# **ENERGY EFFICIENCY SERVICES**



2011 Semi-Annual Conservation Acquisition Report

Cover photo credits

Lower left: a next-generation LED lamp. Image used courtesy of Phillips®, used with permission.

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# **Compliance**

This 2011 Semi-Annual Report of Conservation Acquisition is consistent with several regulatory requirements, most notably:

**Electric Settlement Terms for Conservation, Docket number UE-100177** 

Settlement condition K(8)(e):

[PSE must file the following:] (a) Semi-annual Conservation Acquisition Report, comparing budget to actual kWh's and dollar activity, by August 15, 2011 as specified in UE-970686.

Second Supplemental Commission Order, Docket number UE-970686

Consistent with the Second Supplemental Commission Order in Docket number UE-970686:

(The Commission orders) That Puget Sound Energy is required to submit semi-annual reports on the progress of electricity conservation programs delivered under Schedule 83, Electricity Conservation Service, within 45 days of the end of the second and fourth quarters, until such time as the tariffed services are no longer offered.

Throughout this report, Conservation Settlement Terms conditions (listed under Section K of the Agreed Conditions for Approval of Puget Sound Energy, Inc.'s 2010-2011 Biennial Electric Conservation Targets Under RCW 19.285 Docket No. UE-100177) may be sited where applicable within program progress discussions. The Docket numbers will only be referenced in this, the 2010 Electric Settlement Conditions, and the Glossary of Commonly Used Terms sections.

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# **Executive Summary**

#### **Overview**

PSE is pleased to present this 2011 Semi-Annual Conservation Progress Report. Half way through 2011, the Company is on track to meet or exceed the annual conservation goals of 38.8 average megawatts (aMW) and 4,789,478 therms that were set as a part of the 2010-2011 biennial target.

Each year presents challenges to achieving our conservation goals and 2011 is no exception. Circumstances that have had an impact on the Company's conservation acquisition to date include the lingering effects of the recession; developers, contractors and many homeowners are still reluctant to invest in anything other than low-cost repairs and upgrades. More stringent energy codes enacted at the beginning of 2011 reduced the number and incentive amount of some new construction measures. Increased consumer costs of some measure, including insulation and CFLs have similarly put a damper on customer purchases.

By the end of 2010, some American Recovery and Reinvestment Act (ARRA)-funded conservation initiatives were nearing completion<sup>1</sup>; PSE had previously realized a surge in conservation measures due to ARRA-related projects. Another key factor placing downward pressure on achieving our 2011 savings goals is adjusted savings values for several prescriptive measures, most notably CFLs. As the marketplace continues to add new CFLs to less-used living spaces, the aggregate savings value per lamp has decreased over the past two years. As over 30 percent<sup>2</sup> of 2011 overall EES savings are derived from CFL sales, the impact is clear.

In response to some of these market influences, EES began implementation of a number of adjustments. These include putting in place the increase of certain residential insulation and shell incentive levels in order to stimulate customer response, and planned a new Rock the Bulb "tour" for the spring/summer of this year. Plans are also in place<sup>3</sup> for a new residential refrigerator replacement offering, an LED pilot program, and a program that encourages comprehensive commercial lighting projects. Hot Food Holding Cabinets and Commercial CFLs were also reintroduced.

<sup>&</sup>lt;sup>1</sup> Although the overall impact of ARRA-funded conservation activity has slowed, the Energy Efficient Communities team continues to receive requests from municipalities who have remaining or unallocated funding, as noted in their mid-year discussion.

<sup>&</sup>lt;sup>2</sup> Residential retail channel CFLs accounted for 43,864 MWh through June 30. This figure excludes CFLs installed as a part of the HomePrint, Multifamily or Small Business Lighting programs.

<sup>&</sup>lt;sup>3</sup> By the time of publication of this report, these programs are in effect.

In spite of the hurdles, as of the end of June, 2011, PSE has achieved 41.3 percent of its electric savings goal (338,960 MWh) and 34.5 percent of its natural gas savings goals (4,789,487 therms). Electric expenditures are tracking well with savings achievement, at 34 percent of budget and natural gas expenditures are 32.3 percent of budget. Table 1 provides the overall portfolio sixmonth savings and expenditure results.

Savings Expenditures Electric 139,876 \$30,824,571 (MWh) 2011 Goal 338,960 \$90,793,904 (38.8 aMW) Percent 41.3% 34.0% Gas 1,652,940 \$6,226,882 (Therm) \$19,280,456 2011 Goal 4,789,478 Percent 34.5% 32.3%

**Table 1: Overall Six-month EES Results** 

139,876 MWh divided by 8,760 hours = 15.97 aMW Savings are stated in terms of first-year annual figures.

# **Residential Energy Management**

Through June 2011, REM reached 46 percent of its electric (64,044 MWh) and 33 percent of its natural gas (688,335 therms) 2011 savings goals as of June 30. Expenditures are 37 percent of electric (\$12,147,130) and 30 percent of natural gas (\$3,288,755) budgets for the same timeframe. New construction markets and the Fuel Conversion program were particularly affected by the 2011 first half conditions. Residential lighting continues to be a strong program for EES, however. Low Income Weatherization also turned in encouraging natural gas savings in the first two quarters.

# **Business Energy Management**

BEM has achieved 36 percent of its electric (64,082 MWh) and 36 percent of its natural gas (964,605 therms) 2011 savings goals as of June 30. Expenditures are 30 percent of electric (\$14,010,383) and 36 percent of natural gas (\$2,536,937) budgets for the same timeframe. Lighting projects continue to drive significant savings through the first half of the year, with strong results being reported by the Business Rebates program; both in the electric and natural gas sectors.

# **Regional Programs**

The Northwest Energy Efficiency Alliance (NEEA) comprises the Regional Programs sector. Through June, the Company recognized 11,750 MWh, with expenditures of \$2,611,286.

# **Support Activities**

Support Activities, which are primarily those that support overall EES initiatives, had expenditures that were 31 percent of electric (\$1,415,635) and 31 percent of natural gas (\$401,189) budgets for the same timeframe.

# **Other Electric Programs**

Other Electric Programs, consisting of Net Metering, Renewable Energy Education and Demand Response pilots, had expenditures that were 42 percent of electric (\$640,138) budgets for the same timeframe.

#### **Sector Results Tables**

Sector-level savings and expenditure figures are provided in Tables 2 and 3 at the conclusion of the Executive Summary.

Table 2 provides a Sector view of 2011 savings achievements through June 2011. Table 3 is a Sector view of six-month 2011 expenditures.

**Table 2: Six-month Sector-level Savings** 

	Residential	Business	Regional	Total
Electric (MWh)	64,044	64,082	11,750	139,876
2011 Goal	137,741	177,719	23,500	338,960
Percent	46.5%	36.1%	50.0%	41.3%
Gas (Therm)	688,335	964,605	na	1,652,940
2011 Goal	2,114,228	2,675,250		4,789,478
Percent	32.6%	36.1%		34.5%

**Table 3: Six-month Sector-level Expenditures** 

	Residential	Business	Regional	Support Activities	Other Electric	Total
Electric	\$12,147,130	\$14,010,383	\$2,611,286	\$1,415,635	\$640,138	\$30,824,572
2011 Budget	\$32,965,589	\$46,433,266	\$5,260,640	\$4,618,636	\$1,515,773	\$90,793,904
Percent	36.8%	30.2%	49.6%	30.7%	42.2%	34.0%
Gas	\$3,288,755	\$2,536,937	na	\$401,189	na	\$6,226,881
2011 Budget	\$11,039,916	\$6,952,079		\$1,288,461		\$19,280,456
Percent	29.8%	36.5%		31.1%		32.3%

# **EES Condition Compliance**

Table 4 lists some key highlights of 2011 completed activities that are consistent with the Sections and conditions (which are listed in Section K) of the 2010 Electric Conservation Settlement, Docket number UE-100177. A comprehensive list of compliance achievements is presented in Appendix B of this report, the Condition Compliance Report Card. As noted in the report card, some conditions are ongoing (such as several in K[3]), and some (Section I(18) for instance) are not due until 2012.

**Table 4: Highlights of Condition Compliance** 

Condition	Activity				
F(12) & (13)	Schedule 258 program participation and NEEA/administrative payments				
H(16)	Apply the peak credit method to all customers except Schedule 449s.				
K(3)(a)(i)(1)	a)(i)(1)  Began development, with participation of several CRAG members, of the EM&V Framework				
K(3)(a)(iv)	Reviewed market assessments and data values used in updating PSE supply curves; 2011 IRP completed				
K(3)(b)	Face-to-face meetings with the CRAG (three as of May 19)				
K(5) & K(7)(a)	First of quarterly updates to Exhibit 4				
K(6)(g)	Began the third-party review of 2010 electric savings claims				
K(6)(f)(ii)	Began work through KEMA on M&V cost estimates and process documentation				
K(8)(c)	Filed 2010 Annual Report. First major reformatting in seven years.				
K(8)(d)	Schedule 120 filing; March 1, 2011				
K(11)	Electric cost recovery period, programs and customer classes				

(Table 4 is not a comprehensive list of all conditions or Settlement Terms Sections with which PSE has complied in 2011.)

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# **Residential Energy Management**

The Residential Energy Management (REM) Sector provides incentives, rebates, contractor referrals, and conservation value-added services for a wide variety of residential customers. The Residential structure types supported are equally varied, including single family, multifamily and low income dwellings.

REM offers a variety of direct benefits including mail-in rebates, point-of-sale (POS) discounts for energy-efficient products, no-charge measures such as showerheads and directly-installed CFL lamps, and services such as refrigerator decommissioning.

In order to deliver value-added conservation programs to customers, the Residential team collaborates with vendors, contractors, manufacturers, distributors and retailers. We leverage these relationships to assist in maximizing existing and developing future programs so that implementation is seamless to our customers.

# 2011 Progress through June

The majority of Residential programs were affected through the first two quarters by market and economic conditions, more stringent energy codes and adjusted savings values. Initiatives started in Q1 and Q2 by program staff are ongoing in order to meet savings targets while doing so within budgets.

The Low Income Weatherization program deployed online tools for Agencies to track measures installed using REC proceeds and added new measures to its portfolio. Residential lighting is exceeding its savings targets, while expenditures are below budget and the revised HomePrint program was launched in Q1. The new refrigerator replacement program was launched in Q2 with enthusiastic customer response and a May promotion resulted in an increase in showerhead orders. The lack of federal tax credits and increased material costs are negatively affecting the Weatherization and Space & Water Heat programs.

Implementation of the 2009 Washington State Energy Code (WSEC) revisions affected incentive levels in the new construction sector, while the Fuel Conversion program continues to deal with economic and local municipality challenges. Vacancy rates in the multifamily sector are beginning to come down and is partnering with the BEM team to evaluation measures in multifamily complexes. Two pilot programs continue to gain market acceptance. Table 5 provides program-level views of savings and expenditures through June 2011.

Electric **Schedules** Description Savings Savings Expenditures Expenditures (MWh) (Therms) E214 G214 Single Family Existing 7,393,664 54,510 2,066,370 592,926 E217 G217 Multi Family Existing 1,822,488 6,184 98,642 6,329 Single Family Fuel Conversion E216 241.417 877 Single Family New Construction G215 1.013 \$ 249.871 E215 \$ 513.401 34.739 E201 G203 Low Income Weatherization \$ 1,068,741 740 \$ 328.940 19,634 LIW REC Funding \$ 233 E218 G218 Multi Family New Construction 197.821 370 \$ 88.725 10.875 \$ E200 G206 Residential Energy Efficiency Information 468.790 n/a 259,330 0 G207 16,117 0 **Energy Education** 56,695 0 \$ G249 Pilots, excluding: 29.183 117 \$ 74.951 23.832 354.929 0 105,808 Home Energy Reports 0 Total Residential Program 688,335 12,147,130 3.288.755

Table 5: Residential Energy Management, Savings and Expenditures

REM program details are contained in Exhibit 3 of the 2011 Annual Conservation Plan, filed under Docket number 100177.

### **Residential Energy Information**

Schedules E200, G206

#### **Energy Advisors**

Customer inquiries have increased 13 percent from the same period in 2010. The Energy Advisor Department added four new employees in June 2011 to fill positions that were vacant since 2010. In a continuing effort to support our regional business offices and connect with our communities, the department has deployed four (experienced) energy advisors in the Kitsap Service Center, Bellingham, Olympia and South Whidbey Business Offices. Shortly after the new hires started, one of the Senior Energy Advisors was promoted within Energy Efficiency to Commercial Energy Management.

#### **Events**

Event strategy team provides specific criteria for event participation that matches overall business and strategy of the programs supporting EES programs with emphasis on presence, affiliation and relevance. Each event holds a particular value to stakeholders and relates to objectives of PSE EES programs.

The Events team has been redesigning and organizing the events management processes in order to improve the customer experience. The Events strategy team, including representatives from marketing, outreach and programs, reviews event requests, reviewing event opportunities in advance, with a focus on planning for and vetting events.

The Event Management software module is being designed to improve and deploy event agenda's, communications and statistics all reside in one central location so every staff member has access to the most up-to-date and accurate information for any event they are working on. The team expects to test the system through August.

The Events team has been designing "customer interactive" displays including representatives from Marketing and external consultant that will be used to interact and educate customers on energy efficiency and Renewables topics. The "customer interactive" displays will show case PSE"s energy efficiency and renewable energy programs, services and rebates and demonstrate how customers can save energy, money and help the environment. The displays will be used at various event booths where PSE staff will talk with customers. Expect to deploy by Sept.

#### Online Tools and E-Newsletter Report

In 2011, the Online Tools and E-newsletter<sup>4</sup> budget lines supported funding of the existing Aclara<sup>5</sup> Software contract, and an e-newsletter database management account with Constant Contact, respectively.

#### **Information Services Brochures 2011 Report**

In 2011, the Information Services brochure budget was reduced significantly. However, care was taken to produce the quantities needed for 2011 in 2010, under the Re-Energize brand platform. This year's limited budget has been used to update materials as necessary, to reflect significant program or offer changes.

#### **Low Income Weatherization**

Schedules E201, G203

In accordance with Final Order 05, Docket UE-070725, Agencies tracked the cost effective application of PSE Tariff Electric and REC proceeds to fund repair measures necessary for enabling weatherization, through tools made available in January 2011 in the PSE online tracking and reporting system. PSE conducted measure verification activities at most agencies contracted with PSE to implement the PSE Residential Low Income Weatherization (LIW) program and measure verification goals are on target. New measures for the 2011 program were added to the LIW gas and electric programs, including ductless heat pumps, tankless gas water heaters, gas water heaters, and electric water heaters.

<sup>&</sup>lt;sup>4</sup> EES's Constant Contact account is used for e-newsletter management. Constant Contact manages EES's e-newsletter e-mail database opt-ins and opt-outs, as well as EES's HTML newsletter templates. Federal regulations under the CAN-SPAM act require a qualified email address management system to protect customer preferences.

<sup>&</sup>lt;sup>5</sup> The Aclara software provide online customer account management through MyPSE. The Aclara Energy Center tools provide meter data-supplied energy usage dashboards; appliance, heating, cooling and water system calculators, and targeted PSE rebate and program information, tied to customer information.

### **Energy Education**

Schedules E202, G207

PSE and Hopelink partnered to provide an Energy Efficiency Education program to low income adults with limited English speaking skills. Curriculum and materials were developed for use in the classroom in educating adults on how to save energy and save money. Upon completion of the class, they receive a bag of low cost energy efficient applications such as a low flow showerhead, CFL bulbs and weather stripping. Extended education training workshops for Low Income agencies followed by added additional languages; Spanish and Russian.

PSE and Re-Sources partnered to provide Whatcom Energy Education Challenge which included workshops for the Nooksack Valley School District and Bellingham Sustainable Connections. Promoting energy education tools to teachers and principals. Energy efficiency checklist was developed for students and families to learn ways to save energy in their homes.

# **Single Family Existing**

Schedules E/G 214

### Residential Retail Lighting

The first two quarters of 2011 exceeded the program's mid-year forecasts, while staying within budget expectations. Strategies to achieve these targets included:

- 1. Extra retail lighting Earth Day promotions with Home Depot, Costco, and Walgreens that included prime real estate placement of rebated products and PSE signage and
- 2. A re-design of in-store PSE Point-Of\_Purchase (POP) and signage to include simplified educational messaging in more pictorial formats on application choices, and benefits of energy-efficient lighting products.

#### **HomePrint**

The new HomePrint Assessment program was launched in February 2011 due to changing savings assumptions that resulted in cost effectiveness challenges with the 2010 delivery model. The official kick-off preceded training of 68 individuals to perform the HomePrint Assessment service; a free in-home service that provides customers with a better understanding of their home's basic energy consumption and cost effective ways to use less energy. Additionally, customers are provided with on-site installation of up to 50 free compact fluorescent light bulbs. Finally, each customer receives a summary of energy-saving recommendations, plus information on: PSE energy-efficient product rebates, contractor referrals and other helpful energy efficiency tips. Through June 2011, 1,565 HomePrint Assessments have been completed, reflecting continuing market demand and an engaged contractor network.

### Refrigerator Decommissioning

Refrigerator decommissioning usually begins to pick up in volume in the early summer, where we expect to achieve the majority of the savings for 2011. Program expenses are well below budget.

#### **Refrigerator Replacement**

The new program was launched in June with enthusiastic customer response.

### **Appliances**

Clothes washer savings exceeded Q1 and Q2 forecasts. Program expenses are slightly below budget.

### **Showerhead Replacements**

Showerhead electric and gas savings is slightly behind due to a delayed launch of the PSE online retail store site and expected slow pickup of customer awareness of this new program interface. A promotion was launched in late May for customers to take an online survey to receive a free showerhead. We have seen significant volume pick-up that will be reported in July and August savings figures.

## **Weatherization**

Although ARRA stimulus funding in our region is still available, the absence of Federal tax credits along with other fluctuations to market conditions have resulted in lower than normal participation levels in our weatherization rebate programs.

However, the joint arrangement entered into with UCONS and WSU in 2010, to leverage ARRA funding, has augmented the delivery of the mobile home duct sealing program, which continues to operate ahead of forecasted levels.

### **Space and Water Heating**

Like Weatherization, this program is also affected by the absence of Federal tax credits along with other fluctuations to market conditions. The program has realized lower than normal participation levels in our space heat and water heat rebate programs.

The energy factor (EF) rating on eligible high efficient water heater tanks was raised from 0.65 to 0.67 in 2011 to align with market forces.

#### **Single Family New Construction**

Schedules E/G 215

With the implementation of the 2009 Washington State Energy Code on January 1<sup>st</sup>, 2011, several single-family new construction incentives were impacted. The focus for the first half of this year has been to educate builder partners on the code changes, and work with them to continue to install energy efficient upgrades. Program staff have concentrated on medium to large builders that install the majority of these upgrades. Our goal was to show the continued value of energy efficient "green building" programs, and how builders can exceed code requirements by installing ENERGY STAR® products and appliances with less incentives.

This builder outreach has begun to increase participation, with several new and existing partners taking advantage of and expanding their levels of participation in our incentive programs. Additionally, the ENERGY STAR® Homes Program in the Puget Sound area, now has a market share of approximately 20 percent. More than 50 percent of program savings came from home being built to this standard.

#### **Fuel Conversion**

Schedules E216

The majority of the savings for the program come from electric to gas water heater conversions. This is due to the ease of converting water heaters when there is already gas service to the house. Results continue to be lower than planned due to macroeconomic, local municipal charges (jurisdictional permitting processes, construction design issues), and other first cost issues.

#### **Multifamily Existing**

Schedules E/G 217

#### Electric

Initial program participation has been slow due to economic conditions in this market. However, vacancy rates are now beginning to decrease resulting in increased participation in the late second quarter. Program staff continue to reforecast goals based on customer participation and we are currently on target to meet savings forecasts. The program team is working closely with the commercial group in Business Energy Management (BEM) to evaluate and provide rebates for commercial measures in multifamily complexes. These include ground source heat pumps, solar pool heaters, and common area upgrades. The program is supporting US troops at Fort Lewis/McCord joint base by installing building envelope upgrades in on-base military housing.

#### Gas

The Multifamily Retrofit gas program is on target to meet current savings goals. The program added a solar pool heating custom incentive to be available through the end of 2011. Due to low building stock of gas heated buildings, we are seeing lower participation in building envelope upgrades, but continue to serve common area heating and water heating systems.

#### **Multifamily New Construction**

Schedules E/G 218

#### **Electric**

Despite a slowing in the new construction market in first half 2011, the program was able to exceed its KWh mid-year forecast and gain further visibility in the development community.

#### Gas

Project participation for gas measures was lower than anticipated in the first half of 2011. The program team is working on several projects that were contracted early last year and are just beginning construction. We are seeing several new projects in the planning stages and are working closely with the development teams to incorporate energy efficient upgrades.

#### **Pilots**

Schedules E/G 249

The gas fireplace and the electric heat pump sizing/lockout pilots continue to gain market acceptance. The Residential Grant pilot originally proposed in 2010 is not being pursued in 2011.

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# **Business Energy Management**

The Business Energy Management (BEM) Sector is often also referred to as the "Commercial/Industrial" Sector. The Business Sector serves a diverse set of clientele. BEM programs serve small, medium and large commercial customers, industrial facilities and industrial processes, government entities such as school districts, utilities such as water and sewer treatment plants, and military bases. There are also programs that serve agricultural customers such as farms, food storage and food processing.

PSE provides incentives for efficiency improvements for both existing and new buildings and equipment. Prescriptive rebates are used for small lighting projects, motors, kitchen equipment, heating/cooling equipment, etc. Other prescriptive incentives are available for more complex projects such as new construction or Building Energy Optimization for existing buildings. Custom grants are used for large lighting projects and complicated projects such as HVAC modifications, heat recovery, process improvements, boiler upgrades and replacements, whole-building new construction, etc.

# **2011 Progress through June**

Several BEM initiatives were affected by the lingering effects of the economic difficulties of the past two years. In the Commercial/Industrial (C/I) retrofit program, lighting efficiency projects remain the major contributor to electric savings. In CI New Construction, completion of projects slowed and nearly all projects started during the construction boom have been completed BEM's Resource Conservation Manager (RCM) program now includes over 100 customers and the shared-RCM programs became showcase success stories.

Our Small Business Lighting participation remains high, with process streamlining ongoing, increasing administrative effectiveness. LED traffic signals achieved its total 2011 savings goal in the first quarter. Work will continue into the second half of 2011<sup>6</sup> to develop a final Schedule 258 revision. Lastly, there are several successes in the Business Rebates program, with many initiatives involving collaboration with other area utilities.

Table 6 provides program-level views of savings and expenditures through June 2011.

<sup>&</sup>lt;sup>6</sup> By the time of this report's publication, PSE will file a revised Schedule 258 after consultation with the CRAG.

Electric **Schedules** Description Savings Savings Expenditures **Expenditures** (MWh) (Therms) 6,975,156 1 800 400 F250 G205 C/I Retrofit 28 131 492 329 E253 G208 Resource Conservation Manager - RCM 441,266 8.228 285.748 334.229 E255 3,441,574 Small Business Lighting Rebate 11,672 F251 G251 C/I New Construction \$ 1,502,783 3,881 179.988 28.424 **Business Rebates** 109.623 E262 G262 \$ 999.047 8.676 \$ 241.940 Large Power User - Self Directed 588 856 2 785 F258 E257 LED Traffic Signals \$ 19,131 709 Business Energy Efficiency Information E260 G260 42,569 0 28,861 Total Business Programs 14,010,383 64,082 MWh 2,536,937 964,605

Table 6: Business Energy Management, Savings and Expenditures

BEM program details are contained in Exhibit 3 of the 2011 Annual Conservation Plan, filed under Docket number 100177.

#### Commercial/Industrial Retrofit

Schedules E250, G205

#### **Electric**

Program participation has remained high in the C/I Retrofit program. Lighting efficiency projects continue to remain the major contributor to program savings with HVAC measures making up the second largest category of savings.

C/I retrofit program incentives have remained constant through the first half of 2011.

- Completions of K-12 and higher education efficiency projects receiving stimulus funding through the Office of the Superintendent of Public Instruction (OSPI) and the Department of Commerce have been less than expected. Retrofit projects driven by ARRA stimulus funds have also been fewer than anticipated in 2011. Many "shovel ready" projects were completed in 2010. Subsequent phases of stimulus funded projects are taking longer to develop and implement.
- The Building Energy Optimization Program (BEOP) continued to bring in new customers. New participants are in the large office building, higher education, K--12 and hospital categories. In addition there has been repeat business from a pool of office buildings and chiller plants. We entered into the final bonus phase of the program for a number of projects for the first time.

A three day technical training was offered for providers and customers in existing building commissioning. We continued to provide close supervision for providers in their first jobs to assure quality work and help them fully understand program requirements. Several new providers were qualified to participate, while a few qualified providers left due to changing employment.

An additional Energy Management Engineer was trained to work with customers on this program to help meet the demand.

• PSE's Energy Smart Grocer Program had significant growth in participation in the first half of 2011.

#### Gas

The majority of gas project savings in the first half of 2011 came from completions of multiple large space heating upgrade projects, ventilation controls and heat recovery measures.

#### Miscellaneous

- To better manage incoming projects and improve project forecasting and program planning activities, a new Excel-based Business Energy Management Project Tracking tool was deployed in January 2011. The team worked to overcome many technical challenges associated with tracking and reporting preliminary initial project data.
- In addition to the Excel-based tool, the CSY database used for contract administration, tracking, and reporting of retrofit grant agreements was updated in April 2011 (CSY.net) to include a number of streamlined features and added capabilities.
- To ensure quality LED lighting products are installed under the custom grant program, regional LED qualification criteria coordinated through the Lighting Design Lab, became a requirement for LED products installed through the custom grant retrofit program.

# **Commercial/Industrial New Construction**

Schedules E/G 251

#### **Electric**

In the first six months of 2011, completion and payment of projects slowed from previous years. A majority of the electric savings are attributed to large office buildings. Projects continued to consist of the normal program mix: a few large projects providing significant energy savings combined with an aggregate of smaller projects. In addition to office buildings, 2011 completed projects have also included schools and healthcare facilities. Efficiency measures have consisted of the following: chiller, VFD, heat recovery, lighting and controls, commissioning. Funding has been provided through all of PSE's New Construction program offerings: component approach funding, whole building approach, and whole building prescriptive approach.

Nearly all projects started during the construction boom have been completed or are very near completion. New project leads in 2011 are heavily weighted towards schools, with participants utilizing PSE incentives for both building equipment efficiency measures and third-party commissioning.

#### Gas

A majority of the gas savings are attributed to a large high school project and several large office projects. The mix of measures is distributed among boilers, water heaters, HVAC equipment, controls, commissioning, and via Whole Building Approach.

#### **Resource Conservation Manager**

Schedules E253, G208

As of June 2011, there were over 100 customers engaged in PSE's RCM program. Collectively, these efforts helped to manage energy and resources in over 160 million square feet of facility space and impacted roughly 6,800 PSE meters. Program growth included the addition of new customers as well as renewal of customers reaching the end of their initial three-year agreements, often signing up for a second three-year term.

Newly-formed shared-RCM programs, which combine smaller entities into a portfolio of sufficient size to participate in the RCM program, began to complete deliverables. When compared to other shared-programs which lack formal utility support, the shared programs supported by PSE indicated they strongly benefited from PSE's assistance and experience. Many of these customers demonstrated solid initial progress and became showcase success stories for the shared-program concept.

In March, nearly 100 customers participated in the 4<sup>th</sup> annual RCM program meeting which provided both training and networking opportunities. The annual meeting kicked off the 2011 RCM training calendar. In the first half of 2011, the team has facilitated five all-day training sessions. As part of our Building Operator Certification (BOC) partnership, more than 30 customers participated in three technical webinar sessions. Three customers successfully completed BOC Level 1 training. To support customer requests for more networking opportunities, the RCM team began planning regional networking meetings to be held in August.

RCM program staff continues to focus on improving program mechanics, documentation, and support resources. A salary survey of Resource Conservation Managers was distributed to update data on program measure costs and a series of customer feedback meetings were scheduled to identify opportunities for program improvement. Additionally, the data team helped to develop new and modified existing EES tracking & forecasting databases and reports

In June an Associate Applications Analyst was added to the data team to help meet continued demand for customer data and to provide capacity for addressing needed system upgrades and maintenance.

Program savings in the first half of 2011 were lower than anticipated, which can be attributed to these factors:

- The recession has impacted some customers' abilities to meet program commitments; several have not been able to dedicate adequate staff time to achieve targeted savings due to non-RCM duties being assigned to RCM employees as organizations down-size; and a few have been forced to let their agreements expire.
- A significant portion of savings anticipated in Q1 2011 were finalized and claimed in Q4 2010.
- Program growth outpaced PSE staffing and capacity. Two new PSE RCM staff positions were approved. An Associate Application Analyst position was filled in June and interviews were begun for a Sr. Energy Management Engineer to provide increased technical support and project management.

### **Small Business Lighting**

Schedules E255

In the first six months of 2011, the Small Business Lighting program tracked well to meet its annual goals for budget and electric savings. Process streamlining has continued, allowing project quantity to remain on par with 2010's tremendous volume. Contractors continue to be interested in this program that delivers smaller projects at a lower cost to small businesses.

The project tracking dashboard developed in 2010 continued to support improvements in project management. Additionally, Small Business Lighting Process Workshops continued to be important in training the increasing number of contractors participating in the program. A number of changes have been made to the process as a result of feedback received from contractors during these workshops.

Incoming projects are now almost completely received by e-mail. This allows administrative support staff to screen submittals and prepare them for processing by the Energy Management Engineers, shortening time required to process submittals.

The number of new projects received for both pre-approval and payment remained steady in the first half of 2011, as compared to 2010. This shows continuing interested in the program by contractors and acceptance by customers.

#### **LED Traffic Signals**

Schedules E257

The LED traffic signal program achieved its 2011 savings goal in Q1, and additional projects were initiated that will lead this program to exceed target in 2011. The large savings in Q1 resulted from completion of a large county government project that had been anticipated to finish in 2010. Municipalities continued to express interest in PSE rebates for LED traffic signals to couple with ARRA funding.

## Large Power User, Self-Directed

Schedules E258

Customers eligible for this program remained focused on project development activities in the first half of 2011. A small quantity of projects that were submitted early in the program cycle was completed during the January to June 2011 timeframe.

In response to the 2010 Electric Settlement Condition K(11)(c), PSE worked with the CRAG to review cost allocation methodology included in the 2002 Settlement Agreement and in Docket No. UE-970686 prior to the 2011 Schedule 120 filing. Per results of this review, PSE applied the Peak Credit Method in setting Schedule 120 rates for non-retail wheeling customers eligible for the Large Power User Self-Directed Program. Additionally, PSE began withholding program administration fees (7.5%) and NEEA market transformation fees (10%) from non-retail wheeling customers and revised incentive allocations for non-retail wheeling customers to collect program administration and market transformation fees that were previously uncollected.

Application of the Peak Credit Method resulted in a significant increase in Schedule 120 rates for non-retail wheeling customers. In response to this increase, PSE worked with the CRAG to develop proposed program modifications that would enable customers to effectively utilized increased incentive allocations to achieve timely cost-effective conservation and ensure program success moving forward. Program revisions were not finalized by June 2011, with work continuing into the second half of 2011 to develop a revised Large Power User Self-Directed Program structure.

#### **Commercial Energy Information**

Schedules E/G 260

Energy Advisor, Events and Online Tools initiatives undertaken in the first half of 2011 in the Residential Sector, including working with the Marketing team on the development of a tracking system and event support, and funding of Aclara<sup>7</sup> and Constant Contact<sup>8</sup> also apply to the Business Sector.

#### **Business Rebates**

Schedules E/G 262

#### Electric

In the first half of 2011, PSE's Commercial Rebate portfolio performed according to plan, placing the program on-track to achieve 2011 savings goals.

Commercial CFL Markdown Program: The CFL Markdown Program allows participating distributors to give rebates at the point of sale for Compact Fluorescent Lamps. The CFL Markdown Program slowed a great deal during the beginning of 2011 the year due to modification of incentives for twist lamps made in 2010. Adjustments to this program were implemented in June to ensure future program success. Most of the savings achieved for this program was with specialty lamps, the market sector where utility incentives are most critical for product adoption.

**Commercial Lighting Program:** Similar to the Markdown Program, savings from this program diminished in early 2011 as a result of 2010 modifications to incentives for twist lamps. Savings from non-twist lamp measures continued to perform well, allowing the program to achieve significant savings, but at a higher overall cost without a significant quantity of lower-cost twist lamps incented. Adjustments to this program were implemented in June to ensure future program success.

**Commercial Kitchen Program:** This program teams up with six other utilities in the Puget Sound region to offer a consistent program to commercial customers in qualifying areas. In the first half of 2011 we experienced continued interested from customers and vendors alike. The program achieved over half its savings goal for the first six months below budget.

<sup>&</sup>lt;sup>7</sup> The Aclara software provide online customer account management through MyPSE. The Aclara Energy Center tools provide meter data-supplied energy usage dashboards; appliance, heating, cooling and water system calculators, and targeted PSE rebate and program information, tied to customer information.

<sup>&</sup>lt;sup>8</sup> EES's Constant Contact account is used for e-newsletter management. Constant Contact manages EES's e-newsletter e-mail database opt-ins and opt-outs, as well as EES's HTML newsletter templates. Federal regulations under the CAN-SPAM act require a qualified email address management system to protect customer preferences.

**Premium HVAC Service Program:** This program saw very high participation in the first couple months of 2011 and leveled off after that. Overall, savings in the first half of 2011 was approximately 75 percent of planned at a cost of less than half of the budget. New contractors requested to be part of the program, and modifications were made to program requirements to encourage additional participation. It is anticipated this program will remain healthy.

**High Efficiency Heat Pumps and A/C:** Similar to the Premium HVAC Service Program, this program this program saw heavy participation in the first couple months of 2011 and waned after that. Savings for the first six months is less than half of plan and budget is also at about half. It is believed this is due to the state of the economy since this rebate program funds measures typically associated with capital project investments.

**Variable Speed Drives:** This program has produced exceptionally well due, in part, to contractors marketing the measure more heavily than usual as part of new controls products on the market. Savings for the first half of 2011 were nearly three times the plan and budget.

**PC Power Management**: This program was suspended in 2010 pending results of a program evaluation. The evaluation concluded that deemed savings used by PSE required only a small adjustment and no change to the incentive amount was required. The program was reinstated in 2011 and participation has returned. Every indication is that this will continue for the rest of the year.

**Hospitality Rebates:** Hospitality Rebates are below expectations for the first half of the year in both plan and budget. It appears hotels are concentrating on lighting improvements and postponing regular maintenance on Packaged Terminal Equipment.

**Pre-rinse Spray Heads:** In the first half of 2011, a limited quantity of pre-rinse spray heads were installed in conjunction with the Small Business Outreach program.

#### Gas

In the first six months of 2011 the Commercial Rebate Program was on track to meet natural gas savings goals for the year and operated under budget.

**Commercial Kitchen Program:** This program teams up with six other utilities in the Puget Sound region to offer a consistent program to commercial customers in qualifying areas. This program is right on track to meet its natural gas savings target and is considerably under budget.

**Premium HVAC Service Program:** This program's performance in early 2011 placed it on track to meet planned natural gas savings and it operated within budget. Fluctuating levels in participation made forecasting difficult, and modifications were made to program requirements to encourage additional contractor participation. It is anticipated this program will remain healthy.

**Commercial Laundry Rebates:** This program is over plan slightly for the first half of the year. Slow participation was expected this year due to the residual economic conditions.

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# **Regional Efficiency Programs**

Currently, the Northwest Energy Efficiency Alliance (NEEA) is the only program in the EES portfolio of regional services.

# **2011 Progress through June**

Table 7 provides NEEA savings and expenditures through June 2011.

Table 7: NEEA, Savings and Expenditures

	Schedules Description		Electric			Gas		
Schedules			penditures	Savings (MWh)	Expe	nditures	Savings (Therms)	
E254	NW Energy Efficiency Alliance	\$	2,611,286	11,750	\$	-	0	
	Total Regional Programs	\$	2,611,286	11,750 MWh	\$	-	-	

NEEA program details are contained in Exhibit 3 of the 2011 Annual Conservation Plan, filed under Docket number 100177.

# **Northwest Energy Efficiency Alliance**

Schedules E254

NEEA is a non-profit regional organization that collaborates with BPA, PSE, and over 100 other northwest utilities to maximize energy efficiency engagement. Using it regional reach to maximize measure evaluations, and accelerate innovation and adoption of energy efficient products, NEEA works "upstream" to help expand and accelerate EES programs.

In partnership with PSE, NEEA has provided a first and second quarter report of 2011 activities, attached to this report as Appendix C. The report details NEEA initiatives year-to-date, with discussion and highlights those that affect PSE and its customers. PSE wishes to acknowledge and convey its thanks for the considerable effort made by NEEA's staff in compiling this report for inclusion in PSE's Semi-annual Report of Conservation Acquisition.

Additional organization background, annual reports, and updated news articles are available on NEEA's website:

www.NEEA.org

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# **Efficiency Support Activities**

This group is comprised of several activities and functions that support overall EES initiatives and goals, rather than program-specific tasks. Deliverables include cost-effectiveness analyses, assistance with efficiency messaging and a significant contribution to PSE's IRP.

# 2011 Progress through June

Table 8 provides Support Activities function views of expenditures through June 2011.

**Electric** Gas **Schedules** Description Savings Savings Expenditures Expenditures (MWh) (Therms) 646,068 n/a 195,431 Program Evaluation Strategic Planning & Market Research n/a 74,420 n/a Mainstreaming Green 37,809 n/a \$ 18,743 n/a 105,414 28,803 Conservation Supply Curves n/a \$ n/a 92,497 **EES Market Integration** \$ 40,890 n/a n/a **Energy Efficient Green Communities** 69.297 30.943 n/a n/a \$ E270 G270 Local Infrastructure& Mkt Transformation 43.240 n/a \$ 3.276 n/a F261 G261 Energy Efficient Technology Evaluation 667 n/a \$ 235 n/a Third-Party Evaluation Review (per condition K(6)(g)) Program Support 144.611 n/a 8 449 n/a **Total Support Activities \$** 401,189 1,415,635 n/a

**Table 8: Support Activities, Expenditures** 

Program details for this group are contained in Exhibit 3 of the 2011 Annual Conservation Plan, filed under Docket number 100177.

# **Energy Efficiency Technology Evaluation**

Schedules E/G 261

Enhanced control for small commercial rooftop systems: A few products have been introduced which enhance the functionality of the conventional wall thermostat for rooftop heating/cooling equipment. Some enhanced features include improved economizer operation, demand controlled ventilation, fan cycling or variable speed fan operation, and Web-based access to remotely adjust setpoints and schedules. PSE provided grant agreements for two projects todate. One has been completed, and initial billing history analysis suggests savings may be approximately 25 percent of the electric usage. Initial, limited results look promising, but additional data is required to improve confidence in the estimates.

Farm Worker Housing project update: Construction of the sustainable and energy efficient demonstration houses is delayed, awaiting additional funding<sup>9</sup>; PSE's contribution is being held in trust.

NEEA natural gas market transformation: PSE and several other utilities provided seed money to NEEA to develop a plan to expand its market transformation activities to include natural gas opportunities that would benefit the region. NEEA is continuing its efforts to offer a natural gas market transformation program to utilities.

In addition to these specific projects, PSE employees participate in the Regional Technical Forum (RTF) and other regional efforts to identify and prioritize emerging technologies. For example, we are working with an RTF committee to help BPA develop a program for "variable capacity heat pumps," including ductless heat pumps and variable refrigerant flow types of systems. We participated in regional efforts to produce the Northwest Energy Efficiency Roadmap, and participated on BPA's Energy Efficiency Emerging Technology HVAC Technical Advisory Group. Through this participation, we contribute to the regional effort, and enhance PSE's awareness and understanding of new technologies.

#### **Local Infrastructure and Market Transformation**

Schedules E/G 270

No update or progress to report. Payment of memberships is on schedule.

#### **Conservation Supply Curves**

No Associated Conservation Schedule

PSE completed the conservation supply curve assessment for the 2011 IRP by incorporating the technical achievable potential, developed by the Cadmus Group, into its electric and gas resource portfolio analyses. The results are reported in 2011 IRP chapters 5 and 6 (for electric and gas respectively), with the Cadmus Group's detailed report on conservation potentials in Appendix K of the IRP. The IRP results provided guidance for setting overall 2012-13 conservation savings targets.

<sup>&</sup>lt;sup>9</sup> As of the date of publication of this report, funding was approved and construction is scheduled to begin in August, 2011.

### **Energy Efficiency Communities**

No Associated Conservation Schedule

In the first half of 2011, the Energy Efficient (EE) Communities group has continued its work of partnering with local communities to link them up to Energy Efficiency Service's various programs. Of note is a high level of engagement in the outreach role for Rock the Bulb: The ReEnergize Tour, partnership coordination of the Olympia Green Power Challenge, and multiple engagements with local customers and communities to provide guidance on participation in EES programs. One more Program Coordinator was added to provide better service to the Kitsap, Vashon and East Jefferson service areas.

The EE Communities group has been highly active in linking the communities who have received ARRA funding with EES programs. The team acts as the EES representatives with these entities to ensure close coordination with EES programs. Examples include involvement in coordinating the Home Energy Report program with the 9 communities<sup>10</sup>, linkage with the RePower Kitsap energy efficiency initiative, and linkage with the Washington State University Energy Extension's Community Energy Efficiency Pilot Program grant recipients.

Two Program Coordinators on the team have been working with the Business Energy Management team to deliver small business walk-throughs to Schedule 24 (Small Business) customers, including direct installs and program information.

# **Mainstreaming Green**

No Associated Conservation Schedule and

### **EES Market Integration**

No Associated Conservation Schedule

Through the first six months of 2011, Mainstreaming Green financed the remainder of development of the first phase of the EES web program, launched mid- April. PSE.com's "Savings & Energy Center" features improved user experience, with more intuitive navigation and new customer-centric tools, including the interactive rebate finder, CFL recycling and retailer locator maps and integrated social media tools and multimedia channels. Most funds spent during this period were allocated to PSE IT labor costs associated with technical development, online infrastructure and security projects, with a very small percentage allocated to software and image licensing to support EES marketing programs.

<sup>&</sup>lt;sup>10</sup> The 9 communities are: Bellevue, Sammamish, Kirkland, Redmond, Mercer Island, Issaquah, Renton, Bainbridge Island and Whatcom County. These entities agreed to use a portion of their ARRA funding to share the costs of Home Energy Reports with PSE.

Through the reminder of the year, the Mainstreaming Green budget will underwrite the architecture and planning phase for additional online tools to be developed in 2012, including:

- Personalized energy usage dashboards to help Customers manage home and business usage and demand
- Personalized promotions, rebates, coupons and offers and targeted content based on Customer's profile
- Fillable rebate application forms; trackable online rebate processing
- Sophisticated web use tracking and analytics analysis

In 2011, the Market Integration budget was allocated to EES marketing labor costs only.

#### **Market Research**

No Associated Conservation Schedule

Two major market research studies were completed in the first half of 2011. The Residential Characteristics Study gathered basic end use appliance and building characteristics data from approximately 5,900 customers that is representative at the county level, using a mail/online survey. This study is being complimented by PSE's participation in the region-wide Residential Building Stock Assessment being conducted by NEEA, which will use on-site visits to collect detailed end use information, including approximately 300 homes in PSE's service area. The NEEA study will be completed in 2012.

The second major study was the Residential Incentives and Information Study, which examined impacts of incentive levels and information on consumer interest in purchasing energy-efficient equipment. The Residential Incentives and information Study consisted of an online survey of a sample of 1,000 homeowners, representative of PSE's overall service area.

Several tactical research studies were also completed, including surveys of manufactured home weatherization participants and weatherization and HVAC contractors. This tactical research utilizes off-the-shelf online survey tools and smaller samples to provide fast customer feedback on the overall program experience as well as on specific program components. PSE is also making increased use of GIS-based analytical tools to identify geographically targeted energy efficiency market opportunities.

### **Program Evaluation**

No Associated Conservation Schedule

2011 Evaluation activities are on-track with the 2011 Plan including a \$550,000 Impact, Process and Market Assessment Evaluation by Navigant underway on C/I Retrofit Programs, to be completed in September 2011. Residential studies completed in the first half of 2011 include Duct Sealing and Multi-Family Weatherization. A full Impact and Process study is underway by Navigant on the Bainbridge Residential Demand Response Pilot, to be completed in the 4th Quarter. An RFP for a broad-reach Residential Programs Evaluation RFP covering the following programs/measures, and anticipated to cost near \$1.5 million, was released in June.

Evaluation study work is projected to start in the 4th quarter of 2011, though much of the work and related costs will also occur in 2012:

- Refrigerator Decommissioning Impact Evaluation & Process Evaluation
- Refrigerator Early Replacement Impact Evaluation (metering) & Process Evaluation
- Refrigerator Rebate Program Impact Evaluation & Process Evaluation
- Tankless Water Heater Impact Evaluation (metering)
- Storage Water Heater Impact Evaluation (metering)
- Tankless & Storage Water Heater Market Evaluation
- Heat Pump Market Evaluation & RTF Review
- Clothes Washer and Weatherization RTF Review
- Low Income Market Assessment
- Low Income Process Assessment
- Low Income RTF savings Review
- Quality Assurance Program Strategies and Guidelines (Residential and Commercial)
- Sample Size Requirements for metering and billing analysis for every program (Residential)

An Independent one-time Third Party Review of PSE 2010 and 2011 Electric Conservation Program Savings has been launched, consistent with condition K(6)(g). The consultant team of SBW Consulting and KEMA was selected through a competitive bid process by PSE and WUTC staff, with input from the CRAG. This project is on-track with review and reporting in four phases ending in June 2012.

Additionally, a study of PSE programmatic Measurement and Verification (M&V) functions is underway by KEMA to assess costs, policies, protocols, guidelines and processes consistent with condition agreement K(6)(f)(ii), scheduled for completion in September, 2011.

### **Program Support**

No Associated Conservation Schedule

The primary mission for 2011 Program Support staff includes leading and facilitating the EES 2012-13 biennial program planning and development process. Other functions include management of the programmatic M&V study, briefly described in the Evaluation section, and the related planning, development and implementation of the new Quality Assurance staff functions. An additional 2011 support function includes planning, development and implementation of an EES Field and Office staff Safety Plan. Implementing the Safety Plan includes identifying safety exposures, applicable equipment and training to address them, schedule to complete, and reporting.

# **Other Electric Programs**

There are four electric programs within EES for which conservation savings are not claimed at this time; Net Metering, Renewable Energy Education and two Demand Response pilots.

# **2011 Progress through June**

Table 9 provides program-level views of expenditures through June 2011.

**Table 9: Other Electric Programs, Expenditures** 

2	Description	Electric		Gas		
Schedules		Ш	Expenditures	Savings (MWh)	Expenditures	Savings (Therms)
E249A	Residential Demand Response Pilot	\$	221,418	n/a	n/a	n/a
E248	Renewable Energy Education	\$	86,023	n/a	n/a	n/a
E150	Net Metering	\$	118,443	n/a	n/a	n/a
E249A	C/I Load Control Pilot	\$	214,254	n/a	n/a	n/a
	Total Other Electric Programs	\$	640,138	n/a	n/a	n/a

Detailed descriptions of these programs are contained in Exhibit 3 of the 2011 Annual Conservation Plan, filed under Docket number 100177.

### **Net Metering**

Schedules E150

PSE added 130 net metered customers in the first half of 2011, bringing the total to 911. Table 10 lists the generating type and kilowatt capacity of the cumulative totals.

Table 10: Cumulative Net Metered Customers
June 2011

	Cummulative Totals		
Generator Type	Customers	Kilowatts	
Solar PV	866	3,889	
Wind	٥,	98	
Other	<u>8</u>	<u>38</u>	
Total	911	4,025	

# **Renewable Energy Education**

Schedules E248

Renewable grant recipients were selected in the spring, and plans with the facilities managers and district officials are moving forward. Five schools and a camp were selected for the awards, which focus on curriculum and leveraging community financial support. The recipients are: Ferndale High, Camp Sealth, Bremerton High, Mt. Si High, Grand Ridge Elementary, and Explorations Academy. PSE also promoted net metering by providing tours and tabling at numerous events such as IEEE Solar Day; solar tours at Anacortes/Guemes and Port Townsend; and the new community solar project on Whidbey Island.

#### **C/I Load Control Pilot**

Schedules E248A

The Commercial Load Control Pilot (LCP) was a two-year limited demand response program for large commercial electric service customers located throughout PSE service area. It became fully subscribed with 25 participating Customers in the spring of 2009, and ended following the 2010/11 winter season. Aggregate nominated enrolled capacity: 4.5 MW winter and 5.1 MW summer. Total cost of the pilot was \$1.8 million. Full evaluation of the pilot has been completed. The evaluation report is now available to members of the CRAG.

NOTE: Planning for a long term commercial-industrial demand response program began in the second quarter. This proposed program's objective is to achieve capacity targets established in the Company's latest IRP. The program will be filed in a new, separate, tariff Schedule.

### **Residential Demand Response Pilot**

Schedules E249A

The Residential Demand Response Pilot (DRP) is a two-year limited program targeting direct load control of electric space and water heat in 510 single family homes on Bainbridge Island. This DRP began with the 2009/2010 winter season, and is currently planned to end following the 2011 summer season. Aggregate calculated enrolled capacity: 0.4 MW winter and 0.36 MW summer. Total cost of the residential pilot is estimated to be \$2.1 million. Formal evaluation of this pilot is presently in progress.

# **Stakeholder Relationships**

# **Washington Utilities and Transportation Commission**

#### 2010 Annual Report

In compliance with condition K(8)(c), PSE filed its 2010 Annual Report of Energy Conservation Accomplishments on February 15. During subsequent, ongoing reviews, savings adjustments (which also affected cost-effectiveness calculations) were necessary. As a result, PSE filed replacement pages with the WUTC for its Appendices A, D, and F on April 25.

#### **State-Wide Collaborative**

PSE was an integral contributor in each of the Statewide Collaborative meetings, held from February through June. PSE provided key input on operational issues, condition comparisons for each of the IOUs, and recommendations for improved consistency among the utilities.

#### Schedule 120 Filing

PSE hosted a meeting with WUTC analysts and WUTC Staff on March 24 to provide a general orientation of EES programs and processes. PSE staff from its Rates department also presented key background information. An in-depth Measure Metrics system review was also provided during the day-long meeting.

On April 11, PSE received a request for various expenditure records from WUTC analysts in preparation for its April 12 audit, conducted prior to making recommendations for PSE's Schedule 120 open meeting discussion. PSE hosted WUTC analysts, Staff and a member of Public Counsel on April 12. During the day-long meeting, all records, files and data were provided for both electric and gas conservation program queries. The audit was free of any finds or discrepancies.

#### **Conservation Savings Adjustment**

On June 13, PSE filed tariff revisions designed to adjust rates for electrical and natural gas services. Included in that filing is a request for a Conservation Savings Adjustment (CSA) rate that will allow PSE to collect unrecovered costs from the previous year lost due to conservation of electricity and natural gas.

# **Measure Updates**

Consistent with conditions K(5) and K(7)(a), regarding maintenance of its program details and offerings, PSE filed its first quarterly update to its List of Measures, Incentives and Eligibility (Exhibit 4) with the WUTC on April 22, 2011.

# **Conservation Resource Advisory Group**

PSE continued the momentum established in 2010 to regain a close relationship with its CRAG throughout the first half of the year. CRAG members were invited to participate in several program-specific initiatives, including development of PSE's EM&V Framework, a webinar, conducted on January 25 to provide CRAG members background on PSE's Green Power Program, Net Metering and Renewable Energy Education. PSE engaged a variety of CRAG members throughout numerous Schedule 258<sup>11</sup> discussions, which were highly productive and effective at bringing about a more robust offering for this class of PSE customer<sup>12</sup>.

In an effort to increase the transparency of its program operations, PSE created a new tool for CRAG members, relative to the quarterly updates of its Exhibit 4. Starting with its April filing of Exhibit 4, PSE provided a table of revised or new measures. The table details the sector, program name and affected element of the measure; the incentive level, savings value, installation method, etc. Previously, the CRAG learned of savings values either through an information request or in Appendix B of the EES Annual Report of Energy Conservation Accomplishments. Detailed revision reasons are also provided.

PSE also created the Condition Compliance Report Card, which provides CRAG members and other Stakeholders with a clear reference of the status of PSE electric conservation conditions.

The Report Card is derived from an MS Excel® spreadsheet, where all referenced RCWs, WACs, Commission rules, etc. that are cited in the conditions list are copied where applicable. To that list, PSE added a column "Condition is met when..." that enumerates for stakeholder the specific deliverables that PSE must provide in order to receive a green check mark, which readers will note in the right-most column of the Report Card. As the report tracks deliverables by biennium, all green check marks will be cleared at the beginning of 2012, when the cycle will begin anew.

PSE hosted three CRAG meetings:

Date	Primary Topic
January 27	Schedule 258 operations clarification & Peak Credit Method review; in-depth review of tariff language, past implementation, current customer mix, offerings, NEEA and "Admin" contributions, and program implementation. Outside counsel participated on behalf of NWEC and ICNU.

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<sup>&</sup>lt;sup>11</sup> Schedule 258 is PSE's Large Power User, Self-Directed program.

<sup>&</sup>lt;sup>12</sup> A revised Schedule 258 has been drafted as of the date of this Report's filing.

# CRAG meetings, continued

Date	Primary Topic
March 31	Schedule 258 potential revision options; the accounting for and reporting of the \$1 million "look back" was reviewed, along with a more project-focused discussion. By this point in the program, the Peak Credit Method was being applied, which potentially would cause funding uncertainty. It was agreed that PSE would develop one or two proposals for the CRAG to review at the following meeting. The Condition Compliance Report was provided to the CRAG, who generally agreed that this is a useful tool. The third-party review of 2010 electric savings, the EM&V Framework and cost-effectiveness tests were also discussed.
May 19	Program updates, savings target setting; timeline and methodology, Schedule 258 resolution of outstanding issues. The CRAG heard in-depth statements from two key PSE customers on the merits of the Schedule 258 program. Two alternative Schedule 258 revisions were presented to the CRAG for consideration. It was agreed that PSE would present a final version in the July 21 meeting.

Additionally, all CRAG members were invited to participate in a separate, Schedule 258-specific meeting at the WUTC offices on February 10.

Every CRAG meeting is chronicled in summary notes<sup>13</sup>, which are emailed to CRAG members (both participants and non-participants) within the week following meetings. During CRAG meetings, each CRAG member is provided:

- Updated 12-month compliance calendars.
- An updated condition compliance matrix, attached to this Report as Appendix B.
- The complete PowerPoint® slide deck.

Along with other pertinent or program-specific handouts.

PSE mailed each CRAG member a hard copy of the 2010 Annual Report of Energy Conservation Accomplishments.

In addition to the above noted Schedule 258 CRAG meeting discussions, PSE provided data in response to 14 separate Schedule 258 stakeholder information requests between February and June, some of which dates back to the program inception in 2002.

Puget Sound Energy

2011 Semi-Annual Report of Conservation Acquisition

<sup>&</sup>lt;sup>13</sup> Meeting summaries, while not as formal as meeting minutes, contain sufficient topic review discussion for non-participants to gain a fairly clear understanding of what transpired during the meeting(s). The summary, along with the MS PowerPoint ® presentation, provides non-participants with a firm grasp of the meeting content.

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# **Glossary of Commonly-Used Terms**

Unless otherwise noted in a specific Conservation Schedule, the following commonly-used terms, used throughout and applicable only to this document<sup>14</sup> have the below noted meanings. Definitions or glossaries contained in other EES documents, policies or guidelines referring to specific processes or unique functions shall have the meanings noted in those documents, policies or guidelines.

# **Definitions**

Calculated Savings	This savings type is different than deemed values (described below). This term indicates that there is a pre-approved, stipulated input savings value (or cost) per measure. This value (or cost) is then multiplied by site-specific input values to arrive at the overall savings value (or cost).
Channel	Within an EES Residential or Business sector, an organization that is established to focus on the value chain—consisting of manufacturer distributor, dealer, contractor to the end-use customer—with the most similar market, delivery methods and ultimate purchasers or product users.
Conditions	Also "2010 Electric conservation Settlement Agreement Terms and conditions" or "Energy Independence Act conditions". Specific deliverables and stipulations by which the Company must operate or produce through the course of operating and managing energy efficiency programs. In addition to compliance requirements outlined in the Settlement Terms Sections A through J and L, the conditions are listed under Section K of the Agreed Conditions for Approval of Puget Sound Energy, Inc's 2010-2011 Biennial Electric Conservation Targets Under RCW 19.285 Docket No. 100177. There are additional sections that regulate the Company's energy efficiency operations.

<sup>&</sup>lt;sup>14</sup> Some acronyms, such as "ECM" have a different connotation outside the purview of PSE or conservation activities. Outside of EES, on in evaluation context, "ECM" may mean "Electric Conservation Measure". Within EES's BEM sector, though, it means "Electronically Commutated Motor".

Definitions, continued

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Custom Savings	This savings type applies to conservation projects where a PSE EME performs specific evaluation and review of a unique customer site to determine savings values—therms or kWh—that apply only for that site. For this type of measure, there is insufficient information, the occurrence is too infrequent or it cannot be specifically defined to justify development of a Calculated or Deemed protocol.
Deemed Measure	As in a measure's deemed value; A savings (or cost) value that applies to a unit of specific measure, regardless of where or how the measure is installed. Measures for which it is possible to "deem" per unit energy savings, cost and load shape based on program evaluation data and engineering estimates. (For instance, one residential interior CFL lamp has a deemed value of 24 kilowatt-hours per year.) This classification applies to both RTF and PSE deemed (noted on the following page). The RTF is in the process of replacing this term with "UES"; Unit Energy Savings.
Direct Benefit to Customer (DBtC)	Rebates, grants, credits or services that are of value to customers. Services can include, but aren't limited to, credits on a monthly bill, upstream incentive provided to channel partners or trade allies—either within our service territory or regionally—and free energy efficient devices available by mail.
Direct Install Measure	A conservation measure that is installed by a PSE representative—rather than a PSE customer—into a qualifying structure.
I-937	An informal reference to the 2006 voter initiative, The Washington Clean Energy Initiative. The vote resulted in the creation of RCW 19.285 and WAC 480-109, which is now referred to as the Energy Independence Act.
Measure	A product, device, piece of equipment, system or building design or operational practice used to achieve greater energy efficiency or to promote Fuel Conversion and Fuel Switching. Unless specifically enumerated in a specific Energy Efficiency Program, all Measures, proposed by Customers or otherwise, shall meet or exceed the efficiency standards set forth in the applicable energy codes, or, where none exists, "standard industry practice" as determined by the Company. Measures will meet common construction practices, and meet industry standards for quality and energy efficiency.   Measures must also meet cost-effectiveness standards.

<sup>&</sup>lt;sup>15</sup> Schedule 83, section 4, Definitions, #m. Schedule 183, section 4, #l.

# Definitions, continued

Program	Programs may consist of a single measure, an assortment of related measures or a suite of measures that are related strictly by delivery type or customer segment.
PSE Deemed	Relative to measure savings types (Custom, Calculated, PSE Deemed or RTF Deemed), these measures are supported by PSE engineering calculations or evaluation studies, in compliance with Settlement Agreement condition K(6)(c).
RTF Deemed	Relative to PSE savings types (Custom, Calculated, PSE Deemed or RTF Deemed), supported by RTF analyses, in compliance with Settlement Agreement condition K(6)(b).
Savings	Savings (both gas and electric) are defined and reported as those recognized in the first year of a measure's total expected life. PSE reports the total savings for the year that the measure was implemented, regardless of when it is installed. Electric savings are counted at the customer meter, not the busbar. Gas savings are counted at the customer gas meter.
	It is important to note that all measures have an associated life, during which the noted annual savings accumulate. Each measure has a different life, as determined by rigorous evaluation.
System	In this document, System may have the following meanings:
	<ol> <li>Any software program—supported by PSE's IT department or otherwise—or physical apparatus used to record, track, compile, report, archive, audit energy savings claims or financial data.</li> </ol>
	<ol> <li>Electrical, and/or gas equipment that is either attached together or works in concert to provide space conditioning, plumbing functions or other end-uses associated with structures, such as HVAC systems, pumping systems, etc.</li> </ol>

# Acronyms

ARRA	American Recovery and Reinvestment Act
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aMW	Average MegaWatt. An expression of energy (versus "power"). It is
	used to express very large amounts of energy. The term represents
	an average of power (Megawatts [MW]) used over time (the standard
	term being one year or 8,760 hours). Thus, 1 aMW = 8,760 MWh.
ВРА	Bonneville Power Administration
СНР	Combined Heat & Power
CRAG	Conservation Resource Advisory Group
DHW	Domestic Hot Water
EC Motor (ECM)	Electronically Commutated Motor
EES	Energy Efficiency Services; a department of Puget Sound Energy.
EME	Energy Management Engineer
EM&V	Evaluation, Measurement and Verification
ERR	Evaluation Report Response. A form used to complete an evaluation
	study's resultant actions.
GPM	Gallons Per Minute
HID	High Intensity Discharge (lamp type)
HVAC	Heating, Ventilation and Air Conditioning
kWh	Kilowatt Hour. 1,000 watt-hours = 1 kWh, which is equivalent to 10
	100-watt incandescent lamps being turned on for one hour.
LED	Light Emitting Diode (lamp type)
MEF	Manufacturer's Energy Factor (applies primarily to appliances)
MWh	Megawatt-hour. 1,000 kWh = 1 MWh
NEEA	Northwest Energy Efficiency Alliance

# Acronyms, continued

O&M	Operations & Maintenance
RCW	Revised Code of Washington.
RTF	Regional Technical Forum, an advisory committee and a part of the Northwest Power and Conservation Council. The RTF develops standardized protocols for verifying and evaluating conservation.
TRC	Total Resource Cost: The cost to the customer and/or other party costs to install or have installed approved Measures plus Utility Costs and minus Quantifiable Benefits (or Costs). <sup>16</sup>
uc	Utility Cost: The Company's costs of administering programs included, but not limited to, costs associated with incentives, audits, analysis, technical review and funding specific to the Measure or program and evaluation. <sup>17</sup>
UES	Unit Energy Savings. Formerly "Deemed", the RTF is replacing the term with UES.
WAC	Washington Administrative Code
WSEC	Washington State Energy Code
WUTC	Washington Utilities and Transportation Commission

 $<sup>^{16}</sup>$  Schedule 83, section 4, Definitions, #z. Schedule 183, section 4, #x.  $^{17}$  Schedule 83, section 4, Definitions, #bb. Schedule 183, section 4, #z.

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### Conclusion

This concludes EES's 2011 mid-year review of electric and gas conservation savings and expenditures. PSE appreciates the opportunity to collaborate with CRAG members throughout the year. We additionally appreciate the input and cooperation of our regional partners, other PSE divisions, our constituents and the WUTC in helping the Company move towards achieving our 2011 and 2010-2011 biennial goals.

The EES staff looks forward to a productive and constructive remainder of 2011!

Respectfully submitted,



Puget Sound Energy Energy Efficiency Services