

Community-Wide Urban Residential and Commercial Energy Efficiency Pilot Program

2010 Annual Legislative Report

December 2010

WSU Extension Energy Program

Our Mission

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

Overview

Our staff of approximately 100 people (energy engineers, energy specialists, technical experts, software developers, energy research librarians and more) works out of our Olympia, Spokane and other satellite offices. Operating similar to a consulting firm, the WSU Extension Energy Program is a self-supported department within the University.

Our customers include large and small businesses, public and private utilities, local and state governments, tribes, federal agencies and facilities, manufacturing plants, professional and trade associations, schools, universities, national laboratories, and consumers. For more information, visit our website at www.energy.wsu.edu.

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What is the Community Energy Efficiency Pilot Program?

The Washington State University (WSU) Extension Energy Program was directed by the Washington State Legislature (E2SSB 5649) to identify and fund grant recipients who will develop and implement pilot programs providing community-wide urban residential and commercial energy efficiency upgrades.

The legislation specified that pilot projects would be:

- Dispersed throughout the state, across fuel types, building sectors and owner-occupied/rental buildings.
- Open to general purpose local government, higher education, utilities, public service companies, non-profit organizations, community action agencies, community service agencies and federally recognized Indian tribes.
- Focused on meeting several key goals:
 - Increase public outreach on energy efficiency.
 - Grow the retrofit industry and workforce with family-wage jobs.
 - Expand delivery of energy efficiency services and incentives to those immediately above low-income thresholds.
 - Test whole neighborhood approaches and other innovative approaches.
 - Provide creative energy efficiency financing options.

The Community Energy Efficiency Pilot (CEEP) project is funded through the U.S. Department of Energy State Energy Program and the American Recovery and Reinvestment Act (ARRA).

Eight innovative approaches to increasing energy efficiency at the community and neighborhood level

The pilot projects are applying and testing innovative approaches for expanding delivery of energy efficiency services in Washington State by leveraging learning and implementing higher standards. Energy auditors are being trained to identify issues more clearly, significantly improving the quality of implemented energy efficiency measures. Likewise, more advanced improvements are being made such as air quality, combustion safety, air contamination and environmental measures.

The eight projects were selected in part because they each take a separate approach. Preliminary allocations for each project are listed below and subject to revision based on performance (see **Approach Table** on page 11 for a more detailed summary):

- 1 City of Ellensburg – \$344,000
- 2 Clark Public Utilities – \$1 million
- 3 Opportunity Council & Sustainable Connections – \$2.79 million
- 4 Puget Sound Energy & UCONS L.L.C. – \$1.5 million
- 5 Snohomish County Public Utility District – \$2.16 million
- 6 Sustainable Living Center – \$700,000
- 7 SustainableWorks – \$4 million
- 8 Thurston County Economic Development Council – \$1 million

Project Locations



Where is CEEP now?

Local CEEP projects are beginning to hit their stride.

- Pilot project organizations selected to receive grant funding range from experienced energy efficiency providers and utilities to new first-time implementers.
- July-September 2010 is the first quarter all pilot projects were put into full implementation. Projects invested the first six months of 2010 in building a strong foundation for success.



Success Story

Clark Public Utilities

"The work performed and the overall program has been fantastic for us. We would not have been able to afford these measures on our own, and thanks to the program we are now saving money every month!"

A retired couple in their 70s located in Vancouver received air sealing, attic insulation and wall insulation from Clark Public Utilities.



Success Story

Sustainable Works

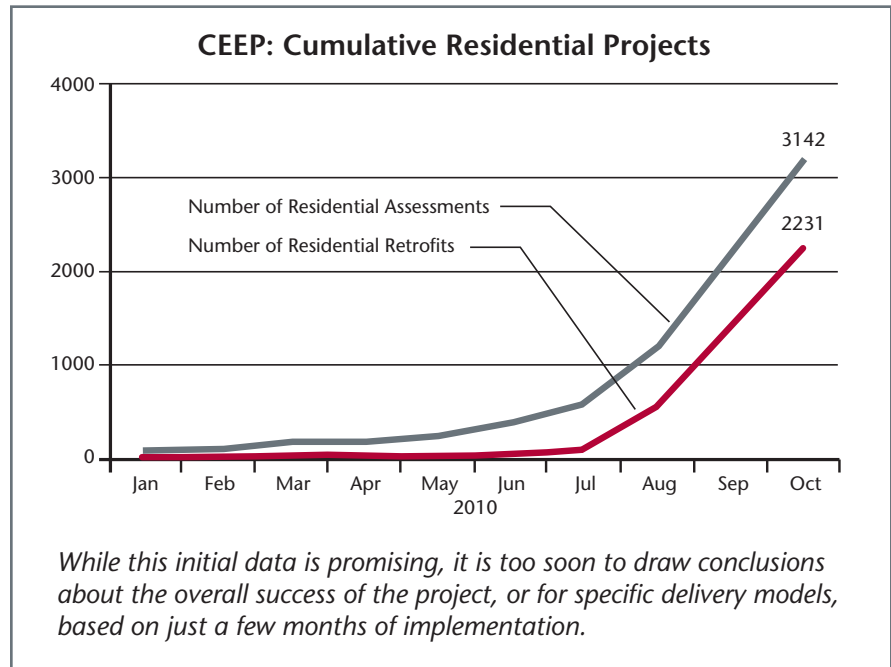
Darrel McLaughlin has been a union electrician with IBEW 191 in Everett for over 10 years.

After months of unemployment resulting from the economic downturn, Darrel attended SustainableWorks trainings, became a BPI certified auditor and proctor, and is now also a SustainableWorks instructor.

In addition to his work with SustainableWorks, Darrel is also an active reverend, husband, father and grandpa. The work created by the SustainableWorks project made it possible for Darrel to get back to work and support his family.

This included hiring staff, getting contractors in place, establishing business and quality assurance processes, developing loan programs, job training for workers, and outreach in the community.

- This investment paid off. The number of installations per month increased from 45 in July to an average of 846 for September and October.



CEEP moved from inception to implementation in under a year.

Projects were identified, selected, contracted, and began implementation on a very aggressive schedule.

Event	Date
Authorizing Legislation Signed by Governor Gregoire	May 2009
U.S. Dept of Energy Approves Washington State Energy Plan	Jun 2009
Formal Request for Proposal Released	Aug 2009
Pilot Projects Selected and Announced	Oct 2009
All Contracts Issued	Nov 2009
Outreach Efforts Began	Dec 2009
First Energy Efficiency Retrofits Implemented	Mar 2010
Pilot Projects Provided First Quarterly Performance Report	Jul-Sep 2010

CEEP touches people across the state

A broad investment in outreach and education.

- As of October 2010, CEEP projects have provided services in 122 neighborhoods in nine counties (Clark, King, Kittitas, Pierce, Snohomish, Spokane, Thurston, Walla Walla and Whatcom).
- Each project uses a different combination of broadly targeted tools to raise program awareness, to recruit participants and complete retrofits.
- Methods include yard signs for in-progress projects, social media and door-to-door outreach. Outreach includes education about energy conservation behavior, as well as the availability of program services.

An investment that is yielding results – as of October 2010 CEEP projects have:

- Assessed or audited 3,142 homes and 68 small businesses.
- Installed measures in 2,225 residences totaling over 2.75 million square feet. This includes 1,345 mobile homes, 596 multi-family units and 284 single-family homes.
- Installations range from comprehensive whole-house retrofits to a more limited package of prescribed measures.
- Installed measures in 19 businesses totaling 288,000 square feet.

The WSU Extension Energy Program will assess retrofit measures, energy savings and cost effectiveness in upcoming reports.

Putting people to work

CEEP dollars are reaching Washington's retrofit industry and other small businesses.

- All CEEP projects use private or non-profit contractors to implement programs. Over 85 percent of these contractors are providing direct services (audits or retrofits). Others provide support services (printing, web services, etc.).



Success Story

Opportunity Council/ Sustainable Connections

Contractors participating in the program stated:

"I would likely not be in business without the Community Energy Challenge."

"I was able to hire two employees and invest in equipment for my business because of the Community Energy Challenge."

Energy improvements have saved the North Fork Brewery and Beer Shrine an average of 7.5 percent of their energy costs. They are now implementing a number of larger improvements including comprehensive air sealing, insulation and adding more than 8 kW of solar photovoltaic electricity.



Success Story

Sustainable Living Center

The Sustainable Living Center's Home Energy Round-Up has trained and mobilized over 75 student volunteers.

The Sustainable Living Center states that participating homeowners are finding a three-to-five-year return on investment.

By focusing only on top priority energy efficiency measures such as insulation and air sealing, homeowners are saving money and energy.

The high savings-to-investment ratio allows federal funding to be leveraged three to one by using utility incentives and homeowner contributions.

- Projects work with contractors in a variety of ways. Three work with specific contractors and then contract for direct installations. Three use funds for outreach and audits to generate leads and refer customers to "qualified contractors." Two use a combination of strategies for working with contractors.
- **171 contractors** with a combined payroll of over **581 employees** have either received ARRA funding through CEEP to deliver service, had projects partially or completely financed by CEEP incentives, or completed projects generated by CEEP audits or outreach. This number will increase as projects continue to move to full-scale implementation.
- **49 FTE** are directly paid by ARRA funds, providing project management, outreach, training, energy audits and retrofit services.

CEEP is supporting family-wage jobs.

- Prevailing wage requirements apply only to projects where ARRA funds cover salaries or project costs. Five of the eight projects funded retrofit project costs, so that all contractors were subject to prevailing wage requirements and provided detailed information of FTE and wages. Three projects funded support and referral services, which were not subject to prevailing wage requirements.
- Wages for projects subject to prevailing wage ranged from \$10 to \$94 dollars per hour, with typical wages ranging from \$30 to \$35 per hour.

Building workforce capacity

CEEP is contributing to a more capable energy efficiency retrofit workforce.

- The CEEP grant selection process included evaluation of whether projects explicitly included strategies to build retrofit workforce capacity.
- Two projects, SustainableWorks and the City of Ellensburg, have incorporated apprenticeship programs in their projects. A third, Puget Sound Energy/UCONS L.L.C., provides informal mentorship and training programs.

- Seven projects reported that **135 contracting staff or volunteers** participated in over 2,500 hours of project or energy efficiency related training. Training efforts range from two-hour courses for volunteer canvassers to on-the-job training for retrofit contractors.
- All programs include careful quality control/quality assurance elements. The WSU Extension Energy Program provides additional monitoring. This combination provides much higher quality workmanship than has traditionally prevailed in this industry and is building skills in participating contractors and subcontractors.
- Participating contractors in several projects have been able to hire additional staff to meet the demand created by the program. Contractors have also been able to invest in equipment to expand the services their businesses provide in their respective communities.

Reaching out to targeted populations:

- When recruiting implementation staff, all eight CEEP projects coordinated with local organizations who work with veterans, the National Guard, low-income workers, and workers with disabilities.
- Four projects have hired or retained workers in targeted populations.

Forging new relationships:

- Historically, utility incentive programs were the predominant model for delivering energy efficiency improvements in the region. While utilities are contributing to all projects, community and non-profit organizations lead four of the CEEP projects.
- All eight projects have reported relationships between utility and community groups were built or strengthened in the first year of the project. Both utility and community groups are finding value in working together in a continued partnership.
- All CEEP projects coordinate program marketing and client identification with their local low-income weatherization assistance provider. This is an intentional effort to leverage and build upon existing state efforts.



Success Story

Thurston County Economic Development Council

The Commercial Services Division of Thurston Energy is currently working with West Coast Bank to finalize implementation of energy savings measures.

As a result of addressing inefficiencies in HVAC operation, lighting, and water usage, current projections estimate a \$4,000 reduction in annual operating costs.



Success Story

Puget Sound Energy/UCONS

After being unemployed for nearly two years, **Bob Stiner** now serves as a weatherization worker on the Puget Sound Energy and UCONS L.L.C. manufactured home retrofit project.

Bob found employment with UCONS through Work Source.

Daniel Phillips, pictured on the front cover, was an Insulation Installer for a local weatherization and clean-up contractor. He was laid off due to the lack of business, and subsequently unemployed for six months. Daniel found employment with UCONS through a partnership with Pioneer Human Services.

Encouraging experimentation:

- Five CEEP projects are trying new strategies with traditionally hard-to-serve utility customers:
 - Clark Public Utilities is working in partnership with Clark County and the City of Vancouver to maximize retrofit penetration in two neighborhoods by trying several targeted approaches.
 - The City of Ellensburg is using CEEP dollars to extend its efficiency programs to customers that heat with natural gas who have not had this opportunity before.
 - Snohomish County Public Utility District is testing several approaches to reach residential and small commercial renters who have split incentives for investing in energy efficiency.
 - Puget Sound Energy and UCONS L.L.C. are focusing on direct installation of limited prescribed sets of measures for mobile homes.
 - Sustainable Connections is providing energy conservation services to the traditionally underserved small business sector using a model built on the successful Resource Conservation Management program.
- Other projects are testing strategies for coordinating service delivery and contractors. Initial results show promise.
 - SustainableWorks reports that, while challenging and time intensive, bundling projects in the same neighborhood and batching schedules for a single contractor is resulting in significant retrofit cost reductions of up to 20 percent for some measures.
 - Sustainable Connections has secured a five percent price reduction from three local solar photovoltaic installers for small businesses participating in their program.

What did we learn from project ramp up?

There is ample opportunity for energy efficiency upgrades in the residential and small business sectors:

- Programs are seeing significant interest in and demand for their programs.

- All projects consistently find the anticipated cost-effective efficiency improvements in homes through audits.
- Similarly, savings are being realized in small businesses. For example, participants in Sustainable Connections' program are saving an average of more than \$1,100 per business through simple, low-cost improvements.
- There is demand for comprehensive energy efficiency services in the middle-income residential market.
- Addition of incentives has reduced the need for financing; this has helped move the market.

Setting up administrative, contractual and project management "infrastructure" necessary to do the work and meet accountability requirements was a significant investment in time and expense.

- Program start-up included hiring and job training, developing accounting and project management systems, financial tools and establishing relationships and protocols with utilities and other partners. Several community groups underestimated the time needed to accomplish this.

While prevailing wage requirements have provided a stronger guarantee that CEEP jobs would be "family-wage jobs," this guarantee has had some impacts on the project.

- Administrative difficulties were encountered in complying with both state and federal prevailing wage verification. Programs are working to creatively address these challenges.
- In a competitive industry not historically required to pay prevailing wage, it is difficult for smaller firms to compete. This additional expense and need for office staff to manage the paperwork process is a significant component.
- The prevailing wage requirement has resulted in an increase in weatherization costs. Most of the expense of the CEEP weatherization work is to the customer. The cost increase appears to be affecting the consumer participation rate for some of the projects. In some cases, the additional incentive funding provided by the project do not cover the cost increase resulting from prevailing wage requirements.



Success Story

City of Ellensburg

"It is programs like this that help keep us going during these economically distressed times."

*Kevin Wyatt, Owner
One Hour Heating & Air
Conditioning*

This is the City of Ellensburg's first major conservation effort for natural-gas-heated homes and businesses. For over 25 years, Ellensburg has been weatherizing electric homes and businesses under their BPA Conservation Program.



Success Story

Snohomish County Public Utility District

Community Power! – administered by Snohomish County PUD – has implemented a direct-install approach to energy conservation in apartment complexes located in South Everett.

Efforts this fall have been focused on the Casino Road neighborhood, where the program has reached 577 apartments with direct install measures that include energy efficient lighting, water saving devices, thermostats and for some window replacement.

Sharing and learning is a core project feature

The pilot project process maximizes opportunities to learn:

- Each project deploys a very different delivery, outreach and incentive strategy. The lead organizations for each project bring a wide variety of differing types of experience (e.g. utility, non-profit, local government) as well as credibility and knowledge of the local community.
- The WSU Extension Energy Program provides opportunities for local project leaders to share progress updates and discuss both barriers and successful strategies through regular conference calls and in-person meetings.
- Program evaluation and data collection efforts are underway. In addition to meeting federal and state reporting requirements, the program evaluation plan includes:
 - Monthly updates on key indicators (energy audits and completed projects).
 - Quarterly reports detailing outreach strategies and outcomes, neighborhood-by-neighborhood counts of audits, installations, measures and costs, process and customer satisfaction outcomes and lessons learned.
 - Local energy savings calculations (verified using regionally accepted deemed savings values).

For additional information, contact Jake Fey, Director, WSU Extension Energy Program, at (360) 956-2000.

Visit the Community Energy Efficiency Pilot Program website at www.energy.wsu.edu/BuildingEfficiency/CommunityEEPilot.aspx

Approach Table

Name	Setting	Location	Lead / Supporting Organization							Model Approach Tested						Primary and Secondary Sectors Targeted										
			Public Utility	Private Utility	City/County	Energy Services Company	Economic Dev Council	Community Action Agency	Community Non-Profit	Neighborhood Blitz	Community Saturation	Hard to Reach Market	Social Marketing	One-Stop Shop	Enhanced Incentives	Innovative Financing	Single-Family Residential	Multi-Family Residential	Mobile Home	Renters	Owner Occupied	Working Poor	Older Properties	General Public	Natural Gas	Small Commercial
SustainableWorks	Multiple	Spokane, King, Pierce and Snohomish			X			X	X		X	X	X	X	X	X	X		X	X	X	X			X	X
Opportunity Council & Sustainable Connections	Small Urban	Whatcom County					X	X	X		X	X	X	X	X				X	X	X	X	X		X	X
Sustainable Living Center	Large town	Walla Walla					X	X	X				X			X			X	X	X	X			X	X
Thurston County Econ. Development Council	Small Urban	Thurston County				X		X	X	X					X				X	X	X	X	X		X	X
Snohomish Co. PUD (Community Invitation)	Multiple	Snohomish County	X		X				X	X				X	X	X	X		X	X	X	X			X	X
Snohomish Co. PUD (Community Block Selection)	Urban	Everett	X		X					X					X				X		X				X	
Clark Public Utilities	Urban / Suburban	Vancouver Hazel Dell	X		X					X				X	X	X			X	X	X	X			X	
City of Ellensburg (Comm. Natural Gas Conservation Prog.)	Small Town	Ellensburg	X		X					X				X		X			X	X		X			X	
Puget Sound Energy & UCONS, L.L.C.	Multiple	Statewide		X		X				X	X	X	X	X	X	X			X	X	X	X	X	X	X	

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