



The Energy To Do Great Things

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August 14, 2009

Mr. David Danner, Executive Director and Secretary  
Washington Utilities and Transportation Commission  
P.O. Box 47250  
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STATE OF WASH.  
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**RE: Docket No. UE-970686  
Semi-Annual Report of Energy Efficiency Services (EES) Programs**

Dear Mr. Danner:

Enclosed are an original and three copies of Puget Sound Energy's semi-annual progress report covering the results of the Puget Sound Energy EES programs for the period of January through June 2009. A summary of accounting for each of the EES programs for the same period is also included.

This report was prepared in accordance with the Second Supplemental Order in Docket No. UE-970686, Requiring Reporting on Programs Funded by the Tariff Rider Mechanism. As required by that order, this report is submitted within 45 days of the end of the second quarter.

Please contact Lynn Logen at (425) 462-3872 for additional information about this filing. If you have any other questions please contact me at (425) 462-3495.

Very truly yours,

Tom DeBoer  
Director, Federal & State Regulatory Affairs

Enclosures

cc: Simon J. ffitich, Public Counsel  
Sheree Carson, Perkins Coie



**PUGET SOUND ENERGY**

*The Energy To Do Great Things*

Energy Efficiency Services  
Program Results  
January – June 2009

August 14, 2009

## Table of Contents

EXECUTIVE SUMMARY.....	1
PROGRAM DESCRIPTIONS.....	3
<b><u>RESIDENTIAL SECTOR</u></b> .....	<b>3</b>
<b>Single Family Existing</b> .....	<b>3</b>
<b>Multi-Family Existing</b> .....	<b>4</b>
<b>Pilots</b> .....	<b>5</b>
<b>Low Income Weatherization</b> .....	<b>6</b>
<b>Single Family, New Construction</b> .....	<b>6</b>
<b>Residential &amp; Commercial Energy Efficiency Information</b> .....	<b>7</b>
<b>Energy Education</b> .....	<b>8</b>
<b>Multi-Family New Construction</b> .....	<b>10</b>
<b><u>COMMERCIAL/INDUSTRIAL SECTOR</u></b> .....	<b>12</b>
<b>Commercial/Industrial Retrofit</b> .....	<b>12</b>
<b>Large Power User/Self Directed</b> .....	<b>12</b>
<b>Small Business Lighting Rebate</b> .....	<b>13</b>
<b>Commercial/Industrial New Construction</b> .....	<b>13</b>
<b>Resource Conservation Manager</b> .....	<b>14</b>
<b>Commercial Rebates</b> .....	<b>15</b>
<b>LED Traffic Signals</b> .....	<b>15</b>
<b><u>OTHER EES SERVICES</u></b> .....	<b>16</b>
<b>Northwest Energy Efficiency Alliance</b> .....	<b>16</b>
<b>Energy Efficient Technology Evaluation</b> .....	<b>16</b>
<b>Net Metering, .....</b>	<b>17</b>
<b>Production Metering</b> .....	<b>17</b>
<b>Local Infrastructure &amp; Market Transformation</b> .....	<b>17</b>
<b>Program Evaluation and Research</b> .....	<b>18</b>
<b>Conservation Market Research</b> .....	<b>18</b>
<b>Mainstreaming Green</b> .....	<b>19</b>
<b>Fuel Conversion</b> .....	<b>19</b>
<b>Demand Response Pilots</b> .....	<b>20</b>
<b>Small-Scale Renewables</b> .....	<b>20</b>
<b><u>Exhibit 1: 2009 Mid-Year Results by Rate Schedule</u></b> .....	<b>A</b>

## EXECUTIVE SUMMARY

Puget Sound Energy's ("PSE's" or "The Company's") Energy Efficiency Services (EES) department is pleased to present this semi-annual report of 2009 energy efficiency program activity. Covering January through June 2009, the report is associated with the Electric Conservation Rider and Natural Gas Conservation Tracker funding.

2009 is the second of a two year (2008 – 2009) conservation tariff period. The summary tables on page 2 compare the overall performance of PSE's energy efficiency programs during the first half of 2009 against budget and savings targets for both 2009 and the 2008-2009 tariff period. EES program descriptions and summary recaps are provided in the following pages. Detailed program savings and expenses are found in Exhibit 1 at the end of this report.

It is noteworthy that the originally filed 2008 – 2009 electric conservation target was revised at the end of 2008. The 2009 target was increased from 28.5 average megawatts (aMW) to 33.8 aMW, an increase of 18.6 percent.

Relative to the adjusted 2009 target, the majority of both Residential and Commercial/Industrial electric programs are tracking to or surpassing mid-year savings expectations. With few exceptions, both sectors are tracking according to budget targets. Residential savings results are driven largely by innovative compact fluorescent lighting programs as well as Multifamily Existing and Single Family New Construction program gains. Commercial/Industrial New Construction has already exceeded its annual target and Small Business Lighting is ahead of its mid-year goals. Rebate programs are also doing well against Q2 targets.

PSE's natural gas efficiency programs are also progressing satisfactorily. Commercial low-flow pre-rinse spray heads and faucet aerators continue to exceed savings expectations. The Commercial/Industrial gas Rebates program has already contributed 50 percent of the overall gas savings for EES. Strong results have also been recognized in the Residential Multifamily Existing and C/I Retrofit programs.

<b>ELECTRIC CONSERVATION:</b>	<b>YTD Actuals</b>	<b>1 yr. EES Budget/ EES Goal</b>	<b>% Goal</b>
<b>Electric Costs:</b>	<b>\$29,719,799</b>	<b>\$69,742,000</b>	<b>42.6%</b>
<b>MWh Savings:</b>	<b>146,768</b>	<b>296,353</b>	<b>49.5%</b>
<b>aMW Savings:</b>	<b>16.8 aMW</b>	<b>33.8 aMW</b>	

<b>GAS CONSERVATION:</b>	<b>YTD Actuals</b>	<b>1 yr. EES Budget/ EES Goal</b>	<b>% Goal</b>
<b>Gas Costs:</b>	<b>\$7,587,938</b>	<b>\$16,353,000</b>	<b>46.4%</b>
<b>Therm Savings:</b>	<b>2,599,240</b>	<b>3,128,600</b>	<b>83.1%</b>

## 2008-2009 Energy Efficiency PTD Summary

<b>Through June 2009</b>	<b>Jan. '08- Dec. '09</b>
<b>24 Months:</b>	<b>71% of 2 year time frame</b>

<b>ELECTRIC CONSERVATION:</b>	<b>PTD Actuals</b>	<b>2 yr. EES Budget/ EES Goal</b>	<b>% Goal</b>
<b>Electric Costs:</b>	<b>\$82,892,040</b>	<b>\$129,701,547</b>	<b>63.9%</b>
<b>MWh Savings:</b>	<b>420,248</b>	<b>513,189</b>	<b>81.9%</b>
<b>aMW Savings:</b>	<b>48.0 aMW</b>	<b>58.6 aMW</b>	<b>81.9%</b>

<b>GAS CONSERVATION:</b>	<b>PTD Actuals</b>	<b>2 yr. EES Budget/ EES Goal</b>	<b>% Goal</b>
<b>Gas Costs:</b>	<b>\$20,218,321</b>	<b>\$29,111,750</b>	<b>69.5%</b>
<b>Therm Savings:</b>	<b>6,271,540</b>	<b>5,648,600</b>	<b>111.0%</b>

# PROGRAM DESCRIPTIONS

## RESIDENTIAL SECTOR

### **Single Family Existing**

Schedules E214, G214

Single Family Existing programs implement cost effective, targeted, residential energy savings using a menu of prescriptive efficiency measure incentives, including rebates. Prescriptive rebates are intended to facilitate participation by customers and trade allies, and provide administrative efficiencies for PSE in meeting energy efficiency goals.

Rebates offered to eligible natural gas and electric PSE Single Family Existing customers include a variety of end-use classifications, not limited to:

- Compact Fluorescent Lighting including CFL lamps and CFL fixtures,
- Clothes washer rebates
- Refrigerator Decommissioning – focused on removing the “garage” unit
- Weatherization including windows, insulation and duct sealing
- Heating including high efficiency furnaces and heat pumps
- Water heating, including tankless water heaters and efficient showerheads.

Rebate amounts are based on regionally accepted energy savings estimates and incremental efficiency measure cost. Rebates may be subject to change in response to revisions in savings estimates, average incremental cost or changes in Federal appliance efficiency standards or State codes.

***Single Family Existing Electric Recap:***

A number of our measures are ahead of target mid way through the year, most notably Electric Weatherization at 88 percent along with the Mobile Home Duct Sealing measure and heat pumps. The Electric window measure is below target but has been gaining traction. PSE launched the **retrofit duct sealing** measure in early 2009. Dealers are in the process of being trained and projects have started to come through.

***Single Family Existing Gas Recap:***

A number of gas measures have been going strong in 2009 in spite of a weak economy. Most of the saving are coming from gas furnaces and water heating. Furnace rebate numbers were extremely high for summer months (typically a slower period) Contributing factors are the Federal Tax Credit and gas conversion measure. Gas Weatherization has been lagging a bit behind but should catch up by the end of the year.

**Multi-Family Existing**

Schedule E217, G217

The Multi-Family Retrofit program proposes to increase the installation of certain measures in existing, multifamily (MF) buildings, consisting of five or more residential units. MF structures typically have both in-unit and common area energy-efficiency opportunities that can include shell, appliance, lighting, HVAC and water heating measures. The program targets installation of energy efficient measures in MF facilities occurring on a retrofit (e.g., planned project) or “replace upon failure” (RUF) basis.

***Multi-Family Electric Recap:***

Large apartment complex nearly completed for 1.7 million kWh. Based on current forecast through the end of 2009, program savings are expected to meet electric targets. Included are saving from two solar pool upgrades that are new a new savings measure in the program.

***Multi-Family Gas Recap:***

Staff working with three HVAC contractors to install high efficient solar pool heaters. Currently working on 32 projects. Based on forecasts and projects likely to be completed by year end, this program may not meet them target.

## Pilots

### Schedule E249

Pilot programs and demonstration projects may be undertaken to determine whether certain strategies and measures are cost-effective in the long run. Pilots are employed to test cost-effective ways to demonstrate market opportunities for energy efficiency.

Pilots may include tests of measure cost and performance, customer acceptance and delivery methods. Pilots are not subject to achieving energy savings sufficient to demonstrate cost-effectiveness in the short run. In 2008, Energy Efficiency Services implemented the following pilots, which are ongoing through the second quarter of 2009:

- Blue Line® - real time in-home display of kWh use
- NEAA Mini-Split Heat Pump Pilot
- HomePrint - In home energy performance and diagnostics program
- Positive Energy – social marketing program comparing usage of like homes.

#### ***Pilots Recap:***

The NEEA **Ductless Heat Pump** Program has installed almost a quarter of the expected total number of units in the first half of 2009. An additional 100 installations have also been pre-approved. Although forecasts have indicated that the majority of activity will be in the second half of the year, PSE has seen a steady increase of installed units month-over-month. A recent direct mailing to 60,000 customers has already created significant interest. Additional marketing activities are planned for the fall in anticipation for the heating season.

**HomePrint** audits have now been performed in over 900 homes and we continue to hear very positive feedback from customers. We're installing, on average, over 20 CFLs per home including many specialty bulbs (we offer 9 varieties). Anecdotally, we have many customers writing in to tell us that they're following up on recommended measures that were brought to their attention during the audit and that they would not have otherwise performed without the auditor's findings.



## **Low Income Weatherization**

Schedules E201/G203

PSE provides funding of cost-effective home weatherization measures for low-income gas and electric heat customers. Funds are used for single-family, multifamily, and mobile home residences.

Program participation takes place through referrals from low-income and crisis service agencies. PSE customers who are having difficulty paying heating bills are also referred to the appropriate serving agency when they apply for energy bill payment assistance. Income qualification for the low-income weatherization program takes place at the local weatherization agency or other designated agency. Local agencies assume responsibility for getting permission from rental property owners to install weatherization measures.

The elderly, disabled, and households with very young children receive priority in scheduling of the weatherization work. In addition to the structure audit and measures installation, agencies are trained to provide energy use education to participants.

### ***Low Income Recap:***

To date, electric and gas savings for the Low Income Weatherization program are on track to meet 2009 savings targets. The Governor's office has announced the distribution of \$30 million of ARRA funds to the Low Income Weatherization Agencies. It is unclear at this point how the additional funds will impact Agency use of PSE Weatherization Funds the second half of 2009.

## **Single Family, New Construction**

Schedule E215, G215

Similar to PSE's Single Family Existing program, rebates are offered to eligible natural gas and electric PSE Single Family customers who are constructing or recently constructed new single family residential structures and include a variety of end-use classifications, not limited to:

- Compact Fluorescent Lighting including CFL lamps and CFL fixtures,
- Clothes washer rebates
- Refrigerator Decommissioning – focused on removing the “garage” unit
- Weatherization including windows, insulation and duct sealing
- Heating including high efficiency furnaces and heat pumps
- Water heating, including tankless water heaters and efficient showerheads.

(Single Family New Construction, continued)

Rebate amounts are based on regionally accepted energy savings estimates and incremental efficiency measure cost. Rebates may be subject to change in response to revisions in savings estimates, average incremental cost or changes in Federal appliance efficiency standards or State codes.

### ***Single Family, New Construction Recap***

The economic and construction market downturn is impacting homes being built and sold. The program is targeting custom and smaller builders who have not been as impacted by the downturn. Electric savings overall on target due to an increase in demand for ENERGY STAR lighting. All other measures are based on a handful of large builders who are building presale only.

## **Residential & Commercial Energy Efficiency Information**

Schedules E200/G1206 (Residential) & E260/G260 (Commercial/Industrial)

These services consist of five components that complement each other to provide information for customers on energy programs and efficiency improvements tailored to their interests and energy-use concerns.

### Energy Advisors

Specially trained and dedicated support representatives provide all customer sectors direct access to PSE's array of energy efficiency services through a toll-free phone number. Energy Advisors discuss with customers the potential benefits of various conservation programs, eligible incentives, and introduce related products and services.

### Energy Efficiency Brochures

PSE provides brochures and how-to guides on various energy efficiency opportunities, including behavioral measures, low-cost equipment, weatherization measures, major weatherization improvements, and equipment upgrades. This information includes investment and savings estimates where appropriate. These brochures are available to customers in paper form and online at the PSE Web site. Where required by tariff, brochures are included as bill inserts.

### On Line Services

To assist customers with information and questions, a section of the PSE web site ([www.pse.com](http://www.pse.com)) is dedicated to energy efficiency and energy management for customers that prefer on-line services. PSE provides "Energy at Home", a quarterly e-newsletter promoting energy efficiency services. This free service contains articles about energy efficiency, timely seasonal tips, links to PSE program information and coupons for energy efficient products. A similar bimonthly "Energy in Business" e-newsletter features case studies of PSE energy efficiency projects, as well as announcements of upcoming training opportunities. Other services include an email box, and links from a customer's Energy Tracker information and graphs to energy efficient tips and ideas.

(Information Services, continued)

On-Line Personal/Business Energy Profile

Personal Energy Profile (residential) and Business Energy Profile (small business) are free energy self-audit surveys, with PSE follow-up analysis and a report that provides customers with specific and customized energy efficiency recommendations. These services identify current energy costs and consumption by end-use, and provide a list of specific recommendations for energy efficiency opportunities and their associated savings estimates.

MY PSE Account incorporates a customer's billing history and details, with an analyzer tool that explains what is included in their bill. Customers can understand what changes can be made to reduce energy usage. The Business Energy Profile is available only to online users.

Events

Energy Efficiency Services sponsors a number of community, local, and regional events. These events include home shows, trade shows, seminars, corporate events and community festivals. They provide a unique opportunity for Energy Efficiency Services staff to interact directly with customers to discuss a variety of products, programs and services PSE offers.

***Information Services Recap:***

Residential:

PSE's 2009 strategy of working with our internal partners to recruit priority opportunities—those that had a green theme and could provide a good number of attendees—in order to best use limited resources has been successful. Other actions taken include creating a speakers bureau which provides specific topics and people that can be relied on. With marketing communication we now have a criteria list to evaluate any "sponsorship" opportunities. As a result, EES has had a presence at 131 events throughout our service territory through the second quarter.

Commercial/Industrial:

Business portal project launched June 30 and is performing well.

**Energy Education**

Schedules E202/G207

Powerful Choices is a four-day school program that empowers Washington State's middle school students with the ability to make informed choices regarding the use of natural resources. This program fills a need for environmental education in Washington State at no cost to schools. Powerful Choices also helps students in reaching Washington's learning standards by aligning the curriculum with Washington State's Essential Academic Learning Requirements (EALRS).

(Energy Education, continued)

Students participate in a variety of activities focusing on energy, water, solid waste, and air quality.

***Energy Education Recap:***

The Powerful Choices education team, in its first full school year with an expanded staff of four full-time and four part-time facilitators, presented the program to 17,169 students at 90 schools during the 2008-09 school year, which was a 23 percent increase in the number of schools reached from the previous year. The **ITSCOOL** pilot completed its first spring season with a total of four participating groups, and a plan is in place to increase CFL sales this fall. All printed curriculum materials for this program are complete.

The Cool School Challenge (CSC) continues to experience strong growth in the number of teachers, workshops and schools involved with the program. The Department of Ecology and the Environmental Protection Agency are interested in helping to increase exposure of the program and are indirectly helping facilitate workshops throughout PSE's service area. Over 300 teachers have now participated in workshops and are engaging their respective schools/students with the curriculum. The Komo Kulshan Outdoor School completed its sixth successful season reaching an additional 20 classrooms with this popular three day program which has students doing an in-depth "exploration" of an ecosystem and correlating that with the wise and efficient use of our limited resources.

## Multi-Family New Construction

Schedule E218/G218

### Description:

There are three distinct construction types in this market:

1. Low/mid rise construction\*: These buildings typically have residential type meters that measure all the natural gas/electric consumption in the dwelling units. Commercial type meters measure the consumption in common spaces. These complexes are one to four floors of residential dwelling units.
2. High rise construction\*: These buildings typically have commercial type meters that measure the in-unit heating/water heating and common area consumption. Residential type meters typically measure the dwelling unit lighting, appliance and plug load. These complexes are five or more floors of residential dwelling units. Where commercial meters measure the residential heat/water heating, energy efficient upgrades are typically served under an existing PSE commercial program.
3. Assisted Living/Affordable Housing construction\*: These buildings typically have commercial type meters that measure the in-unit heating/water and common area consumption. Commercial type meters also measure the consumption in common spaces.

\* There may be any combination of meter mix in all three types of construction. PSE works with each development team to determine the meter type mix. Once the meter type mix is confirmed, the appropriate PSE programs are identified to serve that development.

This program serves the residential meters in all three building construction types. PSE's current commercial tariff programs serve most of the commercial meter upgrades in these types of construction. Where the multifamily program may serve the in unit load on commercial meters, the residential program may apply. An example may be in unit lighting/plug load in master metered complexes.

This program includes rebates/incentives and grants.

Eligible customers include building developers/owners and equipment suppliers. This program will provide financial incentives to the above audience for both natural gas/electric and residential/commercial meters. The incentives are both fixed, per measure rebates, and calculated incentives.

This program is structured to work in accord with our current commercial programs. PSE provides a single "point of contact" to development teams for all energy efficient measure/upgrades. This allows PSE to maximize the energy savings opportunity in each development and reduce multi-program confusion for the customer.

***Multifamily New Construction Recap:***

To date PSE has 25 signed grants in place; serving residential, market-rate, affordable and senior housing units. Five project grants have been fully verified, paid and closed. Based on current forecast through the end of 2009, program savings are expected to exceed electric targets despite construction starts decreasing.

This program is tracking at 50 percent of therm savings goal to date.

## **COMMERCIAL/INDUSTRIAL SECTOR**

### **Commercial/Industrial Retrofit**

Schedules E250/G205

PSE works with commercial and industrial customers to review energy consumption at the customer's facility, and to assess cost-effective energy savings opportunities from equipment, building shell, industrial process, or O&M improvements. These services are provided on the customer's behalf and, where specified by the customer, will be developed in conjunction with design engineers, contractors, and/or vendors. PSE will review third-party savings estimates and analyses. Where the project meets PSE cost-effectiveness funding criteria, PSE will provide grants toward energy savings projects. PSE works with the customer to make sure financial decision makers at the customer's facility are aware of the cost-savings opportunities, including review of energy saving projections that can help obtain favorable financing rates. Upon notice of installation/implementation, PSE will verify the project as complete and operational and payment will be issued.

#### ***Commercial/Industrial Retrofit Recap:***

Program performing slightly behind targets but activity continues to be steady.

### **Large Power User/Self Directed**

Schedule E258

This program solicits electric energy efficiency upgrades through a Request for Proposal (RFP) process. C/I customers receiving electric service under Schedule 40,46,49 or 449 receive a funding allocation based on electric usage and are responsible for proposing cost-effective project to utilize their allocation. Proposals are evaluated by PSE engineering staff for technical soundness, cost-effectiveness and compliance with energy code and tariff requirements. Customers sign a standard PSE Conservation Grant Agreement, defining project cost and PSE incentive amount prior to installation of project measures.

All projects are field verified by PSE before grant payments are made. Customer not designating projects to fully utilize their allocation within 30 months of the program start date forfeit their remaining balance to a competitive phase, in which remaining funds are available to all program participants via competitive bid.

#### ***Large Power User, Self Directed Recap:***

All projects tracking to forecast through Q2 2009.

## **Small Business Lighting Rebate**

Schedule E255

The program offers a variety of lighting fixed-incentives that streamline the delivery of energy-saving measures for a variety of small usage commercial businesses and building types. Eligibility is limited to Schedule 24 and Schedule 8 electric customers. Rebates for small businesses cover efficient incandescent and fluorescent lighting conversions and lighting.

### ***Small Business Lighting Recap:***

Program performing ahead of target, with several pending projects in the pipeline. Optimization efforts underway to prevent delays in pre-approval process.

## **Commercial/Industrial New Construction**

Schedules E251/G251

PSE works with designers and developers of new C/I facilities, or major remodels, to propose cost-effective energy efficient upgrades that exceed energy codes by 10% or standard practice in industrial facilities. Two paths may be followed to qualify for assistance and/or funding for energy efficiency measures.

The first path is a prescriptive measure approach, similar to meeting code using the prescriptive path. PSE recommends and reviews measures beyond what is included in the proposed design. Where the project proposes savings 10% beyond the applicable local Energy Code, PSE provides grant funding.

The second path is similar to meeting the code using a performance path. PSE will work with designers to incorporate measures that produce 10 percent overall savings beyond the applicable local energy code. Given the time frame of new construction planning to completion, these projects may not be complete in the first year.

All C/I customers are eligible, although larger projects tend to be more cost effective. Customers provide PSE with project costs and estimated savings, and assume full responsibility for selecting and contracting with third-party service providers. Projects must be approved for funding prior to installation/implementation to be eligible.



***Commercial/Industrial New Construction Recap:***

Electric:

Total number of projects and energy savings are projected to be similar to 2008 figures; total savings forecasted to come in just above 200 percent of target. Many projects coming online are closing out the past few years of heavy new construction activity.

Gas:

Savings are tracking at 40 percent of target primarily due to lack of new construction projects with high heating loads (health care, natatoriums, etc.) scheduled for completion in 2009.

**Resource Conservation Manager**

Schedules E253/G208

PSE offers Resource Conservation Manager Services (RCM) to any school district, public-sector government agency, and commercial or industrial (C/I) customer, with a focus on larger customers with multiple facilities. An RCM customer employs or contracts with someone who has designated resource management responsibilities, including accounting for resource consumption and savings.

PSE assists in designing and implementing an RCM program. Salary guarantees are available for RCMs, and training opportunities are available for RCMs and corollary staff such as custodial and maintenance personnel.

In some cases, PSE provides a grant to partially fund a start-up RCM position, provided there is a mutual agreement that if the program generates dollar savings, funding by the customer will continue after "start-up" funding support terminates. Depending on individual customer needs, PSE may provide additional services or assistance, including resource policy guidelines; a resource accounting system; PSE billing data; informational materials; and a forum for resource conservation managers to exchange information, ideas, and techniques for controlling utility costs. Any grants for retrofits are coordinated through PSE's C/I retrofit or new construction programs.

***Resource Conservation Manager Recap:***

Q2 emphasis has been on close-out of grants with three-year savings true-ups and transition into renewal phase for many customers. Program participation continues to grow with five new customers this quarter.

## **Commercial Rebates**

Schedules E262/G262

PSE offers fixed rebates for select, commonly-applied measures to commercial customers. Rebate measures are those with energy-savings that can reasonably be standardized over a wide variety of applications, and that have competitive market pricing to ensure cost-effectiveness. The current list (effective August, 2008) of eligible Commercial Rebates is maintained by the Company and made available upon request. Rebate amounts are updated as market conditions change.

### ***Commercial Rebates Recap:***

#### **Electric:**

There was a sharp decrease in the installation of pre-rinse spray heads in the second quarter. This program has stalled due to the discovery of a quality issue in the product. PSE is working with the manufacturer to obtain an appropriate replacement. We continue to have excellent participation in PC Power management and Commercial Kitchens. PSE received less than expected Hospitality Rebate requests but see several on the horizon for next quarter. We also experienced greater than normal participation in lighting controls. In Q3 we expect to see considerable savings from the implementation of a new CFL mark down program in which PSE will work with vendors to take CFL rebates at the point of sale.

#### **Gas:**

The decrease in the installation of spray heads this quarter affected gas savings in addition to electric savings. PSE saw better than average participation in the Gas Boiler Tune-up Program and continues to see good results from Commercial Kitchen Rebates.

## **LED Traffic Signals**

Schedule E257

The program educates public-sector customers with traffic control authority (cities, counties, and DOT's) on the benefits of installing red and green LED traffic signals. PSE provides an LED informational packet along with a rebate application by mail or in person. Customers must receive electric service from PSE to qualify for the rebates, and customers with unmetered accounts must document all connected load at the intersection.

### ***LED Traffic Signals Recap:***

This program received no participation in the second quarter. Large savings figures from projects are expected to be reported in Q3.

## OTHER EES SERVICES

### **Northwest Energy Efficiency Alliance**

Schedule E254

Northwest Energy Efficiency Alliance's (NEEA) market transformation initiatives will increase the availability and consumer acceptance of energy-efficient technologies and practices. As a partner with NEEA, PSE contributes funding for regional programs, actively participates on the NEEA Board of Directors, and supports various related initiatives within the PSE service area.

Detailed information on NEEA history, structure, funding, projects, reports, press-releases, proposals and more is available at NEEA's web site at [www.nwalliance.org](http://www.nwalliance.org).

#### ***Northwest Energy Efficiency Alliance Recap:***

PSE's partnership with NEEA remains robust and discussions continue relative to 2010-2011 savings targets. Participation in the NEEA Ductless Heat Pump (outlined above in the Pilots recap) exceeds expectations and PSE is considering participation in a new Consumer Electronics pilot with NEEA in the second half of 2009.

### **Energy Efficient Technology Evaluation**

Schedules E261/G261

PSE reviews available literature to find information on new, energy efficient technologies and products. PSE draws on the experience and research of others; e.g. E-Source, NEEA, WSU and other utilities. "New" measures must be significantly different from measures already qualifying for grants on the PSE program. The focus of the research is on practical, cost effective technologies and measures that can be immediately implemented. Technologies must be based on generally accepted engineering or scientific principles. Savings must be quantifiable, using generally accepted engineering calculations.

#### ***Energy Efficiency Technology Evaluation Recap:***

##### Electric:

PSE is supporting a sustainable Farmworker Housing project in Skagit County. PSE will collaborate in the design, implementation and post production tracking of energy efficiency measures for this unique sector of housing. To date, the project contractor and building sites have been selected. Once the architect completes civil engineering, permits will be secured and the project will get underway.

##### Gas:

Evaluating savings of drain water heat recover system provided by new supplier in area.

## **Net Metering,**

Schedule E150, in conjunction with:

## **Production Metering**

Schedule 151

Schedule 150, Net Metering for Renewable Energy Services, became effective February 11, 1999. Subsequently, Schedule 150 was revised on June 8, 2000 in response to legislative action<sup>1</sup>, which modified certain aspects of the net metering program.

As revised, the schedule applies to customers who operate fuel cells or hydroelectric, solar or wind generators of no more than 100 kW.<sup>2</sup> Service under this schedule is limited to a total of 4.5 MW of cumulative nameplate generating capacity, of which no less than 2.25 MW of cumulative nameplate generating capacity shall be attributable to net metering systems that use either solar, wind, or hydroelectric power as its fuel. Customer generation can be used to offset part or all of the customer-generator's electricity use under Schedules 7, 24, 25 or 29 of Electric Tariff G.

### ***Net Metering Recap:***

PSE continues to add new Net Metering customers but at a slightly slower pace, with 52 additional customers in Q2 2009. PSE now has 18 wind turbine customers to complement the 415 customers with solar power. Total capacity is approximately 1,527 KW for solar and 43 KW for wind.

## **Local Infrastructure & Market Transformation**

Schedules E270/G270

PSE participates with or utilizes the services of many organizations to support the local delivery, management, and promotion of a broad range of energy efficiency programs. Measures to be delivered are developed on a project by project basis, primarily dealing with education about energy efficiency and information about Puget Sound Energy's energy efficiency services. Measures can include participation in conferences and energy efficiency trade shows aimed at reaching a broad array of customers and trade allies. The company may provide support or fees to energy efficiency industry, trade ally and customer associations with interest in education and promotion of energy efficiency benefits.

### ***Local Infrastructure and Market Transformation Recap:***

Budgeted expenditures are on track through the second quarter of 2009.

<sup>1</sup> On March 27, 2000, Engrossed House Bill 2334 relating to the definition of net metering systems and amending RCW 80.60.010, 80.60.020 and 80.60.040 was signed into law. The revised law became effective June 8, 2000.

<sup>2</sup> Revisions to Schedule 150, including increasing the maximum generator capacity to 100kW became effective June 12, 2006.

## Program Evaluation and Research

PSE is committed to the verification of claimed energy savings and the continual improvement of energy efficiency service delivery to customers.

### ***Program Evaluation and Research Recap:***

Continuing evaluation of high priority measures and programs progressing.  
Developing scopes of work for new projects.

## Conservation Market Research

Demand-Side Resource Market Potential: The Company will conduct an assessment of the long-term market potential for energy savings from energy efficiency and other demand-side resources, covering the twenty year period 2010-2029. The result of this market potential assessment will be the development of conservation supply curves that will be included in the Company's 2009 Integrated Resource Plan and be a key component is establishing program savings targets for 2010-2011.

Baseline Research for Program Design and Promotional Campaign Development: This research will consist of several studies designed to provide basic, foundational information about PSE customers that will be used as input to the Company's Integrated Resource Plan, as well as for the planning and design of programs and promotional campaigns.

Program-Specific Market Research Support: This research will support the development and evaluation of specific energy efficiency program promotion and communications campaigns, including message testing, campaign target markets, and campaign effectiveness studies, as appropriate.

### ***Conservation Market Research Recap:***

No new market research initiatives implemented through the second quarter of 2009.

## Mainstreaming Green

The Mainstreaming Green campaign envisions messaging and advertising communicating this “Why and How” of energy efficiency in addition to serving as a unifying platform of messages and images from which individual energy Efficiency Program promotional campaigns can launch. This unifying platform will allow Energy Efficiency promotions to lever one another and achieve the greatest value for the individual promotional investments.

### ***Mainstreaming Green Recap:***

Development nearing completion on EES-wide graphics. Work well underway on web capabilities. Planning team for 2010-2011 cycle on schedule to complete the plan and budget.

## Fuel Conversion

### Schedule E216

The Company’s fuel conversion program will acquire cost-effective electric energy savings from existing single-family retrofit measures and services by converting to natural gas customers who use electricity as the primary source for their space heat and/or water heat uses. The Company provides incentives for replacing existing electric forced-air or baseboard space heating equipment and/or tank style water heating equipment with high efficiency natural gas space heating equipment and/or high efficiency natural gas domestic water heating equipment.

Based on the measure/product type and market factors, PSE may provide incentives to its customers at different points along the value chain. Market barriers vary dramatically from measure to measure, consequently PSE incentives may occur at the manufacturer, distributor, contractor, retailer or consumer level. Incentive amounts are based on regionally accepted energy-saving estimates and incremental efficiency measure costs. These incentives may be subject to change in response to revisions in savings estimates, average incremental cost or changes in Federal appliance efficiency standards or State codes. Training, education and support by PSE for independent contractors, distributors, retailers, showrooms, sales associates, consumers and partnering organizations will be foundational to the success of this program.

### ***Fuel Conversion Recap:***

Initial direct mailings have gone out for space and water heating prospects. Dealers have been notified regarding program specifics. Early results show that water heater conversions are the majority of rebates; these homes already have gas service at the premise and it is more expedient for the customer to replace an existing water heater than to run a new gas line to the home. Q2 responses indicate that space heating conversions should increase during the latter half of the year.

## **Demand Response Pilots**

### Schedule E249A

PSE's 2005 and 2007 Integrated Resource Plans (IRP) present achievable estimated demand response capacity potential for residential, commercial and industrial customer sectors. Pilots under this schedule are being undertaken to strengthen the Company's capability to responsively and effectively offer cost-effective demand response options to all customer classes in the future. Some members of the CRAG expressed a preference for demand response pilots involving "direct load control" by the Company, as opposed to pilots which involve pricing signals to elicit demand response from consumers.

The Company's primary focus will be to pilot direct load control during times of high peak loads, focusing on the customer communication needed, as well as the information and incentives needed to get the customer to agree to respond. PSE will evaluate the effects of these pilot demand response options on its electrical system.

Attributes to be evaluated include technologies, demand reduction performance, customer behavior and preferences, impact and integration of demand response with PSE operations, demand reductions achieved, energy savings achieved, and local distribution system benefits derived.

#### ***Demand Response Pilot Recap:***

Vendor selection for the Residential Load Control Pilot was completed in June. GoodCents Solutions will provide customer recruiting, enrollment and field equipment installation services. Comverge, Inc selected to provide ZigBee enabled load switches, thermostats and digital gateways (two-way broadband communications using internet protocol) for participating homes. Comverge will also provide hosted software for the load management (dispatch) capability. Bainbridge Island has been selected as the target community for this pilot of approximately 600 electric space and water heat homes. The Bainbridge Community Energy Task Force is supportive of the pilot and will be engaged in promoting island participation. First equipment installs are anticipated in early September.

## **Small-Scale Renewables**

### Schedule E248

This program will first provide a solar rebate equal to the cost of the required production meter under terms of PSE's Production Metering tariff. Separately, PSE will develop a grant program for school solar demonstration projects which are tied in with both a curriculum and energy efficiency services. Further, PSE will encourage customers to make investments in small scale renewable electricity generating systems.

***Small Scale Renewables Recap:***

The solar schools demonstration projects at Coupeville Middle and High Schools, Liberty High School, Hazen High Schools are slated for installation over the summer months. Green River Community College has additional funds for an innovative open shelter area. PSE will work with Green River C.C. facilities, architects, faculty and students during the summer and fall to design and fabricate a solar power showcase project.



# Exhibit 1: 2009 Mid-Year Results by Rate Schedule

## PSE - ELECTRIC CONSERVATION RIDER EXPENSES & SAVINGS

Schedule	Through June 2009		Jan. '09 - June '09		50%		Jan. '09 - Dec '09	
	\$ Spent	MWh Svgs.	\$ BUDGET	MWh Svgs. Target				
<b>Residential Programs</b>								
E214 Single Family Existing	\$ 7,430,649	69,356 \$	15,657,000	129,784				
E217 Multi Family Existing	\$ 3,092,903	9,979 \$	5,672,000	18,967				
E249 Pilots	\$ 1,374,618	163 \$	2,486,000	1,776				
E201 Low Income	\$ 711,803	756 \$	1,686,000	1,342				
E215 Single Family New Construction	\$ 471,480	1,403 \$	1,255,000	2,162				
E200 Residential Information Services (Johannes)	\$ 548,750	n/a \$	1,160,000	n/a				
E202 Energy Education (Kegley)	\$ 365,069	764 \$	700,000	996				
E218 Multi Family New Construction	\$ 129,075	156 \$	385,000	834				
<b>Subtotal Residential Programs</b>	<b>\$ 14,124,347</b>	<b>82,578 \$</b>	<b>29,007,000</b>	<b>155,861</b>				
<b>Subtotal Residential aMWh</b>								
		<b>9.4 aMWh</b>		<b>19.5 aMWh</b>				
<b>BEM Commercial Programs</b>								
E250 C/I Retrofit (Younger)	\$ 7,196,491	20,040 \$	19,330,000	51,000				
E258 Large Power User - Self Directed (Landers)	\$ 736,105	7,458 \$	3,900,000	16,000				
E255 Small Business Lighting Rebate (James)	\$ 1,951,034	6,156 \$	2,800,000	9,000				
E251 C/I New Construction (Lensen)	\$ 1,131,906	5,632 \$	1,800,000	5,000				
E253 Resource Conservation Manager - RCM (Moen)	\$ 414,654	2,576 \$	1,000,000	10,000				
E262 Commercial Rebates (Younger)	\$ 661,090	9,561 \$	1,000,000	9,250				
E260 Commercial Energy Efficiency Information (Younger)	\$ 20,757	n/a \$	145,000	NA				
E257 LED Traffic Signals (Schmutzler)	\$ 702	0 \$	25,000	500				
<b>Subtotal Commercial Programs</b>	<b>\$ 12,112,739</b>	<b>51,424 \$</b>	<b>30,000,000</b>	<b>100,750</b>				
<b>Subtotal C/I aMWh</b>								
		<b>5.9 aMWh</b>		<b>11.5 aMWh</b>				
<b>Other Programs</b>								
E254 NW Energy Efficiency Alliance (Anderson)	\$ 1,754,173	12,250 \$	2,100,000	24,500				
Program Evaluation- Elec (Brateng)	\$ 252,609	n/a \$	1,240,000	n/a				
Conservation Market Research- Electric (Hopkins)	\$ 286,730	n/a \$	800,000	n/a				
Conservation Supply Curves (new) (Phillip P.)	\$ 159,719	n/a \$	529,000	n/a				
CON Program Support (France)	\$ 129,739	n/a \$	200,000	n/a				
E261 Energy Efficient Technology Evaluation (Jackman)	\$ 24,553	n/a \$	192,000	n/a				
E150 Net Metering (Wade)	\$ 69,291	n/a \$	173,000	n/a				
Mainstreaming Green (Ringel)	\$ 29,735	n/a \$	118,000	n/a				
E270 Local Infrastructure, Mkt Transformation (Rich/Brateng)	\$ 48,786	n/a \$	68,000	n/a				
EES Market Integration (Ringel)	\$ 39,949	n/a \$	-	n/a				
Electric Efficiency RFP (Hopkin)	\$ 868	n/a \$	-	n/a				
<b>Subtotal Other Programs</b>	<b>\$ 2,796,152</b>	<b>12,250 \$</b>	<b>5,420,000.00</b>	<b>24,500</b>				
<b>Subtotal Other aMWh</b>								
		<b>1.4 aMWh</b>		<b>2.8 aMWh</b>				
<b>SUBTOTAL ELECT. ENERGY EFFICIENCY</b>								
	<b>\$ 29,033,238</b>	<b>146,251 \$</b>	<b>64,421,000</b>	<b>281,111</b>				
<b>Total aMWh Savings</b>								
		<b>45.1%</b>		<b>52.0%</b>				
		<b>16.7 aMWh</b>		<b>32.1 aMWh</b>				
E216 Single Family Fuel Conversion (Norton)	\$ 218,210	517 \$	3,700,000	15,242				
E249A C/I Load Control Pilot - Elec (France)	\$ 191,835	n/a \$	-	n/a				
249A Demand Response Pilot Programs - Elec (France)	\$ 74,779	n/a \$	1,200,000	n/a				
E248 Small Scale Renewables (MacLean)	\$ 201,737	n/a \$	421,000	0				
<b>GRAND TOTAL ELECT. ENERGY EFFICIENCY</b>	<b>\$ 29,719,799</b>	<b>146,768 \$</b>	<b>69,742,000</b>	<b>296,353</b>				
<b>Total aMWh Savings</b>								
		<b>42.6%</b>		<b>49.5%</b>				
		<b>16.8 aMWh</b>		<b>33.8 aMWh</b>				

**PSE - GAS CONSERVATION TRACKER EXPENSES & SAVINGS**

Through June 2009		Jan '09 - June '09	50%	Jan '09 - Dec '09	Therms Svgs. Target
Sched.	Gas Programs	\$ Spent	Therms Svgs.	Goal \$	
<b>Residential Programs</b>					
G214	Single Family Existing	\$ 2,906,410	723,729	\$ 5,891,000	1,321,100
G249	Pilots	\$ 343,756	0	\$ 1,389,000	0
G215	Single Family New Construction	\$ 304,545	43,816	\$ 953,000	122,500
G206	Residential Information Services	\$ 289,668	n/a	\$ 572,000	0
G203	Low Income	\$ 263,604	14,818	\$ 496,000	22,200
G217	Multi Family Existing	\$ 143,386	16,819	\$ 402,000	69,200
G207	Energy Education	\$ 123,411	47,884	\$ 353,000	64,100
G218	Multi Family New Construction	\$ 45,480	14	\$ 209,000	24,500
<b>Subtotal Residential Programs</b>		<b>\$ 4,420,260</b>	<b>847,079</b>	<b>\$ 10,265,000</b>	<b>1,623,600</b>
<b>Commercial Programs</b>					
G205	C/I Retrofit (Younger)	\$ 2,011,681	278,839	\$ 2,700,000	405,000
G251	C/I New Construction (Lensen)	\$ 190,173	20,966	\$ 1,000,000	200,000
G208	RCM (Moen)	\$ 183,982	135,208	\$ 450,000	200,000
G262	Commercial Rebates (Younger)	\$ 293,073	1,317,148	\$ 400,000	700,000
G260	Commercial Energy Efficiency Information (Younger)	\$ 13,599	n/a	\$ 82,000	n/a
<b>Subtotal Commercial Programs</b>		<b>\$ 2,692,508</b>	<b>1,752,161</b>	<b>\$ 4,632,000</b>	<b>1,505,000</b>
<b>Other Programs</b>					
	Program Evaluation and Research- Gas (Brateng)	\$ 116,205	n/a	\$ 658,000	n/a
	Conservation Market Research- Electric (Hopkins)	\$ 69,922	n/a	\$ 200,000	n/a
	Conservation Supply Curves (P. Popoff)	\$ 41,320	n/a	\$ 129,000	n/a
G261	Energy Efficient Technology Evaluation (Jackman)	\$ 4,468	n/a	\$ 90,000	n/a
	Mainstreaming Green (Ringel)	\$ 29,801	n/a	\$ 50,000	n/a
G270	Local Infrastructure, Mkt Transformation (Brateng)	\$ 28,362	n/a	\$ 29,000	n/a
	EES Market Integration (Ringel)	\$ 21,846		\$ -	n/a
<b>Subtotal Other Programs</b>		<b>\$ 311,923</b>	<b>-</b>	<b>\$ 1,156,000</b>	<b>-</b>
<b>SUBTOTAL GAS ENERGY EFFICIENCY</b>		<b>\$ 7,424,690</b>	<b>2,599,240</b>	<b>\$ 16,053,000</b>	<b>3,128,600</b>
		<b>46.3%</b>	<b>83.1%</b>		
G209	dential Low-Income Customers- G&E Shareholders BTL (\$)	\$ 163,248	n/a	\$ 300,000	n/a
<b>Total with BTL/Shareholders</b>		<b>\$ 7,587,938</b>	<b>2,599,240</b>	<b>\$ 16,353,000</b>	<b>\$ 3,128,600</b>