficiency upgrades to existing residences and commercial buildings.

CEEP focuses on households and businesses that existing energy efficiency enhancement programs have had a harder time serving, including:

- Low- to moderate-income households (below 80% of the state median income of \$45,000 and above 125% of the federal poverty level of about \$20,000);
- Rental housing;
- Manufactured housing;
- Homes heated with oil, propane, and wood; and
- Small businesses.

To improve the quality and affordability of homes and small businesses in Washington state, CEEP partners provide consumer education and financial support to help homeowners and small business owners move forward with energy efficiency upgrades by:

- Providing CEEP incentives for upgrades,
- Helping participants qualify for utility energy efficiency funds,
- Connecting to available financing for energy efficiency upgrades, and
- Encouraging participants to work with a trained and certified contractor workforce.

#### **Delivering value to communities across the state**

The CEEP Pilot was created by the Washington State Legislature in 2009, and was initially funded by the U.S. Department of Energy's State Energy Program and the American Recovery and Reinvestment Act. The eight community-based projects were charged with bringing value to their communities by testing innovative approaches to deliver energy efficiency upgrades to targeted residences and businesses.

Building on the momentum of the pilot, CEEP has developed into a



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mature program, with on-going support from the Washington State Capital Budget from June 2012 through June 2015. In consultation with partners and stakeholders, CEEP strengthened its focus of serving hard-to-reach and underserved markets, and on leveraging utility and other community funds to fill gaps and extend existing energy efficiency offerings.

### **Assisting homeowners and renters**

Since 2009, the efforts of CEEP partners have resulted in:

- Over 125,000 person-to-person contacts,
- Over 38,000 residential energy efficiency assessments, and
- Energy efficiency upgrades in almost 32,000 homes.

In the 2013-2015 cycle, six of seven (84%) residential upgrades met one or more of these criteria for hard-to-reach populations:

- 58% were in manufactured or multi-family housing.
- 37% were moderate income (between 125% and 250% of federal poverty level).
- 19% were in rural or remote communities.
- 9% were in homes with oil, propane, or wood heat.
- 8% were renters.

#### **Common residential energy efficiency upgrades**

##### ***Building Performance or whole-house upgrades:***

Assessments and comprehensive support services drive comprehensive upgrades, which may include air sealing, duct sealing, insulation, heating and hot water system upgrades, and whole-house ventilation system improvements.

***Prescriptive upgrades:*** Install a small number of pre-selected measures for which most or all installation costs are paid by CEEP or utility funds.

### **Assisting small businesses**

Over 2,100 businesses have been assessed and 1,270 upgrades have been completed. CEEP partners have tested both building performance and prescriptive measure packages. In both models, CEEP funds are



*CEEP contractor installing insulation in a residential crawl space.*

used to match utility incentives to bring down first costs.

### **Spotlight on CEEP 2013-15 initiatives**

CEEP partners developed customized approaches to serve harder to reach clients in their communities. A few outstanding programs are summarized here:

- **Maximizing funding leverage in Northern Puget Sound** – The Whatcom-based Community Energy Challenge (CEC) leverages the current \$1.3 million CEEP investment with over \$2 million from the Northwest Clean Air Agency and funding from utilities and other community partners. This funding leverage enabled CEC to expand beyond their pilot territory and increase customer participation. The CEC now serves Skagit, Island, and San Juan counties. Homeowner and small business investments in energy efficiency upgrades continue to multiply. CEC provides each participating household and business with a full energy assessment and a customized energy action plan that details cost-effective measures, assistance with utility rebates, financing referrals, targeted matching incentives, reliable contractors, and quality assurance standards.
- **Targeting manufactured homes throughout Washington** – Puget Sound Energy, Avista Utilities, and delivery partner UCONS, LLC, continue to provide prescriptive upgrades to manufactured housing residents. Avista Utilities provided duct sealing with direct-

install lighting upgrades and low-flow water fixtures to enhance energy efficiency and comfort. Puget Sound Energy paired duct sealing and direct-install measures with floor insulation. These CEEP partnerships have reduced ongoing homeowner operating costs and improved comfort for occupants in 2,780 manufactured homes, many of whom are elderly or on fixed incomes.

- **Aging in Place in Clark County** – Clark Public Utilities focuses on fixed-income neighborhoods with their Aging in Place program. This program upgrades the insulation level and replaces inefficient heating/cooling systems to make homes more comfortable and more affordable to maintain. The Aging in Place program uses conservation funds from the utility paired with CEEP incentives to substantially reduce the cost burden for fixed-income residents.

### **Supporting the state workforce**

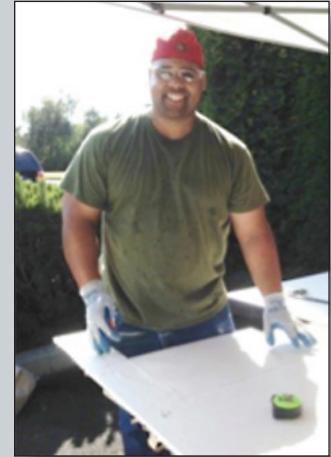
CEEP supports family-wage jobs by driving business to local contractors and ensuring that workers are paid prevailing wages. In turn, the contractors refer customers to CEEP to help them access incentives to reduce out-of-pocket costs.

CEEP is supported by the hard work and investment of over 130 contracting firms in Washington state. To help contractors and outreach staff build capacity to do energy efficiency work, the WSU Energy Program used some CEEP funds to provide training and certifications to participating contractors, including:

- Lead-safe work practices,
- Occupational Safety and Health Administration standards,
- Upgrading homes to Building Performance Institute standards,
- Duct testing to Performance Tested Comfort Systems standards, and
- Sales training.

Additional training for real estate professionals, appraisers, and home inspectors was offered by some CEEP partners to support outreach efforts.

**CEEP is supported by the hard work and investment of over 130 contracting firms in Washington state.**



### **Saving energy**

CEEP delivered energy efficiency upgrades that save over \$4.5 million per year in energy costs, reduce ongoing operating costs for homeowners and small business owners, enhance indoor air quality, and improve building durability.

CEEP upgrades are estimated to save over 211,000 million Btu each year – equal to the amount of energy used by 2,175 typical single-family homes in Washington.

### **Data-driven program management**

From the beginning, we have worked with CEEP partners to capture detailed measure, cost, and occupant data, and use this data to improve targeting, programs, and services.

For example, results from the CEEP Pilot clearly established that some program strategies called for in the authorizing legislation – extensive use of volunteers for auditing and outreach, encouraging energy efficiency financing options for lower-income households, and using geographic canvassing for recruiting building performance upgrades – were not effective. These features were subsequently dropped or deemphasized.

CEEP strengthened the focus on data-driven management in 2013-2015 by instituting detailed monthly reporting of assessments, upgrades and expenditures; quarterly reviews of progress against targets; and a mid-grant assessment, with continued funding contingent on progress.

## Looking ahead

In June 2015, the Legislature renewed its investment in CEEP through June 2017, but reduced the biennial allocation from \$10 million to \$5 million. CEEP's 2015-2017 work focuses on:

- Maintaining minimum capacity and infrastructure of existing CEEP partners or supporting orderly close outs where reduced funding levels and available leverage funds are not sufficient to support viable programs.
- Concentrating resources on core geographic service areas. The number of counties served by CEEP partners will drop from 30 to 12.
- Targeting the highest priority customers in moderate-income households heated with fuel oil, propane, and wood.

To ensure that funds are available to CEEP partners, the WSU Energy Program reduced its program support services funding by 66%, and will focus on the core tasks of fiscal management and meeting reporting requirements. The following services will be discontinued or shifted to partners:

- Workforce training and development,
- On-site quality assurance monitoring,
- Technical assistance for program and incentive design,
- Monthly progress reviews, and
- Support for prevailing wage compliance.

CEEP has focused on maintaining partner capacity because the program has:

- Clearly demonstrated the need for energy efficiency services targeting hard-to-reach customers,
- Shown that significant market potential exists throughout the state, and
- Established that these customers can be served at reasonable cost.



*CEEP contractor preparing to install energy efficient windows and weatherstripping.*

## Advantages of a renewed investment

If the Legislature renews its investment in CEEP's success, future work will focus on:

- Maintaining and expanding services into areas that are not currently supported with CEEP resources;
- Sustaining momentum generated in local economies and contractor business volume;
- Increasing the share of efficiency investment in hard-to-reach markets; and
- Continuing work with utility, municipal, and community partners to develop and test innovative approaches to reach underserved markets.