

## **Appendix C**

Northwest Energy Efficiency Alliance Report for Puget  
Sound Energy, Q1-Q2 2011



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### OVERVIEW

The Northwest Energy Efficiency Alliance (NEEA) is a non-profit organization working to maximize energy efficiency to meet the future energy needs of the Northwest. NEEA is supported by, and works in collaboration with, the Bonneville Power Administration (BPA), Puget Sound Energy (PSE) and more than 100 Northwest utilities on behalf of 12 million energy consumers. NEEA uses the market power of the region to accelerate the innovation and adoption of energy-efficient products, services and practices.

Puget Sound Energy benefits from NEEA's regional market transformation work to fill the energy efficiency pipeline with emerging technologies and accelerate the market adoption of energy-efficient products, services and practices, accomplished through leveraging the Northwest's regional advantage. NEEA's work "upstream" to expand the market for energy efficiency complements and may accelerate individual utility programs. Through NEEA, PSE and other Northwest utilities leverage the market power of the region to realize economies of scale for the benefit of local economies. PSE has committed \$26.3 million in NEEA from 2010-2014, 13.2% of total funding.

### FILLING THE ENERGY EFFICIENCY "PIPELINE"

NEEA identifies, develops and helps commercialize emerging technologies for wider market adoption through its emerging technologies focus area. NEEA provides a mechanism for the region to invest in emerging technologies in a way that minimizes risk to any single funder and maximizes potential benefits. NEEA and its partners have identified thirty-nine emerging technologies with estimated energy savings potential of 1,000 aMW over the next 20 years—more than triple NEEA's goal of 300 aMW. In 2011 Q1-Q2 highlights include:

- **Ductless Heat Pumps (DHP):** Completed DHP field metered sites, with data analysis underway from detailed metered sample of 100 homes. Combined with extensive billing analysis, this data will support determination of a deemed value by the Regional Technical Forum, which will provide a more direct path for utility incentives.
- **Heat Pump Water Heaters (HPWH):** HPWHs represent potential regional savings of 500 aMW by 2029. NEEA completed the second Northern Climate Spec-compliant HPWH test with one major manufacturer, AirGenerate, participating. The AirGenerate ATI66 HPWH can be installed in PSE territory and anywhere in the region. PSE's own contributions helped inform NEEA's regional efforts to improve the North Climate specification for the region, which will in turn accelerate market adoption locally. NEEA also hosted a HPWH workshop May 25-26 in Seattle, with participants from Bonneville Power Administration (BPA), Energy Trust of Oregon, Snohomish PUD, Seattle City & Light, PSE and Idaho Power, Canada and the Northeast U.S. The workshop resulted in two new working groups on technical issues and regional program design.
- **Residential Test Bed:** NEEA finalized study design and funding prospectus, and secured funding commitments for 90 homes, 30 in the Puget Sound region. The test bed will provide an environment to test and refine new residential technologies for the region, serving as the proving ground for new energy-efficient products, services and practices by allowing researchers to conduct experiments under typical real-world conditions. Through detailed metering of energy use, the test bed will also provide a baseline to compare future residential technologies for use in PSE territory and regionally.
- **Industrial Refrigeration:** NEEA completed an energy efficiency opportunity assessment for industrial refrigeration and best practices, identifying an opportunity in defrost and operator training for a potential future initiatives. NEEA conducted preliminary discussions on concept development, with contracts for development to be issued Q3.



## ACCELERATING MARKET ADOPTION

### Residential

NEEA's residential work supports and maintains regional upstream delivery platforms for energy-efficient products and services. NEEA's unique regional role leverages resources to influence the market through collaboration. To remove market barriers to the distribution and use of energy-efficient solutions, NEEA collaborates with utilities, builders, manufacturers, large and small retailers and dealer networks to fill the pipeline with highly energy-efficient products, services and practices. Highlights for Q1-Q2 were:

- **Northwest ENERGY STAR® New Homes:** Through this initiative NEEA helps accelerate market adoption of energy-efficient homes and builds market capability through education and training. The initiative continues to show strength in a weak housing market, with market share of Northwest ENERGY STAR Homes through February reaching 14 percent, well above the initiative's regional market share goal of 11 percent.
- **Consumer Electronics:** NEEA is on track to meet its 2011 goal of 28 percent of televisions sold by participating retailers meeting or exceeding the Most Efficient specification (ENERGY STAR® version 5) through NEEA's Energy Forward campaign, representing significant savings for the Puget Sound region. To further increase consumer awareness, NEEA worked with California utilities to lead the call for a more stringent ENERGY STAR specification planned for 2012, and continued to advance utility retail partnerships and drive awareness of energy efficiency as an important product attribute at the buying offices of major retailers, representing more than 80 percent of the televisions sold in the Northwest.
- **Ductless Heat Pumps:** To continue to improve the efficiency levels of ductless heat pumps available in the U.S., NEEA provided input on the ENERGY STAR "Most Efficient" category and inclusion of ductless heat pumps. (The current ENERGY STAR label is not an effective metric of ductless heat pump efficiency for the Northwest.)

### Commercial

NEEA helps expand the commercial market's capacity to deliver energy efficient products, services and practices and helps stimulate market demand by demonstrating their benefits to business leaders. These voluntary programs prime the market to "lock in" savings through codes and standards. Highlights for Q1-Q2 2011 were:

- **Commercial Real Estate:** To help PSE and the region achieve their energy efficiency goals faster, NEEA completed the first year of the two-year energy benchmarking competition, "Kilowatt Crackdown" in Seattle, creating a future pipeline of utility projects and substantial savings. The 2011 BOMA Seattle King County Kilowatt Crackdown winners were announced in Q2, with 71 buildings participating representing over 21 million square feet of office space. In partnership with the Building Owners and Managers Association, NEEA conducted scoping studies of 31 buildings (140+ to date) totaling 7.9 million square feet, which will lead to both operational and retrofit opportunities in the PSE service territory,

To recognize best practices of energy-efficient building management among property owners, the BetterBricks Awards for Puget Sound honored 12 winners from 22 nominations, with 218 business leaders attending.

To drive awareness of energy-efficient commercial building opportunities in PSE markets and elsewhere, NEEA published the [Green Building Opportunity Index](#), which drew local and national prominence, with numerous references by national media.

During Q1-Q2, NEEA continued to increase demand for energy-efficient solutions by providing executive sustainability and Strategic Energy Management coaching for large real estate firms through the Market Partner Scorecard program. NEEA also supported program development on Seattle's new building energy use disclosure requirement and benchmarking to build market knowledge and skills and increase market adoption.



## Industrial

Within the industrial sector, NEEA helps facilitate the setting of industry-wide energy efficiency goals working with industry groups to adopt Strategic Energy Management, and coordinates regional stakeholders to advance best practices. During Q1-Q2:

- **Food Processors:** In January, NEEA partnered with BPA, Energy Trust of Oregon and Washington State University Extension Energy Program to host 80 industrial decision makers at the 3rd Annual Northwest Industrial Energy Efficiency Summit to advance Strategic Energy Management practices by manufacturing leaders. By sponsoring and promoting the event, NEEA is building regional market capability and increasing market adoption of energy-efficient business practices within the industrial sector.

NEEA continues to work with U.S. Dept. of Energy and Northwest Food Processors Association (NWFPA) to set an industry-wide energy intensity reduction goal of 25% in 10 years, and 50% in 20 years. By leveraging the efforts of the NWFPA and Oregon Association of Nurseries, NEEA is able to increase the market adoption of energy-efficient business practices in other industries such as the wine industry. The [2010 Industrial Energy Savings Memo](#) reports final energy savings of 0.3 aMW for the state of Washington from direct involvement of Continuous Energy Improvement at food processing facilities in 2010.

NEEA continues working with partner utilities to design a version of Continuous Energy Improvement that will provide a pathway to the upcoming ISO 50001 international standard for energy management. PSE can then offer this to industrial customers to support their efficiency and business goals.

## Codes and Standards

- **Codes:** In Q2, NEEA provided funding to develop curriculum and train 283 building officials and design and construction professionals in Washington on the Washington State Energy Code, 103 individuals in the PSE service territory. Code compliance should increase as a result of this effort, leading directly to increased savings in new construction. NEEA also visited 15 local building departments across Washington to obtain information on energy code data collection and enforcement practices. This information will allow NEEA to target code training dollars in the state most effectively.
- **Standards:** To advance more stringent federal appliance and equipment standards in support of the region's energy efficiency goals, NEEA participated in a broad range of national standards rulemakings in Q1-Q2. NEEA participated in nine national standards rulemakings and six test procedure rulemakings, in addition to three product coverage determination processes.

## LEVERAGING REGIONAL ADVANTAGE

NEEA's new Partner Services initiatives help maximize local stakeholder energy efficiency efforts through regional information services, events and training; provide services for utilities with fewer resources to deliver on the promise of regional equity; and deliver a mechanism for the region to share information and accelerate learning. Highlights of Q1-Q2 were:

- **Conduit:** To facilitate information sharing, coordination and collaboration by regional energy efficiency professionals, NEEA launched a new online collaboration platform for utilities, *Conduit*, [www.conduitnw.org](http://www.conduitnw.org) in May, 2011 with additional support from BPA. Conduit will directly benefit Puget Sound Energy's territory by accelerating collaboration by energy efficiency professionals to leverage the collective knowledge of the region, and potentially reducing travel expense within the region.
- **ENERGY CONNECTIONS NORTHWEST Conference:** NEEA continues planning **EFFICIENCY CONNECTIONS NORTHWEST** for November 2-3 in Tacoma, Wash. The conference is developed by and for regional utility professionals at both public- and investor-owned utilities to accelerate collaboration and share best practices within the region.



- *Other Regional Coordination:* During Q1-Q2 NEEA initiated the Regional Energy Efficiency Marketing Toolkit project and the Regional Coordination Potential Assessment. Additionally, NEEA facilitated the Northwest Research Group to discuss regional research gaps/overlaps as well as findings from recent evaluation.

## REGULATORY INTERACTION

NEEA staff, management and Board members interact openly with Commissioners and their staff as well as indirectly, through utilities. NEEA's work is open and transparent. During the reporting period, NEEA participated in the following activities with regulatory or legislative bodies:

- Washington State Building Code Council: NEEA experts provided testimony to Washington State Building Code Council supporting code interpretation that would not require programmable thermostats for ductless heat pumps. Council unanimously supported interpretation, removing significant installation barrier in Washington, and decreasing the cost of installation to consumers.

NEEA is committed to serving its regional stakeholders across diverse geographic areas and markets. Effective stakeholder engagement is a top priority. Interaction is encouraged at NEEA Board meetings, Advisory Committee meetings and energy efficiency events around the region. The next NEEA Board meeting is August 19, 2011 in Bozeman, Mont. Stakeholders are also encouraged to read [NEEA Quarterly Performance Reports](#) and [NEEA 2010 Annual Report](#).

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