Puget Sound Energy, Inc. P.O. Box 97034 Bellevue, WA 98009-9734

August 14, 2008

Mr. David Danner, Secretary and Executive Director Washington Utilities and Transportation Commission P.O. Box 47250 Olympia, WA 98504-7250

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 2008. 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.

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 De Bres

Tom DeBoer

Director, Rates & Regulatory Affairs

**Enclosures** 

cc: Simon J. ffitch, Public Counsel

Sheree Carson, Perkins Coie



Energy Efficiency Services
Program Results
January – June, 2008

August 14, 2008

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## **EXECUTIVE SUMMARY**

Puget Sound Energy's ("PSE's" or "The Company's") Energy Efficiency Services (EES) is pleased to present this Semi-Annual report of 2008 program activity. Covering January through June 2008, the report is associated with the electric conservation Rider and natural gas conservation Tracker funding.

PSE is in the first year of the 2008 – 2009 conservation tariff period. The summary table below shows the overall performance of the PSE energy efficiency programs in the first half of 2008 in comparison to the annual budget and savings target. Detailed program savings and cost figures are available in Exhibit 1 at the end of this report. EES program overviews and six-month recap summaries are provided in the following pages.

EES results have been slightly ahead of plan. Expansion and ramp-up of programs have exceeded expectations and are already contributing to our first half success. Electric efficiency programs are exceeding expectations on savings and costs, driven largely by increased interest in compact fluorescent lighting in the single-family residential market. Natural gas efficiency costs per therm are higher than anticipated due to increased customer costs and associated incentives in the Commercial/Industrial retrofit market.

# January, 2008 - June, 2008 EES Summary

## 2008 Budget/Savings

_	<u>Jan - Jun 2008</u>	<u>Targets</u>	<u>% Total</u>		
ELECTRIC Costs	\$20,477,782	\$55,559,880	36.9%		
MWh Savings	118,959	216,836	54.9%		
(or) aMW (MWh/8,760)	13.6	24.8	54.9%		
GAS Costs	\$6,232,618	\$12,458,750 50.0%			
Therm Savings	1,186,688	2,520,000	47.1%		

Note: kWh and therms are based on first-year savings at the customer meter.

Net Metering, Small-Scale Renewables, Demand Response Pilot---Electric

\$400,127	\$1,875,000	21.3%
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## PROGRAM DESCRIPTIONS

## RESIDENTIAL SECTOR

# Residential & Commercial Energy Efficiency Information, Schedules E200/G1206 (Residential) & E260/G260 (Commercial/Industrial)

These services consist of four 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 (<a href="www.pse.com">www.pse.com</a>) 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.

## 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.

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<u>MY PSE Account</u> 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.

## Information Services Recap:

#### Residential:

2008 marked a commitment to creating more opportunities to interact directly with customers. EES has participated in 75 events during the second quarter alone, more than all of 2007. Events included small community fairs, to "Earth Day" events, to workplace events and seminars. The outreach has significantly increased the quantity of informational brochures put directly in the hands of customers. EES has also been actively involved in ensuring a prominent role in the new Vashon and Pt. Townsend office objectives.

## Commercial/Industrial:

PSE IT department working on adding small commercial accounts to existing data extract to Aclara™ (formerly Nexus) for viewing of monthly billing information on existing My PSE web site.

## Single Family Existing, Schedules E214, G214

<u>Description</u>: 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:

- Heating, Ventilation And Conditioning, including furnaces, duct sealing and heat pumps,
- · Lighting, including lamps and fixtures,
- Shell sealing and insulation
- Water heating, including efficient showerheads,
- Selected appliances.

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:

- \* CFL bulbs have achieved 2008 target; we expect to exceed target by 1.0 million bulbs.
- \* Showerhead/aerator Program was launched in July targeting 686,550 of PSE's SF residential customers via partnership with Cascade Natural Gas, Snohomish PUD, Tacoma Power, Tacoma Water. PSE Energy Advisors are serving as the call center for the multi-utility partnership.
- \* Refrigerator Decommissioning on target to retire 5,000 units.
- \* Fixtures are gaining momentum but continue to move slower than planned.

## Single Family Existing Gas Recap:

- \* Gas Clothes Washers program is slightly behind plan. 90% furnaces is on plan to reach its goal of 5000 units.
- \* Water heaters, although slightly behind plan is expected to be on plan by year end.
- \* The weatherization program—as a result of additional contractors and increased incentives—is expected to significantly exceed targets.

## Multi-Family Existing, Schedule E217, G217

<u>Description</u>: 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:

#### South Counties:

On target to meet/exceed kWh savings. 80% of goal currently installed or contracts pending. MF commercial measure incentives are being added to ensure common area applications are included at time of sale, this will also improve ability to assess MF market opportunities as a whole.

#### North Counties:

Testing a new program design for Island, Skagit & Whatcom counties. Program kick off was May 08. Program expected to meet 2008 kWh savings/budget targets.

#### Multi-Family Gas Recap:

This continues to be a limited and slow market to develop, with long sales cycles and smaller complexes. Joint marketing with commercial applications should help develop and track market penetration and success.

## Single Family New Construction, Schedules E215/G215

<u>Description</u>: To implement cost effective, targeted, residential new construction energy savings using a menu of prescriptive efficiency measure rebates. Prescriptive rebates are intended to facilitate participation by builders, owner-builders and trade allies, and provide administrative efficiencies for PSE in meeting energy efficiency goals.

In addition to most incentive types enumerated for Single Family Existing customers, natural Gas and electric PSE Single Family New Construction customers may also be eligible for the following classifications of incentives:

- Energy Star® dishwashers
- Energy Star manufactured homes

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:

Construction market slowdown is affecting home sales and has lowered requests for permits. More offerings and increased incentives have increased calls from smaller builders and owner builders for energy efficiency incentives. New Construction kWh savings are on target due to an increase in awareness of ENERGY STAR lighting and its affordability. Builders are interested in opportunities to differentiate themselves in the marketplace via Green, LEED or Energy Star®.

Energy Star has implemented new database that hasn't worked as planned and has impacted our ability to report in a timely manner. Corrections are in the works.

## Low Income, Schedules E201/G203

<u>Description</u>: 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 might provide energy use education to participants.

#### Low Income Recap:

Program currently behind plan, due to the transition from Community Trade and Economic Development (CTED) to PSE as the direct source for payments. A significant contract clarification has been communicated to agencies, which now allows them to spend beyond their initial allocation, essentially removing any caps to low income agency incentives. Data tracking and reporting via online system continues to be improved for ease of use.

## 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, delivery methods. Pilots are not subject to achieving energy savings sufficient to demonstrate cost-effectiveness in the short run.

## Pilots Recap:

Four teacher workshops completed for the Cool School Challenge. Feedback thus far has been excellent and results of activity will be available in August 2008. Three additional pilots: Blue Line® in-home kWh use display - Home Energy Audits - Positive Energy (social marketing) are on schedule to launch in the 3rd quarter. Evaluation criteria is also on plan to accompany these pilots.

## **Energy Education, Schedules E202/G207**

<u>Description</u>: Powerful Choices is a 4-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). Students participate in a variety of activities focusing on energy, water, solid waste, and air quality.

## **Energy Education Recap:**

The 2007-2008 Powerful Choices school year reached 13,542 students at 74 schools, a 25% increase from 2006-2007. Total savings for the 2007-2008 school year were 958,139 kWh and 50,188 therms.

## Multi-Family New Construction, Schedule E218/G218

#### Description:

There are 3 distinct construction types in this market:

- 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.
- 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 types 3 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:

A new program manager was hired to specifically address this market. New program design launched in July with over 100 builders, architects, contractors attending kick-off. Joint program development with commercial team has created a comprehensive and builder friendly program that will also allow better tracking of the market.

## COMMERCIAL/INDUSTRIAL SECTOR

## Commercial/Industrial Retrofit, Schedules E250/G205

<u>Description</u>: 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:

#### Electric:

Current completed and signed projects are behind forecast but activity continues to be stable. We have been encouraging more complex projects but that is requiring additional evaluation resources. We are adding engineering staff to help keep up with project evaluation workload.

#### <u>Gas</u>:

Projects are currently ahead of savings forecast and are expected to exceed annual target. Current economic conditions and inflation are driving project costs significantly higher than original estimated program costs. While all projects still meet cost effectiveness criteria, this will have an impact on 2-year budget.

## Large Power User/Self Directed, Schedule E258

<u>Description</u>: 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:

Program non-competitive phase concluded 06/30/08 with sufficient signed grant agreements to meet year-end savings target.

## Resource Conservation Manager, Schedules E253/G208

<u>Description</u>: 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:

The program continues a rapid growth as customers pursue sustainability and greenhouse gas accounting programs; in which local government agencies have expressed a keen interest. There has also been a significant increase in new customer contacts / inquiries. Several grants are in process, which are likely to send savings projections above target. Due to number of new customers, team is behind on evaluating savings, but expects to get on target by end of third quarter.

#### Small Business Lighting Rebate, Schedule E255

<u>Description</u>: 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:

Contractors and vendors say that they have re-focused on the Small Business lighting program, and that is in fact what we see them doing in recent months. The 20% higher average incentive implemented last March has improved interest.

## Commercial/Industrial New Construction, Schedules E251/G251

<u>Description</u>: 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% 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:

Concentration has been on program changes and development to increase participation while making program more cost-effective mainly through prescriptive approaches for small commercial buildings and multi-family complexes. This has involved determining reasonable savings for all standard energy efficiency measures through modeling of prototypical buildings and spreadsheet calculations as well as gathering cost data for all the measures. In addition, coordination with the other utilities in the Puget Sound area and region as well consulting with local designers has been an important part of the process. On July 23rd the new multi-family and whole building prescriptive approach programs was introduced to the design/developer community at a breakfast for about 150 in attendance.

#### Commercial Rebates, Schedules E262/G262

<u>Description</u>: 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:**

The inclusion of ovens in our Commercial Kitchen Program gave created more interest in our Commercial Kitchen program. Our beginning of the Phase 2 of the spray head program is expected to create a large increase in savings. We have several HVAC related projects in the pipeline expected to be completed by the end of the year.

#### Gas:

The inclusion of ovens in our Commercial Kitchen Program gave some help to the slow gas savings. Our beginning of the Phase 2 of the spray head program is expected to greatly increase natural gas savings. Inclusion of gas only measures in the Premium HVAC Service Program, such as economizers, will also boost performance. School summer vacation as well as the oncoming preparation for the fall heating season will also increase participation in the Boiler Tune-up program.

## LED Traffic Signals, Schedule E257

<u>Description</u>: 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**:

Projects from Cities of Renton and Olympia expected in 4th qtr. Will meet 2-year target.

## Northwest Energy Efficiency Alliance, Schedule E254

<u>Description</u>: 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, pressreleases, proposals and more is available at NEEA's web site at <a href="https://www.nwalliance.org">www.nwalliance.org</a>.

#### Northwest Energy Efficiency Alliance Recap:

Program is on target to meet expected energy savings.

## **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:

Evaluating pressure-independent control valves for chilled water and hot water systems, which save energy by avoiding excess water flow and resulting pumping energy. Pressure-independent "Delta-P" valves are manufactured by Flow Control of Woodinville. We are also following a technology that is showing a great deal of interest in the building design community: "Variable Flow Refrigerant" systems for heating buildings more efficiently than conventional heat pumps.

#### Gas:

Several vendors have approached PSE with savings claims for their new products, or improved versions of technologies that have been in existance for several years. One company has a new, more effective fan design used to "de-stratify" large spaces; i.e. blow warm air that has collected at the ceiling back down to the occupant level. We have requested more supporting documentation from the company. Another company is citing significant savings for their boiler controls; however, savings potential is not clear at this point.

## 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:

Highlights of major 2008 new or renewed memberships include:

Consortium for Energy Efficiency (CEE),

Northwest Energy Efficiency Council,

As well as various local symposiums and green/renewable awareness events.

## **OTHER EES SERVICES**

## **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:

Evaluation of highest priority programs and measures, (including several residential -, water heat, weatherization and incremental measure costs) are progressing. Continuing to develop scopes of work for next projects. Potential assessments of the Resource Conservation Manager (RCM) and Premium HVAC Service are being considered.

## **Conservation Market Research**

<u>Demand-Side Resource Market Potential</u>: 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 2009-2028. 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. Over the next two years, the Company plans to conduct customer end use characteristics surveys for the residential and commercial sectors, leveraging regional efforts where appropriate. In addition, The Company plans to conduct market segmentation, communications media effectiveness, and energy efficiency service expectation studies.

<u>Program-Specific Market Research Support</u>: 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:

The long term assessment of demand-side resource potential for the Company's 2009 Integrated Resource Plan (IRP) is on track to be completed by year end.

Completed a residential market segmentation study and commenced working with program planning, promotion, and implementation staff to apply the results. PSE is working with BPA and Puget Sound area utilities to expand this segmentation approach to the entire NW region.

Completed a streamlined residential end use survey and a residential fuel conversion market acceptance survey, to be incorporated into the demand-side resource analysis for the IRP and other program planning efforts. Committed to participating in a regional commercial building stock assessment and in development of a regional industrial efficiency project database.

Provided ongoing support for program promotion and development efforts.

## 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:

To date, preliminary work has been undertaken on the Mainstreaming Green component of our Energy Efficiency marketing efforts. This work has included preliminary advertising creative work done by EES personnel as well as an outside agency. Additional creative work and planning is scheduled for this summer with the campaign scheduled to launch in the fall.

There will also be media relations work done this summer to increase the placement of stories in the print and broadcast media about PSE's expanded Energy Efficiency programs and services.

## Net Metering, Schedule E150; 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 that 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 added 27 New Net Metering customers in Q2 2008 bringing the total customer count to 279. Together they represent 979 kW of capacity. 96% were Solar PV. The remaining 4% were made up of hybrids (joint solar and wind), micro-hydro, wind, and bio-mass.

Of the new Net Metering customers, all are electing to participate in PSE's Renewable Energy Advantage Program. 34 customers or 12% remain net metered only. We continue to encourage net meter only customers to add production meters. We transitioned two more customers from net metering only in Q2 and have two more adding production meters.

In 2008 PSE continues to promote the growth of this sector through community events and working with contractors.

### 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.

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

## Small Scale Renewables Recap:

In Q1, PSE issued an RFP for applications for solar PV demonstration systems for schools. PSE awarded 5 schools amounts ranging from \$3,639 South Whidbey High School, \$20,000 to Interlake High School, and \$25,000 for systems to Thomas Jefferson in Federal Way, Marshall Middle School in Olympia and Sakai Elementary on Bainbridge. The demonstration projects should be installed during the summer months. In Q1 and Q2 PSE rebated \$17,540 to customers to cover the cost of adding production meters to their renewable energy systems. This rebate eliminated any extra charge from PSE for adding home wind or solar. We foresee the rebates to total more than expected by approximately \$25,000 for two reasons: PSE is experiencing greater customer solar development than projected and some of the systems are large and complex, requiring a more expensive metering solution.

## **Demand Response Pilots**

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.

Small-scale demand response pilots will be offered (on a voluntary basis) to targeted customers. Residential, commercial or industrial customers receiving retail bundled service under Electric Tariff G will be recruited for participation in demand events. PSE will determine prospective participant eligibility. There will be no rate impact to participants and financial incentives may be offered to customers who participate. This Schedule (249A) is tied to the provisions of Schedule 83, with funding provided through the existing Electric Conservation Service Rider.

## Demand Response Pilot Recap:

The commercial Load Control Pilot (LCP) experienced recruiting challenges among leading national account retail customers early this year due to the prospect for curtailment events being called during the busy holiday shopping season. Refocused efforts among more diverse customers including large office, educational and food processors have improved participation results through the second quarter. We have also recently agreed with our LCP service provider, EnerNOC, to expand the target recruiting area to Skagit and Whatcom counties, allowing more cold storage customers to participate. We anticipate the commercial LCP program will be fully subscribed with 24 participating customers by November 1<sup>st</sup> this year.

Implementation planning for a residential load control pilot was also initiated in the second quarter. We concur with CRAG member opinions that direct load control methods are preferred - particularly in the residential sector. Currently we envision an approach on the utility side that will take the most efficient and cost-effective advantage of our AMR (automated meter reading) system infrastructure. On the customer side we anticipate working directly with volunteer customers in selected area(s) and a service provider to link the utility network with pertinent customer equipment.

Exhibit 1: January – June 2008 Results by Rate Schedule

Elec Sch #	Gas Sch#	Service	kWh Savings	Therm Savings	E	lectric Costs	· •	Gas Costs	Т	otal Costs
200	206	Res. Energy Effic. Information	N/A	N/A	\$	657,362	\$	367,979	\$	1,025,341
260	260	Com'l Energy Effic. Information	N/A	N/A	\$	31,298	\$	25,249	\$	56,547
214	214	Single Family Existing	64,648,688	603,635	\$	6,598,354	\$	2,984,157	\$	9,582,511
217	217	Multi-Family Existing	5,614,300	7,497	\$	1,454,176	\$	167,479	\$	1,621,655
215	215	Single Family New Construction	1,882,984	53,928	\$	591,237	\$	310,039	\$	901,276
201	203	Low Income	388,267	7,627	\$	489,263	\$	176,041	\$	665,304
249	249	Pilots	<u>-</u>	-	\$	145,806	·	107,706	\$	253,512
202	207	Energy Education	734,484	37,478	\$	256,697	\$	144,867	\$	401,564
218	218	Multi Family New Construction	-	-	\$	32,981		21,920	\$	54,901
250	205	C/I Potrofit	17 294 207	279 242	•	4 762 025	e G	1 275 040	e	6 120 775
250 258	205	C/I Retrofit	17,384,307	278,243 N/A	\$ \$		\$	1,375,940	\$ \$	6,139,775
253	na 208	Large Power User/Self Directed	3,866,370		э \$	894,998 215.132	¢	110 522		894,998 325.654
255		Resource Conservation Manager	2,708,769	108,535 N/A	э \$	<b>,</b>	\$	110,522	\$ \$	,
ļ	na 251	Small Business Lighting Rebate	4,097,882		\$	1,126,101	œ	104 555	φ \$	1,126,101
251	251	C/I New Construction	1,721,885	40,207		488,702	\$	124,555		613,257
262	262	Commercial Rebates	3,581,804	49,538	\$	460,014	\$	87,756	\$	547,770
257	na	LED Traffic Signals	569,240	N/A	\$	18,461		-	\$	18,461
254	na	NW Energy Efficiency Alliance	11,760,000	N/A	\$	1,557,246		-	\$	1,557,246
261	261	Energy Efficient Technology Eval.	N/A	N/A	\$	3,064	\$	163	\$	3,227
270	270	Local Infrastructure&Mkt Trans	N/A	N/A	\$	11,652	\$	6,273	\$	17,925
na	na	Program Evaluation & Research	N/A	N/A	\$	213,739	\$	102,442	\$	316,181
na	na	Conservation Market Research	N/A	N/A	\$	425,521	\$	116,213	\$	541,734
na	na	Electric Conservation Support	N/A	N/A	\$	35,238		-	\$	35,238
na	na	Electric Efficiency RFP	N/A	N/A	\$	418		-	\$	418
na	na	Mainstreaming Green	N/A	N/A	\$	6,487	_	3,317	\$	9,804
		Subtotal, Efficiency Programs	118,958,980	1,186,688		20,477,782		6,232,618	2	6,710,400
150	na	Net Metering	N/A	N/A	\$	32,308		_	\$	32,308
248	na	Small-Scale Renewables	N/A	N/A	\$	157,350		-	\$	157,350
249A	na	Demand Response Pilots			\$	210,469		<u> </u>	\$	210,469
		Subtotal, Net Metering, Small-Scale Renewables and DR Pilots			\$	400,127			\$	400,127
		Total	118,958,980	1,186,688	Ť	20,877,909		6,232,618		7,110,527
		Low Income Customers-				£0,011,303	<u> </u>			
na	209	Shareholders	N/A	N/A		-	_\$_	155,687	\$	155,687

13.6 aMW