PUGET SOUND ENERGY

Puget Sound Energy
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PSE.com

Filed at WUTC via Web Portal

May 31, 2013

Mr. Steven V. King, Acting Executive Director and Secretary
Washington Utilities and Transportation Commission
1300 South Evergreen Park Drive S.W.
P.O. Box 47250
Olympia, WA 98504-7250

Re: RCW-Required Report, RCW 19.285.070 and WAC-Required Report, WAC 480-109-040 Conservation

Dear Mr. King:

Enclosed for filing, please find Puget Sound Energy, Inc.'s ("PSE") report detailing the company's electric conservation achievements in the preceding year (2012), including:

- Expected electricity savings from the 2012-2013 biennial conservation target;
- Expenditures on electric conservation in the preceding year (2012); and
- Actual electricity conservation savings results in the preceding year (2012).

The report is filed pursuant to RCW 19.285.070 and WAC 480-109-040. A copy of this report will also be submitted to the Department of Commerce. Consistent with WAC 480-109-040(2), Commission staff and other interested persons may file written comments regarding this report within 30 days of its filing; in this case Commission Staff and other interested parties have until June 30, 2013 to file written comments.

If you have any questions about the information contained in this filing, please contact Eric Englert, Manager, Regulatory Initiatives & Tariffs, at (425) 456-2312.

Sincerely,

Katherine J. Barnard

Ken Johnson
Director, State Regulatory Affairs

Enclosures

Energy Independence Act (RCW 19.285) Conservation Report

Utility	**Puget Sound Energy**
Report Submittal Date	*May 31, 2013*
Utility Contact Name/Dept.	**Dan Anderson**
Phone	425 456-2306
Email	Daniel.Anderson@pse.com

Planning

2012 - 2013 Planning

	Ten Year Potential (MWh), WUTC-Approved	2012 - 2013 Target (MWh), WUTC-Approved	
Total	**3,531,508**	**666,000**	Please see notes 1 & 2.

Achievement

2012 Achievement — Please see note 3.

Conservation by Sector	MWh	Utility Expenditures ($)	Please see note 4.
Residential	153,343	40,381,507	
Commercial	166,747	40,514,727	Please see note 5.
Industrial			
Agriculture			
Distribution Efficiency			
Production Efficiency			
NEEA	19,400	4,687,146	
Conservation expenditures *NOT* included in sector expenditures			Please see note 6.
Portfolio Support		2,593,348	
Research & Compliance		2,945,796	
Other Electric Programs		652,346	
Total	**339,490**	**91,774,870**	Please see note 7 & note 8.

Utility **Puget Sound Energy**

Methodology Narrative: See instructions

The Commission-approved ten-year potential ("potential")
and two-year target methodology are comprehensively discussed in PSE's 2012-2013 Biennial Conservation Plan document "Ten-Year Potential and Two-Year Targets" , and has been attached to this report as reference. A summary of this Exhibit is provided below.

The ten-year cumulative conservation potential consists of the optimized level of energy use and distribution system conservation potential selected by PSE's resource portfolio model for the 2011 Integrated Resource Plan (IRP). It includes ramping the timing for achieving this potential so that all the economic achievable retrofit potential in existing buildings would be achieved in 10 years, not the full 20-year planning horizon of the IRP.

The methodology used to determine these potentials was consistent that that used by the Council to develop the 6th Northwest Power Plan. The conservation potential was built with a bottom-up approach, using individual energy-efficient technologies applied to appropriate end uses and building types to determine technical, economic, achievable potential.

Efficiency improvements at electric production facilities were not projected in the Company's 2011 IRP. Therefore PSE developed a separate assessment of the conservation potential at its electric production facilities. This assessment included all hydro and thermal plants operated by PSE in the state of Washington.

Based on the analysis described previously, PSE's total cumulative ten-year conservation potential is 3,766,799 MWh (429.9aMW) at the generator, which includes line loss savings from the customer meter back to the power generator (consistent with conservation council's basis for reporting energy savings). Expressed in terms of energy savings at the customer meter (excluding line loss savings), the ten-year potential is 3,531,508 MWh (403.1 aMW).

RCW 19.285.040 requires that, once the ten-year conservation potential has been developed, utilities shall set a biennial electric conservation acquisition target which is no lower than the utility's two-year pro rata share of its ten-year potential.
The WAC rule for setting the biennial target defines "pro rata" simply as "the calculation used to establish a minimum level for a conservation target" (WAC 480-109-007 (14)) and requires that the utility must document how the ten-year cumulative conservation potential was prorated (WAC 480-109-010 (2)).

The 2012 - 2013 biennial target, accounting for the pro rata adjustments described above, is 710,755 MWh (81.1 aMW) at the generator level. This is equivalent to 666,000 MWh (76.0) aMW) at the customer meter level

Utility **Puget Sound Energy**

Conservation Notes:

1) Please Reference PSE's 2012-2013 Biennial Conservation Plan, "Ten-Year Potential and Two-Year Targets" document in Docket No UE-111881. The document was re-named in the 2013 Annual Conservation plan: "Exhibit i: WAC 480-109 Potential Target for 2012-2013" and it is attached as a PDF to this report.
2) The Commission approved PSE's two -year target in Order 01 of Docket No UE-111881, on June 18, 2012.
3) Specific details of 2012 results are contained in PSE's "Customer Solutions 2012 Annual Report of Energy Conservation Accomplishments", ("Annual Report") filed with the Commission on February 13, 2012 in Docket No. UE-111881. (Attached as a PDF, along with its supporting Exhibits.)
4) Sector details extracted from Exhibit 1 of the 2012 Annual Report.
5) PSE does not track Commercial and Industrial savings separately within its Business Energy Management sector. For purposes of illustration and to provide a sense of scale, PSE has often indicated that an approximate ratio could be 90% commercial and 10% industrial. This ratio is only for discussion purposes only.
6) Details of functional activities and portfolio support expenditures are noted in the 2012 Annual Report Exhibit 1.
7) It is important to note that all savings reported are stated in terms of first-year energy savings at the customer meter. There will continue to be conservation energy savings past the first year, up to and beyond the measure life.
8) PSE and UTC Staff have engaged SBW to perform the one-time 2012-2013 independend third-party review of 2012-2013 electric savings. The Commission will not make a determination on PSE's 2012-2013 savings results until PSE files its 2012-2013 Biennial Conservation Report on June 1, 2014.

Customer Solutions

2012 Annual Report of Energy Conservation Accomplishments

PUGET SOUND ENERGY
The Energy To Do Great Things

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FIGURES

TABLES

Supporting Documentation

Please note that the Exhibits listed below align with the Exhibit numbering system established in the 2011 Annual Conservation Plan, and continued into all subsequent Customer Solutions conservation reporting. This maintains continuity between PSE filings, and provides Stakeholders with the ability to perform direct comparisons more effectively.

As this report is a review of past accomplishments, some Exhibit numbers may be omitted, as they are plans, and are not directly applicable to a review of performance. For instance, the 2012-2013 BCP Exhibit 3 contains program details. In this report, those details are contained within the body of the report, rather than as a separate Exhibit. Exhibit 3 is therefore omitted from this report.

Rather than create ***new*** Exhibits, Appendices or Attachments for this report, which may cause confusion, PSE will employ Supplements to established Exhibit (maintaining the Exhibit numbering system from report-to-report).

Established Exhibits Included in the 2012 Report of Conservation Accomplishments

Exhibit 1: 2012 Conservation Targets and Budgets versus Actual Achievements and Spending.

Exhibit 2: Program Cost Effectiveness.

Exhibit 5: Prescriptive measures offered in 2012.

Exhibit 9: Condition Compliance Checklist.

Exhibit 10: NEEA report of annual accomplishments. (Effective with the 2013 Annual Conservation Plan, this is a new Exhibit. Formerly, the NEEA review was included within the body of the PSE Annual Report.)

Established Exhibits Excluded from the 2012 Report of Conservation Accomplishments

Exhibit 3: Program Details *(these are updated and refreshed for inclusion in this report).*

Exhibit 4: EES List of Measures, Incentives & Eligibility *(this is an ongoing, "living" document).*

Exhibit 5: EES Rebate Measures *(This is included as a Supplement to Exhibit 4, noted below).*

Exhibit 6: Evaluation Plan. *(Omitted, as this is a forward-looking document. A Supplement to this Exhibit is noted below.)*

Exhibit 7: Marketing Plan. *(Omitted, as this is a forward-looking document.)*

Exhibit 8: EM&V Framework. *(Omitted; provided in the 2012-2013 Biennial Conservation Plan)*

Supplements

Exhibit 1 *(Table of savings and expenditures)*

- Supplement 1: Expenditures by Cost Element Group (2012-2013 BCP view).
- Supplement 2: 2012 Savings adjustments.
- Supplement 3: 2012 Sponsorships and Memberships.
- Supplement 4: Portfolio Measure Category Counts.

Exhibit 5 *(Customer Solutions' Prescriptive measures)*

- Supplement 1: 2012 EES Prescriptive Measure Revisions.
- Supplement 2: Measures Retired in 2012.

Exhibit 6 (The Evaluation Plan is excluded from this report)

- Supplement 1: Evaluation studies with their associated Evaluation Report Responses (ERRs) performed in 2012.

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EXECUTIVE SUMMARY

Puget Sound Energy's Annual Report of 2012 Conservation Accomplishments

Puget Sound Energy's ("PSE's" or "The Company's") Customer Solutions[1] Department presents this Annual Report of 2012 energy efficiency program accomplishments and activities, satisfying condition (8)(c) of Commission Order 01, Docket No UE-111881, and requirements enumerated in the Commission's second supplemental order in Docket No. UE-970686. The report is associated with the Electric Conservation Rider and Natural Gas Conservation Tracker funding, and discusses activities, initiatives and accomplishments completed in the first year of this 2012-2013 biennium. Table 1a presents 2012 Portfolio-level savings and expenditure figures for electric and natural gas conservation programs. The Portfolio-level Total Resource Cost (TRC) benefit-to-cost ratios are also presented.

Table 1a: Customer Solutions 2012 Savings, Expenditures and TRC Results

2012	Savings	Expenditures	TRC B/C Ratio
Electric (MWh)	339,500	$91,775,000	2.00
Goal/Budget	336,600 (38.4 aMW)	$98,136,000	
Percent	100.9%	93.5%	
Gas (Therm)	5,205,000	$13,653,000	1.33
Goal/Budget	4,877,000	$13,398,000	
Percent	106.7%	101.9%	

339,500 MWh divided by 8,760 hours = 38.8 aMW
Savings are stated in terms of first-year annual figures, without line loses.
Indicated gas expenditures exclude $276,500 low income shareholder funding.
All totals are rounded for summarization. Exact figures are presented in sector chapters and Exhibit 1: 2012 Savings and Expenditures.

[1] Prior to 2012, the Customer Solutions department was known as Energy Efficiency Services (EES).

The report provides three levels of information: a Portfolio-level discussion of overall Customer Solutions 2012 accomplishments, Sector-level overviews (Residential, Business, Regional, Portfolio Support, Research & Compliance and Other Electric Programs)[2] and the most detailed discussions, business-unit and program-level performance reviews. The report provides several views of program financial and savings data, cost-effectiveness summaries, measure category tables, program descriptions, and program accomplishments. Programs are organized in the report according to their Sector presentation in Exhibit 1: Savings & Expenditures and Schedule numbers with the Sector for easy reference.

2012 Results

In 2012, Customer Solutions exceeded energy savings goals[3] while effectively managing costs. In all cases, reference to energy savings is classified as first-year savings as reported at the customer meter for both electric and gas conservation.

Electric expenditures were $91.8 million,[4] 93.5 percent of the year-end budget target. The overall electric energy savings finished the year at 339,500 MWh or 38.8 aMW, which is 101 percent of year-end goal. Gas expenditures were $13.65 million;[5] 101.9 percent of the year-end budget. The overall natural gas savings achieved in 2012 was 5.2 million therms or 106.7 percent of year-end goal.

Customer Solutions finished 2012 with portfolio cost-effectiveness benefit-to-cost ratios of greater than 1.0 for the Utility Cost (UC) test and Total Resource Cost (TRC) test. In 2012, the electric UC benefit-to-cost ratio was 2.89 and the TRC result was 2.00. The gas ratios were: a UC of 2.48 and TRC of 1.22. These tests were performed in compliance with condition (10)(a). Although not required under terms of Order 01 of Docket No. UE-111881, PSE performed these tests for gas programs as well.

[2] Sector headings outlined in Exhibit 1: Savings and Expenditures details.

[3] PSE reserves the word "target" for biennial references and "goal" references a single-year conservation achievement objective.

[4] Total includes $652,000 of Other Electric Program expenditures. Other Electric Programs are not conservation based; for example, Net Metering, Renewable Energy Education and Demand Response.

[5] Total excludes PSE shareholder funding of $276,500 for Low Income Weatherization.

Continued Support of Customer Conservation Efforts

Building on past years' achievements, each Customer Solutions department demonstrated its commitment to exceeding customer expectations throughout 2012. This attention was at the forefront of each Customer Solution customer touch point; from our energy advisor team and rebate processing, the expectations that we have and training that we provide for our vendors, and the customer online experience at PSE.com. In 2012, Customer Solutions conducted energy-efficiency program educational events for PSE department staff who serve our customers, helping them answer customers' energy-efficiency questions. We directly interacted with customers at community events, and provided value with every opportunity that Program Staff, Verification Team members, and energy management engineers have to meet our customers in their homes and businesses.

Continuous Improvement

Program Staff continued its long-established and ongoing work to maximize its savings reporting accuracy and transparency by process and system improvements. Staff increased efficiencies in the reporting systems and databases, and network filing structures, while efficiencies were gained with process standardization. Several Business Sector Schedules were adjusted to allow for grants on LED street lighting, and the Retail Channel completed an in-field retailer training. The entire suite of program offerings, both Business and Residential, were continuously monitored for performance and adjusted throughout the year to ensure maximum customer satisfaction, efficient use of Conservation Rider funds, and realization of savings goals.

Notable Deliverables

Highlights of notable 2012 accomplishments include:

PSE completed its first biennial electric savings review, which concluded that Customer Solutions' processes were consistent with, and in some cases led industry standards. PSE's Biennial Conservation Report (BCR) earned a recommendation from a regulatory Stakeholder that other utilities use PSE's BCR as a template for future reports. Customer Solutions also filed its 2013 Annual Conservation Plan (ACP), a comprehensive publication which built on plans established in the 2012-2013 Biennial Conservation Plan. The ACP earned significant accolades from several Stakeholders as once again setting regulatory reporting standards.

The Company's relationship with the Conservation Resource Advisory Group (CRAG) remains strong, while continuing to make significant advancements in operational transparency and information exchange.

Customer Solutions completed key noteworthy evaluation studies that supported the Company's business methodologies. Customer Energy Management expanded the number and scope of contracted programs and participated in the implementation of a new Contractor Alliance Network. As a part of its region-leading annual measure revision process, several Residential measures were converted to RTF values. The Verification Team completed its first full year of onsite inspections throughout the territory.

PSE converted the Gas Conservation Tracker to a Rider mechanism, so that each funding method is the same, consistent with the Commission's request.[6] And, PSE exceeded electric and gas savings goals while efficiently utilizing customer funds.

Details of Customer Solutions accomplishments are contained in the program discussions that follow.

Compliance

- By the end of 2012, the Company has achieved over 50 percent compliance with all of the regulatory requirements outlined in three separate documents, as well as with other Commission Orders, laws and rules. 100 percent deliverable achievement is projected by the end of the current biennium. The primary conservation-related requirements are outlined in:

  1) RCW 19.285 and WAC 480-109,
  2) The Second Supplemental Order of Docket No. UE-970686,
  3) The 2002 Stipulation Agreement, Docket No. UG-011571,
  4) The 2010 Electric Settlement Agreement, Docket No. UE-100177, and
  5) Order 01, Docket No. UE-111881.

[6] Effective with the 2013 Schedule 120 filing on March 1.

INTRODUCTION

This chapter will describe the contents of this report, and provide a more detailed discussion of PSE's 2012 conservation results. As has been noted in earlier 2012 PSE publications, 2012 marked the revision of "Energy Efficiency Services" to "Customer Solutions". Although the Customer Solutions division encompasses additional functions,[7] the activities and achievements of the Energy Efficiency department within Customer Solutions are the focus of this report. Throughout this report, "Customer Solutions" and "Energy Efficiency department" are often used interchangeably.

Report Organization

This PSE 2012 Annual Report of Conservation Accomplishments will provide detailed discussions of the results of the Customer Solutions' conservation programs and all related activities and functions that contributed to the 2012 results.

Readers will detect a continued evolution in the "look and feel" of the annual conservation report; most notably, new paragraph spacing in each chapter, providing enhanced readability. Each chapter is now enumerated in the report headings for easier reference, some content has been added or modified to suit Stakeholder needs, and some content—where there proved to be little Stakeholder value—was eliminated.

The program and function/activity discussions were re-structured to be consistent with the sequence of Exhibit 1: Budgets and Savings.

In addition to Portfolio-level overviews and sector highlights; which will provide financial results in the Annual Conservation Plan-detailed format, and measure savings type distribution, program discussions also provide measure installation summaries, including measure categories and types installed, and continuous improvement accomplishments. Furthermore, the Glossary and Definition section is included at the end of the report, allowing readers to access key Portfolio information more directly.

[7] These include O&M activities that are not funded through the Conservation Service Rider and Tracker.

To maintain continuity, PSE will carry on the same Exhibit naming tenet found in the 2012-2013 Biennial Conservation Plan. This is outlined in the Table of Contents as well. Some of the Exhibits are not pertinent to an accomplishment review. For instance, the program details outlined in Exhibit 3 are incorporated into the program review sections of this report. There are elements of those Exhibits, though, that are germane to a year-end review, however. Those are labeled "Supplements".

These are not the Exhibits themselves, but address and review specific elements of the Exhibits. Supplement contents are listed in the Table of Contents on page vi.

Report Contents Summary

PSE will detail within this report:

- Customer Solutions' results, at a Portfolio and Sector level:
  - Expenditures and Savings , both portfolio and sector views
  - Five-year trends
  - Cost-effectiveness summaries by fuel type
  - Measure Savings by type
  - Continuous improvement initiatives
- PSE compliance with regulatory requirements
- Customer Solutions' EM&V activities and accomplishments
- Residential Energy Management and Business Energy Management program details,
  - including summary tables of measure or services types
- Portfolio Support, Research & Compliance, and Other Electric Program recaps
  - Details for each function and activity, Renewables programs, and Demand Response programs
- Stakeholder Relationships
  - Washington Utilities and Transportation Commission
  - Conservation Resource Advisory Group
- Exhibits:
  1. Overall Customer Solutions expenditure and savings results, electric and gas
  2. Cost-effectiveness results by program
  9. Condition Compliance Checklist
  10. Northwest Energy Efficiency Alliance report of 2012 accomplishments.

  Exhibits 3 (Program Details), 4 (Customer Solutions List of Measures, Incentives & Eligibility), 5 (List of Prescriptive Measures), 6 (Evaluation Plan), 7 (Marketing Plan), 8 (EM&V Framework), 11 (Tariff Revisions) are excluded from the report, as they relate primarily to Customer Solutions' plans. These are more closely associated with Biennial or Annual Conservation Planning documents. There are several relevant Supplements to Exhibits, including those excluded Exhibits, which are noted below.

- Exhibit Supplements
    - Exhibit 1 (Conservation Rider/Tracker budgets and savings goals)
        a. Supplement 1: 2012 expenditures by Cost Element Group (BCP view), at a Sector and program level
        b. Supplement 2: 2012 Savings adjustments
        c. Supplement 3: 2012 Sponsorships and Memberships
    - Exhibit 5 *(Prescriptive Measures)*
        a. Supplement 1: 2012 EES Prescriptive Measures Offered
        b. Supplement 2: 2012 EES Prescriptive Measure Revisions
    - Exhibit 6 *(The Evaluation Plan is excluded from this report)*
        a. Supplement 1: Evaluation studies with their associated Evaluation Report Responses (ERRs) performed in 2011

Compliance

A complete discussion of PSE regulatory compliance is contained in Chapter 3, beginning on page 34. This 2012 PSE Annual Report of Conservation Accomplishments is consistent with the Commission Second Supplemental Order in Docket No. UE-970686, and condition (8)(c) of Order 01 of Docket No UE-111881.

It is noteworthy that in the interest of brevity and to avoid repetition, PSE will use the terms "condition (N)(x)" or "Section N(x)" when referencing deliverables outlined in Exhibit F to Stipulation Agreement, Docket Nos. UE-011570[8] and UG-011571, the 2010 Electric Settlement Terms, Docket No. UE-100177,[9] and Order 01 of Docket No. UE-111881, rather than "…condition K(n)(n) of the 2010 Electric Settlement Terms, Docket No. UE-100177…" at each instance.

Additional conditions or deliverables are addressed as they pertain to specific sections of the report, and will be noted therein.

[8] Specific electric deliverables outlined in Docket No. UE-011570 were vacated by Commission Order 05 in Docket UE-100177.

[9] Within the 2010 Electric Settlement Terms, "Conditions" apply specifically to Section K. There are also specific PSE deliverables in applicable sections of the above-noted requirement documents.

Customer Solutions 2012 Results

Continued Focus on Energy-Efficiency Customers

PSE is very proud of its 2012 energy-efficiency conservation accomplishments; most notably the numerous customer-focused process refinements implemented throughout the year. The dedicated men and women of Customer Solutions continued their long-standing focus on surpassing our customers' energy-efficiency expectations at each of our customer touch points while also exceeding aggressive conservation goals. As you'll read in the coming pages, the Energy Efficiency organization emphasized superior customer service in each department, including support functions that don't directly interface with our customers.

This "Wordle" or word cloud represents words and concepts that are important to PSE customers. Their color and weight signify their relative prominence in customer expectations.

At every opportunity to interface with our customers—when a customer calls an energy advisor, we mail an energy-efficiency brochure, at energy-efficiency and community events, and even in our rebate and grant processing—we strive to ensure clear, proactive and positive messaging. Our tools and resources have been developed and continuously refined to provide customers with the most current rebate and conservation information with a focus on ease-of-use and clarity.

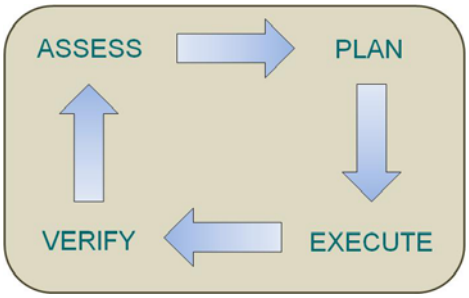
And—even if we or our representatives miss the mark the first time—Customer Solutions has processes in place that emphasize quick and assured resolution of any confusion and proactively address potential dissatisfaction. PSE believes that it is important that customers understand the value of their conservation efforts and contributions to preserve the integrity of our environment; not only for ourselves, but for future generations in the State of Washington.

This emphasis on customer service is prominent in our dealings with our trade allies; those contractors and third-party entities that represent PSE when installing or servicing energy-efficiency measures. We hold our representatives to very high customer service standards, and their performance is regularly reviewed to ensure that they also meet customer expectations.

A small, representative number of customer comments are interspersed throughout this year's report as evidence of PSE's ongoing commitment.

2012 Continuous Improvement

As has been the case for many years, the 125 skilled professionals of Customer Solutions consistently employ universal management techniques that result in continuous improvement. In 2012, their efforts resulted in the outstanding outcomes noted throughout this report. Without subscribing to a fixed management style classification, every Customer Solutions department that supports PSE's energy efficiency programs employ the fundamental principles of iterative and robust program management decision-making:



These steps, implemented in a variety of sequence and iteration, are common to the majority of Total Quality Management (TQM) management models.[10]

[10] The term "Adaptive Management" is another common characterization for this type of system. In response to Commission Staff's July 16 2012 comment in Docket No. UE-100177 on the need for utilities to document their adaptive management processes, Public Counsel responded in its August 2, 2012 memo in the same Docket: *"… Adaptive management is a critical part of utility conservation program administration and regulation. It is reflected,* inter alia*, in ongoing utility program work, advisory group consultation, and EM&V processes. …"*

Throughout the biennium, which includes planning for upcoming periods and program execution, the Customer Solutions Staff stay attuned to market conditions, industry trends, customer demands, contractor and vendor feedback, energy codes, and other influencers.

Of the Customer Solutions Energy Efficiency staff of 125, over two-thirds play a part in directly generating conservation and energy-efficiency program savings.

28 professionals manage conservation programs in Residential Energy Management, and 50 individuals implement Business Energy Management savings. The 7 Energy Efficiency Communities personnel also closely collaborate with REM and BEM Staff to generate savings.

The remaining Energy-Efficiency department of Customer Solutions is associated with Evaluation, Verification or Measurement functions, while more than ten energy advisors provide superior service directly to our customers.

Program Staff design their suite of energy-efficiency offerings, direct customer benefits, and delivery methods based on historical performance and regular management review of forecasts. Program Staff, in collaboration with Evaluation, Research, and Marketing Staff, are able to dynamically adjust implementation plans throughout the year according to performance indicators. These include formal evaluation studies, vendor, retailer, and contractor feedback, and comments received directly from customers. As a result of efficient processes and dynamic relationships that break down barriers, they are able to nimbly execute against those plans. In some cases, these principles resulted in the retirement of under-performing programs or measures.

PSE regularly reviews program plans, status, revisions, etc. with the Conservation Resource Advisory Group (CRAG) throughout the year, and invites CRAG members to visit the Customer Solutions offices regularly.

Routine program updates and revisions are often conveyed via email, notable developments and program plans are reviewed during CRAG meetings, and PSE Provides substantial details in its Biennial and Annual Conservation Plans, routine updating filings of its measure list and program details, along with its Annual and Semi-Annual Reports.

Customer Solutions' attention to continuous improvement led to new and innovative operational processes, reduced costs, enabled increased levels of savings verification, maximized productivity and above all, directed more of our efforts on surpassing customer expectations. And, by deploying energy advisors to the PSE regional offices, we offered walk-in contact with our customers.

The consistent application of these management principles throughout 2012 also enabled Customer Solutions to utilize our customer funding contributions wisely and prudently.

Some examples of customer-focused business enhancements, discussed in detail in the following program chapters, include:

- Establishing reference links between measure tracking databases to enhance tracking and reporting accuracy.
- Increasing the exposure of energy-efficiency programs to a wider range of PSE employees who interact with customers.
- Re-structuring internal network drives for easier, more consistent access by energy management engineers.
- Creating a new Contractor Alliance Network program.
- Maximizing the efficiencies of scheduling and executing community involvement and events.
- Reducing the overall time to assemble, review, vet, and perform calculations to determine program cost-effectiveness ratios.

PSE acknowledges and is very appreciative of the 2012 addition of new WUTC Analysts focusing on conservation.

Their contribution to CRAG activities, report reviews, and quality analyses enabled smooth and timely filing processes.

2012 is the first year of the current 2012-2013 biennium. PSE exceeded its 2012 savings goals of 38.4 aMW and over 4.8 million therms. PSE also demonstrated prudent and efficient use of our customers' conservation funding, as illustrated in table 1a, which presents a Portfolio view of Customer Solutions expenditures and savings for electric and gas programs in 2012.

2012 was a year of evolution and continued development for Customer Solutions' Customer Energy Management (CEM) department. Customer Solutions Management and the CRAG built on the existing relationships, and elevated the level of transparency and cooperation between us, yielding several strategic and tactical accomplishments.

Four CRAG meetings were conducted, with additional sub-committee meetings convened throughout the year as needed.

With review and participation from the CRAG, PSE created its comprehensive 2013 Annual Conservation Plan (ACP) that included PSE's consistently high level of program detail and transparency into the department's operations, and demonstrated the rigor with which we regard customer satisfaction and the prudent treatment of customer funding. Several elements of the plan, not required by a condition—including the comparison of Biennial Conservation Plan to Semi-Annual Report language, and clear references to original 2013 budgets and savings figures, allowing expedient references to updated information—were added to maximize value to Stakeholders.

The ACP was acknowledged by the Commission in its December 21, 2012 open meeting.

Other key regulatory accomplishments included the conversion of the Gas Conservation Tracker to a Rider mechanism,[11] filing of the 2012 Semi-Annual Conservation Report, the successful filing of the 2010-2011 Biennial Conservation Report, and participation in the Commission's Natural Gas Cost-Effectiveness Workshops.

Another substantial 2012 accomplishment was completion of SBW Consulting Inc.'s Independent Third-Party Review of 2010-2011 Electric Savings. The SBW final report, as well as studies performed by KEMA and Navigant, confirmed that Customer Solutions' program design and business practices, as applied to:

- Conservation programs,
- Savings tracking,
- Measurement & verification processes,
- Incentive development,

are well-designed and executed, and are in keeping with—in some cases, setting—industry standards.

As you will read in the following detailed program reviews, Customer Solutions continues to build on its successes, pursue continuous improvement and ever-increasing customer satisfaction, and provide the maximum support to trade allies, distributors, contractors, builders, developers, retailers, and our vendors in effective and efficient ways.

Tables 2a and 2b provides the Customer Solutions Sector view of 2012 electric and gas savings and expenditures, respectively.

[11] In response to a Commission request, the gas conservation funding will now operate consistently with electric conservation funding, facilitated with PSE's Schedule 120, filed every March 1.

Table 2a: Customer Solutions 2012 Savings Results by Sector

2012	Residential	Business	Regional	Total
Electric (MWh)	153,300	166,700	19,400	339,500
2012 Goal	149,300	159,800	27,500	336,600
Percent	102.7%	104.3%	70.5%	100.9%
Gas (Therm)	1,754,000	3,451,000	na	5,205,000
2012 Goal	1,892,000	2,985,000		4,877,000
Percent	92.7%	115.6%		106.7%

All totals are rounded for report summarization. Through this process, there may be apparent discrepancies between one or more summary totals or tables.
Specific 2012 totals are found in each Sector chapter and in the 2012 Expenditures and Savings by Sector tables (2c and 2d), as well as Exhibit 1: 2012 Savings and Expenditures.

Table 2b: Customer Solutions 2012 Expenditures by Sector

2012	Residential	Business	Regional	Portfolio Support	Research & Compliance	Other Electric	Total
Electric	$40,382,000	$40,515,000	$4,687,000	$2,593,000	$2,946,000	$652,000	$91,775,000
2012 Budget	$42,699,000	$41,841,000	$5,261,000	$3,514,000	$3,172,000	$1,649,000	$98,136,000
Percent	94.6%	96.8%	89.1%	73.8%	92.9%	39.5%	93.5%
Gas	$6,104,000	$6,337,000	na	$489,000	$722,000	na	$13,653,000
2012 Budget	$6,937,000	$5,292,000		$537,000	$632,000		$13,398,000
Percent	88.0%	119.7%		91.1%	114.2%		101.9%

All totals are rounded for report summarization. Through this process, there may be apparent discrepancies between one or more summary totals or tables.
Specific 2012 totals are found in each Sector chapter and in the 2012 Expenditures and Savings by Sector tables (2c and 2d), as well as Exhibit 1: 2012 Savings and Expenditures.

Expenditures and Savings

2012 Results

As noted in the above tables, Customer Solutions finished 2012 at 93.5 percent of budget in electric expenditures and at 101.9 percent in gas expenditures ($91.8[12] million, electric and $13.65[13] million gas).

Customer Solutions finished the year above goal in electric and gas savings; 38.8 aMW—equivalent to more than 29,000 average residential homes for 2012—and 5.2 million therms, enough to heat over 6,000 average residential homes for 2012.[14]

Actual expenditures and savings by program are provided in Exhibit 1. Expenditures detailed by cost-element group, are compared to 2012 budgets by cost-element group in Exhibit 1, Supplement 1.

2012 Customer Solutions' Quarter-by-Quarter Sector Progress

Tables 2c and 2d provide Sector-level 2012 savings and expenditure figures, respectively, separated into semi-annual totals. Figure 2a illustrates the proportions of those savings and expenditures by Sector.

[12] Including Other Electric Program (Renewables & Demand Response) expenditures of $652,346. This amount is included in the total electric expenditures noted in Table 1a.

[13] Excludes LIW shareholder funding of $276,510.

[14] Based on an average usage of 11,539 kWh per year per average electric residence, per 2011 figures and an average usage of 853 therms per year per average gas-heated residence, per 2011 figures.

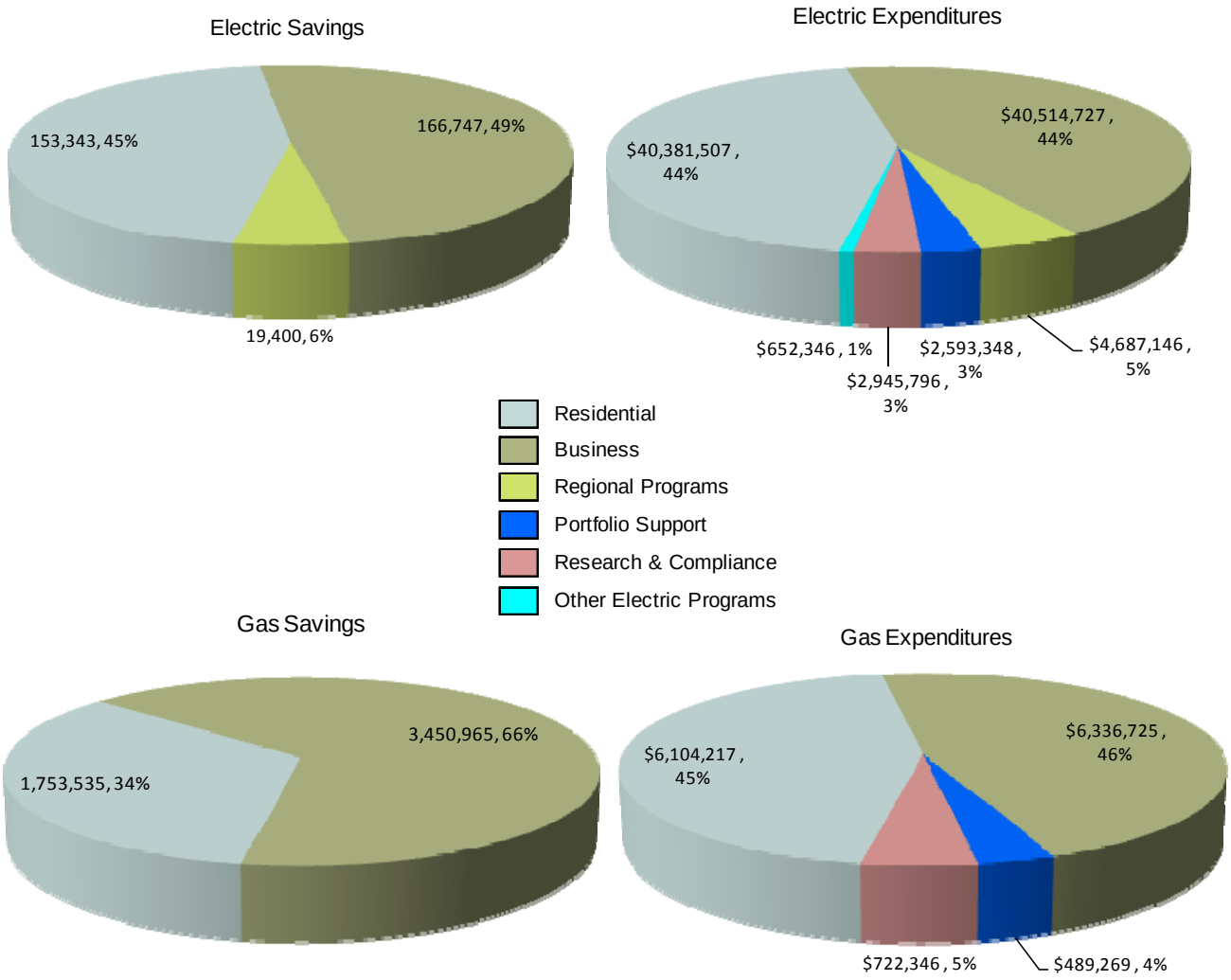
Table 2c Customer Solutions 2012 Expenditures by Sector

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric					Electric
Gas	Gas					Gas
Residential Sector						
	Electric	$ 18,305,009	$22,076,498	$40,381,507	94.6%	$ 42,699,404
	Gas	$ 2,843,886	$3,260,331	$6,104,217	88.0%	$ 6,936,722
Business Sector						
	Electric	$ 18,149,087	$22,365,640	$40,514,727	96.8%	$ 41,841,180
	Gas	$ 2,480,517	$3,856,208	$6,336,725	119.7%	$ 5,291,990
Regional Programs						
	Electric	$ 2,079,756	$2,607,390	$4,687,146	89.1%	$ 5,260,640
Portfolio Support						
	Electric	$ 1,348,536	$1,244,812	$2,593,348	73.8%	$ 3,514,281
	Gas	$ 304,045	$185,224	$489,269	91.1%	$ 537,252
Research & Compliance						
	Electric	$ 1,394,813	$1,550,983	$2,945,796	92.9%	$ 3,171,946
	Gas	$ 372,473	$349,873	$722,346	114.3%	$ 632,221
	Other Electric Programs	$ 375,158	$277,188	$652,346	39.6% 0	$ 1,648,961

Table 2d Customer Solutions 2012 Savings by Sector

2012 Savings		2012 Semi-annual View				2012 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
	Electric (MWh)					Electric
	Gas (Therms)					Gas
Residential Sector						
	Electric	73,138	80,205	153,343	102.7%	149,300
	Gas	706,653	1,046,882	1,753,535	92.7%	1,892,415
Business Sector						
	Electric	71,902	94,845	166,747	104.3%	159,800
	Gas	858,107	2,592,858	3,450,965	115.6%	2,985,000
Regional Programs						
	Electric	9,700	9,700	19,400	70.5%	27,500
Portfolio Support						
	Electric	0	0	0		0
	Gas	0	0	0		0
Research & Compliance						
	Electric	0	0	0		0
	Gas	0	0	0		0
	Other Electric Programs					

Figure 2a: Customer Solutions' 2012 Expenditures and Savings Percentages



Residential Sector Overview

Numerous customers conveyed their satisfaction with our energy-efficiency programs; in conversations with energy advisors, at community and home-show events, and through their correspondence. The Company's updated Rock the Bulb events realized strong attendance, and included new and exciting displays and contests. Consistent with Customer Solutions' Measure Revision Guidelines and its focus on continuous improvement, REM adjusted measures in several programs to either move from a PSE Deemed savings value to one of RTF UES.

Two former pilot measures; Efficient Gas Fireplaces and LED lamps and fixtures were converted to full programs. Spiral and specialty CFL activity, along with steadily increasing participation in LED programs were significant contributors to the Sector's success, along with diversified showerhead offerings. With a renewed emphasis on positive customer experiences, the new Contractor Alliance Network was launched in 2012. The sector's 2012 conservation performance exceeded forecasts; 103 percent of electric and 93 percent of gas savings were achieved, while expenditures were effectively managed. Additional details can be found in the Residential Program Details Discussion in Chapter 6.

Business Sector Overview

Business Energy Management's continued attention to the customer experience and process refinements led to the creation of several value-add improvements throughout the year. Among those most significant included a billing history template, designed to be a leave-behind to engage customers and energy management engineers in energy-efficiency discussions. The CSY system incorporated several upgrades, designed to minimize entry duplication and maximize reporting accuracy. Network archives were restructured, also minimizing information duplication and improving work flow for EMEs, including enhanced quality control review of custom grant projects.

Numerous customers have indicated their satisfaction with BEM's conservation programs. One particular customer was so impressed with the Comprehensive Building Tune-Up program, that they expanded their efforts campus-wide. This instance, along with other significant achievements led to the development of a series of case study publications, which are included in BEM's quarterly "ReEnergize your Business" e-newsletter. In response to customer demand, the Sector expanded several tariff Schedules to be able to include LED street lighting in custom grants.

BEM finished 2012 conservation efforts strongly; 104 percent of its electric savings goal, and 116 percent of its gas savings goal. Electric and gas expenditures were both managed efficiently and prudently. Additional details can be found in the Business Program Details Discussion in Chapter 9.

Five – Year Trends

The following figures represent electric and gas savings and expenditures for completed years 2008 through 2012. Figure 2b indicates that PSE's electric conservation efforts have resulted in a 24 percent increase in savings since 2008. Figure 2c indicates that gas savings increased considerably; over 42 percent.

On the expenditure side, electric spending has increased commensurately with conservation efforts since 2008; over 71 percent, while gas spending increased 15 percent since 2008.

Over time, energy-efficiency costs have increased per unit saved. Several factors contribute to this increase:

- The lowest-cost measures have saturated the market.
- Avoided costs have increased, resulting in more expensive measures becoming cost-effective.
- Measure baselines resulting from increased federal legislation on efficiency standards, higher energy code requirements and standard practice.
- Increased regulatory compliance record-keeping and reporting requirements.

It is noteworthy that the overall proportions of customer incentives have remained relatively unchanged throughout this timeframe, potentially indicating that the costs of energy-efficient measures continue to increase.

Figure 2b: Customer Solutions Electric Programs; Savings and Expenditures – Five-year Trends

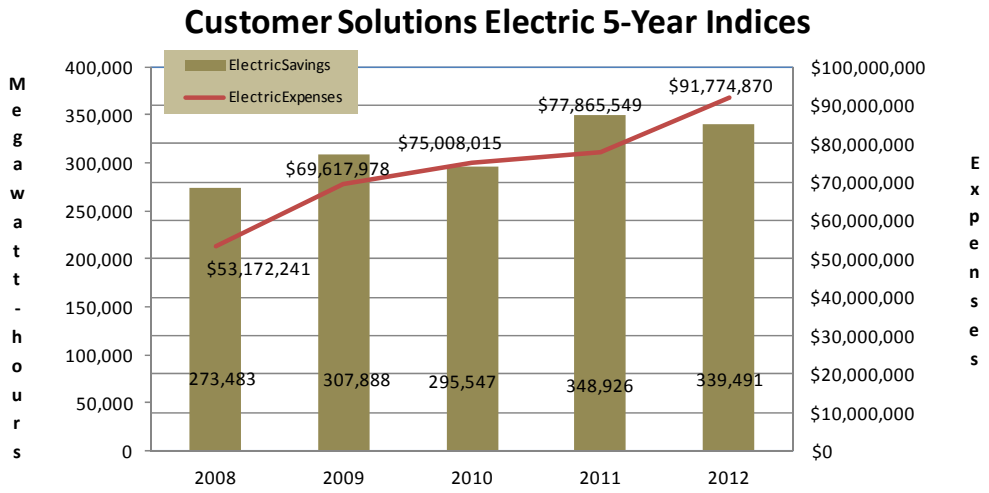
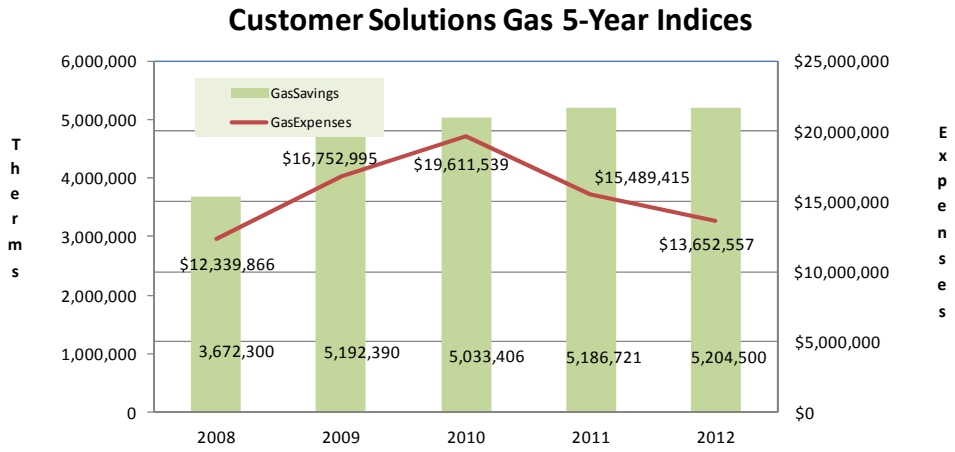


Figure 2c: Customer Solutions Gas Programs; Savings and Expenditures – Five-year Trends



Cost-Effectiveness Ratios

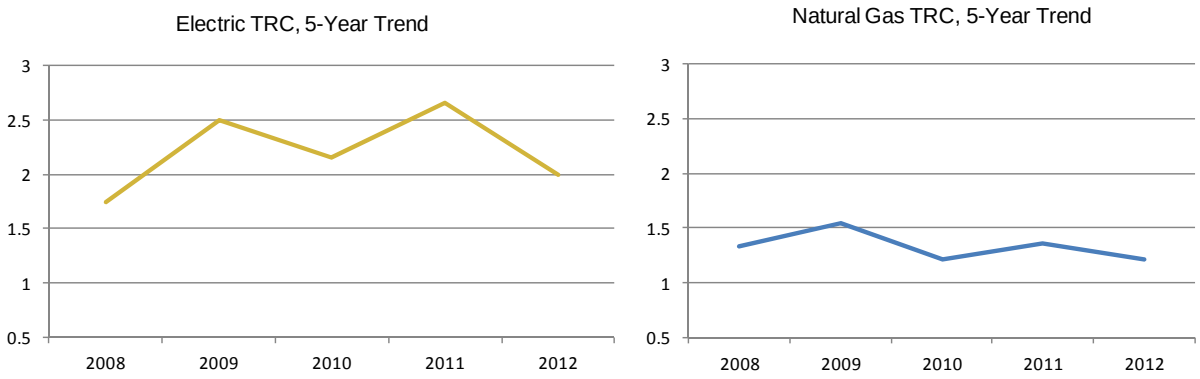
Table 2e provides the Portfolio view Utility Cost and Total Resource cost test results for 2012. Details supporting these ratios are contained in Exhibit 2 of this report. Figure 2d present the most recent 5-year benefit-to-cost TRC ratio figures for electric and natural gas, respectively.

Table 2e: Overall Customer Solutions Cost-Effectiveness Benefit/Cost Ratios

Benefit to Cost Ratios		
	Utility Cost	**Total Resource Cost**
Electric	2.89	2.00
Gas	2.48	1.22

Indicated TRC represents the B/C ratio without the conservation credit value applied.

Figure 2d: Electric and Natural Gas TRC Ratios – Five-year Trends



Incentives as a Percent of Customer Energy Management Expenditures

Exhibit 1, Supplement 1: Actual Expenditures Compared to Budgets provides—at a cost element grouping level—program-by-program results of incentives paid to customers. As a proportion of CEM-specific electric expenditures ($80.9 million), the total incentives paid to customers ($64.9 million) are slightly over 80 percent.[15] Even when all Portfolio Support, Research & Compliance, and Other Electric Programs expenditures ($91.7 million expenditures versus $69.6 million in incentives) are factored, the proportion still exceeds 75 percent of all Energy Efficiency Rider funding collected is returned to customers in the some form of remuneration; either a grant, rebate or other form of payment.

The proportions are equally impressive on the gas side; factoring CEM-specific[16] gas expenditures of $12.4 million against incentives paid of $10.06 million results in an over 80 percent ratio. When using the total expenditures of all Sectors of $13.65 million, the incentives paid ratio is over 73 percent.

As noted on page 27 in the Five-year trend discussion, these ratios have remained relatively constant over time.

Special consideration must also be given to the fact that expenditures that are not specifically classified as “incentives” also carry a certain value to the customer, albeit not monetary.

[15] Figures apply only to Residential Energy Management + Business Energy Management.

[16] Residential Energy Management and Business Energy Management.

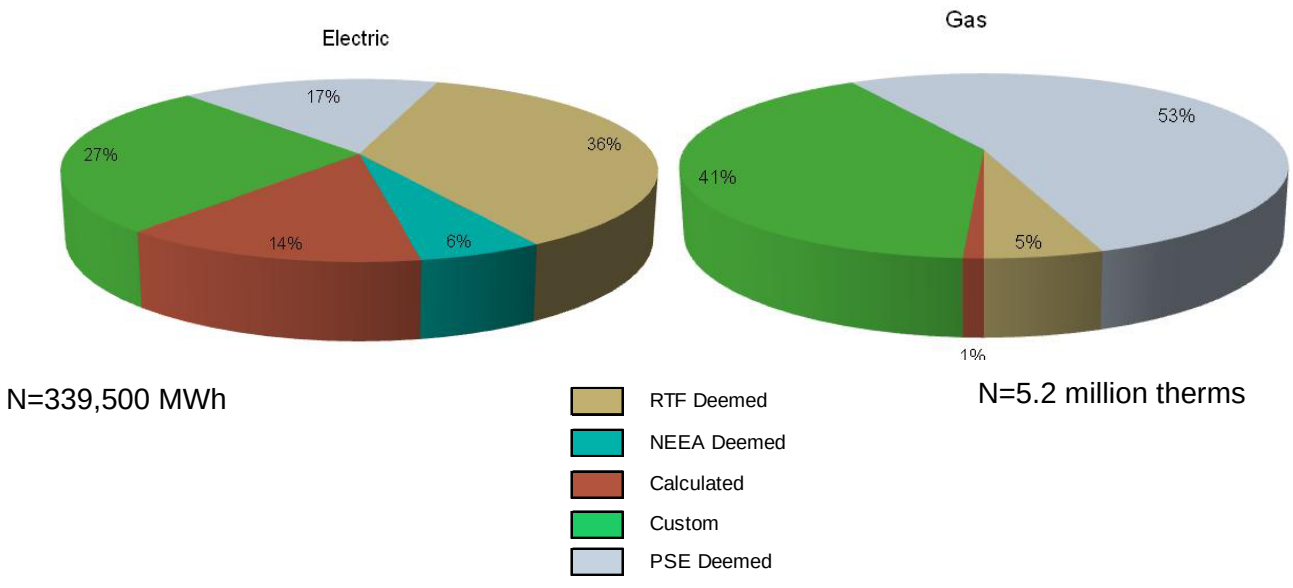
For example, Evaluation functions, EME project evaluation and verification analyses, trade ally/contractor training, energy advisor consultations, community event participation and all customer renewable program support is also excluded from the incentives category, even though these should be considered a customer direct benefit. Each of these is critical to providing customers with cost-effective, value-added energy efficiency programs.

Other non-incentive expenses include administrative functions necessary to efficiently operate the department and maintain accurate recordkeeping, provide required reporting, and maintain good customer service. Other functions and services that are not classified as incentives include, but are not limited to, marketing—including the creation and distribution of energy efficiency brochures, web and media content—market research, all program support functions, including rebate processing, reporting, systems support and analyses.

Ratio of Savings by Measure Type

Figure 2e illustrates the overall EES electric and gas savings, distributed by measure savings type. It is important to note that gas savings are limited in this type of analysis. Since the RTF deems only a small number of gas prescriptive savings, the majority of prescriptive gas measures are considered PSE Deemed, Calculated or Custom. These terms are defined in the Glossary chapter, starting on page 235 of this report.

Figure 2e: 2012 Savings Distributions by Measure Savings Type



Measure Details

An extensive discussion of the Measure Metrics archival system is contained in Chapter 4, Evaluation, Measurement & Verification, page 42. Prescriptive measures available for use in 2012 are noted in Exhibit 5, Supplement 1. Exhibit 5 itself is excluded from this report, as it is included in the Biennial and Annual Conservation Plans.

Exhibit 5, Supplement 2 lists all measures that were retired, and their retirement reasons, in 2012. Retired measures noted in this report may still be offered; often, a measure is retired when a savings value, incentive amount, etc. is revised, or a database keying error is revealed during a routine record reconciliation.

An example of this type of keying error would be if a 1.5 GPM Single Family direct-install showerhead—offered through the Retail Channel—was originally entered into the Measure Metrics database as "370 kWh/unit" instead of "307 kWh/unit". During the routine database review, the measure with the incorrect savings value would be retired, with the corrected savings value measure taking its place. Throughout the audit→reconciliation→retirement process, though, the showerhead would continue being offered through the Retail Channel.

Retired measures are only considered "cancelled" when the noted measure is removed from Exhibit 4, the Customer Solutions List of Measures, Incentives and Eligibility, and the notation within the "Retired Reason" field in the Measure Metrics database indicates that the measure is no longer offered.

Measure Counts by Program

Each program discussion in the coming pages will provide an overview or summary of the counts of individual prescriptive measures, grants, or projects that were completed in 2012. These counts are rounded for discussion purposes and grouped according to measure types or categories. Their inclusion is intended to provide readers with a scale and scope of measure installations, rather than a precise count for auditing purposes. Exhibit 1, Supplement 4 also provides a summary view of project and dwelling unit counts by measure grouping, organized in a form similar to Exhibit 1: Program Budgets and Goals.

Memberships and Sponsorships

Customer Solutions Staff derives value for customers by engaging in memberships and sponsorships. A key PSE membership is that of the Regional Technical Forum (RTF). As illustrated in Exhibit 1, Supplement 3: Sponsorships and Memberships, the RTF is the recipient of the largest share of funding in this category. Other memberships provide CS Staff with additional technical resources, professional training, provide a path for BEM's Energy Management Engineers (EMEs) to receive needed educational credits to maintain their certifications, allow PSE to network with other utilities and industry experts, and present the ability to promote energy efficiency to a much broader range of customers.

An additional discussion of local and regional members can be found in the Trade Ally Support section of the Portfolio Support Chapter (chapter 11), beginning on page 191.

Customer Solutions considers sponsorships very carefully, and typically avoids sponsorships unless we can actively promote our efficiency programs to participants. The Department takes several steps to ensure that only high-value sponsoring entities are engaged that have no ties to political agendas. Before allowing a sponsorship engagement, it is necessary for the interested party to complete a questionnaire to justify the sponsorship expenditure. Exhibit 1, Supplement 3 enumerates membership and sponsorship payments made in 2012, along with the sponsorship questionnaire.

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2012 COMPLIANCE

Half-way through the biennium, PSE is well on the way to meeting all 2012-2013 regulatory deliverables. These include those that are outlined in the 2002 Stipulation Agreement, Docket Nos. UE-011570[17] and UG-011571, all Sections and conditions of the 2010 Electric Conservation Settlement Terms, Docket No. UE-100177, and the subsequent Commission Order 01 in Docket No. UE-111881. The conditions listed in Order 01 only update the conditions listed in Section K of the 2010 Settlement. Accordingly, Sections A through J and Section L of the 2010 Settlement still apply, along with gas-specific deliverables listed in the 2002 Stipulation Agreement.

PSE rigorously tracks each of these regulatory deliverables and reports on its compliance progress to its Stakeholders regularly. Additional discussions that highlight Customer Solutions' interactions with our Regulatory Stakeholders can be found in Chapter 16, Stakeholder Relations, beginning on page 224.

This chapter presents an overview of conservation-specific deliverables provided in 2012.

RCWs and WACs

In compliance with RCW 19.285.070(1), and WAC 480-109-040(1), the Company filed its Biennial Conservation Report with the Department of Commerce and the Washington Utilities and Transportation Commission on June 1, 2012. The report is available on the PSE website at:

http://pse.com/savingsandenergycenter/AboutReEnergize/Pages/default.aspx

Commission Orders

This 2012 Customer Solutions Report of Conservation Accomplishments is consistent with the Commission's Second Supplemental Order, Docket No. UE-970686, and condition (8)(c) of Order 01, Docket No. UE-111881.

Not unlike Residential Energy Management and Business Energy Management, the Customer Solutions Budget and Administration team has a broad base of customers, including other Customer Solutions organizations, and internal PSE departments.

Utmost priority is given to meeting the expectations and delivering exceptional service to a highly-valued set of customers, our regulatory Stakeholders.

Throughout 2012, with a focus on providing useful and timely information, we received several compliments from CRAG members.

We are very appreciative and will continue striving to earn these accolades and respect.

[17] UE-011570 was vacated in Commission Order 05, Docket No. UE-100177.

A key 2012 deliverable was also related to the above-noted filing of the June 1 Biennial Conservation Report. PSE complied with Commission Order 07, Docket No. UE-100177 by filing a revised Biennial Conservation Report, reflecting the ordered reduction of 7,938 Megawatt-hours (MWh).

Other conservation filings and activities provided in compliance with Commission Orders are listed in Table 3a.

Table 3a: Compliance Status of Commission Orders

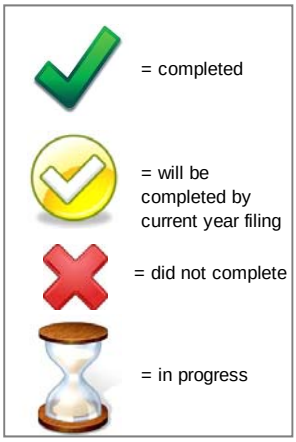
Product	Date Filed or Provided	Consistent With Order
The 2011 Annual Report of Conservation Accomplishments	15-Feb-12	Second Supplemental Order, Docket No. UE-970686.
Accounting revision of the gas Tracker mechanism to a conservation Rider	1-Jun-12	Order 01, Docket No. UG-120812.
Cessation of Conservation Programs in Jefferson County *(Filing Suspended by Order 01)*	1-Jun-12	Order 01, Docket No. UE-120807.
The 2012 Semi-Annual Report of Conservation Accomplishments	15-Aug-12	Second Supplemental Order, Docket No. UE-970686.
Settlement Agreement on the Cessation of Conservation Programs in Jefferson County	17-Sep-12	Order 02, Docket No. UE-120807.
NEEA Joint proposal on saving claims consistency	1-Nov-12	Order 07, Docket No. UE-100177.

2012-2013 Order 01, Docket No. UE-111881 Conditions

By the end of 2012, Customer Solutions completed over 50 percent of the 61 total actionable deliverables.[18] This total includes 15 Sections or conditions that Customer Solutions considers standard business practice.

Conditions that describe the need for line extension policies, or require PSE to continue to honor Commitments 22 and 23 from U-072375, [19] or describe the makeup of the Conservation Resource Advisory Group (CRAG) are ongoing, describe no set deliverable date, or have no specific CRAG role. Customer Solutions reviews these annually to ensure that there are no updates or revisions. Where there are none, the conditions are notated as "completed".

In the attached Exhibit 9, these are noted in the "Deliverable Provided Date" column as "ongoing", or "No specific deliverable—ongoing business practice.". The status of any deliverable can be quickly referenced via these icons:



Customer Solutions allows an appropriate amount of time to elapse subsequent to providing the deliverable.[20] The yellow check mark above is normally only used for filings or information that is due on December 1 of a designated year.

[18] It is important to note that some paragraphs of Sections A through J and Section L of the 2010 Settlement Agreement are declaratory or explanatory, rather than indicating a specific deliverable or requirement.

[19] This requirement is regarding funding levels for Low Income Weatherization programs.

[20] A deliverable is considered complete if it meets the terms listed in the "Condition is **met** when:" column.

Since the implementation of the Electric Settlement Terms in October 2010, PSE has demonstrated diligence and meticulousness in keeping the CRAG appraised as to condition compliance progress.

In addition to the electric requirements outlined in this document, PSE also maintains compliance with those gas-specific requirements still in effect in the 2002 Stipulation agreement, and the conditions listed in the 2012-2013 Order 01.

Deliverables

Exhibit 9 of this report provides detailed information on PSE's deliverable compliance. The Exhibit lists all deliverables; actionable and otherwise in the 2012-2013 Order 01, and those Sections still in effect from the 2010 Electric Settlement Agreement.

A key deliverable for 2012 was the development of the 2013 Annual Conservation Plan (ACP), a draft of which was provided to the CRAG on November 1, with the final draft filed on December 1, 2012. As part of Customer Solutions' continuous improvement efforts, and in response to prior Stakeholder needs, several value-add features were added to the ACP and its Exhibits, including references to preceding documents, comparisons of budget and savings figures, and significant improvements in document formatting and flow.

PSE earned noteworthy praise from parties filing comments on PSE's 2013 ACP, including those filed by Public Counsel in their 2013 Annual Conservation Plan filing comments:

> "The quantity and quality of information that PSE provided the CRAG and stakeholders at the time of, and in advance of, this filing was impressive. Public Counsel believes that PSE continues to set the standard with how information is provided to the CRAG and the Commission in the Annual and Biennial planning reporting documents.",
>
> "Finally, Exhibit 1, which contains budget and savings detail, is exceptional.",
>
> And
>
> "…Public Counsel applauds PSE's EES staff for its work creating and maintaining this file, and for the efforts made to respond to stakeholder suggestions in its development."

Several other key deliverables that were satisfied in 2012 are highlighted in Table 3b.[21]

Table 3b: Highlights of Key 2012 Conditions Compliance

Section	Activity Status, UG-011571	
M(44)	Completed—PSE completed mailings of its Natural Gas 2010-2011 customer report card in June, 2012.	✓
Condition	**Activity Status, UE-100177**	
I(17)	Completed—PSE exceeded its 2010-2011 electric biennial conservation target, thus avoiding penalties.	✓
I(18)	Completed—PSE mailed its electric Conservation Report Card to customers between October 15 and November 15, 2012.	✓
K(6)(g)	Completed—PSE provided the final report of the Third-party review of 2010-2011 electric savings in the 2010-2011 Biennial Conservation Report on June 1, 2012.	✓
K(8)(g)	Completed—PSE filed 2011 Annual Report in February 2012. (One of five 2012-specific conditions in the 2010 Electric Settlement Agreement.)	✓
K(8)(h)	Completed—PSE filed its 2010-2011 Biennial Conservation Report on June 1, 2012, and posted an electronic copy on its website.	✓
Condition	**Activity Status, UE-111881**	
(4)(a) & (4)(b)	Completed (Effective with the 2013 ACP)—PSE provided its 2013 annual budget with program details, with sector and portfolio pages linked.	✓
(8)(a)	Completed—PSE's 2012 Semi-Annual Conservation Report was filed August 15, 2012.	✓
(8)(b)	Completed--the 2013 ACP was presented in draft form to the CRAG on November 1 and filed with the WUTC on December 1.	✓
11(c)	PSE's Schedule 120 filing was made on March 1, 2012.	✓
12(a)	PSE filed its petition for Declaratory Order on July 6, 2012.	✓

Conditions noted as completed exclude those that are classified as "standard business practice" In Exhibit 9: Condition Compliance Checklist.

[21] A similar version of this table is also included in PSE's 2013 Annual Conservation Plan, filed under Docket No. UE-111881, page 22.

This Annual Report is consistent with condition (8)(c).

Exhibit 9

In addition to the summary information presented in Figure 3a: 2010-2011 Condition Compliance by Quarter, the complete Condition Compliance Checklist is attached to this report as Exhibit 9.

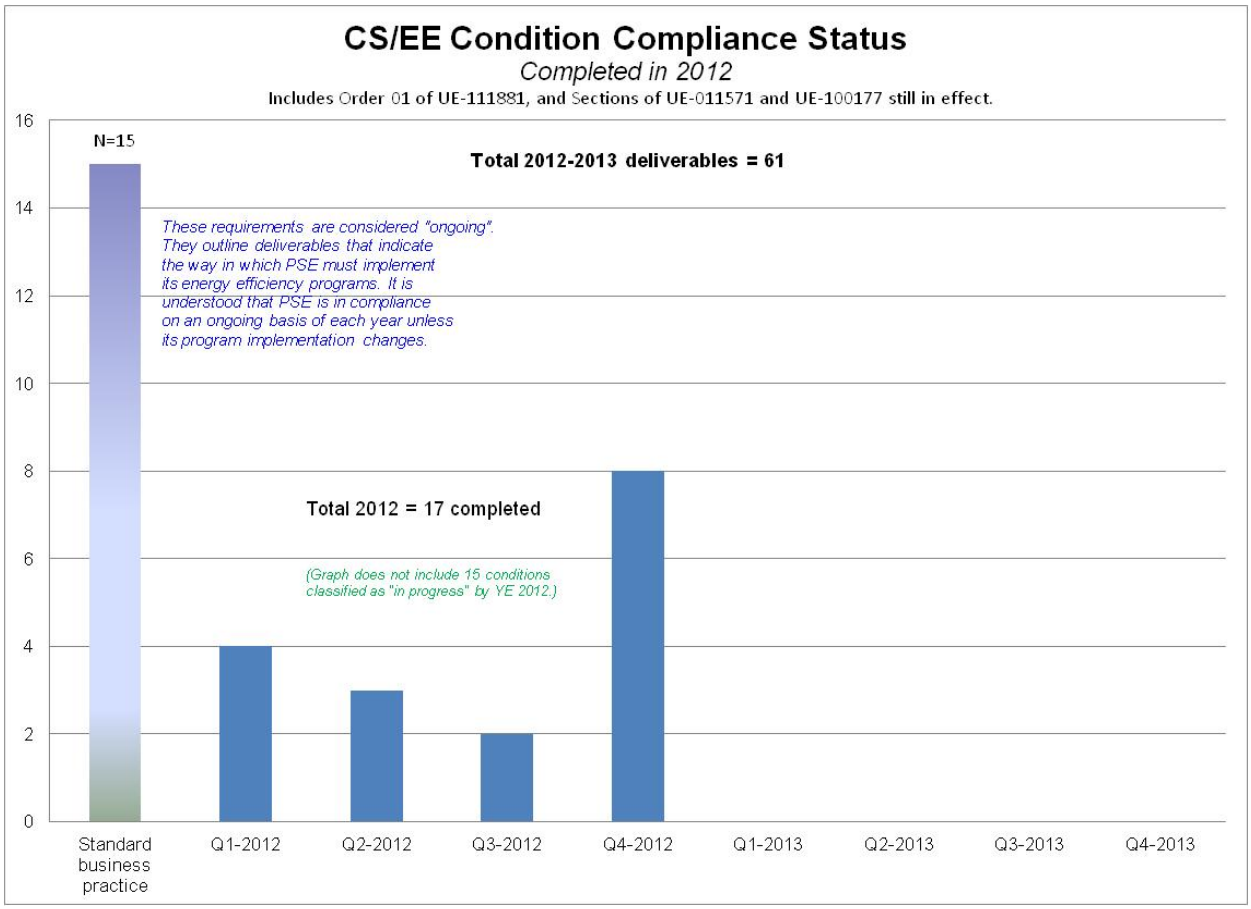
In considering how PSE will comply with regulatory deliverables,[22] and how PSE will convey compliance to our Stakeholders, we first examined those portions of the sections that were primarily declarative or informational, rather than indicative of a specific deliverable. Similarly, there are some Sections or conditions that address ongoing business practices that span more than one biennium. The remaining Sections and conditions make up "actionable" deliverables.

In total, there are sixty-one actionable deliverables from all three regulatory requirement documents. Of those, four are due in 2014.[23] Figure 3a represents PSE's 2012-2013 condition compliance progress through 2012, and clearly indicates that PSE is well on the way to achieving 100 percent compliance with all requirements by the end of the current biennium.

[22] As listed in the 2002 Stipulation Agreement (Docket No. UG-011571), the 2010 Electric Settlement Agreement (Docket No. UE-100177), and the conditions listed in Order 01 of Docket No. UE-111881.

[23] These are: (1) the 2012-2013 Third Party Review of Electric Savings, (2) the 2013 Annual Report, due February 15, 2014, (3) the Schedule 120 filing, due March 1, 2014, and (4) the 2012-2013 Biennial Conservation Achievement Report, due June 1, 2014.

Figure 3a: 2012-2013 Condition Compliance by Quarter



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CUSTOMER SOLUTIONS EVALUATION, MEASUREMENT & VERIFICATION (EM&V)

This section of the report describes 2011 accomplishments of Evaluation, Measurement and Verification (EM&V) functions and activities that are performed in conjunction with all conservation programs and activities in Customer Solutions.

Each business unit within Customer Solutions contributes some element of Evaluation, Measurement or Verification. These tasks are not unique to a specific program or sector, or group of staff members. This discussion highlights key areas within Customer Solutions that impact the overall Evaluation, Measurement and Verification of all Customer Solutions programs, whether they be related to savings claims verification, auditing financial expenditures or managing the systems and archived used as bases for Customer Solutions performance.

Consistent with condition (3)(a)(i)(1):

> (The Advisory Groups shall address but are not limited to the following issues:)
>
> *"Updates to the evaluation, measurement, and verification (EM&V) framework as implemented by Puget Sound Energy which guides its approach to evaluation, measurement, and verification of energy savings. This framework must be reflected in the Biennial Conservation Plan for the next biennium, 2014-2015."….*

PSE's EM&V Framework can be found as Exhibit 8 of PSE's 2012-2013 Biennial Conservation Plan, available at the WUTC website, under Docket No. UE-111881; "10-28-2011; Initial Filing".

Within this section, we reference several departmental evaluation, measurement or verification processes employed throughout Customer Solutions. These are included for purposes of discussion and putting into context our 2011 energy conservation achievements, rather than in-depth process reviews. These details are available in the EM&V Framework Attachments.

2012 Program Evaluation

As described in the EM&V Framework, PSE conducts and utilizes Impact, Process, Market and Market Effects evaluations. The EM&V Framework contains extensive discussions on evaluation protocols, processes, and strategies.

Topics addressed in the Framework that are referenced in this report are included as a means to establish 2012 performance expectations relative to deliverables and accomplishments, and are not intended to duplicate or contradict the Framework's content.

Evaluation Studies

Pursuant to condition (6)(f), Exhibit 6, Supplement 1 of this report contains all evaluation studies completed, either by Customer Solutions Evaluation department staff or third-party consultants, in 2012. A portfolio evaluation of the Commercial & Industrial Retrofit Program was completed in February 2012, followed by an evaluation of the Low-Income Weatherization Program, a Home Energy Report Evaluation, a Clothes Washer Savings Review, an Energy Efficient Communities Program Evaluation. Evaluation Report Responses (ERRs) have been completed for these studies, and incorporated into the final evaluation reports.

Additionally, the independent third-party review of PSE's 2010-2011 electric conservation energy savings, performed by SBW Consulting Inc., was also completed in 2012, pursuant to condition (6)(g). That report was provided to CRAG members and filed with the 2010-2011 Biennial Conservation Report on June 1, 2012, consistent with the condition.

Evaluations begun in 2012 for completion in 2013 include those for the Commercial & Industrial New Construction, Resource Conservation Manager, and Commercial Rebates and Small Business Lighting programs, as well as evaluations of, Showerheads and CFLs, Multifamily Air Sealing, Existing Single Family, and Home Energy Reports.

A complete list of evaluation studies completed in 2012 is provided in the Research & Compliance Section of this report, Table 13a under the Program Evaluation heading. A discussion of resource prioritization is also contained in the EM&V Framework.

Evaluation Report Responses (ERRs)

Each evaluation included with this report has attached its corresponding ERR. The ERR describes the actions that will be taken by Program Staff in response to the Evaluation.

The ERR process ensures that there is a direct link between evaluation studies, program staff and their savings tracking systems and the Measure Metrics archival system.

As an evaluation study is completed, it is reviewed with the applicable program staff.[24] The results are discussed as they related to potential program effects. The Evaluation Staff provide the program staff with the ERR form, indicating the study title, a hyperlink to the study and the study date. The program staff then indicate what actions, if any, will be taken as a result of the study.

Actions may include, but aren't limited to, revising the delivery method,[25] adjusting the incentive level or revising the savings value at a prescribed interval.

2012 Evaluation Accomplishments and Activities

An ERR was generated in response to each of the five evaluation studies completed in 2012 and logged into the Evaluation tracking database. These are attached in Supplement 1 of Exhibit 6. There are often times when a single evaluation will address more than one program, such as the 2008 Weatherization Study, which address Single Family, Multifamily, and Low Income Weatherization. In these cases, each program will submit an EER. Thus, one study may have several associated ERRs.

[24] There are cases, such as the Showerhead Installation Survey, where multiple programs are affected, such as Single Family Existing, Multifamily Existing and Consumer/Retail.

[25] A hypothetical study may indicate, for instance, that a cost-effective "widget" may yield a higher penetration rate if PSE switches to a mail-in program versus a directly-installed "widget".

M&V Discussion

Process Highlights

Customer Solutions' Measurement and Verification processes, most of which are long-standing elements of conservation programs, are consistent with the requirements outlined in condition (6)(f):

> *"Puget Sound Energy must perform EM&V annually on a four-year schedule of selected programs such that, over the EM&V cycle, all major programs are covered. The EM&V function includes impact, process, market and cost test analyses. The results must verify the level at which claimed energy savings have occurred, evaluate the existing internal review processes, and suggest improvements to the program and ongoing EM&V processes."*

The following discussions will highlight key areas of measurement and verification resources, tools, and processes implemented by Customer Solutions Staff to ensure the highest level of accuracy and transparency of PSE's conservation expenditures and savings reported.

Measurement

PSE uses several processes and systems to accurately measure and track not only electric and gas measure savings, but electric conservation Rider and gas conservation Tracker expenditures as well. Systems illustrated in Figure 3b, include enterprise-level, proprietary systems, and tracking databases that were developed within Customer Solutions. Where applicable, many conservation programs track the number of rebates processed, measures installed, grants paid, contracts or MOUs executed, and invoices paid using tools built specifically for them.

PSE considers measurement to be the accurate counting of measures and accounting for conservation savings as they are determined by prescriptively setting the savings value, by estimating the savings value using engineering calculations, or, in some instances (primarily associated with custom grants) measuring savings at the customer meter.

Measure Savings

Savings Values

Exhibit 5, Supplement 1 of this report lists the savings values for all prescriptive, (RTF Unit Energy Savings [UES] and PSE Deemed) and selected calculated measures by program (most often associated with a Schedule number) and fuel type.

Before a measure (either new or a modified version of an existing measure) is offered to customers, it must follow a rigorous implementation process. The process is outlined in Customer Solutions' *Guidelines for Measure Revisions* and *Guidelines for Measure Creation,* made available to all EES staff in 2010, and updated routinely since. These guidelines are also included as Attachments to the EM&V Framework (Attachments 5 and 6, respectively).

These processes provide outlines of all required documentation, approvals and archiving necessary to ensure that PSE is compliant with condition (6)(b) and can demonstrate prudence for all savings claimed.

Residential measures and their savings values are determined either independently by RTF-sponsored evaluations or as a part of a program's suite of offerings during a routine Customer Solutions evaluation.[26]

Conservation measures installed as a part of Commercial/Industrial custom grants are unique, in that every grant project is evaluated by a PSE EME, and subsequently reviewed for confirmation of savings by a senior EME.

Ex-post and Ex-ante savings estimate types are discussed on page 10 of the EM&V Framework.

Savings Reporting

A key component of PSE's EM&V processes is the assurance of savings reporting accuracy. Since 2008, PSE has implemented several processes and guidelines to ensure that the accuracy of its savings reporting, both electric and gas, maintain the highest standards. The most significant of these outlines the methods of vetting, justifying, counting and reporting measure savings, and is titled EES's *Guidelines for Ensuring the Accuracy of Electric and Gas Savings Claims*. This document is Attachment 4 in the EM&V Framework, and has been updated several times since 2008.

This is a comprehensive document that ensures consistency across programs and sectors, outlines rounding rules for both savings values and measure counts, applicable reporting periods, and how retired measures are tracked, reported and archived. In this document, Customer Solutions also outlines the guidelines for tracking savings derived from rebate applications, directly-installed measures and savings from retailers, resellers and dealers.

Savings Adjustments

Although Customer Solutions' programs maintain robust processes and systems to ensure accurate savings and financial tracking, there are infrequent instances when an adjustment is necessary. Exhibit 1, Supplement 2 lists and describes each electric and gas savings adjustments, along with its respective adjustment value, and an aggregate total of all adjustments that were performed throughout 2012. The savings adjustment process is included in the EES *Guidelines for Ensuring the Accuracy of Electric and Gas Savings Claims*, which is also included as an Attachment to the EM&V Framework.

[26] The EM&V Framework includes a four-year evaluation cycle table, where every EES program will be evaluated.

An example of a necessary savings adjustment may involve a case where a PSE vendor may mistakenly identify some clothes washers from a previous month and add them into the current month's total. Another may be a data entry error, which also occurs infrequently and is corrected as soon as they are found (for example, "a total of 69 refrigerators were entered in the Residential Savings Tracking System when there were actually 96").

The Customer Solutions Budget team manages a formal and detailed adjustment process, which includes documenting answers to the following five questions (hypothetical simple responses are in parentheses. Actual responses are typically much more detailed):

- What happened? ("savings were overstated by 10,000 kWh last month", etc.)
- How was the need for adjustment discovered? ("During a routine monthly review by the Systems Staff…")
- Why it happened ("10 manufactured home rebates were counted twice", etc.)?
- How it is corrected ("10,000 kWh will be subtracted from this month's claims, with a corresponding note in the Residential Savings Tracking System", etc.)?
- What will be done to prevent future errors ("all rebate forms will be marshaled in areas specific to their corresponding programs and receive a check mark when processed", etc.)?

Program Staff also complete a Microsoft® Excel™ worksheet, that details the per-measure savings value, the incorrect total and when that total was originally recognized, and what the new aggregate totals should have been, and how that will affect the current reporting month.

When the responses have been vetted by the Budget team, the adjustment is forwarded to Customer Solutions management for approval. The applicable tracking system is then updated to reflect the accurate savings value and the adjustment is logged and archived for historical records.

The adjusted amount is added to or subtracted from the original amount—depending on whether the claimed amount was an over-or-understatement—reported for the month in which the adjustment was approved by Customer Solutions management. Once entered and reported, the month in which the revision is needed is NOT adjusted; the month in which the revision is *reported* is adjusted. If the adjustment is a result of a corrected savings value, the total for the month in which the adjustment is to be recognized, is calculated based on the correct value before the addition or subtraction. These points are illustrated on the following page.

Table 4a represents a hypothetical savings adjustment circumstance. In this example, we will assume that an inconsistency was discovered, and an adjustment was considered necessary in September.[27]

This hypothetical circumstance illustrates several overriding tenets of proper savings accounting, the key principal being that savings are not adjusted in a past month (even if making the adjustment results in a negative value in the current month). There may be multiple adjustments in a single month and adjustments may apply to either electric or gas values. Actual adjustments are noted similarly in the EES Tracking Master. The savings claims are adjusted pursuant to Customer Solutions' *Measure Revision Guidelines*, which is an Attachment to the EM&V Framework.

Table 4a: Hypothetical September Savings Adjustment

	(A) Per-unit value	(B) Units	Total Claimed value (A * B)	Comment
Jan - Aug sumulative claims	162	1,000	162,000	*Six of the eight monthly values have already been filed.*
September correction				
Adjusted cumulative value	131	1,000	131,000	*This is what should have been claimed*
Total adjustment required			-31,000	*This is the amount that was overstated through August*
September claims	131	100	13,100	*1) In the adjustment month, we first ensure that the correct value is being referenced.*
Less Jan-Aug corrected values			-31,000	*2) Add the adjustment amount*
Adjusted September claims			-17,900	*3) Sometimes, the adjusted monthly total results in a negative value.*
Adjusted cumulative YTD savings			144,100	*162,000 + (-31,000) = 144,100*

The remaining months will use the correct per-unit value.

[27] In this hypothetical case, PSE inadvertently used the Commercial electric water heater site value of 162 kWh/yr instead of 131 kWh/yr for a Residential electric water heater. For this illustration, the month-to-month values are omitted.

Figure 4a is a sample of one adjustment entry provided in the Exhibit 1, Supplement 1. This example (an actual 2012 adjustment of negative 180 Kilowatt-Hours [kWh]) also illustrates that PSE treats reporting accuracy with a high degree of rigor, substantiation, and detail applied, regardless of whether the adjustment adds to or subtracts from the overall total.

Figure 4a: Sample of 2012 Adjustments from Exhibit 1, Supplement 2

Exhibit 1, Supplement 2
2012 Savings Adjustments

Electric

Referenc	Sector	Channel	Program	UOM	Adjustment reason	Consequence	Adjustment Type (Addition or subtraction of savings)	Adjustment Approved date (approved by B&A)	Savings Adjustment Entered date (month adjustment is input)	Savings date affected	kWh adjustment amount (Positive amount = addition; negative amount "(nn)" = subtraction)
3	Residential	Low Income Weatherization	Windows	kWh	LIW agency made an incorrect savings claim.	Savings were over reported by 180 kWh.	subtraction	March, 2012	March, 2012	December, 2011	(180)
4	Residential	Low Income Weatherization	MH Duct Sealing	kWh	Online system had incorrect savings value.	Savings were under reported by 2 kWh.	addition	March, 2012	March, 2012	January 2012	2

Another important element to the savings accuracy of Customer Solutions' savings reporting, it is necessary to ensure that measures are retired when their savings value, incentive levels or delivery methods are revised. Exhibit 5, Supplement 2 of this report reflects all measures that were retired at time in 2012.

Measures are retired, rather than deleted, as it is critical that PSE maintains a history of a measure's state throughout its life. A measure can be retired for a wide range of reasons. For instance, when reviewing Exhibit 5, Supplement 2, readers may note a Reason Retired entry as "Measure no longer offered". This type of measure adjustment is fairly typical when it is revealed that a measure has become non-cost effective.

Customer Solutions Tracking and Reporting

Customer Solutions employs a combination of proprietary and enterprise software applications to accumulate, validate and report financial and energy savings figures with a high degree of integrity and accuracy. Some are used strictly for Residential Sector reporting, others are primarily Business Sector focused. The EES Tracking and Forecasting System also maintains information on some Business measures used by Multifamily projects. Corporate systems, such as SAP, are used for all financial activity within the department. All come into play when Customer Solutions presents data to its Stakeholders.

SAP and CLX (described in the highlight on page 52) are enterprise systems and are used throughout PSE. SAP provides all financial information, including vendor contracts, material orders,[28] staff pay and expense reporting, and overhead allocations. CLX is PSE's primary CIS (Customer Information System). This system is used to manage basic customer account information, premise and meter data, as well as billing and payment history. In 2012 PSE began the process of replacing this legacy system with an entirely new application, which is slated to be put into action in 2013. Although the new system will improve access to information for the entire enterprise, CIS will also have a significant benefit for energy efficiency processes as well.

In 2012, Customer Solutions continued to update key program staff on SAP tasks that are essential to their program in order to expedite the flow of information and allow program Staff to effect prompt and effective management alterations, more effective response to contractor invoice queries, material tracking, and contract status inquiries.

CSY (primarily oriented to Business sector rebate and grant activity and Residential Sector space and water heat rebates) and CMS (primarily used in Residential rebate and customer interaction tracking) are key Customer Solutions measurement and tracking tools. It is CSY's monthly reporting that directly feeds the EES Tracking and Forecasting System, and the Customer Solutions Tracking Master workbook for the Business sector. CMS is used within Customer Solutions to manage customer interactions with its programs:

- Providing program collateral,
- Contractor referrals and
- Rebate tracking

In addition to their functions as measurement tools, it is noteworthy that these systems also play a critical role in savings and expenditure verification processes. As part of the Customer Information System (CIS), CLX is described in the table on page 52. CLX is used extensively in both the Residential and Business Energy Management Sectors as a verification tool.

Each system comes into play when Customer Solutions provides data and information to its Stakeholders.

[28] Material orders include lamps used in energy efficiency events, carbon monoxide detectors used in weatherization projects, etc.

Along with the below system discussion highlight, Figure 4b provides a graphical representation of the various systems' relationships and the information that is exchanged or provided. Please note that many business tools; spreadsheets, flowcharts, checklists, etc., utilized by individual programs or Customer Solutions Staff which feed some of those listed here are not outlined in this document.

Explanations of Functions indicated in Figure 4b

SAP (Systems, Applications, and Products in Data Processing) – The PSE SAP system is used mainly for HR, Contracting, inventory control and General Accounting. EES interacts with the system thru timesheets, contract/invoicing, material orders, and by assigning costs against order numbers.

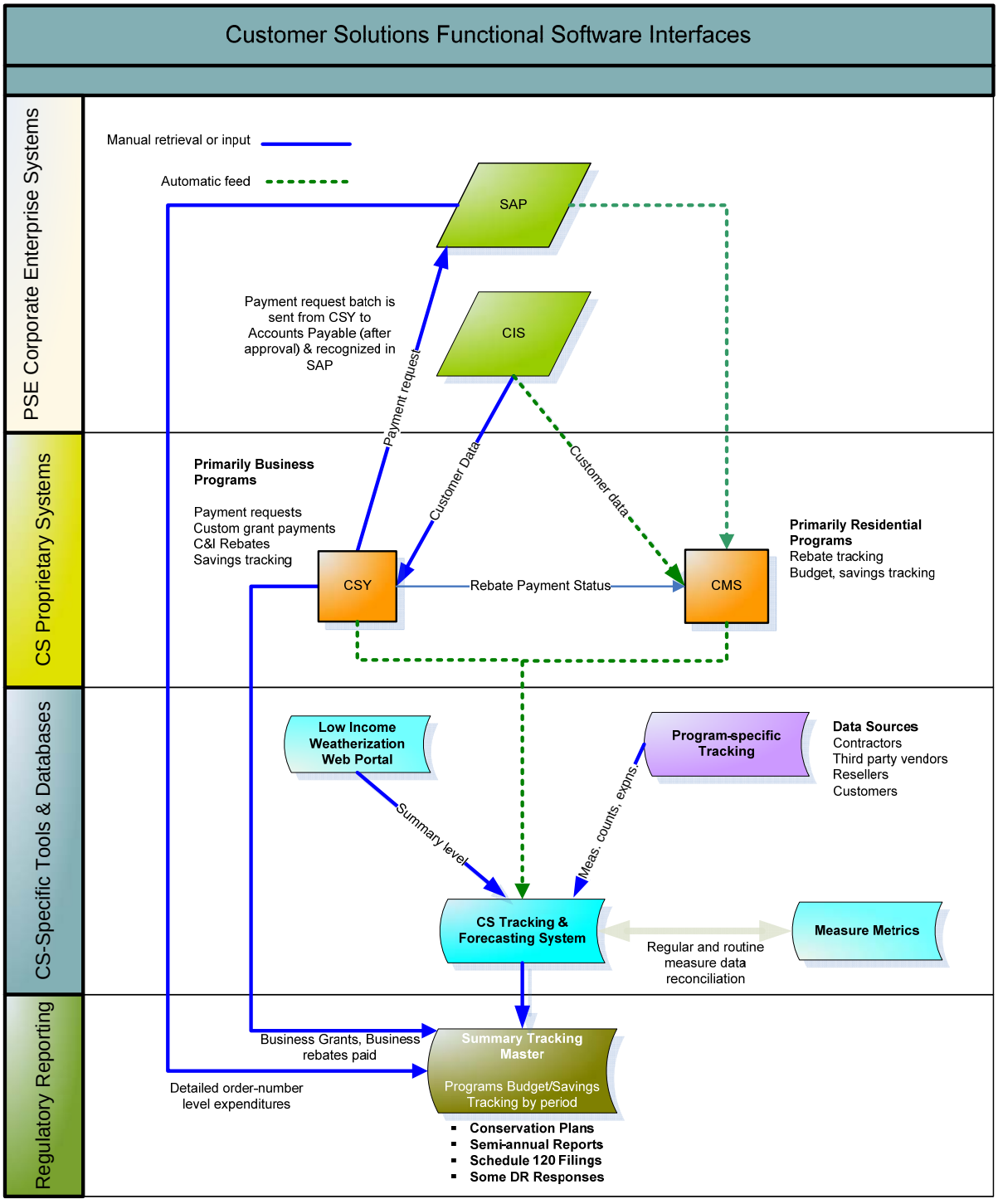
CIS (Customer Information System—currently managed by CLX (Customer LinX) – A proprietary system used for managing customer billing information, meter data (meter readings, ID numbers, structure history, etc.) and tracking outages. CSY and CMS pull customer usage data and basic account information (name, address, account number) from the data warehouse. It is important to note that CLX will be replaced by a new system designed by SAP in Q1 and Q2 of 2013.

CSY (Customer SYstems solutions) – A PSE-created system with two distinct functional areas: Custom Grant Programs and Customer Rebate Programs. The system is used to track the status of Custom Grant Projects (from initial estimates to Grant Agreement to Final Payment) and to send payment request information to SAP. Payment information includes custom grants and rebate; for both EES sectors.

CMS (Customer Management System) – EES Customer Management System is the primary interface for fulfilling and tracking customers' interactions with EES residential programs and services. Modules include: Literature & Rebate Fulfillment, Contractor Referrals, Rebate qualifying and processing and EES Inventory Management.

EES Master – Compiles all savings and all financial data relative to EES operations in both sectors (Residential and Business). Generates all periodic reports; internal and regulatory.

Figure 4b: EES Energy Management Tracking and Reporting Interface



Customer Solutions Systems

Primarily geared towards tracking Residential Energy Management conservation activity, the EES Tracking Database also tracks some of Business Energy Management activity. The system also creates Sector-level savings and expenditure reporting and can also be used to compile and report forecasting information. This database is managed by the Systems Channel, which is described in Chapter 5: Residential Energy Management Overview.

To ensure data accuracy, the tracking database limits access based on a security hierarchy:

- Read-only
- Program-specific reporting and forecasting
- Developer

Systems Channel staff made several enhancements to the EES Tracking and Forecasting Database in 2012, including:

- Linking Measure Data to Measure Metrics to ensure accuracy and consistency between systems.
- Creation of additional reporting capabilities.

Figure 4c is a screen shot of the EES Tracking and Forecasting System main page, accessed by authorized Customer Solutions Staff. Figure 4d is a screen shot of a sample Program Report from the EES Tracking and Forecasting System.

Figure 4c: EES Tracking and Forecasting System Interface

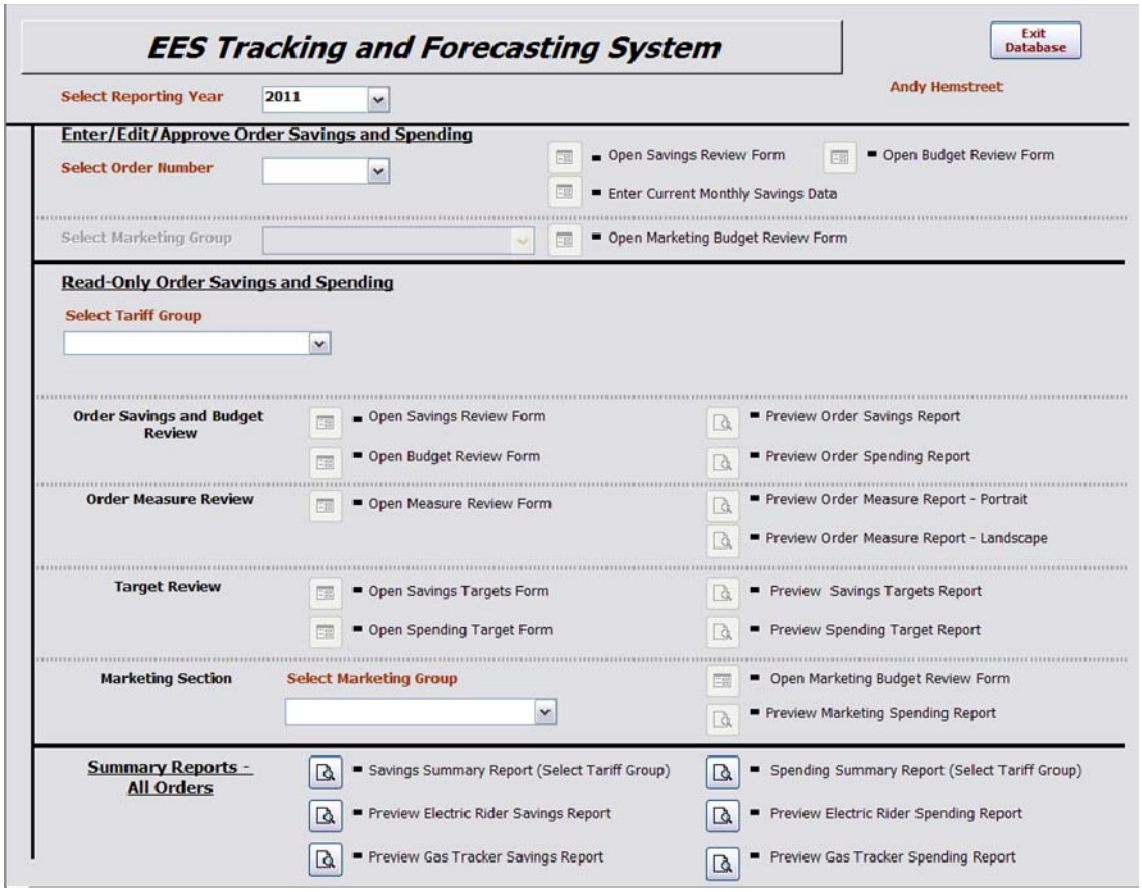


Figure 4d: EES Tracking and Forecasting System Sample Report

Order Savings Report

1/23/2013
9:48 AM

Order Number: 18230626

SF Existing Water Heat - Electric

2011 — ACTUAL | FORECAST

Measure Name / Savings		TARGET Units / Savings	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ACTUAL YTD Units / Savings	%	TOTAL (Act. + Fcst.) Units / Savings	%
Energy Star Heat Pump Water Heater (=> 2.0 EF)	2001 kwh	425	24	25	11	3	8	2	5	9	0	1	0	0	88	21%	88	21%
		850,425 kwh													176,088 kwh		176,088 kwh	
High Efficiency Electric Water Heater (=> .94 EF)	125 kwh	400	9	14	18	18	19	22	17	10	7	22	2	22	180	45%	180	45%
		50,000 kwh													22,500 kwh		22,500 kwh	
Waste Water Heat Recovery (models with an efficiency of 42% or greater)	485 kwh	79	0	0	1	0	0	0	0	0	0	0	0	0	1	1%	1	1%
		38,315 kwh													485 kwh		485 kwh	
Energy Star Heat Pump Water Heater (=> 2.0 EF) $500	2001 kwh		0	0	0	0	0	0	0	0	7	32	41	23	103		103	
		kwh													206,103 kwh		206,103 kwh	
	UNIT TOTALS:	904	33	39	30	21	27	24	22	19	14	55	43	45	372	41%	372	41%
	KWH TOTALS:	938,740	48,149	51,775	24,740	8,253	18,303	8,752	12,130	19,259	14,082	68,703	82,291	48,773	405,176	43%	405,176	43%
	THERM TOTALS:	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
	Sign Off:		DLR	DLR	DLR	DLR	DLR	MBM	DLR	DLR	DLR	MBM	MBM	MBM				

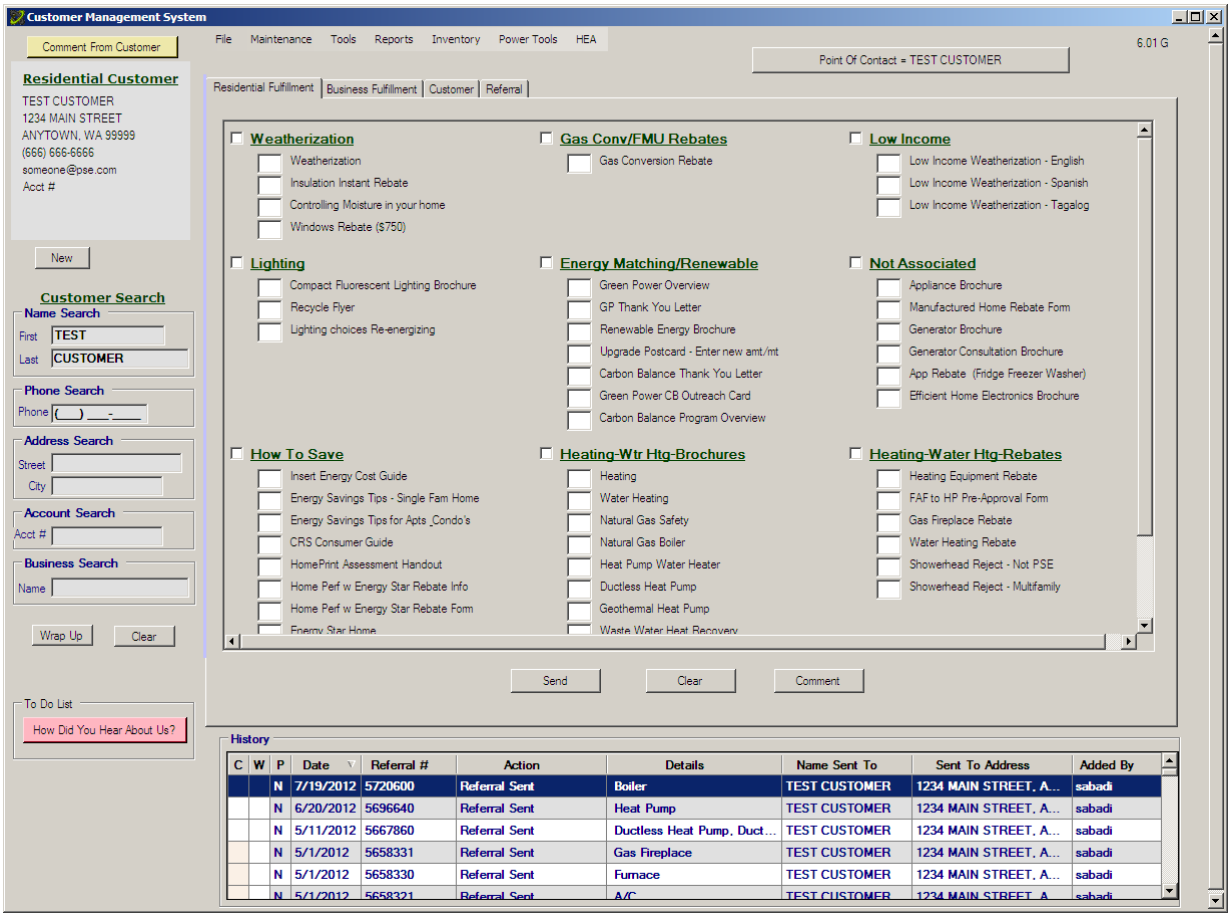
Reported Savings Comments:

CMS (Customer Management System)

As described in the system highlights discussion on pages 52 and 53, the Customer Management System is the primary interface for fulfilling and tracking customers' interactions with Customer Solutions' residential programs and services. CMS allows EES staff to track the status of customer requests, rebate payment status, number and type of rebates for which the customer(s) have applied, and to randomly select completed rebates for verification.

Figure 4e is a representation of Customer Solutions' CMS system interface, used to record and track customer rebate status and history.

Figure 4e: CMS User Interface, Populated with Test Data



Measure Metrics

The Measure Metrics system serves both a Measurement and Verification role in Customer Solutions. Its primary purpose is to archive detailed measure information, function as a reference to ensure accurate savings reporting, and provide easy retrieval and reporting of pertinent data. The system is also vital in providing accurate representation of measure offerings, listed in Exhibit 4: The Customer Solutions List of Measures, Incentives & Eligibility.

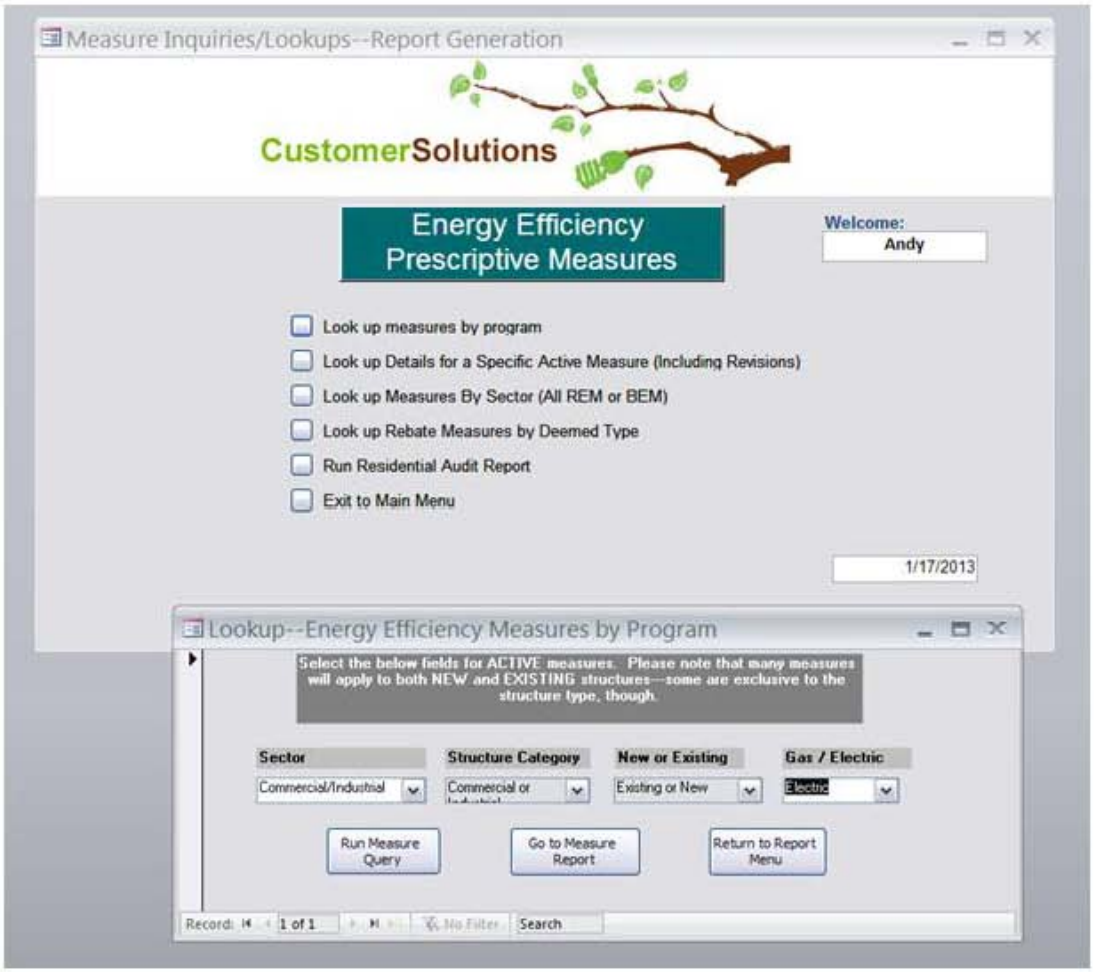
Consistent with Customer Solutions' continuous improvement initiatives, significant enhancements were made to both the archiving process and the database in 2012.

In addition to archiving every prescriptive—and some calculated—measure's source of savings, incentive level, measure life, cost, and revision history via a clearly enumerated process of review and management approval, Measure Metrics now:

- Provides an increased level of security, via the authorized users' network identification.
- Clear relationship of the Measure Metrics' measure identification code with the corresponding identification code in the EES Tracking Database, expediting accurate measure reconciliation.
- A streamlined, more effective measure approval process.

Figure 4f is an illustration of one of the Measure Metrics database interfaces available for authorized users.

Figure 4f: Measure Metrics Program Lookup Function



Electric and gas savings claims are regularly reviewed at various stages throughout the life of a measure. From the time that a measure is implemented, and the savings value and source of savings documentation is added to the Measure Metrics database, it is regularly verified against the savings values logged in the EES tracking systems.

Reported savings are internally reviewed and audited both on a monthly rolling basis and a formal stand-alone quarterly audit, both within the applicable Sector and by supporting departments.

In Exhibit 5, Supplement 1, Customer Solutions presents complete measure tables for programs whose suites of offerings consist of prescriptive measures.[29] The notations in the field labeled "Savings Type" is relevant to the requirement of condition (6)(b) and (6)(c), which indicate that PSE must use RTF UES measure savings values unless there is sufficient documentation that justifies using PSE Deemed values. Since the majority of Business Sector measures are custom engineering calculations, only the Business Rebates program (Schedule 262 for both electric and gas) are included in the Supplement.

All measures noted in the Supplement are listed in the EES List of Measures, Incentives and Eligibility, ***Exhibit 4***. Exhibit 4 is available at the Company's website:

http://pse.com/aboutpse/Rates/Pages/Electric-Rate-Schedules.aspx?Schedule_x0020_Description=Index%20and%20Title%20Page

Measure tables included in Exhibit 5, Supplement 1 indicate all iterations of a particular measure category appearing in the program's suite of offerings. For instance, there may be mail-in, directly installed, and retail showerheads—for each efficiency type; 2.0 gallons per minute (GPM), 1.75 GPM and 1.5 GPM. Measures are listed and compiled by Schedule, and then separated into fuel types. A number of measures (residential clothes washers for instance) may apply to more than one program within that Schedule (for example, showerhead are offered in both the Retail and Dealer Channels) and thus, may be noted several times.

[29] Active measures as of December 31, 2012.

This point is illustrated on the following page. In this example of Single Family Existing clothes washers, each variation is listed according to water heater and dryer type:

- Electric water heater/electric dryer,
- Electric water heater/gas dryer,
- Gas water heater/electric dryer,
- Gas water heater/gas dryer.

Each of these also includes three MEF[30] levels, for a total of 12 possible listings, as illustrated in Exhibit 5, Supplement 1 table, Figure 4g.

Figure 4g: Sample Page of Exhibit 5, Supplement 1; Single Family Existing Clothes Washers

Residential Electric

Schedule E214 Single Family Residential Existing

Measure Heading

Measure Category	Additional details, comments, equipment applications	Savings Type	kWh Savings	Therm Savings
Clothes Washers				
	Single Family Existing only			
Energy Star®	MEF 2.0 or Higher and WF 6.0 or below; Electric Water Heater & Electric Dryer	RTF Deemed	119.00	
Energy Star®	MEF 2.0 or Higher and WF 6.0 or below; Electric Water Heater & Gas Dryer	RTF Deemed	61.00	
Energy Star®	MEF 2.0 or Higher and WF 6.0 or below; Gas Water Heater & Electric Dryer	RTF Deemed	77.00	
Energy Star®	MEF 2.0 or Higher and WF 6.0 or below; Gas Water Heater & Gas Dryer	RTF Deemed	19.00	
Energy Star®	MEF 2.2 or Higher and WF 4.5 or below; Electric Water Heater & Electric Dryer	RTF Deemed	159.00	
Energy Star®	MEF 2.2 or Higher and WF 4.5 or below; Electric Water Heater & Gas Dryer	RTF Deemed	79.00	
Energy Star®	MEF 2.2 or Higher and WF 4.5 or below; Gas Water Heater & Electric Dryer	RTF Deemed	106.00	
Energy Star®	MEF 2.2 or Higher and WF 4.5 or below; Gas Water Heater & Gas Dryer	RTF Deemed	26.00	
Energy Star®	MEF 2.46 or Higher, Electric Water Heater & Electric Dryer	RTF Deemed	181.00	
Energy Star®	MEF 2.46 or Higher, Electric Water Heater & Gas Dryer	RTF Deemed	88.00	
Energy Star®	MEF 2.46 or Higher, Gas Water Heater & Electric Dryer	RTF Deemed	124.00	
Energy Star®	MEF 2.46 or Higher, Gas Water Heater & Gas Dryer	RTF Deemed	32.00	

NOTES: *(1) The indicated measures and savings values represent values that were in effect at some point in time in 2010. A separate report, indicating measures retired in 2010 is included in this Annual Report as Exhibit 2a..*

(2) In the DETAILS field, notes that indicate "Check business calculator tool at indicated link..." refer to hyperlink functions within the Measure Metrics database that provide access to the specific savings calculation tool used for that measure.

(3) For measures with a SAVINGS TYPE of "Calculated", a savings value of "0" is entered. This prevents misinterpretation that the field was unintentionally left blank.

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[30] "Manufacturer Efficiency Factor".

Some residential programs provide incentives for all clothes washer variants, while others limit incentives to selected types. Prescriptive Business measures are classified and compiled similarly in Exhibit 5, Supplement 1.

Program-Specific Tracking

Many Customer Solutions programs use sophisticated Excel-based tracking tools to ensure consistently accurate reporting of customer[31] and measure counts, invoices paid, and aggregate savings. These tools are customized for the specific program requirements and range from a simple workbook with data links to elaborate tools that incorporate dashboards.

All are integral in providing the finest level of detail possible during routine internal program audits; providing the ability to regress from high-level aggregate savings figures down to detailed measure counts for most programs.

In 2012, PSE considered Non-Energy Benefits (NEBs) when calculating a program's or measure's Total Resource Cost (TRC).

PSE applies a strict definition of economic theory as a cost for NEBs.

We apply the price that a customer pays for the installation of a CO detector, insulation, door sweeps, etc., as indicative of the value of the benefits that customer receives.

We do not, however, attempt to monetize the value of a customer's increased happiness, lost days from work prevented, decreased hospital costs, etc. when calculating NEBs.

Cost Effectiveness

Much of the EM&V work performed or managed by Customer Solutions Staff contributes to confirming and/or determining the cost effectiveness of programs and measures. Customer Solutions Evaluation Staff, often working with third party consultants, employ a high degree of rigor and review in determining program savings, persistence, and consequential cost effectiveness, with results expressed in terms of Utility Cost (UC) and Total Resource Cost (TRC) Benefit-to-Cost ratios. The protocols, guidelines and processes that Evaluation Staff employ for these purposes were included as a part of Exhibit 2, Supplement 1 to the 2012-2013 Biennial Conservation Plan: Calculating Electric and Gas Avoided Costs, and Calculating Cost Effectiveness.

[31] Where possible. In the case of retailer CFL sales for instance, customer-specific data isn't available.

PSE's program-level detailed view of electric and gas cost-effectiveness results for 2012 is attached to this report as Exhibit 2.

2012 Measurement Accomplishments and Activities

Savings Adjustments

Thirty-four savings report adjustments were made; twenty-seven electric, seven gas. Through rigorous Program Staff reporting process refinements and enhanced adjustment follow-up processes, overall adjustments were reduced from 49 in 2011. Details of these adjustments are provided in Exhibit 1, Supplement 2.

Improved Inventory Control

The Systems Channel inventory control system continues to provide benefits throughout Customer Solutions. This tool clearly monitors and tracks program brochures, promotional materials and lighting products as they are used for mailings, events, and programs. This system allows the group to help reduce waste, lower storage costs, and decrease collateral charges in nearly every department. This system is built with the group's CMS application.

Cost-Effectiveness Calculations

Through a series of continuous improvement efforts by Customer Solutions Staff in several departments, the time needed to complete the extensive and comprehensive Portfolio-level view of cost-effectiveness calculations was reduced almost six-fold.

In the Residential Sector, the Systems Channel includes three rebate analysts, who manage the processing of rebate applications for Manufactured Homes, Heat Pumps, Furnaces, Water Heaters, Windows, Fireplaces, Boilers and Fuel Conversion.

Clothes washers rebate applications are processed through a PSE contractor. The majority of CFL and LED lamps are processed at the reseller.

Business rebates, such as Commercial Kitchen, Ice Makers, LED Exit Signs, HVAC Retrofit, etc., are managed by the Commercial Rebate staff.

Verification

Customer Solutions verifies electric and gas conservation savings and expenditures using a wide range of processes, tools, systems, and reports.

There are essentially five different elements of verification:

1) Baseline reference: Is it possible to determine and measure the pre-installation energy usage?
2) Customer eligibility: Does the customer receive service from PSE?
3) Measure counts: Are the measures being counted accurately? [32]
4) Savings values: Are the correct kWh or therm savings being applied, as noted in Measure Metrics or other archives?
5) Measure installation: Is it possible to prove that the measure was installed, as claimed?

Data sources include vendors, contractors, customer rebate and grant applications, telephone surveys, and reseller invoices. Customer Solutions also verifies that the savings values indicated by evaluation studies, engineering analyses, or the RTF are correctly applied, that the savings values are properly archived, that all tracking systems are accurately counting the number of measures and applying the correct savings values, and, when a correction is required, it is logged using standard accounting procedures.

This range of verification activities are executed by several groups within Customer Solutions, as discussed below. Some of the activities are unique to one particular team or function. Some departments, though, perform more than one verification activity throughout the course of managing energy grants.

Business Sector Custom Grants

The full range of verification activities is conducted when an energy management Engineer (EME) manages a custom grant; either in the Commercial/Industrial (C/I) Retrofit, C/I New Construction, or Large Power – Self Directed programs.

[32] Often colloquially termed “widgets”.

When an EME is first engaged in a custom grant project, he or she may be able to verify the existing energy usage.[33] The EME will also verify that the customer is eligible and receives electric or gas service from PSE.

The EME will evaluate the proposed measures and create the grant agreement, indicating in specific detail the measures that the customer will install (or have installed by a contractor). All conservation savings, electric and gas, associated with custom Commercial/Industrial grants are inspected and verified. The grant agreement for each custom project includes a detailed description of the measure(s) to be installed, a listing of applicable forms or other data to be submitted by the customer, and a verification plan describing how PSE will determine that the equipment is installed and working properly. Discrepancies, if any, are documented, and savings calculations are revised accordingly prior to reporting.

Once the project is completed, the EME will verify the installation of the specified measures, and in some cases, install devices that will monitor the resultant energy usage.

Similarly, the RCM executes varying degrees of all verification steps throughout the customer engagement term.

For the Energy Smart Grocer program, operated under the CI Retrofit Program, the contractor that runs the program is required to inspect a minimum of 25 percent of all projects, including 100 percent of all projects with incentives greater than $7,500. When new installers participate, at least their first five projects are inspected.

Other Business Sector programs; LED Traffic Signals, Small Business Lighting, Business Rebates, use processes similar to those employed by the Residential Sector, discussed below.

On a quarterly basis, all projects that are equal to or greater than $100,000 in value, along with other randomly-sampled projects are reviewed for proper signing authority.

Measure Installation Verification

A key development during 2012 was the full implementation of a dedicated team of individuals that performs on-site verifications of measure installations for both the Residential and Business Sectors.

[33] In the case of New Construction projects, of course, this isn't possible.

Customer Solutions Verification Team

The Customer Solutions Verification Team, created in 2011 and expanded in 2012, consists of field inspectors and support personnel who provide overarching support for PSE's verification efforts at the installation level.

This team independently confirms installed measure quantities, model numbers, site qualifications, equipment settings, and other related installation parameters through a combination of onsite inspections, review of primary project documentation, and phone surveys. The majority of the team's efforts are directed at random verifications of measure installations for both the Residential and Business Sectors, while additional effort is devoted to program-requested verifications.

The responsibilities and scope of work of the Verification Team have continuously expanded in 2012 with a 2½-fold increase in the number of verifications, inclusion of additional Business and Residential programs, development of improved processes and tools, and implementation of phone verification processes to compliment on-site inspections. A complete discussion of Verification Team 2012 accomplishments is provided in page 202.

Measure Count Verification

In addition to verifying the savings value of installed measures, and attributes such as "is the applicant a PSE customer?", "Is this the correct fuel type?", "Is the customer receiving service under the applicable Rate and Conservation Schedule?", "Did the customer submit a valid receipt (rather than one that's been used before)?", "Is the equipment eligible?", all measure counts processed through the Systems Channel and by the Business Sector Rebates team are reconciled against CSY and the EES Tracking and Forecasting System.

Rebate Processing

The efficiency of PSE's residential retrofit rebate processing (windows, heat pumps, furnaces, water heaters, and gas conversion) increased substantially in 2012. Table 4b provides a summary of rebates processed by Customer Solutions System Channel staff.

It is important to note that the information represents only those rebates paid as a result of a customer mailing a rebate application to PSE, which is then processed by one or more members of the System Channel staff.

Key rebates excluded from these counts include appliance rebate applications processed by third-party contractors, retailer mark-downs, refrigerator decommissioning, all Business rebates and grants, and any residential (primarily Multifamily) grants. Totals are presented to indicate the relative scale for comparison purposes only and are not intended to provide auditable information.

Table 4b: 2012 In-House Residential Rebates Paid

Residential Rebates Processed			
Program	**Count**		**$ Paid**
Energy Star(r) Manufactured Homes	11	$	3,300
Fuel Conservation Rebates	253	$	340,900
Residential Calculated Rebates[1]	582	$	356,000
Residential New Construction	1,509	$	222,600
Residential Retrofit Rebates[2]	8,206	$	3,800,000
HomePrint Assessment	4,070	$	369,000
TOTAL	**14,631**	**$**	**5,091,800**

[1] Windows, unique measure adjustments

[2] Furnaces, heat pumps, Water heaters, etc.

Business Grants and Rebates

As noted in the Business Sector Custom Grants discussion on page 63, every custom grant is subject to several verification steps. In addition to custom grants, BEM Sectors also processes a significant number of rebates, including Small Business Lighting, HVAC, and Commercial Kitchens, among others. As they are processed, these rebates also are subject to a number of verification steps. These include, but are not limited to:

- Pre-approval eligibility (is the applicant actually a PSE customer, applicable fuel type, qualifying Schedule, etc.),
- Product qualifications,
- A quality-control checklist review is conducted prior to the payment of any rebate.

Additional details relative to the below grants is provided in the respective program discussions in the Business Energy Management/Programs sections. Table 4c represents a summary of BEM grants and rebates paid in 2012. It is important to note that many projects are a combination of electric and gas measures, which are omitted from this table for clarity.

Table 4c: 2012 Business Sector Incentives Paid

Measure Category	Total Measures	Total Rebate $
Commercial Kitchens	200	$ 183,650
Water Heating	8,900	$ 224,520
HVAC	24,700	$ 1,009,060
Lighting (non-SBL)	231,100	$ 3,176,000
PC Power Management	29,300	$ 232,540
Misc	1,500	$ 256,510

All Business incentives were processed through the CSY system.

Measure Savings Verification

In the majority of prescriptive rebate programs, applications are reviewed to ensure that the applicant is an eligible PSE customer or eligible party. The equipment or measures listed are analyzed to also ensure eligibility. Proofs of purchase are reviewed to ensure authenticity. Applications that include ineligible equipment or measures, illegible proofs of purchase, etc., are returned to the applicant.

After it has been determined that an application is eligible for payment, CSY, or the EES Tracking and Forecasting System will assign a set electric or gas savings value for the specific measure, based on archived savings data.

Each month, the REM Systems Channel reviews savings claims for each Residential program to ensure that the correct savings value was assigned. A similar process is employed for Business Rebates in CSY. As noted in the Measurement discussion above, reconciliations are performed semi-annually between CSY and the EES Tracking and Forecasting System, and the Measure Metrics archive.

With regards to applications processed by PSE vendors (for instance, Retail Lighting, and Retail Appliances), the Channel staff reviews vendor reports included with monthly invoices to ensure proper application of measure data.

RESIDENTIAL SECTOR OVERVIEW

Our Customers

The Residential Energy Management (REM) S of Customer Solutions is designed to provide and enhance programs and services for a wide range of residential energy-efficiency customers. Through the sector's four Channels, discussed in detail below, REM furnishes the marketplace, customers, and contractors with incentives, rebates, referrals, and other value-added services with the intention of surpassing customer expectations and to meet prescribed savings and budget goals. REM provides benefits for single family, manufactured homes, and multifamily and low income dwellings.

Suite of Offerings

The residential team manages a comprehensive strategy to educate, collaborate, develop and implement services that provide a broad range of benefits for PSE's residential customers. These strategies include offering customers direct install services, instant and mail in rebates. The REM Sector also offers full-service measures, including refrigerator replacement and decommissioning programs. In order to enhance our customers' understanding of the important role that they play in the region's conservation efforts, REM offers training and outreach sessions with customers, contractors, and other constituents, and energy-auditing services throughout PSE's service territory.

PSE also collaborates with the regions retailers, contractors and manufacturers to offer limited time promotions. These promotions require agile program management, and may consist of giveaways, special one-time pricing on selected measures or cross-merchandising with similar measures.

Our Constituents

The success of the REM programs rely heavily on partners that assist PSE in making informed, pro-active decisions. These partners—who are established parts of the distribution channels and value-chain—consist of vendors, contractors, distributors, manufacturers, builders, developers, retailers, audit companies, and other groups that directly engage our customers. PSE leverages these relationships to assist in effectively managing existing, and nimbly developing future, programs so that implementation is seamless to our customers. REM holds all of our partners to a very high customer experience standard. Their performance is regularly monitored and reviewed to ensure compliance with PSE and customer expectations.

One of the primary tools used to provide maximum exposure to energy conservation programs and ensure a maximum level of customer engagement is our training expertise. REM Staff conduct several vendor seminars throughout the year to ensure that all customer touch points have the most up-to-date information and customer satisfaction skills. Through our extensive training programs, contractors are certified in customer service, rigorous insulation installation techniques, combustion safety, HVAC installation, and code standards.

We train retailers in the process of providing product mark-downs at the point of sale,[34] and HomePrint audit contractors are provided stringent guidelines on home review techniques.

Organizational Structure

Residential Energy Management's programs are managed within four channels. Channel Staff manage the performance of third-party vendors and other REM constituents, and is supported by other Energy Efficiency/Customer Solutions staff, as well as other departments in PSE, such as Accounts Payable and Purchasing. The channels and their support groups are committed to providing customers with helpful information and developing programs that provide them with the tools and resources needed to manage and control energy costs. In order to maximize the Residential Sector effectiveness—responding to customer requirements, addressing contractor and trade ally questions, and providing the highest level of service possible—the organization is modeled according to the accompanying chart, Figure 5a.

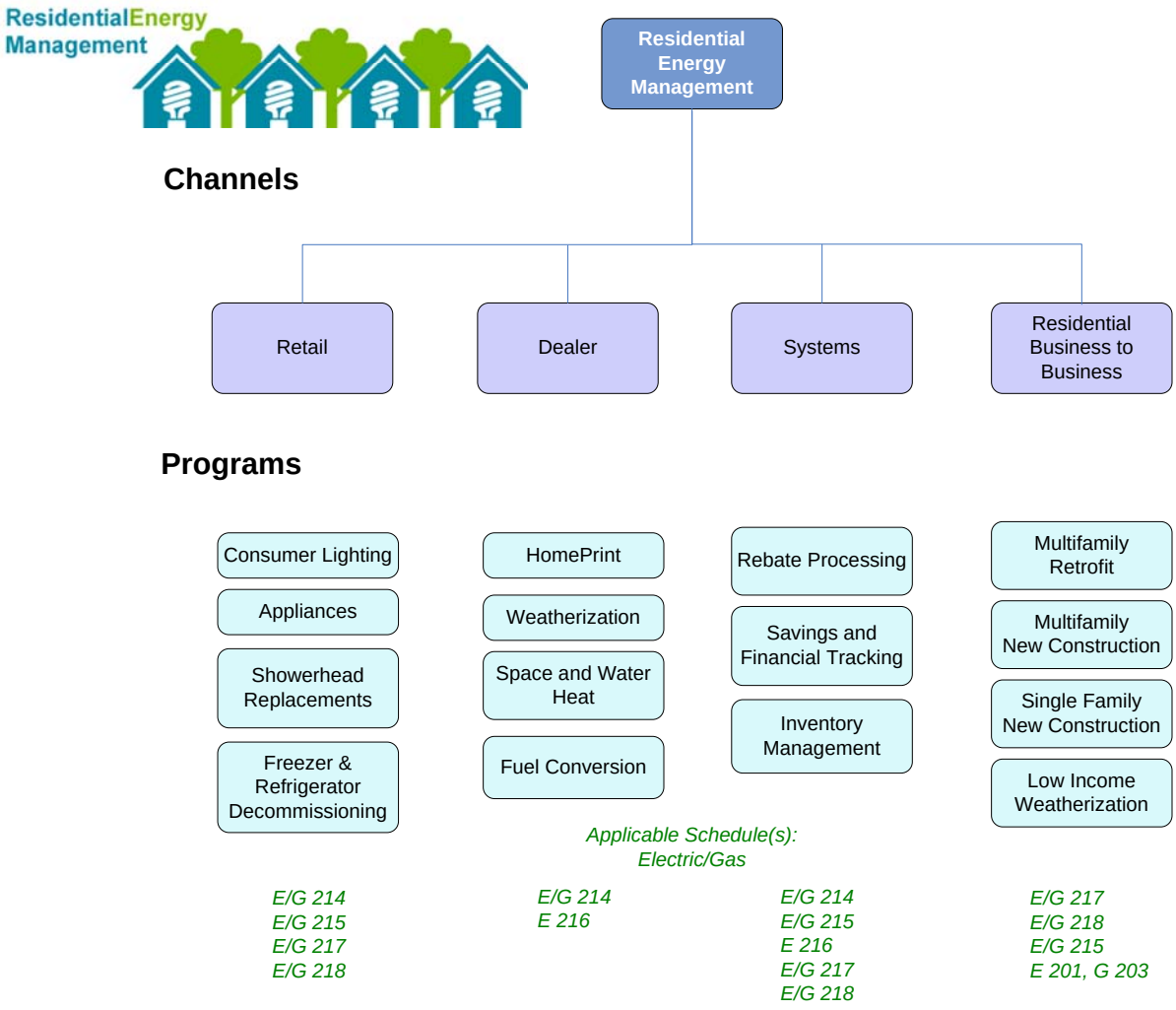
The Staff

REM is comprised of a department manager, market managers, program managers, coordinators, implementers, analysts, an administrative specialist and a consulting engineer. These professionals have gone through rigorous training to provide added value to PSE customers, trade allies and other internal and external stakeholders. In 2012 three staff members completed classes and obtained a Building Analyst professional certification to through Building Performance Institute. This brings the total number of staff members to nine that have completed BPI certification. The certification is the same required to be a home energy auditor.

[34] Product mark-downs at the point of sale (POS) eliminate the need for rebate forms and a separate transaction for customers.

In addition to these individuals REM staff consists of a licensed architect, a Certified Energy Manager (CEM), a LEED Accredited Professional (AP) Specialist, one staff member that holds a Building Operators Certification (BOC) and an Energy Star Home verifier. These licenses bring a higher level of professionalism designed to better serve our customers. Figure 5a is a graphical representation of the Residential Energy Management organizational structure.

Figure 5a: Residential Energy Management Organizational Structure



Retail Channel

Primary Products/Services: ·Consumer lighting,·home appliances; such as freezers, refrigerators, clothes washers,·showerheads, replacement and decommissioning services.

Partners: ·Include "Big-box" stores,·large and small retailers and resellers, appliance stores, home improvement stores, and·recyclers.

The Retail Channel's role is to promote the use of programs and services that affect the marketplace's retail sector, and provide customers with increased accessibility, and a wide variety of easy-to-use and understand incentive opportunities. Some of the strategies the Channel utilizes include:

- In store Point of Purchase material,
- training for sales associates,
- program awareness campaigns,
- store and community events,
- recycling information and product pick up services.

The Retail Channel has a high visibility and access at key customer touch points throughout PSE's service territory. Because of this, their channel is leveraged to create additional awareness, educate consumers, and promote many other PSE energy-efficiency offerings. The Channel provides services that apply under Schedule 214,215, 217, 218 Electric and Gas.

Dealer Channel

Primary Products and Services: ·A wide variety of weatherization products, including attic, wall, and floor insulation, HomePrint evaluations,·HVAC (Heating, Ventilation and Cooling) Products, Water heating,·Windows, and Fuel Conversion (to high-efficiency natural gas equipment).

Partners: Include HVAC and plumbing contractors, energy audit companies, weatherization and window contractors, manufacturers, and suppliers.

The Dealer Channel develops and leverages relationships with contractors that provide product installations and services directly to customers throughout PSE's service territory. These partnerships allow the channel to provide the best possible direct in home services for our customers, and work to the mutual benefit of all parties; contractors, customers and PSE. The relationships are managed through staff interaction, in-person and online training sessions, and the channel's CAN (Contractor Alliance Network), which will be discussed in detail as a part of the Dealer Channel 2012 accomplishments section, beginning on page 97. The channel also promotes participation indirectly through suppliers, community groups, manufacturers, and trade associations.

The channel operates primarily within the structures of Schedules (electric and gas) 214 and (electric only) 216, and uses the relationships they have developed to provide value to other energy-efficiency groups to meet customer needs and achieve conservation goals.

Systems Channel

The Systems Channel plays an important support role within Customer Solutions. This group provides the department with the right tools, resources, and people to assist in pro-actively managing their respective businesses, allowing Program Staff to make management decisions that optimize their business. Rebate processing, customer fulfillment, program analysis, and savings reporting are some of the critical services this team provides.

The group has Staff dedicated to processing many of the residential rebates offered by the Dealer Channel as well as the Single Family New Construction Program, and developing business revisions to enhance the effectiveness of internal processes. Rebates for windows, heat pumps, furnaces, water heaters, gas conversion, and new construction are all processed in-house.

The Systems Channel oversees the ongoing improvements to the department's customer management system (CMS). This system enables the group to effectively handle customer inquiries, requests for brochures, contractor referrals, and internal requests for brochures and supplies for program-related events.

The group's analysts handle research and data requests, savings and expense tracking, systems support and program analysis for all groups within Energy Efficiency. The Systems' team has been concentrating its efforts in 2012 on developing a system to aggregate customer participation data that is collected by its residential program teams. These efforts will not only help the team respond to information requests more efficiently, but it will also enable the team to provide broader program insights to the whole department.

Residential Business to Business (RB2B) Channel

Primary Products and Services: This Channel—formerly referred to as the Multifamily Channel, includes the Single Family New Construction, Multifamily Retrofit, Multifamily New Construction, and Low Income Weatherization programs. The Channel provides weatherization services, customized grants, residential and commercial lighting products, HVAC-related products, water heating, appliances, showerheads, windows, manufactured home rebates, whole house fans, and several other measures.

Partners: The Channel's constituents include builders, developers, contractors, low income agencies, building management companies, building owners, associations, suppliers, manufactures, and architects.

The Channel develops and implements programs for businesses that provide direct services and benefits to PSE customers. The REM Sector changed the name to Residential Business to Business (RB2B) in 2012 to better reflect the group's activities. The Single Family and Multifamily New Construction Staff rely heavily on their relationships with the building industry and related trade allies like NW Energy Star Homes, to ensure that measures are incorporated in the design and construction of a wide spectrum of multifamily building types. The Multifamily Retrofit program collaborates with variety of stakeholders and provides outreach services to increase customer and constituent awareness of and maximize the benefits of PSE services, to building owners. The Low Income Weatherization program works with social service agencies to satisfy the need of our customers that meet low income guidelines.

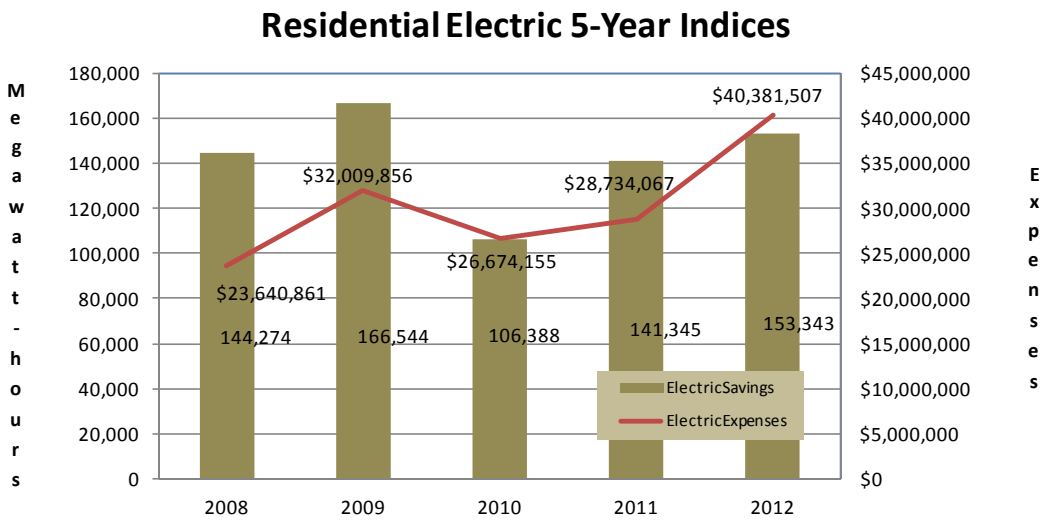
The group provides services under Electric and Gas Schedules 215, 217, 218 and collaborates with PSE's Business Energy Management sector when multifamily projects include a combination of residential and commercial custom measures. The Low Income Weatherization program operated under the terms of Schedules E201 and G203.[35]

Five-Year Trends

As illustrated in Figure 5b, the five-year trends indicate an average annual increase in electric savings of 1.6 percent and an overall 6.3 percent increase from 2008 to 2012.

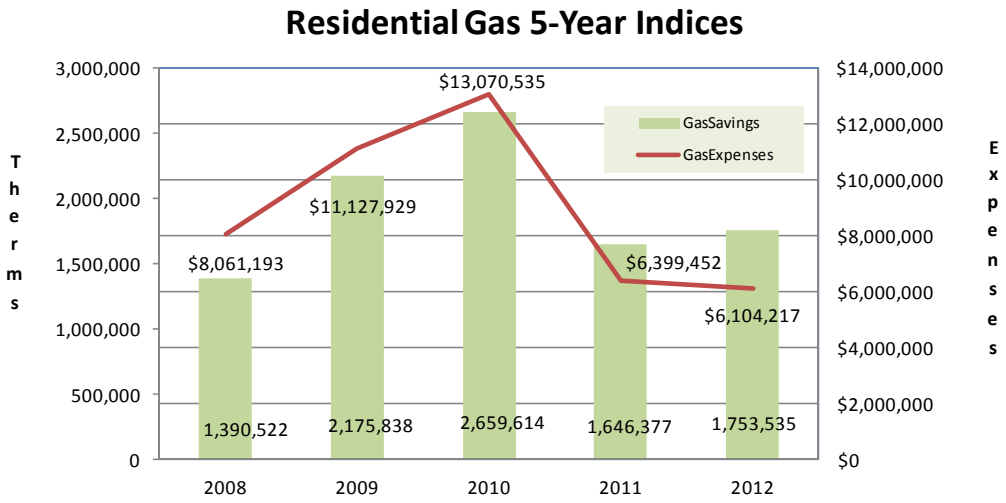
Figure 5c illustrates an average annual increase in gas savings of 13.4 percent and an overall 53.5 percent increase from 2008 to 2012.

Figure 5b: Residential Electric Savings (MWh) and Expenditures Five-Year Trends



[35] In December 2012, the Commission approved a Schedule name change; natural gas Schedule 203 was revised to 201. This change better aligns the electric and natural gas Schedules; both of which are now called 201.

Figure 5c: Residential Gas Savings and Expenditures Five-Year Trends



2012 Residential Energy Management Sector Summary

Electric Programs

PSE's Single Family Electric retail programs, namely specialty and spiral CFL's, realized significant success in 2012 with greater than anticipated customer participation. LEDs have also been steadily increasing a respectable market share, achieving nearly 5 percent of the residential lighting units. Another notable was the growth of residential showerheads, which was achieved through delivery diversification of qualifying products; online, retail outlets, and engagement events. The increased demand was accomplished through partnership developments with retailers, manufacturers, and other community partners.

Sector expenditures in 2012 finished at $40.4 million or 95 percent of year-end budget. Residential electric programs achieved savings of 153,343 MWh (17.5 aMW), which is 103 percent of year-end savings goals.

Natural Gas Programs

PSE's Single family Gas existing programs (weatherization, space heat, appliances, and water heat) realized slightly less than anticipated customer participation in 2012. The lower than anticipated savings for gas programs in 2012 can be attributed in part to delayed implementation of the whole house air sealing measure, as well a reduced number of applications for gas space heat measures. These programs are discussed in detail in the following chapter.

Sector expenditures in 2012 finish the year at $6.1 million, or 88 percent of year-end budget. Residential gas programs achieved savings of 1.75 million Therms, which is 93 percent of year-end savings goals.

Key Results Drivers

Since the introduction of PSE's LED measure, and within 2012, the LED market has changed dramatically. Product offerings have expanded exponentially both with more manufacturers entering the market and the styles of LED product offerings. All of this has created greater supply and so the prices have come down – a great thing for PSE customers.

The adjusting marketplace meant we had to be flexible with our LED incentive levels. This has actually worked well for PSE's planned limited-time offerings and LED campaigns. We leveraged relationships with retail and manufacturer partners to further produce desirable and lasting improvements. These partnerships have allowed us to leverage resources and stretch our utility budget to achieve mutual goals while achieving the utmost cost effective program.

Lighting has long been a gateway into energy-efficiency. LEDs are no different that brings in a fresh group of PSE consumers that adds to our base of energy-efficiency customers. Now that we have their attention, we have the opportunity to discuss all of our other PSE programs designed to help them save further energy. It further lays the groundwork to inspire customers to adopt a lifestyle using the top energy saving products and they look to PSE to help them do it. We do more than get customers to buy, we get them engaged and excited.

The staff further developed partnerships with stakeholders that use and promote the use of our programs and drive customers to action.

Tables 5a and 5b represent electric and gas expenditures, and electric and gas savings achieved in 2012, respectively.

Table 5a: 2012 Residential Electric and Gas Expenditures

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	**Programs**	**Q1 & Q2**	**Q3 & Q4**	**Total**	**% of Budget**	
Electric	Electric					Electric
Gas	Gas					Gas
E201	Low Income	$ 749,118	$ 1,665,148	$ 2,414,265	81.9%	$ 2,946,378
E214	Single Family Existing	$ 10,684,387	$ 14,647,531	$ 25,331,918	83.5%	$ 30,332,921
E215	Single Family New Construction	$ 598,700	$ 706,182	$ 1,304,882	117.4%	$ 1,111,043
E216	Single Family Fuel Conversion	$ 215,375	$ 324,931	$ 540,306	67.2%	$ 803,973
E217	Multifamily Existing	$ 5,731,447	$ 4,515,794	$ 10,247,241	148.8%	$ 6,887,604
E218	Multifamily New Construction	$ 325,983	$ 216,911	$ 542,894	87.9%	$ 617,485
E249	Pilots	$ -	$ -	$ -		$ -
	Total Electric Programs	$ 18,305,009	$ 22,076,498	**$ 40,381,507**	94.6%	$ 42,699,404
G203	Low Income	$ 121,328	$ 257,184	$ 378,512	62.6%	$ 604,593
G214	Single Family Existing	$ 2,340,366	$ 2,551,683	$ 4,892,049	89.9%	$ 5,442,844
G215	Single Family New Construction	$ 56,541	$ 103,085	$ 159,626	51.6%	$ 309,171
G217	Multifamily Existing	$ 261,841	$ 190,112	$ 451,953	199.5%	$ 226,525
G218	Multifamily New Construction	$ 63,330	$ 158,268	$ 221,598	62.7%	$ 353,589
G249	Pilots	$ 479	$ -	$ 479		$ -
	Total Gas Programs	$ 2,843,886	$ 3,260,331	**$ 6,104,217**	88.0%	$ 6,936,722

Table 5b: 2012 Residential Electric and Gas Savings

2012 Savings		2012 Semi-annual View				2012 Goal
Schedule	**Programs**	**Q1 & Q2**	**Q3 & Q4**	**Total**	**% of Goal**	
	Electric	MegaWatt-Hours				Electric
	Gas	Therms				Gas
E201	Low Income	460	1,146	1,606	76.5%	2,100
E214	Single Family Existing	57,581	67,214	124,796	99.5%	125,400
E215	Single Family New Construction	492	1,004	1,496	99.7%	1,500
E216	Single Family Fuel Conversion	655	877	1,532	61.3%	2,500
E217	Multifamily Existing	13,327	9,626	22,952	136.6%	16,800
E218	Multifamily New Construction	623	339	961	96.1%	1,000
E249	Pilots	0	0	0		0
	Total Electric Programs	73,138	80,205	**153,343**	102.7%	149,300
G203	Low Income	6,791	15,831	22,622	53.5%	42,300
G214	Single Family Existing	639,949	967,038	1,606,987	92.4%	1,739,615
G215	Single Family New Construction	538	206	744	2.3%	31,900
G217	Multifamily Existing	55,571	34,585	90,156	360.6%	25,000
G218	Multifamily New Construction	3,804	29,222	33,026	61.6%	53,600
G249	Pilots	0	0	0		0
	Total Gas Programs	706,653	1,046,882	**1,753,535**	92.7%	1,892,415

The individual program discussions in the Residential Programs section will provide additional details of our 2012 achievements.

Continuous Improvement

The Residential Sector pro-actively reassesses its suite of offerings to ensure that customers have access to cost-effective incentives and measures and to ensure that REM offerings meet their expectations. We partner with the Energy Efficiency/Customer Solutions Evaluation Staff to review savings claim figures, delivery methods, measure costs and program cost effectiveness.[36] The Sector Staff incorporate feedback from our constituents and customer to effect program and measure revisions in a timely fashion, regularly review program performance, and monitor vendor and contractor performance to ensure compliance with PSE and customer expectations.

[36] A detailed description of Evaluation activities is located on page 200 of this report.

Residential Cost Effectiveness

Table 5c represents the actual calculated Utility Cost and Total Resource Cost benefit-to-cost (B/C) tests for the Residential Sector. The complete UC and TRC tables, showing cost-effectiveness calculations by program, are presented in Exhibit 2 of this report.

Table 5c: 2012 Residential Sector Cost-Effectiveness Tests

Benefit to Cost Ratios		
	Utility Cost	Total Resource Cost
Electric	3.19	2.06
Gas	2.76	1.15

Indicated TRC represents the B/C ratio without the conservation credit value applied.

Savings Ratios by Measure Type

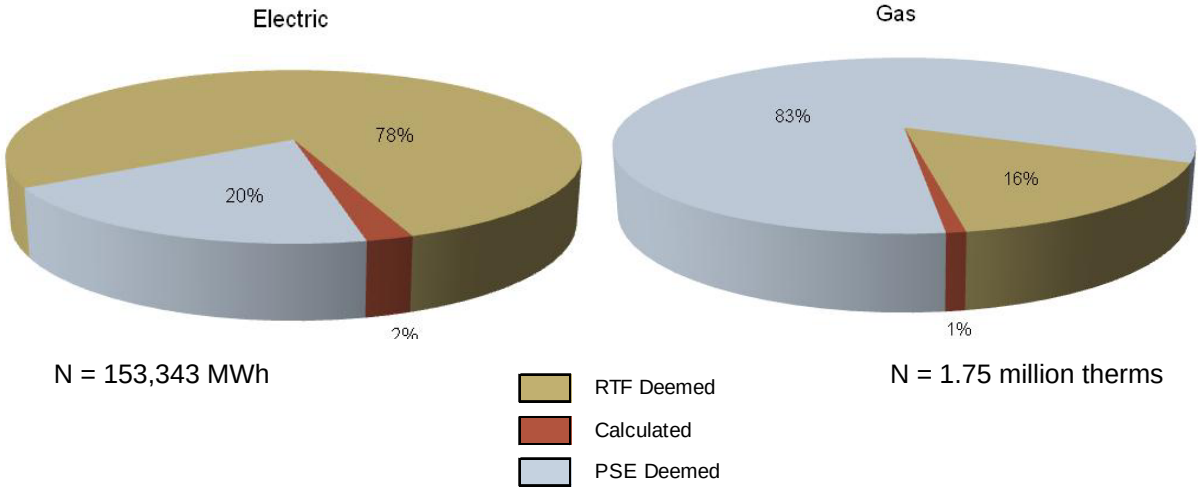
Figure 4f illustrates the distribution of savings in the Residential Sector by measure type. It is important to note that gas savings are treated differently in this type of analysis. The RTF deems[37] some gas prescriptive savings. The majority of prescriptive gas measures are considered PSE Deemed, Calculated or Custom. In contrast to the savings distribution in the Business Sector,[38] it is apparent that the majority of Residential savings are derived from RTF Deemed (UES) measures.[39]

[37] In 2011, the RTF revised the term "RTF Deemed" to "UES": Unit Energy Savings.

[38] A similar chart is included in the Business Sector Overview, beginning on page 124

[39] A complete list of prescriptive and calculated measures used by PSE is included in this Annual report as Appendix B.

Figure 5d: Residential Sector Savings Distributions by Measure Type



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RESIDENTIAL PROGRAM DETAIL DISCUSSIONS

Low Income Weatherization

Schedules E201/G203

Description

The Low Income Weatherization program assists low-income residential customers to improve the energy efficiency of single family residences, multifamily structures and manufactured/mobile homes.

Key stakeholders are low-income gas and electric customers; county and municipal low-income weatherization agencies in the PSE service area, Washington State Department of Commerce ("Department of Commerce" or "Commerce"), and participating weatherization contractors and suppliers.

Residential Low Income Weatherization provides funding of many cost-effective home weatherization Measures for low-income customers receiving gas and/or electric heat from PSE. Funds are used for single-family, multi-family and mobile home residences. Some Measures which do not meet standard cost-effectiveness tests may also be approved.

In addition, this program provides funding for energy-related repairs and energy education. An energy-related repair is a repair that is necessary (1) to install a weatherization measure properly, (2) to protect the health and/or safety of the occupants, (3) to address an existing problem that weatherization could aggravate or (4) to protect the integrity of the installed measure. Examples include but are not limited to:

- Repair roof leaks
- Electrical inspection and repairs
- Mold/mildew remediation
- Rodent, insect and pest extermination
- Bath and kitchen ventilation upgrades
- Furnace or water heater repairs or replacement.

Sources of Low Income Weatherization funding include, but are not limited to, Electric Rider, Gas Tracker, Company funds, BPA credits or other federal or state government programs.

For those funds that must meet the cost-effectiveness standard, up to 30 percent **may** be applied to energy-related repairs that are necessary to effect the installation of other cost-effective measures. The final percentage allocated will be determined according to the overall program cost-effectiveness.

Energy education include those Measures that would help customers understand how to benefit from Measures installed in their home and to further reduce energy consumption through behavior modification.

In accordance with Final Order 05, Docket UE-070725, Agencies tracked the cost effective application of PSE Tariff Electric and REC proceeds to fund repair measures necessary for enabling weatherization, through tools made available in January 2011 in the PSE online tracking and reporting system.

PSE conducted measure verification activities at most agencies contracted with PSE to implement the PSE Residential Low Income Weatherization (LIW) program and measure verification goals are on target. New measures for the 2011 program were added to the LIW gas and electric programs, including ductless heat pumps, tankless gas water heaters, gas water heaters, and electric water heaters.

2012 Program Revisions

New measures were added to the 2012 program including ENERGY STAR® mechanical ventilation, smart strips, and LED lighting.

2012 Accomplishments and Activities

The PSE Low Income Weatherization program has seen reduced production in the 2012 relative to 2011 due to agency downsizing in the first quarter. Agency downsizing was a direct response to the end of the economic stimulus American Recovery & Reinvestment Act (ARRA) infusion of funds to agencies. Conversely, the state passed a budget to increase 2012-13 Energy Matchmaker funding which afforded social service agencies an opportunity to increase production capacity the latter half of 2012.

When agency capacity decreased as a result of decreased Federal funding, it became apparent to PSE and its social service agency partners, that to maintain customer satisfaction, through continued program participation, that a program be designed that could operate independent of other funding sources while maintaining program cost effectiveness.

During the first two quarters of 2012, PSE led the process of working with the agencies and the Energy Project to identify ways to sustain a consistent level of program production regardless of State and Federal funding activity. Under the new program structure, social service agencies will be able to elect to fund a given project using PSE only funds which will activate funding to mission critical measures at a higher administrative reimbursement rate to cover additional program support costs.

Table 6a provides a high-level summary of Low Income Weatherization measures installed in 2012. The figures are rounded and are intended to indicate a general sense of program scope, rather than precise totals to be used for auditing.

Table 6a: Low Income Weatherization Measure Highlights

Measure *(stated in number of projects unless otherwise specified)*	**Gas**	**Electric**	**Total**
Attic Insulation (Units receiving attic insulation)	80	150	230
CFL Fixtures	-	1,500	1,500
Common Area HVAC (projects)	2	-	2
Duct Insulation (Duct systems insulated)	40	4	44
Duct Sealing (Systems sealed)	50	150	200
Ductless Heat Pump	-	10	10
EnergyStar Whole House Ventilation	-	300	300
Floor Insulation (Units receiving floor insulation)	50	250	300
Gas Furnace Replacement >90%	10	-	10
Pipe Insulation	30	180	210
Refrigerator Replacement	-	380	380
Screw-In CFL	-	490	490
Showerheads	-	40	40
Structure Sealing (Number of structures)	60	190	250
Tankless Gas Water Heater (.90 EF)	10	-	10
Wall Insulation (Units receiving wall insulation)	70	50	120
Windows (Units receiving window upgrades)	10	30	40

Single Family Existing

Schedules E214, G214

Description

Single Family Existing programs implement cost effective, targeted, residential energy savings using a menu of prescriptive and calculated efficiency measure incentives, including rebates for single family existing structures. Existing single family structures are defined as residential dwellings which include; structures with four or less units that are attached by a contiguous roofline, manufactured or factory built homes permanently affixed to a concrete foundation, and manufactured or factory built homes that are transportable. Single family existing residences exclude structures that are currently under construction. Prescriptive rebates are intended to facilitate participation by customers, contractors, developers and trade allies, and provide administrative efficiencies for PSE in meeting energy efficiency goals. It is important to note that multifamily campuses which have a mixture of existing residential building types, including buildings with four attached residential units or less, are served under the Multi-Family Retrofit Program; schedules E217 & G217.

Rebates and incentives 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.
- Light-Emitting Diode (LED) lighting including A-line and down light lamp, and LED fixtures.
- Appliance—including refrigerators, freezers and clothes washers—rebates.
- Refrigerator and Freezer Decommissioning – both secondary and primary units.
- Refrigerator Replacement – focused on hard-to-reach markets.
- Weatherization, including windows, insulation air and duct sealing.
- Space heating including hydronic systems, high efficiency furnaces, high efficiency fireplaces, heat pumps, and system controls.
- Water heating, including heat pump water heaters, and efficient showerheads.

Incentive amounts and savings values are regularly reviewed and are based on regionally accepted energy savings estimates and incremental efficiency measure cost. 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.

The Single Family Existing group is comprised of two Channels, which are detailed in the following pages:

1. Retail and Consumer Channel
2. Dealer Channel

Program Performance

Tables 6b and 6c provide a 2012 summary of expenditures and energy savings for the Single Family Existing group.

Table 6b: Single Family Existing 2012 Expenditures

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
	Electric					Electric
	Gas					Gas
E214	Single Family Existing					
	Home Energy Reports	$ 67,337		$ 80,691		
	HomePrint	$ 568,933	485,448	$ 1,054,381		
	Water Heat	$ 82,406	171,475	$ 253,881		
	Residential EE Lighting Rebate	$ 4,703,954	7,901,612	$ 12,605,565		
	Space Heat	$ 1,214,372	1,753,982	$ 2,968,354		
	Home Appliances	$ 2,710,615	2,604,040	$ 5,314,655		
	Showerheads	$ 216,942	83,794	$ 300,736		
	Weatherization	$ 1,202,235	1,551,419	$ 2,753,655		
Subtotals		$ 11,397,558	13,934,360	**$ 25,331,918**	83.5%	$30,332,921
G214	Single Family Existing					
	Home Energy Reports	$ 27,322		$ 30,356		
	HomePrint	$ -	0	$ -		
	Water Heat	$ 5,583	150	$ 5,733		
	Space Heat	$ 587,822	756,549	$ 1,344,372		
	Showerheads	$ 111,116	83,919	$ 195,035		
	Weatherization	$ 1,608,523	1,708,030	$ 3,316,554		
	Home Appliances	$ -	0	$ -		
Subtotals		$ 2,340,366	2,551,683	**$ 4,892,049**	89.9%	$5,442,844

Table 6c: Single Family Existing 2012 Savings

2012 Savings		2012 Semi-annual View				2012 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
	Electric	MegaWatt-Hours				Electric
	Gas	Therms				Gas
E214	Single Family Existing					
	Home Energy Reports			5,498		
	HomePrint	1,003	939	1,942		
	Water Heat	205	375	580		
	Residential EE Lighting Rebate	42,533	44,154	86,687		
	Space Heat	3,099	4,246	7,345		
	Home Appliances	4,948	3,679	8,627		
	Showerheads	1,587	4,104	5,691		
	Weatherization	4,411	4,013	8,425		
Subtotals		60,161	64,635	**124,796**	99.5%	125,400
G214	Single Family Existing					
	Home Energy Reports	0		346,724		
	HomePrint	0	0	0		
	Water Heat	0	0	0		
	Space Heat	218,791	252,504	471,295		
	Showerheads	77,717	143,462	221,179		
	Weatherization	325,314	213,012	538,326		
	Home Appliances	18,127	11,336	29,463		
Subtotals		639,949	967,038	**1,606,987**	92.4%	1,739,615

Retail Channel

The Retail channel focuses on services targeted to a wide variety of retail entities, including "big box" chains, hardware chains, regional concerns and local resellers. The channel manages several programs—most of which are consumer-oriented—including refrigerator decommissioning, appliances upgrades and of course, energy efficient lighting. The Retail Channel provides incentives and promotions for efficient products to PSE's residential customers through agreements with retailers and manufacturers of energy efficient products – such as lamps, light fixtures, lighting controls, showerheads, electronics, and appliances to ensure that customers have access to a wide variety of efficient product options.

Residential Retail Program

This program collaborates with retailers and manufacturers of energy efficient products – such as lamps, light fixtures, lighting controls, showerheads, and appliances such as water heaters, clothes washers, refrigerators and freezers – to ensure that customers have access to a wide variety of efficient product options. The Retail Program provides incentives and promotions for efficient products to PSE's residential customers through agreements with retailers and manufacturers; PSE also provides field services to educate retail employees on our products, detail qualifying product, and ensure compliance with PSE agreements.

William and Kathy Brown of Yelm, who entered to win the Gladiator Chillerator when they attended the Rock the Bulb: The Re-Energize Tour light bulb exchange event held at the Yelm Goodwill in August.

2012 Continuous Improvement

Based upon PSE customer feedback and market research, PSE Staff initiated a full signage review that led to updating in-store retailer point-of-purchase (POP) signage. All POP within retail stores is updated and has been deployed throughout our PSE service territory.

The PSE team created messaging about choosing the right light to meet a customer's lifestyle and provided it on PSE.com for easy customer download.

The Retail Channel completed a retail store in-field review that created an in-field training document to help retail sales associates that touch PSE customers to sell energy-efficiency equipment that meets PSE's rebate programs. This document builds on the strategy that PSE energy-efficiency knowledge must extent to the individuals that touch PSE customers everyday so they are as knowledgeable as PSE staff. To accompany this piece, the team has led numerous trainings to retail sales associates and PSE internal staff.

2012 Accomplishments and Activities

At six Rock the Bulb exchange events, the third year of this campaign, over 84,000 energy-wasting incandescent bulbs were traded in for new energy-saving light bulbs. To raise the awareness of the local community's exchange events, our staff implemented 126 outreach events and went door-to-door to 21,500 homes to distribute nearly 75,000 engagement CFL bulbs to customers. For the first time, PSE was able to provide LED bulbs at two of the exchange events and greatly raise the awareness of this efficient product. We touched over 90,000 customers.

PSE launched the Re-Energize Your Community campaign, an innovative customer engagement and education campaign that ran for nine months (March to November). The campaign asked residential electric customers to make a pledge and take energy-saving action at home. Actions included changing their old incandescent light bulbs to ENERGY STAR CFLs, changing out their old showerhead for a resource efficient one, and recycling their old refrigerator or freezer. As an incentive and motivation to complete the actions, customers were offered a resource-efficient showerhead and/or a CFL bulb. Over 60,000 free ENERGY STAR CFL bulbs and 25,000 WaterSense showerheads were pledged through one-on-one interaction at community events and in PSE offices.

PSE continues three delivery models for showerheads that provides PSE customers expanded offerings in regards to styles, colors, and flow rates ranging from 1.5 to 2.0 gpm.

In 2012, PSE received several complimentary letters from lighting manufacturers. Among them:

*"If it wasn't for Puget Sound Energy's (PSE's) LED lighting program, (*company name*)'s business would not be what it is today. Since (*company name*) met PSE in May of 2012, we have been able to approach the retail strategy with new concepts and ideas that will help drive the company's success in the retail market place. …"*

*"(*Company name*)'s relationship with Puget Sound Energy (PSE) has shown to product desirable and lasting adoption of efficient lighting within the residential market, making them our most progressive and trusted partner. Whenever (*company name*) wants to implement a new concept, idea, or program, we come to PSE first. …"*

*"(*Company name*) has developed a unique model to effectively market LED light bulbs to consumers throughout the United States. … (*Company name*) would not have been able to create this national sales model without the innovative platform PSE made available to (*company name*). …"*

Delivery options include:

- Online e-tailer website where PSE customers purchase showerheads (and other energy efficiency measures) directly through a PSE branded website.
- Instant rebates offered through retail outlets.
- Engaging PSE customers with a low-flow showerhead when they pledge to install it in their home. This delivery gives PSE a personal touch where we are able to answer customer questions and engage in other energy-efficiency messages.

In late Quarter 4, 2011, PSE launched our successful Holiday Outreach pledge campaign. This engaged customers with a low-flow showerhead for pledging to install it within their home.

Due to the success of this campaign, PSE launched a similar campaign called “Re-Energize Your Community” in 2012. From March to November, PSE pledged over 25,000 WaterSense showerheads through one-on-one interactions at community events and in PSE offices. The demand for these efficient showerheads assisted in pushing our energy-savings for showerheads to 400 percent of the original electric goal, and a three-fold increase in gas savings, while only 60 percent above the original electric budget and a lower-than-planned spending on the gas showerhead program.

The Retail Channel expanded the marketing outreach to lower-income PSE customers of our refrigerator replacement program that generated over 2,000 units, at over 1.7 million kWh savings – a three-fold program participation increase from the previous year.

The refrigerator/freezer decommissioning launched three delivery options within 2012:

- Our standard direct-to-consumer option - the PSE customer calls directly to schedule their unit pick-up.
- A QuickLink option – at select retailers, the PSE customer is verified in-store and schedules their pick-up upon the purchase of their new unit.
- A mid-stream option – at limited retailers, the retailer is utilized for unit collection in which customers are enrolled “instantly.”

In 2012, PSE launched new delivery options and looked for new ways to market our residential appliance measures.

Some examples include, but are not limited to:

- Refrigerator and freezer decommissioning options directly at retailers.
- Marketing to lower income organizations such as food banks and thrift stores.
- Limited-time-offers that temporarily increased our rebate levels.
- Co-branding opportunities with retailers and manufacturers at events, stores, and on-line.
- Instant rebates at Sears and Home Depot.

The Retail Channel's focus on exceeding customer expectations results in several complimentary letters. Here are but a few:

"Dear Puget Sound Energy:
I want you to know you are a gift to my life!! I'm overwhelmed by the generosity of PSE. Lucky me—never thought I would be eligible to receive a new refrigerator free (and have my old one removed, too). Again, many thanks for the gift and an energy saver as well.
Sincerely,
*(*Customer name*)"*

"Just a Sincere Note of Gratitude From a Disabled Man That Has Never Been Treated Nicer. I Would Like To Thank Your Program for My New Refrigerator along With My Service Provider Puget Sound Energy. I Have Never Been Treated Nicer and to be Frank, Receiving Such a Nice Efficient Gift is Very Humbling... Programs Like This Make It So Much Nicer for Us Less Fortunate..But on a Day Like Today Feel "Very Fortunate" To Have People Like These to Make Us Feel Just That Much Better...God Bless All of You!"

Retail adoption of these delivery options lagged behind our expectations and all of our residential appliance measures were well below our original unit targets, and therefore well below our original savings plans. Our efforts still required similar PSE labor and marketing effort; thus, administrative costs remained constant, but since the savings didn't materialize, the expenditures appear disproportionately more than the savings.

For 2012, PSE transitioned the LED instant discount program from a pilot to a program. Increased retail market adoption of light emitting diode (LED) replacement lamps by partnering with retailers and manufacturers with innovative limited-time offers that would make LEDs engaging and exciting to our customers.

Some sample key offers and innovative promotions are listed below:

- Philips, Lutron, Home Depot: Purchase 3 Philips 8w LED and a Lutron Occupancy sensor and receive $46.00 in discounts
- Philips, Home Depot: Purchase any 3 Philips AmbientLED and receive an additional $25.00 (total $40.00) in discounts
- Greenlite, Lowe's: LED 2-pack for $5.98 after $20.00 instant discount

Greenlite, McLendon Hardware: LED 2-pack for $5.98 after $20.00 instant discount

Key offers and innovative promotions, continued:

- Zenaro Lighting, Walgreens: LED 2-pack for $5.98 after $20.00 instant discount
- Insignia, Best Buy: Purchase Insignia LEDs for $3.99 and $6.99 after $10.00 PSE instant discounts
- Feit, Costco: Receive $10.00 instant discounts on eligible LEDs

Energy Efficiency's Retail Channel recognized several of their community and retail partners with Energy Efficient Partner awards at presentations on Safeco Field during Seattle Mariners home games this summer.

Recipients of this award include:

- Haggen Food and Fred Meyer stores for their efforts to provide PSE customers with top quality efficient lighting choices.

- Batdorf & Bronson Coffee Roasters in Olympia for their sustainability efforts. B&B incorporate sustainability into all of their business decisions, including their purchase of 100% Green Power from PSE, completing an energy efficiency lighting upgrade, and providing CFL recycling for their employees.

- Ecolights Northwest of Seattle and the Community Food Co-op of Bellingham were recognized for their significant contribution toward energy efficient lighting, their involvement in the business CFL recycling program and their support of the Rock the Bulb campaign, Ecolights and Community Food Co-op have been valued partners of PSE in saving energy and helping the environment.

- Jaco Environmental for their significant contribution toward the recycling of inefficient appliances. Jaco has been a longtime valued partner with PSE in saving energy through their refrigerator decommissioning program.

RE-ENERGIZE Your Lighting events, where customers can purchase ENERGY STAR® lighting products and low-flow showerheads at deeply discounted prices have been staged in nearly 60 public and private venues in our electric service territories. Businesses and municipalities have offered this opportunity to purchase energy efficient products to their employees to raise awareness about the features and benefits of energy-efficiency.

Products available for purchase include; CFLs, LEDs, and water-saving showerheads. We don't stop there: every customer purchase includes additional information about all of PSE's energy-efficiency programs.

Keeping in mind that PSE employees who engage our customers at various touch points will enhance the customer experience if they are better informed of our efficiency programs, several PSE facilities have also hosted this very popular event to encourage PSE employees to experience the benefits of these products, including these:

- Bellevue Campus
- Bellingham Business Office
- Factoria Service Center
- Olympia Business Office
- Skagit Service Center

We encourage our customers to take part in “Bring Your Bulb to Work” day and every day. To support this effort, PSE rolled out a newly designed CFL and incandescent bulb recycling box. The new recycling box is large enough to hold nearly 200 bulbs -- either CFLs or incandescent. Each bulb is recycled into the following components: metal, plastic, glass and mercury phosphor powder. Although CFL bulbs are safe to use at home, they do contain a trace amount of mercury and cannot be thrown away in household garbage or recycling bins. The new recycling boxes are located in about 350 businesses in our community, including all PSE offices, City Halls and Chambers of Commerce.

PSE continues to provide our Home Energy Report program to nearly 24,000 PSE customers. In addition, we continue to track and learn from the 10,000 customers who were part of the program up until 2011 and then removed from the program. Savings from both the 24,000 continuing customers and 10,000 removed customers will be adjusted as part of a “true-up”, based upon survey findings due in the spring of 2013. PSE continues to seek an understanding to the actions of participants and non-participants in the customer surveys. Our continued evaluation of original participants provides PSE with one of the most thoroughly evaluated demand side management programs in the country.

The Home Energy Report annual program cycle was running October through September with first payment of each cycle due 60 days prior to program start. PSE paid roughly two thirds of the 2012 program costs in October of 2011 with the remaining one third paid April 2012. Thus, expenditures appear to be disproportionate to savings achieved. Recently, there was a restructuring of future payment schedules to run from January through December to match up with the evaluation cycle.

Table 6d provides an overview of Retail Channel measures reported in 2012 by measure types. It is important to note that these figures are intended to convey the scale and scope of measure types reported in this channel, rather than to provide the precise number of measures installed.

Table 6d: Overview of 2012 Retail Channel Measure Activity

Category	Measure Type	Electric	Gas
Appliances			
	Clothes Washers	16,600	
	Refrigerator Replacement	2,300	
	New Refrigerators	2,100	
	Refrigerator/Freezer Decommissioning	8,100	
Water Heat			
	Showerheads	32,800	29,400
Lighting			
	CFL Bulbs	4,441,000	
	CFL Fixtures	38,200	
	LED Bulbs	209,200	
	LED Fixtures	26,100	

Figures are in units, unless otherwise specified in description

The Dealer Channel's Staff actively manage their programs using forecasting, data analyses, and relationships with key market actors to proactively meet customer needs and ensure market trends are adaptively managed. Its target market constituency consists primarily of resellers and contractors that sell, install and service HVAC systems, water heating systems, windows, insulation, and energy assessments. The Dealer Channel operates primarily within the structure of Schedule 214; Single Family Existing. Programs within this channel are delivered to customers mostly through contractors.

HomePrint™

HomePrint Assessments provide customers with a free in-home service performed by a PSE qualified independent HomePrint Specialist. The program is intended to increase the awareness of customers regarding their home's energy consumption and identify cost-effective ways to use less energy. Additionally, customers benefit from instant energy savings from the direct installation of compact fluorescent light bulbs.

HomePrint 2012 Continuous Improvements

The HomePrint Assessment program launched a new web-based contractor tool in February 2012 to streamline data collection and reporting processes. Authorized Specialists are able to utilize the tool to qualify customer eligibility prior to scheduling an appointment. Once in the home, the Specialist can log all required field data, including the number of direct install measures provided, secure the customer's electronic signature, and submit all data to PSE for measure savings and incentive processing. This final step delivers a dynamic report of the assessment findings to the customer outlining a summary of energy-saving recommendations, plus information on: PSE energy-efficient product rebates, Contractor Alliance Network referrals and other helpful energy efficiency tips.

Customer Solutions' commitment to a positive customer experience of our energy-efficiency offerings extends to our partner and contractor expectations. From a satisfied PSE customer:

"I was very pleased at how soon the assessment was made. The specialist was courteous, and it was a surprise to receive the light bulbs. Thank you PSE!!!"

The new report is of significant benefit to the HomePrint customer because it provides them with an electronic "to-do-list" that they can reference at their discretion as they decide which actions to take in enhancing the efficiency of their home.

Weatherization

The weatherization program oversees the "shell" of residential structures; installation of windows, insulation, air and duct sealing. There are a wide variety of duct sealing offerings, some directed specifically to mobile homes, while other focus on site-built residences.

PSE customer Stacia Harper took advantage of the Dealer Channel's Manufactured Home Duct Sealing program. Stacia said that her usage has dropped so much that "I did not need any help with paying (the electric bill) this year. I cannot thank the program and its people enough for being there for me."

Weatherization 2012 Continuous Improvement

In Q1 of 2012 the Weatherization program launched a revised duct sealing measure in response to an impact evaluation conducted in 2011.[40] The evaluation indicated a higher instance of duct insulation and duct sealing being install together and that this was a more accepted application by contactors. This measure now incorporates both duct sealing and duct insulation into one measure. Additionally, the rebate was adjusted to cover 50 percent of the measure cost up to $500, instead of it being offered as a free measure. This adjustment resulted in some reduction in jobs completed while contractor training and new processes were put in place, but the market responded well to the adjustment.

In Q3 of 2012 a comprehensive whole-house air sealing measure was launched in collaboration with several Community Energy Efficiency Program (CEEP) funded organizations in an effort to leverage existing QA processes to fine tune delivery methodology prior to wider application to both electric and gas heated homes in 2013.

Additionally, PSE augmented its manufactured home duct sealing program by leveraging over $1 million in state funds through Washington State University (WSU) CEEP grant extension which reduced the program cost to PSE ratepayers

Space and Water Heating

The Space and Water Heating program provides measures and services related to a variety of water heating elements, such as water heaters, and various HVAC measures, such as heat pumps.

[40] Impact and Process Evaluation of Puget Sound Energy's Duct Sealing & Repair Program.

Space and Water Heat 2012 Continuous Improvement

There were several revisions to both the electric and gas space heating programs in 2012.

For gas space heat, a new integrated space & water heating measure was added to account for new technology in the market. The efficiency requirement and incentive for the gas furnace measure were increased. Finally, the gas fireplace measure was fully implemented as a rebate in 2012; this measure exceeded its forecast.

On the electric side, the electric heat pump sizing/lockout measure was fully implemented in 2012resulting from a successful application in 2011. Additionally, a new Tier 3 heat pump measure was added in Q1 2012.

2012 Dealer Channel Accomplishments

In order for PSE to truly leverage its trade ally relationships to provide exceptional customer service, while keeping energy efficiency top of mind, a more structured engagement strategy was needed. The second quarter of 2012 was identified as the ideal time for PSE to deploy a new strategy to; maximize customer satisfaction, optimize operations, minimize risks, streamline relationship with our trade allies, broaden energy efficiency awareness, and reduce costs.

PSE designed the Contractor Alliance Network program to provide coordination and leadership for effective and efficient management of all utility resources and to focus on energy efficiency and customer service through improved trade ally engagement, education, and quality.

This was accomplished by expanding the PSE pre-qualified trade partner network, streamlining management processes, improving training, implementing a performance management protocol, updating online tools and reporting mechanisms, and finally by expanding cooperative marketing opportunities.

Additionally, a new customer complaint process was developed and implemented in association to the Contractor Alliance Network to ensure consistent communication and resolution with our customers while standardizing rules of engagement with our contractors. This was accomplished with the implementation of a resolution checklist to which contractors must adhere in order to stay active within the Contractor Alliance Network.

The HomePrint online reporting and customer engagement system expenditures, including IT configuration and licensing costs, were amortized over the 2012-2013 budget cycle. Upon implementation of the new system in Q1 of 2012, the actual payment schedule resulted in higher first-year costs and an apparent disproportionately higher per unit cost in 2012. Additionally, lamp expenditures in 2012 included approximately 13,000 lamps, at a cost of roughly $40,000. As a result of invoice payment processes, a small number of lamps were installed in late 2011.[41] The majority were installed in 2012, while a small number may be installed in 2013. The savings associated to these installations are reported in the applicable year. Consequently, 2013 costs will be commensurately lower, as compared with the budgeted spending.

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

The new Tier 3 heat pump measure outpaced projections thanks to an engaged market place, the electric heat pump sizing/lockout measure far exceeded forecasted units, and the efficient fireplace measure exceeded its 2012 goal. Finally, the ductless heat pump measure continued to exceed forecasts, which is a good indication that customers are becoming more aware of the technology.

Despite a slow introduction of the integrated space & water heating measure to the market, and due to need for additional training and communication to the installation market, there was a marketable increase in applications for these measures during the heating season.

Even considering some advances—as is the case with the Weatherization program—these programs were also affected by the absence of Federal tax credits along with other fluctuations to market conditions. The resulting lower than normal participation levels have been realized specifically in our gas space heat and electric water heat rebate programs.

The wholesale cost of fiberglass, foam, and cellulose insulation products increased throughout 2012, resulting in higher than anticipated actual measure costs. Three thousand carbon monoxide alarms were purchased in Q4 of 2012, at a cost of $131,000, to ensure adequate inventory was available to our trade allies in the field in Q1 of 2013.

[41] HomePrint contractors are provided an inventory of lamps to install during assessments. These lamps are reported at the completion of the assessment to ensure savings accuracy. In a small number of cases, lamps that are ordered at year-end may be received and disbursed prior to PSE receiving the invoice from the manufacturer. Thus, a December 2011 invoice may not be paid until January 2012.

Carbon monoxide alarms are installed as a safety measure when insulation is being installed in gas weatherization projects as a Direct Benefit to Customer (DBtC), which is included in the "incentives" cost element budget grouping in Exhibit 1, Supplement 1. The majority of these units will be installed in 2013 when the associated benefits will be realized.

Table 6e represents the measures, grouped by types that were reported in 2012. It is important to note that the figures are intended to convey a sense of scale and scope of project activity, rather than to provide an audit tool.

Table 6e: Overview of 2012 Dealer Channel Measure Activity

Group	Measure Type	Electric	Gas
Mobile Home			
	Duct Sealing	3,900	500
	Showerheads	3,900	400
	CFL Lamps	34,000	
HomePrint			
	Water Heater Turn-down		
	Showerheads	500	
	CFL Lamps	75,900	
Space/Water Heat			
	Water Heaters	370	50
	Furnaces		3,750
	Boilers		50
	Waste Heat Recovery	1	
	Heat Pumps	3,400	
	Fireplace		650
	DI Showerhead	200	
Weatherization			
	Attic Insulation (SqFt)	362,100	1,752,500
	Wall Insulation (SqFt)	53,300	484,000
	Floor Insulation (SqFt)	468,500	1,904,500
	Duct Insulation	60	600
	Prescriptive Duct Sealing and Insulation	200	3,400
	Duct Sealing (QA)	60	600
	Windows (SqFt)	98,300	

Figures are in units, unless otherwise designated in the description

Single Family Fuel Conversion

Schedule E216

This program discussion is presented out of Schedule-number sequence. This is because it is managed within the Dealer Channel. Presenting it in numeric sequence would also interrupt the program sequence of the Residential Business-to-Business (RB2B), which also includes the Single Family New Construction program, Schedule E/G 215.

Description

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[42] 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 are foundational to the success of this program.

2012 Continuous Improvement

There were no direct program revisions to the Fuel Conversion program during 2012. However with the implementation of the Contractor Alliance Network program customers were able to receive instant rebates associated to these measures, reducing the upfront cost identified as a key barrier to customers taking advantage of this program.

[42] As outlined in the Company's Schedule 216, **Section 1, Availability/Eligibility**, the equipment to which the Customer is converting must be "highly efficient natural gas space and/or domestic water heating…"

2012 Accomplishments and Activities

The Dealer Channel endeavors to incorporate fuel conversion messaging and promotion in conjunction with other outreach activities. HVAC contractors have embraced the program since it was introduced. The majority of the savings for the program continue to come from electric to gas water heater conversions. This is due to the ease of converting water heaters when there is already gas service to the house.

In Q2 of 2012 PSE developed a joint awareness campaign with a third-party implementer that focuses on customer safety while communicating the benefits of the conversion program to potential electric water heating customers that have natural gas service. Results continue to be lower than planned due to macroeconomic, local municipal charges (jurisdictional permitting processes, construction design issues), and other first-cost issues. Table 6f illustrates a summary of measure types installed in the Single Family Fuel Conversion program during 2012.

Table 6f: Key Fuel Conversion Activities

Measure Categories	Electric
Space and Water Heat	50
Water Heat Only	180
Space Heat Only	20

Single Family, New Construction

Schedule E215, G215

Description

Similar to PSE's Single Family Existing program, rebates and incentives are offered to eligible natural gas and electric PSE Single Family New Construction developers, contractors, trade allies and customers (cumulatively, the Program refers to these as "partners") who are constructing new single family residential structures (consisting of two units or less). Customer Solutions works with these partners to market energy efficient equipment to their customers. Customer Solutions encourages the purchase and installation of energy efficient products for their construction projects.

Incentives include a variety of end-use classifications, not limited to:

- Lighting: Compact Fluorescent Lighting including ENERGY STAR® CFL fixtures
- Appliances: Clothes washers, refrigerators,
- Whole House Ventilation,
- HVAC equipment upgrades,
- Northwest ENERGY STAR Homes incentive bonus
- Manufactured homes: ENERGY STAR® or EcoRated Manufactured homes, which is unique to this program.

For all of the conservation measures installed, the program receives measure installation data directly from builders, developers, showrooms and distributors. It is therefore possible to precisely track measure details.

2012 Continuous Improvement

This was the full first year of offering the Advanced Lighting Package to builders through participating lighting showrooms. Unique to this is that contractors receive an instant buy-down at the showroom when purchasing light fixtures. This reduces incentive submissions from the builders and the showrooms report sales monthly. This has resulted in increased builder participation.

The new construction team refined the Advanced Lighting Package to include LED fixtures along with CFL fixtures. This allowed builders install 100 percent energy efficient lighting, including LED dimmable fixtures.

New Construction staff collaborated with Customer Construction Services to provide energy efficiency program information when builders initially contact PSE for service to their new construction sites.

The Single-Family New Construction program added incentives for the following measures in 2012:

- ENERGY STAR® Ductless Mini-Split Heat Pump
- ENERGY STAR® Heat Pump Water Heater

As a result of new avoided cost figures for natural gas, the following program measures were deemed to be no longer cost effective and were therefore retired in 2012:

- ENERGY STAR® gas storage water heater
- ENERGY STAR® tankless water heater
- Duct Sealing with Performance Testing
- Ducts Inside the Conditioned Space

2012 Accomplishments and Activities

The program on-boarded 7 of the region's top 10 builders in our Advanced Lighting Package (ALP 80) program for 100% of their new home starts. This resulted in the installation of at least 80% ENERGY STAR® fixtures in over 1,700 new construction homes.

Program Staff collaborated with Northwest ENERGY STAR® Homes on the development and launch of Version 3, as well as their new creative branding concept.

The single family new construction program coordinator was invited to join the Built Green Executive Committee for King/Snohomish County. This is the steering committee that develops stringent builder guidelines to meet the Built Green energy efficiency and green development standards. The committee developed a statewide builder checklist that all builders design to. They also developed and implemented the Z-Star standard that is net zero energy use. This includes renewable and solar technologies. Table 6g represents a summary of measures, grouped by type, reported in 2012.

Table 6g: Single Family New Construction 2012 Measure Summary

Measure Categories	Electric	Gas
Whole House Fan	600	
Furnace		10
Refrigerator	50	
Clothes Washers	80	
CFL Fixtures	26,400	
Heat Pumps (Air Source and Ductless)	80	
Manufactured Homes	10	

Multifamily Existing

Schedule E217, G217

Description

The Multi-Family Retrofit Program is designed to increase the installation of selected energy efficient Measures in existing, multifamily buildings with five or more attached residential dwelling units located in PSE's electric and natural gas service areas. The team works with property owners, managers, contractor's trade allies and tenants to encourage these installations. The program also serves multifamily campuses that have a mixture of building types including buildings with less than five units. Multifamily structures and campuses typically have opportunities for upgrades in common areas, building envelope and in the units. Measures include window and insulation upgrades, appliance, lighting, HVAC and water heating upgrades and calculated commercial upgrades including boilers and solar pool heaters. This program targets installation of energy efficient measures occurring during planned retrofit and replace upon failure. PSE will update current measures list and incentives as needed.

PSE's Common Area Lighting Program works with multifamily or condominium owners to provide energy-efficient lighting options that benefit the property and its tenants. This program is designed to help small and large property owners manage energy costs and maintain a competitive edge.

FROM A CUSTOMER:

"As a property manager, managing an asset for an owner, your primary function is to make wise decisions that enhance the owner's equity and financial position. Having PSE make saving money on energy costs so appealing through their rebate is incredible. Now there is monetary incentive, upfront, to put in place systems that will likely pay for it themselves in the long run anyway. That's in addition to the clear environmental and therefore marketing advantages to a program such as this, which while they aren't as compelling as the direct financial gains, are certainly something to consider."

Sam Mullen, Property Manager

Villaggio at Yarrow Bay

2012 Accomplishments and Activities

Customer interest level in LED's is very high. LED lamps and Smart Power Strips were added to the Direct Install program in July 2012. Staff also made new contacts at TRENDS, the rental housing management conference and trade show. This conference brings together property owners, managers, maintenance staff and utilities together for a one day conference and trade show that highlights energy efficiency and property maintenance. The PSE team initiated an "energy efficient & green tradeshow team" that resulted in over 80 audits of properties in our service area.

At the PSE booth, PSE offered sample Direct Install kits to customers that included products that we directly installed in multifamily customers units. Property owners received samples of LED bulbs, water heater pipe wrap, a shower head and CFL bulbs that PSE directly installs in their tenants units. This helps owners to decide to participate by trying the products for themselves

The multifamily team entered into a contract with Arrow Insulation® to air seal multifamily buildings. This is a unique application in that we are testing entire buildings before and after air sealing the buildings to measure air leakage reduction and energy savings. PSE is the first utility to offer air sealing to its customers and the data collected will be used to further study this application.

There are two key drivers that led to Multifamily Existing exceeding savings targets:

1. Contractor-driven insulation sales (particularly Attic Insulation R11-R38 totaling nearly 4 million kWh). Between the program's top-performing contractor (Green Property Solutions) ability to take on more projects with larger crews coupled with a new out-of-state contractor (Energy Masters) with pre-existing portfolio level relationships, several high volume projects closed in 2012.

2. Realized refrigerator replacement market potential greater than originally anticipated. This was a new measure for the Multifamily Existing program and it was difficult to forecast the potential for pre-1993 refrigerators in MF properties. The initial goal was set for 1,000 units, but the actual installed units in 2012 was over 4,000; an increase of 2.8 million kWh.

Table 6h provides a general overview of measure categories reported in the Multifamily Existing program in 2012. For this discussion, these figures are intended to provide a perspective of the scale and scope of Multifamily Existing activity, rather than a precise count of every measure installed.

Table 6h: Multifamily Existing 2012 Savings

Measure Categories	Electric	Gas
Calculated (Projects)	2	10
Hot Water Pipewrap	10,600	
Attic Insulation (SqFt)	3,126,000	73,300
Floor Insulation (SqFt)	844,900	10,100
Wall Insulation (SqFt)	29,800	
Windows (SqFt)	197,200	51,900
Common Area Lighting (projects)	70	
CFL Fixtures	1,200	
CFL Lamps	145,400	
LED Lamps	4,400	
Showerheads	8,700	1,500
Refrigerators	30	
Refrigerator Replacements	4,200	
Smart Power Strips	9,700	
Ventialtion Fans	1	
Water Heaters (in unit)	1	
Pool Heat Pump (projects)	3	
Air Sealing (SqFt)	91,900	
Air Sealing with Insulation (SqFt)	138,100	

Figures are in units unless otherwise designated in the descriptions

Multifamily New Construction

Schedule E218/G218

Description

PSE's Multifamily New Construction program increases the installation of energy efficient measures into new electric & gas heated multifamily (MF) buildings constructed in the PSE service territory. High efficiency measures need to be specified and installed during design and construction. Otherwise, it may be up to 30 years before energy efficient changes to the buildings will take place.

This program targets structures with three or more residential units per building, per Washington State Energy Code 2009 Edition (effective January 1, 2011). These structures typically have both in-unit and common area energy-savings opportunities. These include, but are not limited to, energy efficient upgrades to building shell, appliances, lighting, HVAC and water heating systems.

Eligible customers include an owner, developer, or agent acting on behalf of responsible party of service receiving electricity or natural gas through PSE. This program provides financial incentives to the above audience for both natural gas and electric residential and commercial meters. The incentives offered are both prescriptive and calculated.

2012 Continuous Improvement

As a result of reductions in the avoided cost of natural gas, incentives for domestic hot water heating systems, condensing boilers and condensing water heaters were retired and replaced with a project by project custom analysis review. This allows PSE a greater level of flexibility to calculate energy efficiency measures and provide incentives.

The program coordinated with Construction Customer Services (CCS) to cross reference program information. This informs multifamily developers about energy efficiency programs when they apply for electric or gas service, if they are not already aware of these services to their project site.

2012 Accomplishments and Activities

Nearly 2,900 housing units were awarded financial incentives through this program. Almost 800 units were reviewed but did not meet program cost-effectiveness thresholds. Approximately 3,600 units within the program year are nearly 72 percent of the entire market region potential.

Notable program projects completed in 2012 include affordable housing projects by Bremerton Housing Authority, Housing Authority of Thurston County, King County Housing Authority, Catholic Housing Services, Compass Housing, and Capitol Hill Housing.

In October PSE hosted the Northwest Energy Efficiency Coalition building enclosure and energy code education training classes. These classes train architects, builders and contractors on design and implementation of the new energy codes.

Table 6i provides a general overview of measure categories reported in the Multifamily New Construction program in 2012. For this discussion, these figures are intended to provide a perspective of the scale and scope of Multifamily Retrofit activity, rather than a precise count of every measure installed.

Here are a few comments from satisfied Multifamily New Construction customers (any names have been removed to protect privacy).

"Thanks (program manager name) *for everything, we appreciated your professionalism, excellent service and quick response to our application.*

We are looking forward working with you on our next 200 multifamily units in Olympia, which we are planning to start soon. We will stay in touch with you as soon we break ground."

And…

(The overall experience was) "Very good. PSE was positive and worked with us to maximize the rebate we could receive."

*"(*The MFNC program manager*) was pleasant and helpful. I look forward to working with him in the future."*

*"(*The MFNC program manager*) had good response to questions and clarification."*

Table 6i: Multifamily New Construction 2012 Measure Summary

Measure Categories	Electric	Gas
Refrigerators	790	
Clothes Washers	260	
Windows (SqFt)	8,300	
Garage CO DCV w/ VFD fan control	20	
CFL Fixtures	7,100	
Corridor Lighting Reductions (SqFt)	619,900	
Stairwell Bi-level Lighting	90	
Garage Lighing Reduction (SqFt)	1,252,800	
Showerheads	200	1,700
Air-to-Air Heat Pumps (SqFt)	1,000	
Ductless Heat Pumps	50	
Fuel Switch (Projects)	1	
Boiler - Heating (Projects)		10
Boiler - Water Head (Projects)		10
Heat Recovery (SqFt)		89,200

Pilots

Schedule E249

Description

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. In compliance with condition (7)(d), pilots will only claim energy savings that achieve energy savings sufficient to demonstrate cost effectiveness by passing the TRC test.

There were no pilot programs implemented by REM in 2012. Former pilots, such as energy-efficient fireplaces and LED lamps & fixtures were converted into full programs in 2012.

BUSINESS SECTOR OVERVIEW

Readers will find that Customer Solutions uses the term "Business" and "Commercial/Industrial (C/I)" interchangeably within this and following sections of the report. As the Customer Solutions suite of offerings evolve and become more sophisticated, we constantly review the focus of the sector. We determined that there are many more business classifications other than "Commercial" and "Industrial". Hence, the evolution of the sector name to that of "Business Sector".

Customer Base

The Business Sector serves a diverse set of clientele. Our programs serve small, medium and large commercial customers; industrial facilities and industrial processes; government entities such as school districts, municipal and county buildings, utilities such as water and sewer treatment plants, state and federal buildings and military bases. Our programs also serve agricultural customers such as farms, food storage and food processing.

Types of Incentives, Measures and Services

The Business Sector exerts significant effort in developing and maintaining programs that serve all classes of business customers. We monitor the participation and energy management needs of all customer categories and modify programs as required to ensure attractive program offerings are available to all business customers. PSE has incentives for efficiency improvements for both existing and new buildings and equipment. Prescriptive rebates are used for small lighting projects, kitchen equipment, heating/cooling equipment, etc. Other prescriptive incentives are available for more complex projects such as tune-ups of existing buildings. Custom grants are used for large lighting projects and complicated projects such as HVAC modifications, heat recovery, process improvements, boiler upgrades and replacements, whole-building new construction, etc.

PSE's services also include training and education for contractors and customers. For example we train contractors to make effective use of our programs; we sponsor workshops, conferences and provide incentives for customers to attend regional training programs such as Building Operator Certification. Our staff often give presentations at local conferences and events to educate and encourage participation in our energy efficiency programs. Resource Conservation Managers have individual and group training opportunities to improve their skills and to share their knowledge with others. Other types of support include Energy Interval Service, utility tracking software, analysis tools, etc.

Who We Work With

PSE works directly with the following entities to promote and deliver business efficiency programs, as well as to solicit feedback regarding the effectiveness of programs in fulfilling customer needs and to seek guidance in program structure and design:

- Customers
- Contractors
- Other Service Providers (e.g. direct-installers, RFP contractors)
- Design Professionals and Consultants
- NEEA; Other Utilities; Local & Regional Organizations
- Professional and Trade Associations (e.g. AEE, ASHRAE, BOMA, AIA, WAMOA)

Our Organization and Staff

The Business Sector is comprised of 48 engineers, managers, analysts and accomplished professionals, who participate in large construction project engineering, collaborate with contractors and vendors and exceed our customers' expectations throughout the vast PSE service territory. The Business Sector organization consists of three engineering teams that focus on custom grants; a commercial rebates team, a building performance team, and program support staff.

Employees in the Business Sector hold over 60 relevant professional licenses and certifications including 11 licensed Professional Engineers, 21 Certified Energy Managers, 6 Certified Lighting Efficiency Professionals, and 8 LEED Accredited Professionals. During 2012, 17 new certifications were obtained by Business Sector staff as they continued their professional development and worked to remain current in energy analysis, engineering, facilities management and lighting design.

The engineering teams, led by three supervising engineers, are responsible for administering custom grants and managing sector-specific programs such as Energy Smart Grocer, Data Center Energy Efficiency Program, Industrial Systems Optimization Program, and the Large Power User Self-Directed Program. All engineers work on a diverse mix of projects to broaden skills and promote professional development.

The commercial rebates team, led by a market manager, consists of a mix of engineers, program managers, coordinators, and an implementer to deliver prescriptive rebates and programs. A business analyst and administrative specialist process commercial rebates and track rebate projects and participation.

The building performance team, led by a supervising engineer, consists of program managers, applications analysts and engineers to support customers with operational and behavioral improvements for energy efficiency at their facilities. This team is responsible for delivery of the Resource Conservation Management (RCM) program and the Building Energy Optimization Program (BEOP).

Business support staff consists of a business analyst and administrative specialists responsible for issuing and tracking grant contracts and maintaining procedures to ensure accurate tracking and reporting of business sector incentive payments and energy savings.

In 2012 a program manager position was added as a direct report to the manager of the Business Sector. This position is responsible for program reporting, documentation and special projects focusing on process improvement.

The Business Sector teams deliver programs through the following primary channels:

- Contractors (Lighting, Mechanical, Design-Build, Performance Contractors)
- Design Professionals (Architects, Mechanical Engineers, Electrical Engineers)
- Product Distributors
- Resource Conservation Managers (RCMs)
- Commissioning Agents
- Contracted Third Party Program Providers (Energy Smart Grocer, Data Center Energy Efficiency Program, Industrial System Optimization Program, Simplified Building Tune-Up, Small Business Direct Install, Premium HVAC Service, Pre-Rinse Spray Head & Aerator Direct Install)

Geographical coverage: To enhance customer service and facilitate delivery through channels mentioned above across PSE's service area, members of the engineering teams and commercial rebate team are positioned in multiple PSE offices located in Bellingham, Bothell, Bellevue, Bremerton, Kent, and Olympia.

Figure 7a provides a summary view of Business Energy Management's organizational structure as it relates to program delivery and trade ally relations. It illustrates the primary customer sectors served, measure delivery channels and incentive types.

Figure 7a: Business Sector Organizational Structure

Service Delivery			
Trade Allies			Customer Direct
Contractors	Design Professionals	Product Distributors	Many services are provided directly to customers
Lighting Mechanical Design-Build Performance Contractors Contracted Direct-Install Programs	Architects Engineers	Distributors Resellers, Retailers	Communities, Counties, State/Fed Govt Property owners, Leasors, Business owners Third-party providers

Schedule	Program	Responsible Business Group			
E250, G205	Commercial/Industrial Retrofit	Engineering Teams Building Performance Team	Engineering Teams Building Performance Team		Engineering Teams
E251/G251	Commercial/Industrial New Construction	Engineering Teams Building Performance Team Commercial Rebate Team	Engineering Teams Building Performance Team		Engineering Teams
E253, G208	Resource Conservation Manager				Building Performance Team
E255	Small Business Lighting	Commercial Rebate Team			Commercial Rebate Team
E258	Large Power Users/Self-Directed				Engineering Teams
E262/G262	Commercial Rebates	Commercial Rebate Team		Commercial Rebate Team	Commercial Rebate Team

Value to Customers and Trade Allies

PSE provides direct incentives to customers in the form of rebates, grants and direct-installation of equipment. Customers also receive indirect incentives such as point-of-sale discounts. In addition to financial incentives, customers receive services such as training & education, Energy Interval Service and other services, including expert on-site advice, etc. Contractors, design professionals and other trade allies can boost their business and knowledge in the application of energy efficient technologies through PSE's programs.

Program and Services Development

PSE strives to enhance and refine its programs to achieve annual goals in a cost effective manner. It is imperative that our customers, contractors and vendors—who provide efficient equipment and services—find our services worthwhile and our participation requirements well-defined and easy to navigate.

Upon completion of custom grant projects and delivery of many prescriptive rebate payments, customers are provided a Project Evaluation Form requesting feedback on the service provided by PSE, suitability of efficiency programs to specific project needs, and recommendations for program modifications and changes. Energy Management Engineers receive customer service scores from the evaluations, which are tied to annual performance appraisals to encourage excellent customer service.

We gain insights and high level guidance for our programs from our Integrated Resource Plan, but program design and implementation is where "the rubber meets the road," where offerings and delivery mechanisms are aligned with customer needs.

Continuous Improvement

The Business Energy Management team exerts significant effort to work out program details and anticipate issues or barriers pertaining to participation before a program is launched to the public, and continues to modify and adjust programs based on input from participants and lessons learned from completed projects.

We rely heavily on support from others who are experts in the field when designing new programs or modifying existing programs. We value suggestions from our customers and trade allies because they are most directly involved in the process. We also rely on the experience of other utilities and players in the energy efficiency field. Furthermore, our programs are evaluated by third party evaluators who make recommendations for program improvements. After launching a program, we constantly look for ways to improve it, simplify it, make it more user-friendly and adjust it as needed to respond to changing market conditions.

To keep informed of the latest technologies, we make use of extensive regional and national information resources to help enhance and refine our program offerings; (e.g. NPCC, Regional Technical Forum, NEEA Energy Efficiency Technology Roadmap, BPA's E3T/HVAC Technical Advisory Group, WSU Energy Program, Emerging Technologies Coordinating Council, various National Labs, Department of Energy, CEE, ACEEE, AEE, ASHRAE) We also make use of our Energy Efficient Technology Evaluation tariff as needed to research specific technologies or new applications that show significant potential.

The "oversight" function is important in order to assure that our programs continue to stay on track, achieve our goals and do it cost effectively. PSE's Evaluation staff reviews our savings, delivery methods, measure costs and program cost effectiveness. It assures accurate reporting of our results and helps to improve our processes.

The Conservation Resource Advisory Group (CRAG) also provides valuable guidance and advice regarding our programs.

Five-Year Trends

As illustrated in Figure 7b, the five-year trends indicate an average annual increase in electric savings of 14.8 percent and an overall 59 percent increase from 2008 to 2012. Figure 7c illustrates an average annual increase in gas savings of 12.8 percent and an overall 51 percent from 2008 to 2012.

Figure 7b: Business Sector Five-year Electric Savings (MWh) and Expenses

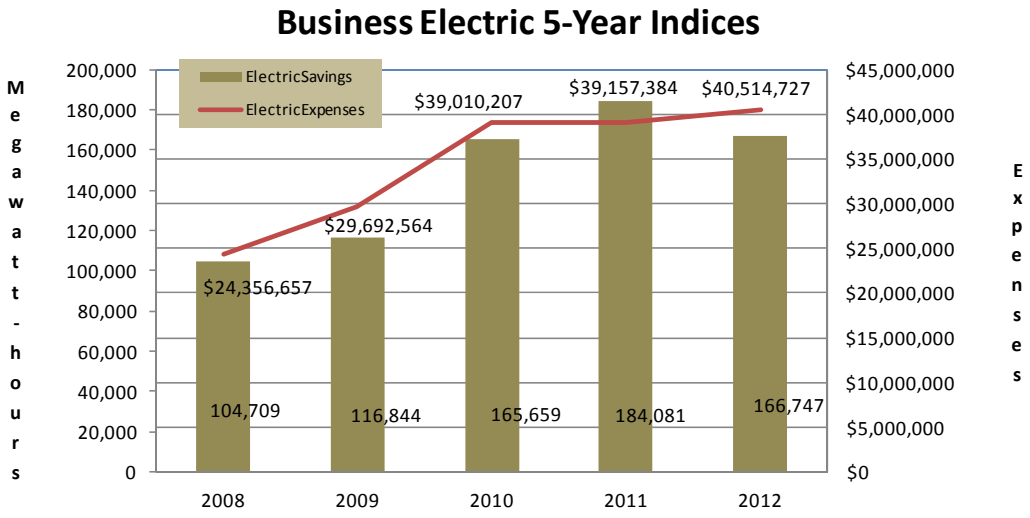
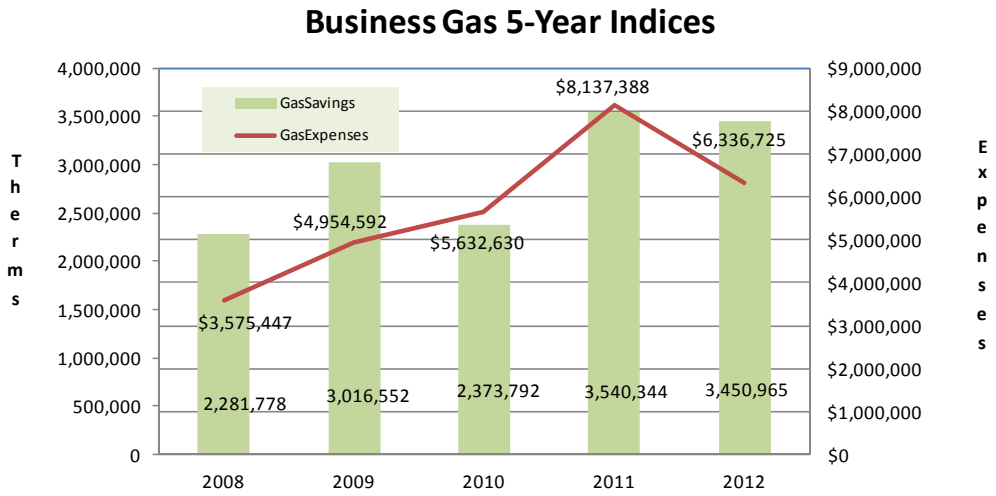


Figure 7c: Business Sector Five-year Gas Savings (Therms) and Expenses



2012 Summary

Electric Programs

The Business Energy Management team focused on enhancing customer satisfaction in 2012 through expanded program offerings and greater customer support efforts. New programs delivered by third-party contractors focused attention on market segments with significant savings potential but historically lower participation rates. By providing customers in these sectors with direct support for project development, we observed greater willingness to adapt energy management practices and install energy efficiency measures. Success stories range from small business customers receiving site assessments and electing to have measures installed through the Small Business Direct Install Program to large data centers realizing energy usage can be significantly reduced without risking server reliability when participating in the Data Center Energy Efficiency Program.

In addition to leveraging technical expertise through third party programs, in-house staff focused on improving the customer experience by developing project case studies and new program materials to encourage greater participation and more-comprehensive projects. Case studies were published to provide real-world examples of energy efficiency projects that created a more profitable business, a better customer perception of energy efficiency and produced a more comfortable working environment. The new case studies have been used as flyers and event displays, posted online at PSE.com, and have assisted trade allies in gaining customer confidence in PSE programs. New program materials, such as an improved Small Business Lighting Rebate application released mid-year, have encouraged thoroughness in analysis of efficiency measures and more comprehensive project proposals.

Throughout 2012, Business Energy Management continued its focus on making process improvements. Database systems were enhanced to improve productivity and reduce risks of data entry errors, with one example being automated uploading of project data submitted by third party implementers into the CSY tracking database. Additionally, the Customer Management Solutions Database (CMS) module for Small business lighting was placed into the testing phase and was used concurrently with our original project tracking spreadsheet. A great deal of progress was made to move to this more stable tool and by the end of the year CMS became our main method of tracking Small Business Lighting projects.

Natural Gas Programs

As mentioned in the discussion of electric programs, the Business Energy Management team also continued our attention to customer satisfaction and process improvements on natural gas efficiency programs in 2012. A key initiative undertaken during the year was adapting to declining avoided costs associated with natural gas savings. A revised funding formula was utilized for evaluating custom grant incentives in 2012, which reduced the quantity of fundable natural gas projects relative to recent years. However, the team focused on assisting customers in completing active projects initiated in previous years, which led to the Business Sector exceeding gas savings goals for 2012, while simultaneously working to develop new program approaches to sustain gas efficiency offerings moving into 2013.

Key Results Drivers

Electric Programs

Business Energy Management electric efficiency programs achieved 104 percent of savings goal at 97 percent of program budget; 166,747 MWh and $40.5 million respectively. Additional electric savings were the result of Commercial Rebates programs exceeding savings targets due to customers taking significant advantage of rebates for LED lighting products and participants in the Large Power User Self-Directed program utilizing incentive allocations faster than anticipated.

Labor costs were lower than planned for 2012 due to a number of position vacancies resulting from retirements and promotions that required significant time to backfill.

Reported employee expenses were higher than budgeted, but this was the result of some items originally budgeted as overhead being charged in the employee expense category. An example of this would be phone and office equipment expenses for which the department was directly responsible.

Expenditures on outside services were less than budgeted as more work was accomplished utilizing in-house staff and planned software expenses for the RCM program were deferred to allow program reporting and tracking needs to be better defined prior to making a significant software investment.

Miscellaneous expenses exceeded budget primarily as the result of PSE's support of the Lighting Design Lab (LDL) being reported in this category rather than outside services. The Commercial/Industrial Retrofit, Small Business Lighting and Commercial Rebates programs utilize the services of the LDL to maintain qualifying LED products lists and to offer consultations to customers seeking to optimize lighting upgrade designs.

Direct benefit to customer (DBtC) expenditures were less than planned in C/I Retrofit as a result of highly cost effective lighting and commissioning projects contributing significantly to electric energy savings in 2012. These costs were lower than budget for the RCM program since planned software upgrades, which customers would utilize directly, were deferred. Additionally, meters not being utilized by customers with Energy Interval Service were unsubscribed from the service. DBtC expenditures were greater than planned in the Large Power User Self-Directed Program as customers utilized incentive allocations more quickly than anticipated in the remaining program cycle. Commercial Rebates also experienced increased DBtC expenditures as more incentive payments were made with the rapid uptake of LED lighting incentives.

Natural Gas Programs

Business Energy Management natural gas efficiency programs achieved 116 percent of savings goal at 120 percent of program budget; 3.45 million therms and $6.3 million respectively. Natural gas savings beyond the planned amount resulted from high participation in the C/I Retrofit program and success of RCM customers reducing their natural gas consumption beyond anticipated levels. Additionally, large new construction projects originally planned for completion in late 2011 were not fully commissioned with savings measures verified until 2012.

Similar to electric programs, labor costs were less than budgeted in 2012 primarily due to vacated positions that required significant time to backfill. Additionally, Energy Management Engineers who deliver custom grant incentives for both electric and gas programs worked more on electric project development in 2012 since fewer qualifying gas project applications were received as a result of funding formula changes that reflected lower natural gas avoided costs.

As with electric programs, reported employee expenses were higher than budgeted. This was the result of some items originally budgeted as overhead being charged in the employee expense category. An example of this would be phone and office equipment expenses for which the department was directly responsible.

Outside services exceeded overall planned budget for natural gas programs as contracted third party programs began to focus attention on developing cost-effective gas savings. Planned outside services expenses for RCM program software development were deferred to allow program reporting and tracking needs to be better defined prior to making a significant software investment.

Miscellaneous expenses exceeded budget primarily as the result of Business Energy Management supporting efforts by PSE field staff outside of the department to educate commercial customers on energy efficiency incentives available for upgrading aging natural gas equipment to more efficient options.

Direct benefit to customer (DBtC) expenditures were greater than planned in C/I Retrofit as a result of several large projects being completed in 2012. Commercial Rebates expenditures were less than budgeted primarily due to final invoice payments for Pre-rinse Spray Valves & Aerator direct installs completed late in 2012 not being processed prior to the accounting year end-date.

Tables 7a and 7b provide, at a program level, BEM savings and expenditure figures, presented in a semi-annual view. Details of Business Sector results are included in the program overviews in Chapter 8.

Table 7a: Business Sector 2012 Expenditures

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	% of Budget	
Electric	Electric					Electric
Gas	Gas					Gas
E250	C/I Retrofit	$ 8,572,385	$10,371,394	$ 18,943,779	94.3%	$ 20,084,250
E251	C/I New Construction	$ 851,405	$1,330,338	$ 2,181,743	98.5%	$ 2,214,170
E253	Resource Conservation Manager - RCM	$ 428,569	$615,586	$ 1,044,155	52.4%	$ 1,993,900
E255	Small Business Lighting Rebate	$ 2,818,754	$2,148,964	$ 4,967,718	65.8%	$ 7,548,030
E258	Large Power User - Self Directed 449 (Takala)	$ 1,440,995	$781,429	$ 2,222,424	134.4%	$ 1,653,936
E258	Large Power User - Self Directed Non 449 (Takala)	$ 1,720,617	$3,261,792	$ 4,982,409	141.8%	$ 3,514,614
E261	Energy Efficiency Technology Evaluation	$ -		$ -		$ -
E262	Commercial Rebates	$ 2,316,361	$3,856,137	$ 6,172,499	127.7%	$ 4,832,280
	Total Electric Programs	$ 18,149,087	$22,365,640	**$ 40,514,727**	96.8%	$ 41,841,180
G205	C/I Retrofit	$ 1,683,165	$2,945,505	$ 4,628,670	159.9%	$ 2,895,320
G208	Resource Conservation Manager - RCM	$ 232,082	$318,656	$ 550,738	49.2%	$ 1,119,120
G251	C/I New Construction	$ 462,475	$231,825	$ 694,300	113.9%	$ 609,350
G261	Energy Efficiency Technology Evaluation	$ -		$ -	0.0%	$ 27,300
G262	Commercial Rebates	$ 102,794	$360,222	$ 463,016	72.2%	$ 640,900
	Total Gas Programs	$ 2,480,517	$3,856,208	**$ 6,336,725**	119.7%	$ 5,291,990

Table 7b: Business Sector 2012 Savings

2012 Savings		2012 Semi-annual View				2012 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	% of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E250	C/I Retrofit	28,668	41,848	70,516	102.9%	68,500
E251	C/I New Construction	2,374	2,894	5,268	150.5%	3,500
E253	Resource Conservation Manager - RCM	7,493	8,533	16,026	80.1%	20,000
E255	Small Business Lighting Rebate	9,517	7,482	16,999	70.5%	24,100
E258	Large Power User - Self Directed 449 (Takala)	2,507	3,023	5,530	104.7%	5,280
E258	Large Power User - Self Directed Non 449 (Takala)	3,080	13,872	16,953	151.1%	11,220
E261	Energy Efficiency Technology Evaluation	-		-		0
E262	Commercial Rebates	18,262	17,193	35,456	130.4%	27,200
	Total Electric Programs	71,902	94,845	**166,747**	104.3%	159,800
G205	C/I Retrofit	286,871	586,227	873,098	182.7%	478,000
G208	Resource Conservation Manager - RCM	305,139	804,097	1,109,236	110.9%	1,000,000
G251	C/I New Construction	60,843	68,934	129,777	129.8%	100,000
G261	Energy Efficiency Technology Evaluation	-		-		n/a
G262	Commercial Rebates	205,254	1,133,600	1,338,854	95.2%	1,407,000
						0
	Total Gas Programs	858,107	2,592,858	**3,450,965**	115.6%	**2,985,000**

Business Energy Management Cost Effectiveness

Table 7c represents the Utility Cost and Total Resource Cost benefit-to-cost ratios for the Business Sector. A complete listing of cost-effectiveness ratios by program is presented in Exhibit 2: Program Cost Effectiveness.

Table 7c: Business Sector Cost-Effectiveness Tests

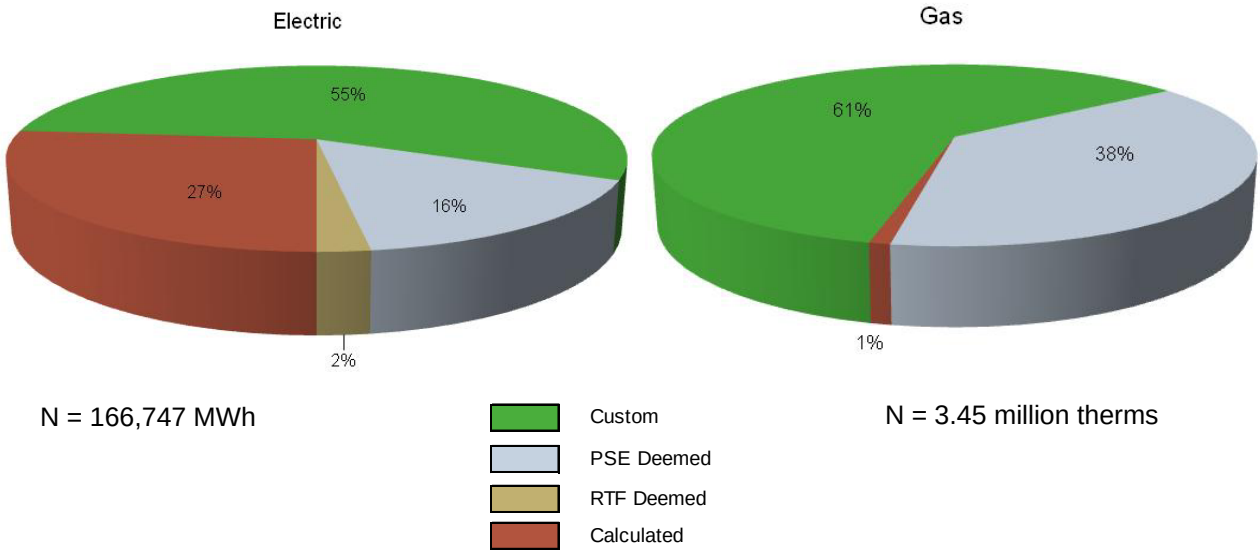
Benefit to Cost Ratios		
	Utility Cost	Total Resource Cost
Electric	3.09	2.11
Gas	2.67	1.43

Indicated TRC represents the B/C ratio without the conservation credit value applied.

Savings Distributions by Measure Type

Figure 7d illustrates the distribution of savings in the Business Sector by measure type. Since the RTF does not deem gas prescriptive savings, all prescriptive gas measures are considered PSE Deemed, Calculated or Custom. The majority of Business savings are derived from custom measures.[43]

Figure 7d: Business Sector Savings Distributions by Measure Type



[43] In contrast to prescriptive measures, custom measures are determined on a project-by-project basis and are calculated and verified in a multi-step process by BEM Energy Management Engineers.

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BUSINESS PROGRAM DETAIL DISCUSSIONS

Commercial/Industrial Retrofit

Schedules E250/G205

Description

PSE works with Commercial and Industrial customers to provide incentives for cost-effective energy efficiency upgrades to equipment, building shell, industrial process, and select 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 conducts site assessments to identify savings opportunities and makes recommendations to customers. PSE also reviews third-party savings estimates and analyses, and when required performs in-house analyses to validate energy savings. PSE works with financial decision makers at the customer's facility to ensure the customer is aware of cost-savings opportunities, including review of energy saving projections that can help obtain favorable financing rates.

Commercial/industrial retrofit projects commonly include: lighting system upgrades, HVAC equipment upgrades, HVAC controls improvements, commercial refrigeration Measures, and industrial process modifications. Additionally, incentives for existing building commissioning (O&M) improvements are provided through the Comprehensive Building Tune-Up Program (CBTU) and Simplified Building Tune-Up Program (SBTU) offered under C/I retrofit.

Upon the customer's decision to proceed with a project, PSE issues a standardized Conservation Grant Agreement that establishes terms and conditions for participation in PSE's Custom Grant Program. After the agreement is signed by both parties, the customer is given notice to proceed with the energy efficiency project.

Following completion of the project, PSE verifies the installation and energy savings via an on-site inspection, review of equipment operation and trend log data where necessary, and collection of project invoicing and specifications of installed equipment.

In addition to Commercial/Industrial Retrofit Custom Grant offerings, PSE contracts with industry experts to develop and implement cost effective programs tailored to the unique needs of target markets. Additional programs offered in 2012 were the Energy Smart Grocer Program (ESG), Data Center Energy Efficiency Program (DCEEP), Industrial System Optimization Program (ISOP) and Simplified Building Tune-Up (SBTU).

Industrial Systems Optimization

The program focuses on operational and maintenance (O&M) Measures to be verified through custom analysis on an individual project or site basis. Incentives are based on actual savings achieved. Customers agree to continue monitoring and verification following implementation to assure persistence of the savings.

Data Centers

The program focuses on various types of efficiency improvements; e.g. server virtualization, hot/cold aisle isolation, airflow upgrades, and cooling upgrades. Program provides site assessments to identify cost effective energy savings opportunities and offers measure-specific incentives.

Energy Smart Grocer

The program provides audits, technical assistance and measure-specific financial incentives to grocers who wish to purchase and install energy efficient lighting, refrigeration and HVAC systems.

Building Tune-Up and Tracking

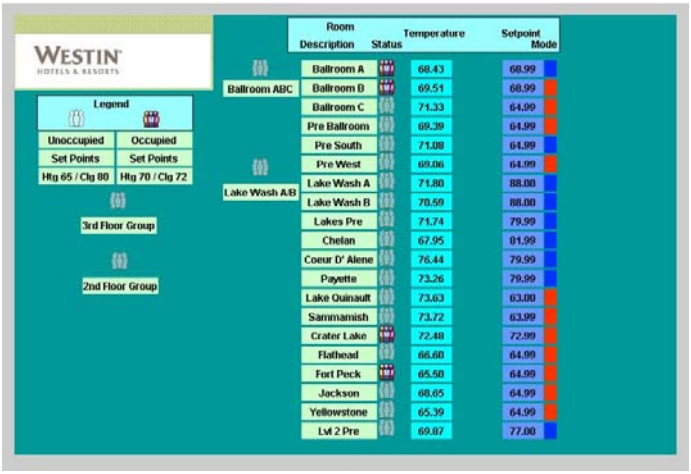
The program focuses on low-cost operational and maintenance (O&M) improvements. Commercial customers are provided with an energy use analysis and expert advice on cost-effective improvements that can be determined through a building survey and analysis of energy use.

"PSE's Comprehensive Building Tune-Up Program cost the hotel nothing, and saves us electricity and gas every month. What's not to like about that?"

— Tim Altier, Chief Engineer, The Westin Bellevue

Customers who implement improvements receive incentives during the post implementation year based on actual energy savings.

Tim Altier, Chief Engineer, The Westin Bellevue, is pleased with low-cost / no-cost measures like changes in HVAC scheduling.



Meeting room scheduling screen and controls turn room HVAC (VAV box) off when meeting rooms are unoccupied.

2012 Continuous Improvement

PSE has incorporated several process improvements designed to positively impact employee productivity and enhance customer satisfaction. PSE created a billing history template designed to be a leave-behind information source for the customer and encouraged Energy Management Engineers to use it as a tool for engaging in conversation regarding energy efficiency opportunities beyond the specific project(s) for which an on-site visit was conducted. The template provides multiple years of energy consumption, energy consumption relative to average outside air temperature and typical Energy Use Intensity (EUI) ranges for similar facilities as well as energy savings potential based on the EUI values.

Internal process improvements included an initial effort to incorporate Custom Grant project Scope of Work documentation into the CSY project tracking and reporting database, thus eliminating duplicate data entry and reducing grant package creation time. This revision also applies to other custom-grant oriented programs, such as Commercial/Industrial New Construction.

PSE re-organized project information storage on network drives to allow for faster project data access and reduced data retrieval time. Instead of working in individual personal folders, Energy Management Engineers and program support staff can now access a centrally located project folder containing all active grant projects and can retrieve project data. Enhanced customer service follows as any engineer can now inform the customer of project status and QC Reviews are streamlined since energy savings analyses can be reviewed electronically. Project transitions between employees became simpler and more efficient in 2012. Enhanced data storage processes will also aid in data gathering for program-level compliance review events. Information necessary for project review is now stored in a central location, is accessible and complete, reducing our reliance on paper files when conducting reviews.

2012 Accomplishments and Activities

Electric

Program participation has remained high in the C/I Retrofit program. Lighting efficiency projects continue to remain the major contributor to program savings with HVAC measures making up the second largest category of savings. Several large-sized, highly cost effective retro-commissioning and lighting projects completed in the 4th quarter of the year led to achievement of the savings goals while finishing the year slightly under budget.

In response to customer requests, PSE amended Rate Schedule 250 in the 4th quarter of 2012 to extend program availability to all street and area lighting rate schedules. This enabled municipalities and government customers to satisfy utility energy efficiency incentive leveraging requirements when applying for Department of Commerce grant funding for street lighting upgrades within PSE's service territory.

The Energy Smart Grocer Program exceeded 2012 savings targets as the program responded to additional customer demands and project development opportunities. An automated data upload tool developed and implemented to directly load contractor data into the CSY database has greatly streamlined program data entry and reduced the potential for errors associated with manual entry of data.

PSE began offering an Enhanced Lighting Program in late 2011 which offered increased incentives for comprehensive lighting retrofit projects which include all cost-effective interior and exterior lighting upgrades, as well as installation of lighting controls. The program has proven to be a successful model for a comprehensive lighting approach and a highly successful offering that is achieving deeper facility savings than standard lighting retrofits. Customer response has been positive with continuing interest and the program has gained national attention as an effective approach to encouraging deeper retrofits. The program was featured in an E Source webinar in 2012.

2012 economic stimulus-driven projects were more focused on gas efficiency measures than electric efficiency measures. As a result of this shift in focus, OSPI projects contributed less than six percent of electric savings claimed in 2012.

Comprehensive Building Tune-Up (CBTU) was rebranded from Building Energy Optimization Program (BEOP) in 2012 to align with complementary PSE program offerings. This program contributed significantly to the E250 electric retrofit program savings accomplishments in 2012 and experienced growth from the large office and hospital sectors.

CBTU continues to provide very cost-effective gas and electric savings and has achieved more savings than anticipated.

CBTU projects entered the bonus incentive phase for the first time in 2012 and delivered predicted or, in some cases, increased savings in the first full operational year after improvements were implemented. This indicates that operational improvements are persisting as planned.

Customers have been very pleased with the results as they have achieved more savings than initially estimated. One customer used the experiences from CBTU participation to develop a campus-wide on-going commissioning program that will bring in savings for the remainder of their buildings and help ensure continuing persistence of savings. CBTU made process improvements this year to improve the customer experience including standardizing internal paperwork processes for payment and verification, improving the program manual and utilizing additional engineers to implement the program.

As recommended by the recent program process evaluation performed by Navigant Consulting to increase participation in the C/I Retrofit and other programs, PSE completed six energy efficiency project case studies covering multiple business and project types. Case studies are particularly valuable because they provide real-world examples of energy efficiency projects that created a more profitable business, a better customer perception of energy efficiency and a more comfortable working environment. Case studies completed in 2012 represent a variety of BEM programs including Building Tune Ups, New Construction Grants, Resource Conservation Management Grants and Custom Retrofit Grants. These studies also represent a wide variety of non-residential customers including healthcare, hospitality, commercial office and retail, state government and a community/cultural organization. The new case studies have been used as flyers, event displays, handouts distributed directly to customers and meetings of professional organizations. Their content has also been included in articles in the BEM quarterly Re-Energize Your Business e-newsletter and as PowerPoint slide content for PSE staff use in presentations. All case studies are available online at PSE.com.

C/I Retrofit Electric (E250) launched three new contracted programs in 2012 in accordance with the 2012-2013 Biennial Conservation Plan. The three programs launched are Data Center Energy Efficiency Program (DCEEP), Industrial System Optimization Program (ISOP), and the Simplified Building Tune-up Program (SBTU):

Data Center Energy Efficiency Program (DCEEP) - This contracted program was initiated in early January 2012. Customer satisfaction and participation have met or exceeded expectations for the first year of a start-up program. Ten audits resulted in a total of five implementation agreements signed in 2012 by customers who committed to proceed with facility upgrades. Energy savings from the five projects with signed implementation agreements yielded higher-than-forecast savings for the year. However, unforeseen delays in final measure commissioning and installation verification meant that the savings will not be recorded until early 2013. Following the savings, expenditures for the year were also higher than forecast as these measures were nearly fully completed by year-end.

Data center operations are unique and present challenges when implementing energy efficiency projects due to the high importance placed on data processing reliability. One specific challenge encountered in completed projects at year-end is that some data centers initiate a "blackout" period for system and equipment modifications during the holiday sales season. During this period, the data center is off limits to any non-critical work being performed in order to maintain absolute reliability. Meeting customer expectations in these locations required delaying final steps of project implementation and close-out until the holiday season was over.

Industrial System Optimization Program (ISOP) This program was launched in January 2012. The program focuses on industrial customers with energy intensive systems. 2012 efforts were focused on creation of marketing materials, customer implementation agreement forms and outreach to potential participants. More than twenty customers received initial scoping visits in 2012. A total of eight implementation agreements were signed and three customers proceeded with optimization events at their facilities. As many of the modifications made to plant systems are unique and complex, significant amounts of data must be collected and analyzed prior to implementation of changes. Consequently, after an optimization event has been completed, rigorous data analysis must be done to ensure the measures are performing as expected and delivering energy savings. For this reason, savings was not claimed under the program in 2012.

Further marketing efforts with the contractor and trade allies were developed as the year progressed to target customers with energy intensive compressed-air systems. This marketing effort leveraged existing customer relationships to promote the program's success.

Simplified Building Tune-up Program (SBTU) – This contracted program was launched in early March 2012. The marketing initiative was increased substantially in the second half of 2012 and successfully increased customer interest in the program.

The increased marketing efforts included creation of marketing materials and case studies as well as attending conferences, Building Owners and Managers Association (BOMA) meetings and promoting the program in the BOMA monthly newsletter. The third party contractor (QuEST) created and presented three webinars to local area contractors interested in offering this program to their customers. PSE also enhanced the marketing strategy by leveraging internal resources of Community & Business Services account representatives and Business Energy Management staff to provide program information to their business contacts. In the last half of 2012, customer participation in SBTU doubled. Due to a six-month monitoring period required to verify energy savings following tune-up activities, the SBTU Program was not planned to, and did not contribute, savings claimed toward the 2012 Schedule 250 program goal.

Gas

C/I Retrofit Gas (Schedule G205) completed the year significantly ahead of target. Several large gas saving projects were completed in the 4th quarter of 2012. In addition to the large projects, numerous projects initiated in previous program years were completed in 2012. The largest gas saving project occurred on a military installation and the balance of larger gas saving projects occurred in educational and public sector facilities. Many natural gas savings projects completed in 2012 were associated with stimulus funding, which was the result of second-round OSPI and Department of Commerce energy grant projects moving beyond “low hanging fruit” lighting retrofits to more complex HVAC controls measures and equipment upgrades.

The program DBtC budget closely tracked savings achievements. Labor expenses associated with Schedule G205 were significantly below budget. Key factors contributing to reduced labor expenditures were fewer incoming new projects in 2012 and significant focus on closing projects initiated in previous years – project verification and closeout is less labor intensive than up-front project development, initial savings analysis, and development of scopes of work for grant agreements. Fewer projects were developed in 2012 as a result of funding formula revisions that significantly reduced or eliminated funding for less cost-effective gas retrofit projects.

2012 Results by Project and Measure Type

Table 8a below shows the number of projects completed and the number of electric and gas measures installed. "Electric-Only" projects include only electric savings; "Gas-Only" projects include only gas savings; "Electric & Gas" projects include both electric and gas savings. A single project may include more than one measure; for example, a retrofit project might include a lighting measure and HVAC measure.

Table 8a: Commercial/Industrial Retrofit Projects and Measures

Project Type	Count	
Electric savings only	560	
Gas savings only	120	
Both electric and gas savings	30	
Energy Smart Grocer (Elec. Only)	370	
TOTAL	1,080	
Measure Type	**Electric**	**Gas**
Lighting	580	0
HVAC & Controls	90	90
Boilers	2	40
Envelope	10	20
Energy Smart Grocer	610	0
Commissioning	20	2
Process Modification	20	4
Refrigeration	5	0
Compressed Air System	10	0
Heat Recovery	1	2
Variable Frequency Drives	20	2
TOTALS	1,368	160

Commercial/Industrial New Construction

Schedules E251/G251

Description

PSE works with designers and developers of any large or small new Commercial / Industrial facilities, or major remodels, to propose cost-effective energy efficient upgrades that exceed energy codes or standard practice where minimum efficiency requirements are not prescribed by code. Three paths may be followed to qualify for assistance and/or funding for New Construction energy efficiency Measures. New Construction Commissioning is also offered in addition to the building paths.

The first path is similar to the retrofit program where Measures are evaluated individually and funding is based upon cost effectiveness. Under this approach, customers may receive up to 100 percent of the incremental cost over a code-compliant baseline option.

The second path utilizes building energy simulation to demonstrate improvement over energy code requirements. PSE will work with designers to incorporate Measures that produce at least 10 percent overall savings beyond applicable energy code, including local jurisdiction amendments. Given the time required for planning and construction, these projects typically take several years to complete.

The third path includes Prescriptive Basis incentives for Measures that are eligible for rebates under Schedule E262/G262, Commercial and Industrial Incentive Program. The incentive amount for a measure is the same as that which is available under Schedule E262/G262, but energy savings may be calculated based on actual Site-Specific conditions.

New Construction Commissioning (Cx) includes three phases: Design, Construction, and Post-Occupancy. The total incentive available for all three phases combined is up to $0.50/square foot.

Customers assume full responsibility for utilizing their design teams and contractors to provide information to PSE for evaluation for grant funding. Projects must be approved for funding prior to installation/implementation to be eligible.

2012 Continuous Improvement

As noted below, the Commercial/Industrial New Construction program incorporated a significant portion of Energy Smart Grocer measures in its portfolio of services for the first time in 2012. The program also took advantage of CSY's new data upload tool, which greatly enhanced project processing.

2012 Accomplishments and Activities

A majority of the measures paid (for both electric and gas) were to schools, cities, or government agencies, enabling these entities to implement energy efficiency measures. Navigant Consulting was contracted to conduct an evaluation of the New Construction Program in 2012 and started work on site verifications, energy analysis, and interviews.

Electric

The program exceeded its electric savings target for the year. Nearly two-fifths of the energy savings were provided by the Energy Smart Grocer (ESG) program's activity in the new construction market. This specific program includes very cost effective measures largely, but not exclusively, focused on refrigeration. This was the first year of claiming savings from the typically retrofit-focused ESG program, gaining more penetration in the grocer market for new construction. The program costs came in lower than budgeted, driven by lower than forecasted incentives required for the savings delivered.

Gas

The program exceeded its gas savings target for the year. Approximately one third of the savings are attributed to a large new corrections facility. The remaining savings are comprised of a mixture of other measures and/or facility types. The program costs came in over what was budgeted for 2012, mainly due to large projects that were originally planned to close in late 2011 actually closing in early 2012.

2012 Results by Project and Measure Type

Table 8b on page 137 shows the number of projects completed and the number of electric and gas measures installed. "Electric-Only" projects include only electric savings; "Gas-Only" projects include only gas savings; "Electric & Gas" projects include both electric and gas savings. A single project may include more than one measure; for example, a new building project might include an envelope measure, lighting measure, and HVAC measure.

Measure Type figures include those implemented by the Energy Smart Grocer program. Some projects included multiple measures. Hence, the measure quantity may be greater than the project quantity.

Table 8b: Commercial/Industrial New Construction Projects and Measures

Project Type	Count	
Electric savings only	15	
Gas savings only	2	
Both electric and gas savings	10	
Energy Smart Grocer (Elec. Only)	3	
TOTAL	30	
Measure Type	**Electric**	**Gas**
Lighting	10	0
HVAC	2	2
Domestic Hot Water	0	2
Envelope	0	1
Commissioning	10	3
Refrigeration	10	0
Other	1	2
Whole Building (Model)	2	1
Whole Building (Prescriptive)	10	5
TOTALS	45	16

Figures include Energy Smart Grocer

Resource Conservation Manager

Schedules E253/G208

Description

PSE offers Resource Conservation Manager Services (RCM) to any school district, public-sector government agency, and Commercial or Industrial (C/I) customer with a minimum portfolio base load to meet cost-effective thresholds. The RCM program targets larger customers with multiple facilities such that the cost of implementation can be recovered through savings achieved. Schedule 448, 449, 458, and 459 customers may utilize their Schedule 258 funding allocation for Resource Conservation Manager Services (RCM).

"We're always busy. We might be able to look at energy use data for a few minutes a day, but most of our staff is up off our chairs and far away from a computer monitor.

You need to stick with energy optimization for the long term, not minutes. Without a dedicated RCM, we never would have pulled it off."

— *Glen Bachman, SCSM/CPM/RPA, Vice President and Director of Retail Operations, Kemper Development Company*

Customers qualify for the RCM program based on their annual PSE energy purchases. A typical customer baseline for a fulltime equivalent (1 FTE) program is 20,000,000 kWh for electric only or 2,700,000 therms for gas-only service from PSE. Funding levels are prorated based on the amount of staff a customer would need to allocate in order to achieve cost-effective savings from RCM efforts. A customer must have a minimum 0.25 FTE to participate in the program.

An RCM customer employs, contracts, or designates existing staff to implement RCM responsibilities, including accounting for resource consumption, assessing facilities, recommending actions, monitoring progress, calculating savings and communicating program information to organization stakeholders.

Monetary grants include a "start-up" grant for completion of deliverables associated with building the program foundation: hiring an RCM, setting up an energy-accounting database, writing a company resource management plan, and completing facility action plans. Once start-up deliverables are complete, the customer may qualify for "performance grants" based on achieving pre-established energy-reduction targets. Salary guarantees are available for customers with a full-time program on an as-needed basis.

The RCM agreement is valid for three years. Over this time, PSE anticipates a 10-12 percent reduction in overall energy use. Savings are calculated using industry standard practices and energy accounting methodologies. Reported annual savings are a variance from the previous year. PSE may elect to renew a customer's RCM agreement in three-year increments to provide continued support and additional performance incentives.

Puget Sound Energy's RCM support program is comprised of a "menu" of services, which can be tailored to meet the specific needs of the customer. Typical RCM services include, but are not limited to, the following assistance and support:

Program Start Up

- Designing and implementing an RCM program;
- Hiring or contracting a Resource Conservation Manager;
- Developing baselines, policies and guidelines, and facility action plans;

Alfonsus Tanoto, RCM for the Kemper Development Company. Alfonsus is responsible for managing energy use across nearly 4 million sq. ft. of office space.

Resource Accounting Software

- Purchase and implementation of resource accounting software;
- Audits of existing databases to review for inclusion of all facilities, accounts, meters, etc., sufficient facility details, missing data, and overall data integrity.

Technical Assistance

- On-site walk-through audits to train customer staff to identify waste and opportunities for improved efficiency;
- Analysis and reporting of savings relative to established baseline.

Education & Training

- Training in fundamental concepts for designated RCM and support personnel such as custodial, maintenance, and facilities staff
- Educational materials for classroom or building occupant use including checklists, fact-sheets, and calculators;
- Training stipend to support professional development in Building Operation or Energy Management. (Training stipend is based on achieving the Building Operator Certification Levels I & II.)

Energy Data Services

- Historical and on-going monthly PSE billing data in electronic format for import into resource accounting software;
- Energy Interval Services for internet viewing of facility gas and electric interval meter data;

Cash Incentives

- ”Start-up” intended to share the cost of program start up provided there is a mutual agreement that the customer will match the “start-up” funding support. The $35,000 grant (for 1 FTE) is paid upon satisfactory completion of “start-up” deliverables.
- Performance grants for customers who achieve a pre-established targeted amount of energy savings after completing their first year and “start-up” deliverables. Similar to the “start-up grant”, the performance grants provide a $35,000 incentive (for 1 FTE).
- Salary guarantee for customers implementing a program with one or more full-time RCM employees.
- Site-based incentives for specific actions by occupants and staff which reduce energy consumption in individual facilities.

PSE is exploring ways to make RCM cost-effective for smaller customers. Shared RCM services among a group of smaller organizations have generated interest from local governments and other organizations with smaller facility portfolios. PSE efforts will continue to work with RCM consultants, customers, and other support agencies to develop this market. In 2012, PSE had 15 organizations participate in the shared RCM program.

The RCM program has also assisted customers in establishing Energy Star Benchmarks for their facilities using EPA’s Portfolio Manager. PSE will continue to help customers to identify potential targets, improve energy efficiency to meet award qualifications, coordinate the application and inspection process, and submit material to EPA for Energy Star awards.

Additionally, access to energy accounting software has allowed PSE RCM customers to facilitate greenhouse gas accounting and other climate change and sustainability initiatives. The value of this service routinely exceeds those stated in the RCM program scope of work.

2012 Continuous Improvement

The staff went through some changes in 2012. The manager of the RCM program left in February 2012 and was officially replaced in September 2012. A business support analyst was promoted to a different team in October 2012 and was replaced in December 2012. Finally, a new energy management engineer was hired in May 2012 to provide enhanced customer service for the more complex RCM customers.

RCM program staff also devoted time and resources to improving program communication to customers. In November, the staff held their first webinar, which provided an update to RCMs and addressed upcoming training activities. The webinar was successful and was determined to be a great way to effectively communicate with remote RCM customers. The RCM team also created a "Puget Sound Energy Resource Conservation Manager" group on the Northwest Energy Efficiency Alliance (NEEA) Conduit website. PSE staff updated the user group with links, calendar events, and articles. The website provided an easy way to connect with the RCM community. In addition, the RCM team produced three case studies to communicate the success stories of customers.

The case studies highlight the amount of energy and financial savings achieved through participation in the RCM program. The publications also discuss the various tools used to identify the energy saving opportunities. The case studies and other marketing mechanisms were successful in attracting 7 new customers and signing 21 new renewal grants. Customers continued to see the benefit of the RCM program.

The RCM team performed an extensive evaluation of meters activated in the Energy Interval Service (EIS) system. By identifying customers not actively using the meter service, the evaluation led to the reduction of 38 percent of the meters activated, which helped reduce program costs. This is one of the reasons the budget for both gas and electric were below anticipated costs for the year.

A third-party consultant (SBW Consulting) completed a review of the PSE 2010-2011 electric conservation savings, which included an in-depth review of the RCM program. Program staff members were heavily involved in providing data, documentation, and answering questions for SBW.

The review was completed to determine the veracity of PSE's reported electric energy savings, and assess evaluation, measurement and verification practices. In response to SBW's findings, PSE developed an RFP to complete a thorough program evaluation on an accelerated schedule beginning in 2012. Once again, SBW Consulting was chosen as the third-party consultant and an official kick-off meeting occurred on October 25, 2012. The RCM team provided all of the requested information to SBW throughout the year. The evaluation is expected to be completed in April 2013.

To identify opportunities to enhance the customer experience, the RCM program also hired a third-party consultant to evaluate the existing software and program processes. The consultant provided recommendations and provided a list of software that could meet the program's needs. This information was sent to SBW to complement their evaluation efforts. The staff is currently looking at replacing the antiquated software for the program since it will no longer be supported at the end of 2013.

2012 Accomplishments and Activities

The Resource Conservation Manager program had 94 engaged customers managing energy and resources in over 122 million square feet of space. Fifteen customers are participating in a shared RCM program, which combine smaller entities into a portfolio of sufficient size to participate in the RCM program. In addition, several customers were in the renewal phase of their grant for a second three-year term. The program maintained a comparable number of RCM customers to 2011.

The RCM program continued to support training opportunities for customers and program staff. Four customers and two staff members took part in Building Operator Certification Level 1 training in 2012. The RCM program provided training stipends to customers who successfully completed BOC Level 1 Certification. One PSE staff member on the RCM team enrolled in Building Operator Certification Level 2 training during 2012.

Electric

The RCM electric program fell below the target level for savings and budget. Part of the reason for the shortfall is due to the nature of the program, which is difficult to predict given that savings are based on annual behavioral-based improvements.

The RCM staff also received a significant quantity of RCM reports in the latter part of 2012, which coincided with selection of an evaluation contractor, resulting in delays of processing savings claims until all reports could be thoroughly reviewed. Another contributor to the lower performance is larger customers who did not generate as much savings as anticipated in 2012.

The program was under budget in 2012 due to several reasons. First, the EIS review project led to a 38 percent reduction in meters, which saved over $100,000 in expenses. Secondly, unexpected staffing changes led to vacancies during the year which reduced labor cost. The supervisor left in February 2012 and a replacement supervisor was hired in September 2012. It also took longer than expected to fill an open energy management engineer position on the team. The engineering position was expected to be filled in January 2012, but wasn't hired until May 2012. Finally, the current utility accounting software was forecasted to be replaced in 2012 with significant expense expected, but was delayed until further review and identification of software needs is completed.

Gas

The RCM gas program exceeded the savings target and had expenditures below budget for the year. The additional savings is predominately attributed to large gas customers finding significant opportunities for improvement.

Similar to the below-budget expenditures in the electric portfolio, the gas budget realized savings from the EIS review project, unexpected staffing changes, and a delay in the replacement of utility accounting software.

2012 Results by Customer Sector

Table 8c below shows the number of customers participating in the RCM program, and the total facility area in each major customer sector.

Table 8c: Number of RCM Customers and Facility Area by Sector

Customer Sector	No. of Customers	Facility SqFt	% based on SqFt
School Districts	36	50,787,000	42%
Government	34	36,443,000	30%
Commercial	6	17,168,000	14%
Higher Education	10	10,262,000	8%
Hospitals	4	5,337,000	4%
Industrial	2	635,000	1%
Non Profit	2	1,644,000	1%
TOTALS	94	122,276,000	100%

Small Business Lighting Rebates

Schedule E255

Description

The Small Business Lighting Rebate program provides a menu of Standard Lighting retrofit rebate options as well as a "Custom Analysis" path allowing a rebate to install the non-standard lighting retrofit products. The program is designed to meet the needs of most small business customers and maintains a network of lighting contractors and vendors that effectively serve small businesses. The rebates offered cover a wide variety of energy efficient conversions including Fluorescent, Light Emitting Diode (LED), High Intensity Discharge (HID), Exit Signs, and Lighting Control options.

2012 Continuous Improvement

Two new employees were brought on board in October to replace a vacated position and provide greater support for project verification.

In June the Small Business Lighting Program hosted a contractor training and appreciation event to recognize outstanding contractor achievements which contributed to the program goals, and to introduce a revised and improved Small Business Lighting project application.

Over 100 contractors attended and awards were given to nine lighting contractor companies for providing PSE customers with quality efficient lighting projects resulting in high energy savings. The improved Small Business Lighting application introduced at the event requires more thorough documentation from contractors, requiring them to identify all efficient lighting opportunities on site by area to aid in project review, verification and evaluation.

Here are a few representative Small Business Lighting customer comments (names have been removed to protect privacy)*:*

"I called to verify the program & the contractors who would be installing the lighting, your staff was helpful & reassuring." *(…-4510)*

"It's been 2 months & my bill is down by about 1/3. I also have a brighter work place & my rebate is a bonus." *(…-4999)*

"(The PSE EME) has been very helpful with our options." *(…-8393)*

The new application enables the contractor to offer a more comprehensive project proposal to the customer, maximizing cost-effective lighting conservation opportunities and incentives and allows PSE to identify additional areas for energy saving opportunities for the customer. The new application contributed to a slowdown in program participation initially, as program changes generally do.

Contractor training on program processes and requirements were held nine times, providing an opportunity for attendees to become familiar with all the programs, the new application and the staff that manage them.

New measures were added to the program for LED fixtures in response to contractor interest, specifically a switch from retrofitting incandescent fixtures to CFL fixtures to retrofitting the incandescent fixtures with LED fixtures.

An enhanced quality control process was added which improved overall project quality and accuracy. The internal Quality Control checklist was updated to include all the major steps required to prepare a project for payment. Beginning in 2012, each project was passed on to a peer in the program to review all steps and the manager responsible for signing and approving the project verified key project components again prior to final approval.

The new Customer Management Solutions Database (CMS) for Small business lighting was placed into the testing phase and was used concurrently with our original project tracking spreadsheet. A great deal of progress was made to move to this more stable tool and by the end of the year CMS became our main method of tracking.

2012 Accomplishments and Activities

The Small Business Lighting Rebate program continued to draw contractor interest in delivering smaller projects at a low cost to small businesses. Small Business Lighting did not meet 2012 targets due to a combination of Federal EISA standards not having the anticipated affect on customer demand for the T12 to T8 conversion and added time needed to train new program staff. Program Staff believe that as contractors become more familiar with the revised application process discussed above, participation will pick back up to previous levels.

Table 8d below shows the number of measures installed. The majority of measures were conversions from T12 to T8. The balance of the measures included incandescents, high intensity discharge (HID), exit signs, and lighting controls. A "measure" is typically an individual fixture; for example, a retrofit kit used to change a single F40T12 4-lamp fixture to an F32T8 2-lamp fixture would be counted as one measure. If 25 such kits were included in one project, it would be counted as 25 measures.

Table 8d: Number of Small Business Lighting Measures Installed

Measure	# of Measures	% of Measures
T12 to T8	41,000	78%
HID/INC to T8/T5	3,400	7%
LED	1,500	3%
CFL	2,000	4%
CFL Fixture	2,000	3%
Controls	1,600	3%
Custom	470	1%
EXIT	700	1%
Other	300	1%
Total	53,000	

Large Power User/Self Directed

Schedule E258

Description

This program solicits electric energy efficiency upgrades through a Request for Proposal (RFP) process. Business customers receiving electric service under Schedule 40, 46, 49 or 449 receive a funding allocation based on their electric usage and are responsible for proposing cost-effective project(s) to utilize their allocation. This is classified as the non-competitive phase.

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, PSE incentive amount, and verification requirements prior to installation of project measures.

The Large Power User Self-Directed program is implemented in cycles, with the current program cycle spanning January 1, 2010 to December 31, 2014. Customers have until March 29, 2013 to propose projects that utilize their incentive allocations under the non-competitive phase. Customers not designating projects that fully utilize their allocation forfeit their remaining balance to a competitive phase, in which remaining funds are available to all program participants via competitive bid.

In the Competitive Phase, Eligible customers respond to an RFP in order to obtain remaining incentive funding that was not claimed during the non-competitive phase. In this phase, eligible customers may have access to funds beyond their original allocation. All projects submitted by the required deadline will be ranked based on cost effectiveness. Competitive funding will be awarded, in order of project ranking, until all funds are allocated to projects.

2012 Accomplishments and Activities

In May 2012, two additional customers joined the program. Their prorated allocations were calculated and communicated allowing the customers to fully participate in the non-competitive phase of the program.

With the non-competitive phase of the program closing March 29, 2013, 2012 involved working with all of the customers to encourage them to take advantage of any remaining allocations by developing and submitting projects. As a result, 2012 experienced greater savings and thus more incentives paid than expected over the three years remaining in this program cycle. The work continues to engage customers so every effort is made to have high customer participation in the program.

As a result of the October 2011 ACEEE report titled, "Follow the Leaders: Improving Large Customer Self Direct Programs," there was continued national interest in PSE's Large Power User Self-Directed program. This interest ranged from mechanics and structure to cost effectiveness. The program continued to be seen as a leader amongst its peers and one that other utilities want to model similar programs after.

The February 2012 final evaluation report of retrofit custom programs, prepared by Navigant Consulting, states that PSE's Large Power User/Self-Directed program "…participants are generally satisfied with the program and find program participation easy. Participants appreciate the fact that Schedule 258 money is labeled 'theirs' as it helps to motivate management to authorize projects to get access to those funds." "Customers are motivated to get their own money back." The biggest barrier to doing more projects is other demands on capital.

2012 Results by Project and Measure Type

There were more than 60 projects completed in 2012. Table 8e below shows the number of measures installed. A project may include more than one measure.

Table 8e: Large Power/Self-Directed Number of Measures

Measure Type	Number, Electric
HVAC	28
Lighting	11
Motors	19
Process	4
TOTALS	62

Energy Efficient Technology Evaluation

Schedules E261/G261

Description

The purpose of Energy Efficiency Technology Evaluation is to identify new, energy efficient technologies and products for our program offerings. Ideally, we would identify cost effective technologies and Measures with significant savings potential, which are commercially available. However, there are many emerging technologies that range from "commercially available, but not used in the Northwest," to "conceptual" or "prototypical" technologies still in the development phase.

It is relatively simple to determine whether new, commercially available technologies are suitable, as long as generally accepted engineering calculations can be used, and manufacturers can provide reliable data. For example, vendors frequently approach us with new, improved products, claimed to save more energy than their older models, or their competition. Usually these proposals are evaluated by the Energy Management Engineer who is managing the project, who then shares his/her experience with others in the group.

Some technologies are not so simple to evaluate. Those that are truly new typically have little experiential history, or there is no generally accepted method to calculate the performance. Clearly, it would be risky to broadly offer incentives through our programs - risky with regard to uncertain savings and risky for our customers due to unforeseen product issues. If the potential savings look significant, we may try the technology on one or two projects, especially if we are working with a customer who understands the risks and would like to be an "early adopter." Sometimes the most prudent approach is to monitor the progress of the technology, especially if the savings potential appears limited. Our effort is not intended for basic research, or product development, but to identify technologies that are available and suitable for our programs.

The most challenging situations arise when vendors propose products that are "too good to be true." Often their savings claims are supported by testimonials from satisfied customers, with little or no reliable test data.

Many technologies, such as transient voltage suppressors, power factor correction devices and paint with high R-Value, have been known for years to save little or no energy, but the vendor may insist that his product is different, even though it may only have a different name on the box. Fortunately we have experience with many of these products, or can readily find others who have had experience. It is important, however, to distinguish between the spurious claims and those that might truly be the new emerging technology that deserves attention.

2012 Accomplishments and Activities

There were no program expenditures in 2012. PSE program staff continued to actively monitor emerging technologies and the significant quantity of regional and national initiatives that focus on advancing new innovations in energy efficiency and moving products to the marketplace. PSE participates in the Regional Technical Forum (RTF) and other regional efforts to identify and prioritize emerging technologies, as well as national organizations such as CEE. We participated in regional efforts alongside NEEA to identify new emerging technologies, and participated in BPA's technology evaluation efforts. Through this participation, we contributed to the regional effort and enhanced PSE's awareness and understanding of new and emerging technologies.

Commercial Rebates

Schedules E262/G262

Description

PSE offers prescriptive 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 following measure categories are managed in-house by PSE staff:

- High Efficiency HVAC (new and retrofit)
- Variable Speed Drives
- Electronically Commutated Motors (ECMs)
- Commercial Washers, gas and electric
- Commercial Laundry Water Heating
- Commercial Kitchens, gas and electric
- Commercial Lighting Rebates (lamps and controls)
- Hospitality Rebates
- Portable Classroom Controls
- PC Power Management

PSE contracts with industry experts to develop and implement cost effective Measures tailored to the unique needs of target markets. The following measure categories are offered through contracted programs:

- HVAC Service Program, gas and electric
- Pre-rinse Spray Valves and Aerator Direct Install
- Cooler Miser Direct Install
- Green Motor Rewind
- LED Traffic Signals
- Small Business Direct Install Measures

The Program Staff collect tracking data, monitor program performance, and report results and trends. The Program Staff work with equipment suppliers/vendors and this program is coordinated closely with the electric and gas Commercial and Industrial Retrofit Program.

Program refinements and cost effectiveness are reviewed with engineering staff, the Evaluation Team, and the BEM manager as necessary on an ongoing basis. Incentive Measures, marketing and the fulfillment process may be modified, as needed, to respond to developments in technology, customer acceptance and/or changes in supplier/contractor delivery and pricing.

2012 Continuous Improvement

A proactive program management step was taken in 2012 to ensure accuracy of savings reported for commercial lighting rebates. In 2012 we observed a large percentage of LED lamp installations occurring in hotel/motel rooms, which have lower hours of operation than originally estimated for these measures. In response, the savings for the program were adjusted down to reflect the mix of business types actually participating in the program. We believe that addressing the measure savings based on this unanticipated shift in mix of program participants is an example of our commitment to accurate reporting of program savings.

As noted in the below accomplishments discussion, the Business Rebates program leveraged operational efficiency improvements from the Energy Smart Grocer program, by using the automated data upload tool for the Markdown Program, which directly loads contractor data into CSY. The tool greatly streamlines program data entry and reduces the potential for errors associated with manual entry of data.

2012 Accomplishments and Activities

Electric

The Commercial Rebate Program experienced higher than expected participation and exceeded the electric target for the year. The increased participation is largely due to higher than anticipated consumer demand for LED lamps and ease of product qualification through the Lighting Design Lab Regional LED list.

Similar to the higher than expected contribution to the program goal, the Commercial Lighting and Lighting Markdown Programs contributed more than expected to our overall spending, leading to the overall electric rebate program direct benefit to customer spending to be greater than originally anticipated.

These programs have helped to reduce the cost of materials in the marketplace for our customers. Vendors have observed there is an opportunity to achieve better market penetration by narrowing the gap between material costs and our rebate amount. As a result vendors negotiate with manufacturers to provide better pricing, which benefits our customers whether they are using our programs or not.

The PC Power Management Program exceeded its forecasted program savings target for 2012. Most of these savings came from a single large customer taking advantage of the program. The success of the project even prompted the customer to implement this program throughout their international operations. This project was a major achievement across multiple PSE divisions and groups within the customer's organization that required continuous management on the part of PSE staff to ensure project success.

Vendor participation increased in the Lighting Markdown Program, providing more opportunities for customers to receive lighting rebates at the point of sale. This program greatly simplifies the rebate process for customers purchasing the "do-it-yourself" types of lighting upgrades, like LED and CFL lamps and Low Wattage T-8 lamps used for group re-lamping. This increases customer acceptance of these measures and vendors willingness to provide them. Leveraging operational efficiency improvements from the Energy Smart Grocer program, an automated data upload tool has been developed for the Markdown Program to directly load contractor data into our savings database (CSY). The tool greatly streamlines program data entry and reduces the potential for errors associated with manual entry of data.

The High Efficiency Heat Pump and A/C program also saw very high participation during the year, greatly exceeding the program's annual targets. Most of the savings were due to one multi-site project from a school district that replaced electric resistance heat at multiple schools. There was also an increase in projects coordinated with trade allies in Whatcom County.

The Premium HVAC Service program saw the majority of its savings come in during the first half of the year. The program performed well and provided considerable natural gas savings as well.

Outreach efforts through participation at regional events such as the Washington Lodging Association Trade Show and the Northwest Food Service Show were rewarded with increased participation, particularly in the Hospitality Program. Hosting and assisting with contractor presentations on new technology and the development of targeted marketing materials increased the program's visibility to a larger number of PSE hospitality customers.

Also noted in 2012 was an increase in the tendency of hotels and motels to use this rebate program to assist in early retirement of equipment and to address all of the opportunities in a facility rather than one-by-one replacements as units fail.

The Commercial Kitchen program saw slower than anticipated participation for most of the year. PSE continues to advertise the program and reach out to customers through restaurant trade shows and retail point of sale programs. At the trade shows this year, program staff spoke directly with restaurant owners and learned that this sector of the market seems to have continued to encounter challenges with the slow economy. It is quite possible that an improving economy may help spur this program in the coming year and marketing and outreach efforts in 2012 are supporting future projects our customers will likely implement in their businesses.

Contracted Programs

Small Business Direct Install: This program was launched later than originally planned leading to the program not meeting program targets. However, the program proved very effective in reaching out to smaller outlying communities this year. Three PSE Small Community "Blitz's" were conducted in 2012: Ferndale, Point Roberts and Tumwater. During a Small Community Blitz, businesses are visited by teams consisting of PSE employees and our contractor to give customers an overview of PSE services and perform an energy assessment of the location. If the customer is interested, PSE schedules the installation of a variety of energy efficiency products designed to reduce their lighting, refrigeration, hot water and heating and cooling energy usage, all at no cost to the customer.

For the Tumwater Blitz, representatives from the City of Tumwater were not only included in the planning of the event but were integrated into the survey teams as well. This provided an excellent opportunity for the city to engage their customers during each site visit, asking and answering questions designed to better serve their own constituents. This program enjoys a high participation rate after the initial survey and provides excellent customer services to communities in our service territory.

Cooler Miser Direct Install Program: This program was initiated with a limited quantity of installations in the first half of 2012 which utilized provisional energy savings. Information was gathered to inform future decisions regarding this measure.

Green Motor Rewind: PSE offers this incentive to support a national collaborative, Green Motors Practices Group, which actually drives the program. Participation in the program has decreased throughout North America for the past several years as the economy has impacted the program.

Several marketing and incentive efforts were undertaken in 2012 through the national Green Motors Practices Group, providing added recognition for their member rewind shops in an effort to increase participation. Based on the fact that only one project was completed in this program in 2012, incentives provided by Green Motors Practices Group may not be sufficient to make this a successful program. In 2012, PSE staff assessed opportunities for improving electric motor efficiency incentives and results of this work will inform future program planning.

Gas

Spending on natural gas related rebates was less than originally projected. While the Pre-rinse Spray Valves and Aerator Direct Install Program continued to perform well and contributed greatly to savings reported for the year, installations completed near year-end were not logged into the CSY tracking database and final invoice payments were not processed prior to the calendar year accounting period end date. These costs and savings will appear in 2013 program reporting. Additionally, the program experienced a fairly large decrease in the number of rebates processed for commercial kitchen equipment that uses natural gas as a fuel source.

The Small Business Direct Install program was launched later than originally planned, resulting in gas savings and incentives delivered by the program being less than planned. The Premium HVAC Service Program performed well and provided considerable natural gas savings.

Table 8f below shows the number of measures, by category, installed in 2012. Measures indicate equipment count, except where noted in parentheses; for example, the unit of measure for VSDs is the installed “horsepower.” Some measure categories include both electric measures and gas measures. The “Total Measures” column shows the total number of measures for the respective measure category. The values have been rounded.

Table 8f: Number of Business Rebate Measures Installed by Type

Program Group	Measure Type	Total Measures	Electric	Gas	Gas & Elec
Commercial Kitchens					
	Cooking Equipment	175	55	120	-
	Refrigeration	30	30	-	-
Water Heating		-	-	-	
	Dishwashers	45	15	20	10
	Commercial Washers	25	1	24	-
	Spray Heads/Aerators SBW	8,810	1,190	7,620	-
	Small Business Direct Install	175	125	50	-
	Laundry Water Heating	-	-	-	-
	Restaurant Water Heating	10	-	10	-
HVAC		-	-	-	
	HE HVAC (Tons)	1,800	1,780	-	20
	Prem. HVAC Service	340	260	60	20
	VSDs (Horsepower)	1,170	1,170	-	-
	Portable Classroom Controls	8	8	-	-
	ECMs (Square Feet)	18,300	18,300	-	-
	Programmable T-stats	-	-	-	-
	Small Business Direct Install Prog. T-Stat	1	1	-	-
	Hospitality	3,050	3,050	-	-
Lighting (non-SBL)		-	-	-	
	Commercial Lighting	161,790	161,790	-	-
	Small Business Direct Install	7,180	7,180	-	-
	LED Traffic Signals	1,300	1,300	-	-
	Lighting Markdown	60,615	60,615	-	-
PC Power Management		-	-	-	
	PC Power Manager	29,300	29,300	-	-
Misc. Equipment		-	-	-	-
	Green Motor Rewinds	1	1	-	-
	Premium Efficiency Motors	-	-	-	
	Premium Efficiency Motors	-	-	-	-
	Coolermisers	1,470	1,470		

REGIONAL EFFICIENCY PROGRAMS AND RELATIONSHIPS

Northwest Energy Efficiency Alliance

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Schedule E254

Description

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

Puget Sound Energy benefits from NEEA's market transformation work to accelerate the market adoption of energy-efficient products, services and practices, and to fill the energy efficiency "pipeline" with emerging technologies. NEEA works "upstream" to expand the market for energy efficiency and complements utility programs without duplicating efforts. NEEA's regional advantage allows Puget Sound Energy and other Northwest utilities to leverage the market power of the entire region to realize economies of scale.

As a key funder, Puget Sound Energy expects to invest $26.3 million in NEEA during its 2010-2014 business plan cycle. In 2012, Puget Sound Energy invested $4.6 million in NEEA, or 17.5 percent of its total funding. This report summarizes NEEA's 2012 value delivery to Puget Sound Energy. For additional information about NEEA's unique value to the region, history, structure and recent initiatives, please visit www.neea.org.

PSE also participates in NEEA's Cost-Effectiveness Committee to:

- Conduct an annual review of NEEA cost effectiveness and aMW savings information for reporting purposes
- Review market transformation cost and savings measurement and estimation methods.

2012 Accomplishments and Activities

This report summarizes activities and outcomes and regional initiatives in the areas of emerging technologies, residential, industrial, commercial, codes and standards, partner services and evaluation by the Northwest Energy Efficiency Alliance in PSE's service area from January 1 through December 31, 2012. PSE appreciates the considerable effort demonstrated by NEEA to assemble the following discussion.

Please see Exhibit 10 for the complete NEEA recap of 2012 accomplishments.

Production and Distribution Efficiency

Schedule E292

Description

The purpose of the Generation, Transmission and Distribution Efficiency program is to evaluate and implement energy conservation Measures within PSE's own generation and distribution facilities.

The Generation, Transmission and Distribution Efficiency program involves implementing energy conservation Measures within PSE's own generation and distribution facilities that prove cost-effective, reliable and feasible.

Within generation facilities, conservation Measures reduce ancillary loads at the site and exclude efficiency improvements made to the generating equipment itself. These Measures may include, but are not limited to, lighting upgrades, variable speed drives and compressor upgrades.

For transmission and distribution (T&D) efficiency, improvements are implemented at PSE's electric substations. These improvements can involve reducing the energy use within the substation itself and the distribution of energy from it. They can range from on-site Measures like lighting and heat pumps to system Measures like phase balancing and conservation voltage reduction (CVR), which is also referred to as voltage optimization (VO).

This program requires coordination between the Energy Efficiency Program Manager and staff in other PSE departments to collect project specific details for program tracking and reporting.

2012 Accomplishments

Generation and Distribution Efficiency program did not achieve savings in 2012. This is due to this program being new and the anticipated ramp up time being delayed by budget shortfalls. This shortfall was the result of the program not receiving conservation rider funding under Schedule 120 as had been planned in 2012 per the 2012-2013 Biennial Conservation Plan. This decrease in program funding reduced what the program could achieve in 2012.

While no savings were claimed by the program in 2012, work was completed to position PSE to claim savings in 2013.

The distribution side of the program completed the following work to prepare for phase balancing and Conservation Voltage Reduction (CVR) implementation:

1. Substation Selection – Twelve substations were selected based on their high percentage of residential loading and the initial Biennial Plan. Of these twelve, three were studied in-depth throughout 2012 as the first stage of implementing CVR for this program. The purpose of staging the implementation of CVR is to continually monitor the cost effectiveness of the measure prior to large scale implementation.
2. Communication – Thirteen presentations were given to communicate the scope of CVR to other departments, specifically to departments potentially influenced by the implementation of CVR.
3. Energy savings estimates were made for twelve substations using the methodology outlined in the RTF's simplified voltage optimization (VO) protocol.
4. Calculated the load profile of Residential, Commercial and Industrial for six substations
    a. Using the load profile and customer appliance data acquired by the Energy Efficiency department VO factors were determined for the feeders coming out of six substations.
5. SynerGEE Analysis
    a. Phase balancing for feeders out of three substations was determined. A field inspection was completed to verify the phasing in field.
    b. Voltage drop on each feeder for six substations was evaluated.
    c. Loading on each feeder for six substations was verified.
    d. Evaluated the R and X settings within SynerGEE for 3 substations.
6. End-of-the-line (EOL) Metering for each phase of a the feeders coming out of three substations
    a. Types of meters were selected to provide voltage data at the house.
    b. The cost and contract were determined with Landis+Gyr.
    c. The locations were identified and a field inspection was completed to verify phasing of the meters.
7. Documentation
    a. Completed preparing project packages for the phase balancing work associated with the three stage one substations (Mercer Island, Mercerwood, Southmercer).

For the production side of program, some sites implemented measures, however the process of documenting the baseline and following standard energy efficiency procedure were not completed. Thus, savings could not be claimed in the program. An effort is underway to educate production staff about the process so future measures can be claimed.

Regional Technical Forum (RTF)

Background

In 1996, Congress required the Northwest Power Planning Council (Council)[44] to convene a Regional Technical Forum (RTF) to develop standardized protocols for verifying and evaluating conservation. Congress further recommended that the RTF's membership include individuals with technical expertise in conservation program planning, implementation, and evaluation and that its services be made available to all utilities in the Northwest.

At its April 1999 meeting the Council voted to form the RTF to facilitate the development of the conservation and renewable resources identified in the Council's Plan and to assist the Bonneville Power Administration in implementing a Conservation and Renewable Resources Rate Discount.

Specifically, the four goals adopted by the Council for the RTF corresponding to its original charge from Congress and the Comprehensive Review are to:

- Develop standardized protocols for verification and evaluation of energy savings and the performance of renewable resources.
- Track regional progress toward the achievement of the region's conservation and renewable resource goals.
- Provide feedback and suggestions for improving the effectiveness of the conservation and renewable resource development programs and activities in the region.
- Conduct periodic reviews of the region's progress toward meeting its conservation and renewable resource goals at least every 5 years, acknowledging changes in the market for energy services and the potential availability of cost-effective conservation opportunities.

Consistent with these goals, the RTF would also be called upon to make recommendations to Bonneville to facilitate the operation of the conservation and renewable resources discount program. These recommendations would include:

[44] At the time, the Northwest Power Planning Council, now the Northwest Power and Conservation Council.

- A list of eligible conservation measures and programs, the estimated savings associated with those measures and programs, and the estimated regional power system value associated with those savings.
- A process for updating the list as technology and standard practices change and an appeals process through which customers can demonstrate that different savings and value estimates should apply.
- A set of protocols by which the savings and system value of measures/programs not on the list could be estimated. These would include complex commercial or industrial projects.
- Criteria for eligible renewable resource projects.
- Recommended protocols for measurement and evaluation of savings or production.

The Council Chairperson (Tom Eckman, the Council's Manager of Conservation Resources), in consultation with the Chair of the Power Committee and Director of the Power Division, appoints the RTF's members.

Members and Invitees

The RTF has 28 Voting members and approximately 45 Corresponding members. A current list of Voting and Corresponding members may be found on the RTF website:

http://www.nwcouncil.org/rtf/

The RTF and PSE

Where possible and applicable, PSE will use RTF Deemed measure savings in order to comply with Condition (6):

> Approved Strategies for Selecting and Evaluating Energy Conservation Savings.
>
> (b) Except as provided in Paragraph (6)(c) below, PSE must use the Council's Regional Technical Forum's ("RTF's") "deemed" savings for electricity measures. As of the date of this Agreement, the RTF maintains a Web site at http://www.nwcouncil.org/energy/rtf/.

PSE is a funding provider of the RTF and regularly engages the RTF and other constituents in savings analyses. PSE has provided and will continue to provide measure savings data for RTF input when applicable. Some measures have deemed savings values or deemed savings protocols that are specific to the PSE service region, which are compared to RTF values. PSE shares these data with the RTF to provide additional data points for analyses.

2012 Accomplishments and Activities

PSE relies on RTF UES values, Standard Protocol and Provisional measures for a large number of customer Energy Efficiency offerings. The RTF is now engaged in an effort to update a large number of legacy measures. The RTF has also developed Guideline documents in recent years to document RTF expectations for the development and maintenance of RTF approved measures. PSE has voting member of the RTF, and remains involved with RTF meetings and activities.

The Northwest Research Group

Recently the Northwest Research Group (NWRG) was formed to bring together research and evaluation staff from Northwest utilities to share research findings, methodologies and identify common needs where parties can benefit from combining efforts.

The Northwest Research Group (NWRG) remains active and is under new dynamic leadership at NEEA, the sponsoring organization. PSE Evaluation and Research staff members continue to take an active role in the NWRG meetings, seeking opportunities to facilitate collaboration in research and evaluation activities across the region's utilities.

Other Regional Contributions

PSE participated in the Northwest Trade Ally Network, putting together a contractor training program, where other regional utilities presented specific topics. The Lighting Design Lab also participated with lighting training available to attendees.

Several Customer Solutions Staff members actively contribute to regional and national associations that have connections to energy efficiency. These include, but are not limited to, NEEA (discussed at the beginning of this section), the Association of Energy Engineers (AEE), the Bonneville Power Administration, the Regional Technical Forum (RTF), the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), the Lake Washington Technical College, and several community clubs and Boards.

Customer Solutions staff members serve on Advisory Committees, Steering Committees, Boards of Governor, and voting members. Two are presidents or past presidents of prestigious organizations.

EFFICIENCY PORTFOLIO SUPPORT

Overview

The teams that comprise the Support Activities group play a critical role in Customer Solutions' success in consistently achieving conservation targets within budget parameters. Much of what Residential Energy Management and Business Energy Management (who make up the Customer Energy Management [CEM] department) implements and offers to customers is dependent on the work performed by these teams.

Comprised of 17 dedicated individuals in marketing, research, support, community interaction, administrative and evaluation activities, this sector provides significant input, information and services to a variety of EES programs.

Rather than focusing on a single conservation program, staff members must be expert in evaluation and statistical methodologies, customer marketing, long-range planning, or market conditions evaluation. In order to support the entire EES portfolio, they must also develop an intimate knowledge of a broad range of Residential and Business conservation program offerings.

The Portfolio Support Activities teams ensure that efficiency programs are cost-effective and that a regular schedule of review is established for them. They also collaborate with program management to ensure that all customer classes are engaged and represented, incentives are properly set, and that program staff are targeting their efficiency communication effectively. Through market research and planning, the establishment of compelling messaging, easy-to-navigate and intuitive web content, and visible conservation presence within our communities, the teams' contributions cannot be understated.

It is also with this sector's input that a significant portion of PSE's IRP is developed and published.

These support functions are specific enough to warrant separate entries in PSE's Exhibit 1, the biennial savings targets and budgets table.

The overall functional group met all expectations in 2012. Expenditures finished the year at 74 percent of budget for electric and 91 percent of budget for gas. The efforts within this team have also developed effective marketing programs, helped thousands of customers learn about our conservation programs, and refined internal support processes.

Functional Group Performance

Table 10a provides a 2012 year-to-date summary of expenditures and energy savings for the Support Activities team.

Table 10a: Support Activities 2012 Expenditures

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	% of Budget	
Electric	Electric					Electric
Gas	Gas					Gas
	Customer Engagement and Education	$ 619,848	$559,949	$ 1,179,797	72.1%	$ 1,635,405
	Energy Advisors	$ *360,566*	$382,037	$ *742,603*	*71.6%*	$ *1,036,907*
	Events	$ *184,725*		$ *298,869*	*72.1%*	$ *414,363*
	Brochures	$ *21,630*		$ *45,981*	*84.8%*	$ *54,250*
	Education	$ *52,927*		$ *92,345*	*71.1%*	$ *129,885*
	Web Experience	$ 362,291		$ 873,838	*88.9%*	$ 982,558
	Customer Online Experience	$ *244,665*		$ *634,822*	*99.8%*	$ *635,950*
	E-news	$ -	$1,781	$ *1,781*		$ -
	Market Integration	$ *117,626*	$119,609	$ *237,235*	*68.4%*	$ *346,608*
	Energy Efficient Communities	$ 100,269	$151,534	$ 251,803	89.0%	$ 282,827
	Trade Ally Support	$ 32,517	$4,000	$ 36,517	78.9%	$ 46,300
	Marketing Research	$ 233,611		$ 251,392	44.3%	$ 567,191
	Total Electric	$ 1,348,536	$1,244,812	$ 2,593,348	73.8%	$ 3,514,281
	Customer Engagement and Education	$ 162,399	$69,733	$ 232,132	94.8%	$ 244,795
	Energy Advisors	$ *115,284*	$35,916	$ *151,200*	*97.7%*	$ *154,772*
	Events	$ *23,017*	$24,895	$ *47,912*		$ *62,631*
	Brochures	$ *5,286*	$6,949	$ *12,235*	*149.8%*	$ *8,169*
	Education	$ *18,811*		$ *20,785*		$ *19,223*
	Web Experience	$ 73,882		$ 155,496	105.5%	$ 147,442
	Customer Online Experience	$ *39,932*		$ *100,993*	*105.6%*	$ *95,650*
	E-news	$ -		$ *1,077*		$ -
	Market Integration	$ *33,950*		$ *53,426*	*103.2%*	$ *51,792*
	Energy Efficient Communities	$ 33,449	$30,499	$ 63,948	151.3%	$ 42,263
	Trade Ally Support	$ -	$0	$ -	0.0%	$ 18,000
	Marketing Research	$ 34,315	$3,378	$ 37,693	44.5%	$ 84,752
	Total Gas	$ 304,045	$185,224	$ 489,269	91.1%	$ 537,252

Customer Solutions Portfolio Support activities are those that are necessary to implement conservation measures, perform Evaluation, increase consumer awareness of PSE programs, and review potential new energy efficient technologies. The activities described in the following pages are set apart from the Residential and Business Sectors because they influence and impact all conservation initiatives and are not program-specific.

These activities do not directly result in electric or natural gas savings, although they do have a significant bearing on savings, insofar as identifying target customers, influencing energy efficiency behavior, evaluating installation rates and billing histories, validating savings assumptions and ensuring accurate compilation and reporting of Customer Solutions results. Portfolio Support activities expenses are spread over the portfolio for purposes of calculating cost effectiveness. Only Other Electric Programs[45] expenditures are excluded from cost-effectiveness calculations.

Continuous Improvement

Programs within the Portfolio Support Sector focused on continuous improvement throughout the year, implementing several process revisions to improve efficiencies, reduce costs and maximize customer satisfaction. From the marketing activities that improved program synergies to energy advisors' direct interaction with customers in regional offices providing energy-efficiency advice, the following program- specific reviews will outline key Customer Solutions achievements and revisions.

[45] Net Metering, Renewable Energy Education and Demand Response pilots.

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PORTFOLIO SUPPORT DETAIL DISCUSSIONS

Customer Engagement and Education

The Energy Advisor Department receives numerous accolades from customers who are satisfied with their energy-efficiency solutions throughout the year.

Here are only a few, representative voice mail customer comments. (The customer names are omitted to protect their privacy.)

Compliment from a PSE employee to an Energy Advisor: *"I have the privilege of listening to you speak to our customers and I must say you are excellent at your job. Your patience and clarity with each customer is amazing to me."*

Compliment from a customer to an Energy Advisor: *"Your advice on not closing the vents on my furnace is most appreciated, I was not aware that it could cause long term problems. I would really like to thank you for your response and help with my question. It is nice to know that you guys actually care and are willing to help me save a buck or two without coming all way out here to my house."*

Compliment from a customer about an Energy Advisor: *"I am very impressed with one of your energy advisors. We were very worried about our electric bill and he went through all of the calculations of everything in our home, very detailed monthly usage, and even gave me his direct phone number so I didn't have to go through the hassle of calling through another phone tree. He was polite, thorough, and he cared! The information he gave me was practical, detailed, and I want to pass on my sincerest compliments about your energy advisor. Thank you!"*

Energy Advisors

The Energy Advisor Department is a unique customer solution operation within Customer Solutions. The energy advisors are often the first contact that a customer has with Customer Solutions' Energy Efficiency department, and to them, the energy advisors ***ARE*** Customer Solutions. An energy advisor's focus is to both ensure that both residential and business customers have a positive impression of PSE and its energy-efficiency suite of services, and feel that all of their energy-efficiency questions are answered by a trusted source.

All energy advisors must be knowledgeable about the full scope of energy-efficiency programs and offerings; the expertise of this talented group brings efficiency into our customers' homes by guiding them to make energy efficient choices, in addition to providing energy advice such as low-cost and no-cost savings tips. Unlike transaction based customer care departments, the energy advisors provide expertise and deliver solutions tailor-made for customers' homes.

There are slight differences in how energy advisors process residential versus business customer inquiries.

Energy advisors field questions, and help customers with commercial inquiries specific to Small Business Lighting, the Pre-Rinse Spray Head Program, the Vending Miser Program, and Commercial Rebate Programs. Special energy advisor assignments also include billing history requests.

To keep up with the customers growing expectations and the complexity of inquiries, the energy advisors are encouraged to broaden and expand their knowledge base and skills. Several of the EA's enrolled in Everblue's BPI Building Analyst /Energy Auditor Training and became certified energy auditors. The energy advisors learned critical skills for energy auditing, weatherization, insulation, heating and air conditioning, home construction, home inspection, air quality abatement, as well as energy efficient design and engineering.

An energy advisor provides some energy-efficiency information to a prospective customer at a 2012 event.

The Regional energy advisors continue to increase employee awareness of energy efficiency across the company, with cross-departmental training and presentations. An Energy Advisor is now located in the Customer Care Center and Customer

Construction Services, to increase visibility and offer an on-site contact for Energy Efficiency. We anticipate having a presence with these customer facing organizations will expose opportunities for process improvements and improving the customer experience.

Customers have access to speak directly to an energy advisor through a toll-free number, **1-800-562-1482**, Monday through Friday, 8am to 5pm. Table 11a presents key energy advisor metrics.

Table 11a: Energy Advisor Metrics

Energy Advisors	
Metric	**Number**
Phone calls	81,048
Events staffed	108
Email responses	4,945

Energy advisors also support Commercial/Industrial events.

The metrics noted in Table 11a represent:

- Phone calls are both Residential Sector, and a portion of Business Sector activity.
- Events staffed are those home shows, municipal gatherings, etc., where energy advisors are on-hand during all or a portion of the event to share a wide range of energy efficiency information directly with PSE customers. Event metrics are presented below.
- Email responses include a wide variety of actions taken by energy advisors in response to emails sent to the general energy advisor email link.

Events

Opportunities to have PSE visible in the communities enhances the value of what we can offer to our customers while bringing trust and comfort to our customers that PSE is nearby. The number of event activities in 2012 was successful and provided customers a way to support the community and educate our customers. Events included increased messaging at the events to include HomePrint Assessment, Contractor Alliance Network and Safety.

Event planning is highly focused on the customer and how we can offer quality information. By engaging with PSE experts, the customer can make smart choices with upgrading their home/business. Having the right knowledge gives them the empowerment to choose what is best for them.

A particularly notable accomplishment for the Events Team includes event request training for PSE employees to use when requesting an event through the Event Strategy Team. The enhanced request process ensures efficiency and manageability when submitting event requests. The event calendar is located on an internal PSE website and has easy access for PSE employees to view the event requests on a monthly activity. There are a number of internal stakeholders involved where we are able to provide positive customer impacts through the event process with good interaction to help determine the customer messaging for each event.

The PSE Events Team interacts and looks for opportunities to also work with external stakeholders. This provides a joint effort relationship which enhances serving the customer, and also helps support the program goals for the year as customers can take advantage of signing up for HomePrint Assessments to achieve instant savings by receiving a CFL bulb at the event. Customers enjoy talking to individual experts and feel good with having a one on one contact with PSE. In addition to offering energy efficiency program information we also included customer safety messaging.

*Throughout the year, many customers send PSE positive comments about our event participation. Here are only a few (*the names are removed to protect customer privacy*):*

"Thanks for PSE's commitment in the community. …We are grateful for the support and hope to see you here next year."

"Thank you for helping to make our annual school tour a great success."

"Thank you for participating in (City's name)'s Earth Day. Together we do have the energy to do great things and spread the message of sustainability…"

"Thank you for participating in the (Institution name)'s Climate Day event."

Individual Program Support

In addition to participating in community and home-show events, the Events Team also provides event support and participation for several individual Customer Energy Management programs. Highlights of significant events include:

- HomePrint contractors joined PSE events by providing product expertise and by being visible at the events in the community.
- The Events Team supported the Retail Channel at a variety of events, including "Rock the Bulb".

Individual program support, continued:

- "Customer Solution Now and in the Future" – An internal PSE event, Customer Solutions Staff provided comprehensive energy efficiency information for all PSE employees, with a special emphasis on those who directly interface with customers at various touch points.
- Customer Solutions' energy efficiency programs were also provided to PSE employees at the "Skagit County Road Show".
- Microsoft® Employee Fair – This annual event, held at the Redmond Campus was a very successful event for Microsoft® employee engagement.

Residential Events: Business to Business Channel, Single-Family New Construction (SFNC) Program

The Single Family New Construction program continues to build upon key partnerships with various associations and identifying numerous educational events to leverage and accomplish our mutual energy efficiency goals in reaching out to builders, contractors, suppliers and the community. In 2012, PSE worked closely with the Northwest ENERGY STAR Homes (NWESH) program in the development of a **regional Demonstration Home Campaign**.

This campaign was set to primarily generate consumer awareness on advanced residential construction practices and communicating added value and benefits of these advancements. An RFP process was established, managed by the NWESH team, looking for local builders who are going above and beyond the NWESH specifications. Twenty-five applications were received from builders spanning across the region, Washington, Oregon, Idaho and Montana. Of those 25 applications, 6 projects were selected.

Scott Homes' Inspiration Home, located in Thurston County (within PSE's service area), was selected as a "super-efficient home" featured in this year's campaign. The home served to generate consumer awareness for advanced building practices and technologies; opened for weekend tours during the last three weeks in the month of August. More than 1,000 people toured the home, where they learned how a home that's affordable to construct could also cost just $15 per month to heat – paving the way for a more educated homebuyer.

Both NWESH and PSE were featured as key contributors of the media relations, radio interviews, website contributions, social media outreach, workshops, advertising and staffing special exhibits.

Inspiration Home Campaign Highlights

- Over 6,000 visitors to Scott's website
- More than 1,000 visitors to the open houses
- Almost 150 combined Facebook® members
- Numerous live-radio remotes, including an interview with "Mix 96"
- 3 "Behind the Walls" workshops
- 1 Builder Appreciation Presentation and Photo Opportunity (over-sized check to Scott Homes)

Business Events

The expertise of Energy Management Engineers of Business Energy Management (BEM) and all of PSE's commercial offerings were showcased at the West Coast Energy Management Congress, held in Seattle in May. This noteworthy event, hosted by PSE in 2012, attracted over 1,600 energy professionals from all over the western United States. Attendees took advantage of the high-quality educational sessions, which began with a keynote address from Cal Shirley, Vice-President, Customer Solutions, entitled "Enlightened or Obsolete". PSE's prominent presence on the tradeshow floor included a "Re-Energized" display with materials on BEM programs and case studies on energy efficiency projects.

"Brighten Your Business" promotions took place in both Olympia and Bainbridge Island. These events were instrumental in increasing awareness of PSE's commercial lighting rebates, and how energy efficient lighting can help businesses reduce energy expenses in our service territory. PSE also exhibited at Food Services of America to educate customers about how commercial kitchen rebates can help school cafeterias, church kitchens and commercial restaurants to be more energy efficient and manage energy costs.

BEM focused on concentrated outreach to small businesses in three communities through small business "blitzes." In Pt Roberts, Ferndale and Tumwater, these blitzes were an organized effort of PSE staff who knocked on doors of small businesses and offered on-the-spot energy-efficiency measures installed directly at businesses. The blitzes were a successful community relations effort that offered immediate help to small businesses who wanted to lower their utility bills through energy efficiency.

Table 11b provides a summary of 2012 events in which PSE presented energy-efficiency information.

Table 11b: Total Events

Residential Events	
Type	**Count**
Home Shows	7
Residential Energy Management	86
Business Energy Management	15
Single Family New Construction, Multifamily	12
Community	116
TOTAL	**236**

Energy Efficiency Brochures

PSE provides brochures; both on line and in hard-copy format, and how-to guides on numerous energy efficiency opportunities, including 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 website. Some brochures are included as bill inserts,[46] many are requested by customers—either via an email, or telephone call to an energy advisor—or provided during an energy efficiency event. When a customer requests a hard-copy brochure, it is Customer Solutions' goal to mail it (them) by the next business day.

Table 11c provides the number of energy-efficiency brochures mailed to customers in 2012. The "Number of Brochures Mailed" indicates those that were specifically requested by a customer over the course of 2012. Brochures Distributed at Events includes the 236 events listed in Table 11b, and other community meetings, field visits, or other internal or customer presentations.

[46] Some are required by regulations.

Table 11c: Information Services Brochure Distribution

Brochures	
No. of Brochures Mailed	**39,800**
Brochures Distributed at Events	**486,000**

Notable brochure quantities

Clothes Washer Rebate form:	over 17,000
Refrigerator Replacement form:	almost 9,000
Water Heating Equipment Rebates:	over 6,000
Contractor Referral Service Consumer Guide:	over 5,000
Heating Equipment Rebates:	over 5,000

Energy Education

Description

The Customer Solutions Energy Education program provides opportunities to broaden knowledge of conservation and renewable energy, and increase participation in efficiency programs. PSE's energy education provides a forum for positive customer and community interaction and involvement that will inform, inspire, and empower with the understanding that individual choices do make a difference.

Education is a key component in furthering consumer energy efficiency and renewable energy awareness so that customers are adequately informed to make wise energy decisions.

PSE and Hopelink[47] partnered to provide an Energy Efficiency Education program, Save Energy, Save Money (SESM) workshops to low income adults with limited English speaking skills (over 60 percent of attendees spoke English as a second language). The energy education SESM training PowerPoint handout below was revised to include updated EE and safety education. A copy of this handout is available upon request.

[47] http://www.hope-link.org

At the completion of the workshop:

- Over 90 percent of attendees feel they know more about saving energy and money.
- Over 80 percent of attendees feel they know more about energy safety.
- The top three actions clients will change in their daily routines are:
    - Using CFL light bulbs.
    - Turning the light/s off when leaving a room.
    - Telling friends and family about energy safety.

PSE provided an energy grant to Independent Colleges of Washington (ICW) with a focus on promoting high-quality, academically rigorous learning to students through an RFP process. Seattle Pacific University Students responded and were awarded the EE Student Research project. SPU Mechanical Engineering students researched and developed an Autonomous Window Control System to save energy, by controlling blinds and windows automatically. A prototype system was designed and assembled. PSE incorporated PSE employee mentors and overall was a successful project.

Customer Online Experience

No Conservation Schedule

The Customer Online Experience and Market Integration initiatives are designed to significantly improve customer awareness of energy efficient home and business solutions as well as ease of learning about energy efficient product and services that they can apply to their properties.

Description

Customer Online Experience consists of unified “Re-Energize” graphic standards, as well as the initiative to make PSE’s energy-efficiency web tools effective in delivering electricity and gas savings, especially as we progress toward anticipated higher future savings targets. Research has shown that PSE customers are more web-savvy than average and have high expectations of learning about efficient products and services and having access to energy-management tools online. Continuous improvement of these tools is necessary as technology, interactive tools, online community building and customer expectations evolve.

Market Integration

The Market Integration initiative consists only of salary costs of employees and temp contractors working on Customer Online Experience-related items. This is to make the work done on marketing-related items transparent: these tasks include the enhancement of the energy-efficiency web capability and the “Re-Energize” promotional effort.

Investment in Online Tools

In 2012, Customer Online Experience supported the development of additional tools to help PSE's residential and business customers, community partners and trade allies take even better control of their energy use.

The organization also supported research and testing of capabilities to support PSE's energy-efficiency outreach efforts, including:

- Development of the MyPSE Account Energy Center, with personalized energy-usage dashboards, and segmented energy-efficiency promotions, rebates, coupons and special offers, to help customers manage their usage and demand and understand the savings options available.
- Management of a sophisticated customer data and propensity analytics analysis program, to better give customers the information they need and choices they want, and for future use in online merchandising.
- Launch of the Trade Ally section of the energy-efficiency dedicated "Savings & Energy Center," featuring the new Contractor Alliance Network member portal.
- Improvement of the customer-facing online contractor referral process, including the addition of digital signature capability.
- Additional fillable sign-up and info request forms, including email sign-up.
- Robust oversight of the email newsletter program, including improved list management, analytic recovery of customer response, successful efforts to increase customer subscriber numbers and an increase in communications frequency.
- Improved content voice and tone; simplification of instructions, navigation and additional user interface improvements to enhance the online experience.

Most funds spent during this period were allocated to PSE IT labor and vendor costs associated with technical development, online infrastructure and the Aclara energy management tools, with a very small percentage allocated to software and image licensing to support marketing programs. This complements a first phase of web tools and improved website organization and navigation that was released in 2011.

Customer Engagement and Impact

Since the new website's launch in 2011, the "Savings & Energy Center" has seen a significant uptick in page traffic and overall engagement with customers. In 2012:

- PSE.com saw more than 3 million unique visitors in 2012, an increase of more than 22% over the year prior.
- The "Savings & Energy Center" received more than 1,280,000 page views with an average time of about 1 minute 12 seconds spent on the pages, an increase of more than 50% in page views over the old website, during the same period in 2010.
- There were more than 225,000 views of the residential Rebates & Offers page, an increase of 75% over the same period in 2010, on the old website. The business Rebates & Incentives page received more than 16,000 page views.
- There were more than 24,000 views of the Ask an Energy Advisor inquiry form page, an increase of 53% over the same period in 2010, on the old website.
- There were more than 33,000 views of the Contractor Referral Service referral page, an increase of 49% over same period in 2010, on the old website.
- There were more than 29,000 views of the efficient product retailer and dealer locator maps; more than 2,200 views of the Re-Energize splash page, and more than 81,000 views of the energy-efficiency Tips Tools & Ideas resource pages.

Table 11d provides several highlights of PSE's online metrics.

Table 11d: Energy Efficiency On-Line Metrics

Online Services
PSE.com saw more than 3,006,330 unique visitors in 2012, an increase of more than 22% over the year prior.
The "Savings & Energy Center" received more than 1,280,000 pageviews with an average time of about 1 minute 12 seconds spent on the pages, an increase of more than 50% in pageviews over the old website, during the same period in 2010.
There were more than 225,000 views of the residential Rebates & Offers page, an increase of 75% over the same period in 2010, on the old website. The business Rebates & Incentives page received more than 16,000 pageviews.
There were more than 24,000 views of the Ask an Energy Advisor inquiry form page, an increase of 53% over the same period in 2010, on the old website.
There were more than 33,000 views of the Contractor Referral Service referral page, an increase of 49% over same period in 2010, on the old website.
There were more than 29,000 views of the efficient product retailer and dealer locator maps; more than 2,200 views of the Re-Energize splash page, and more than 81,000 views of the energy-efficiency Tips Tools & Ideas resource pages.

Figures 11a and 11b (pages 185 and 186, respectively) present screen images of the PSE Savings and Energy Center, and About Re-Energize web pages.

Figure 11a: PSE.com Savings and Energy Center

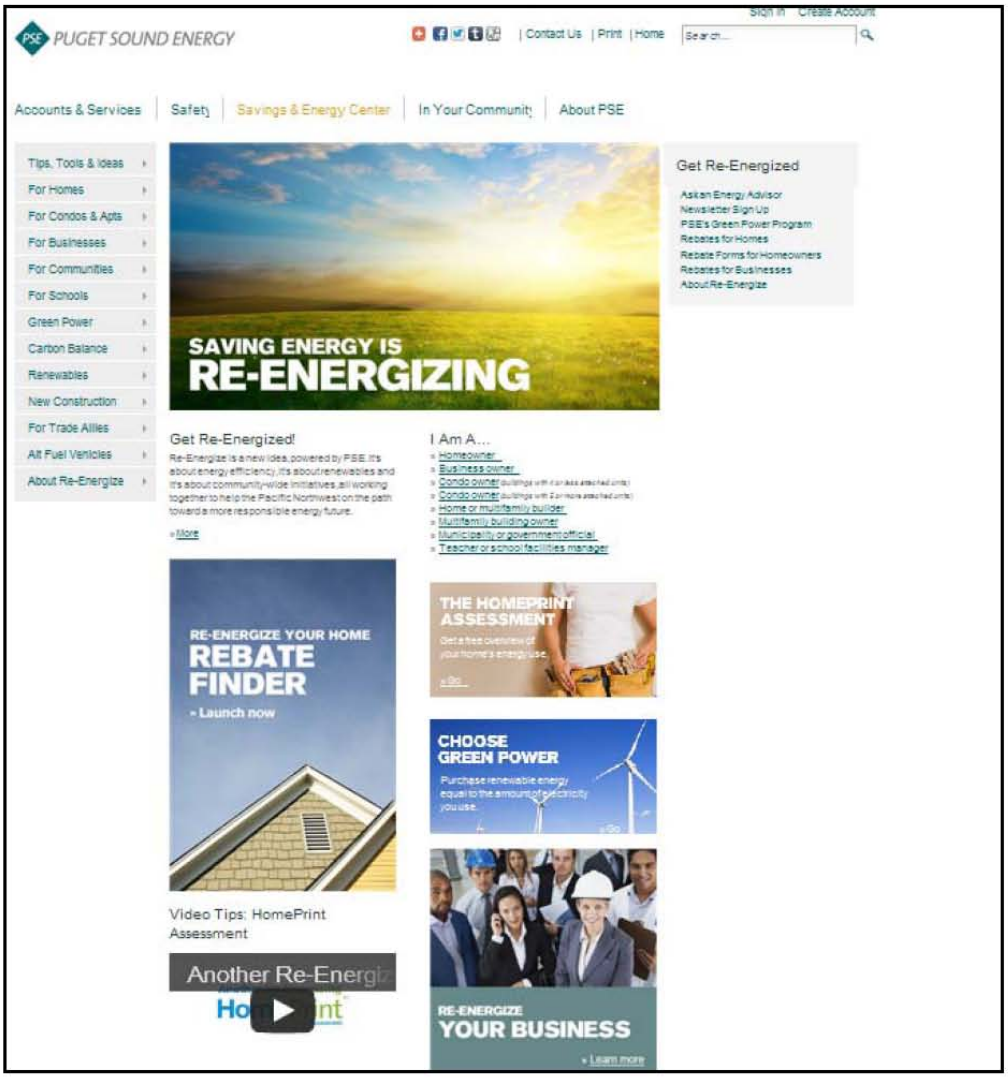
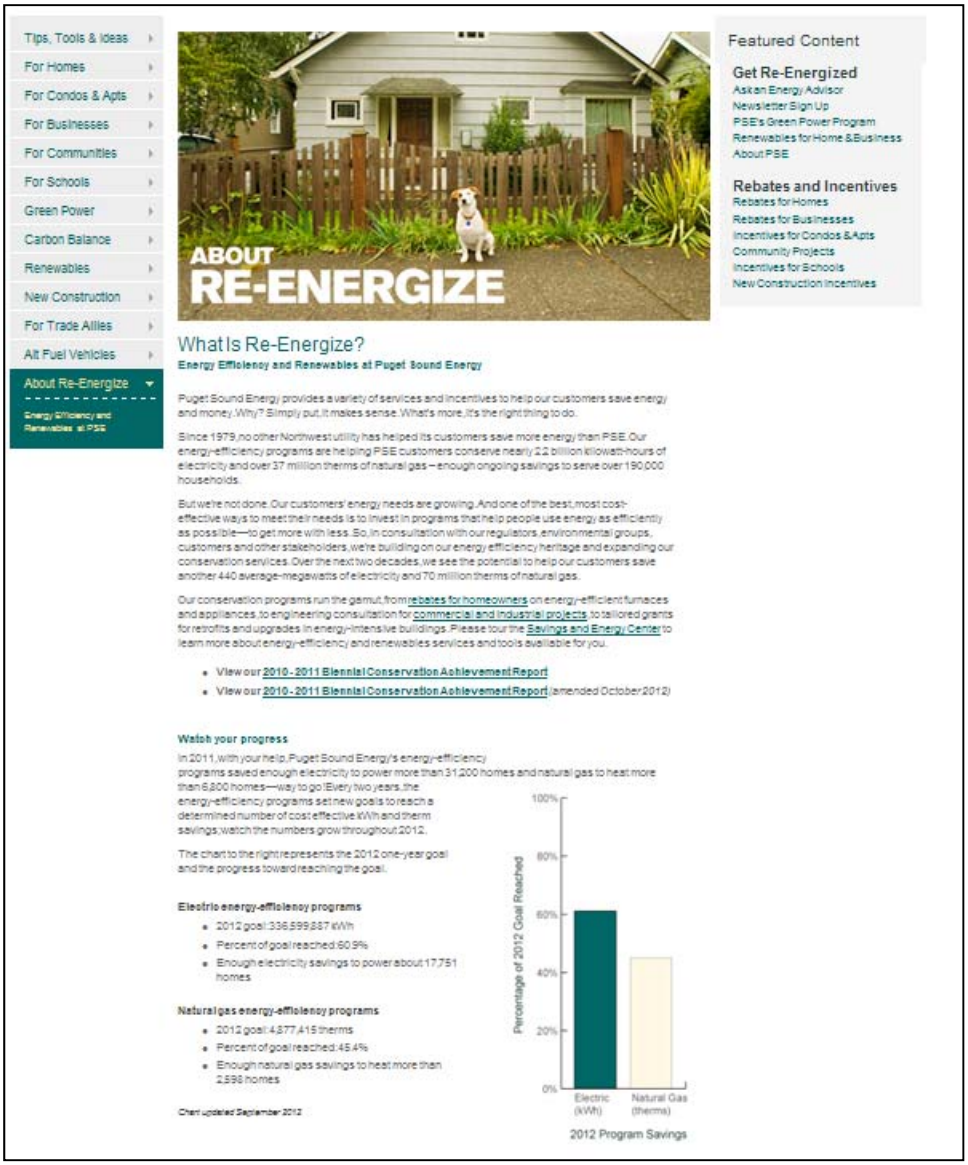


Figure 11b: PSE.com's About Re-Energize page



2012 Customer Online Experience Accomplishments and Activities

Customer Online Experience and Market Integration

In 2012, the Customer Online Experience effort was focused on development of a variety of online improvements and additional tools, the MyPSE Account Energy Center, with personalized energy-usage dashboards and oversight of a sophisticated customer data and propensity analytics analysis program. The resulting increase in customer utilization of these tools is outlined above.

Additional program and general consumer information and customer-facing outreach materials were converted under the Re-Energize graphic standards throughout the year.

Labor dollars within Market Integration to support Customer Online Experience development and implementation remained true to monthly forecasted budget projections for the year.

Energy Efficient Communities

No Associated Conservation Schedule

Description

The Energy Efficient Communities (EEC) team is responsible for direct to customer outreach for efficiency programs and other PSE customer offerings. The team is integrated into the energy management program teams as well as the regional community and business service teams to deliver optimal energy opportunities to the customers and communities PSE serves. They do this by matching the local needs with PSE programs and services through partnerships with cities, counties and other community entities to discover locally-appropriate ways of engaging the communities.

The program staff consists of a market manager, five outreach leads, and a program coordinator, who interface with customers and communities throughout the entire PSE service area.

2012 Accomplishments and Activities

In 2012, the Energy Efficient Communities group continued its work of direct-to-customer outreach for energy efficiency (EE) programs throughout the PSE service area. Of note was high engagement in the outreach role for the following program initiatives in energy efficiency:

- Rock the Bulb: The ReEnergize Tour, focused on PSE's more rural residential electric customers,
- ReEnergize the Community efficiency pledge campaign in local PSE offices and in the community,
- ReEnergize Your Lighting customer events at large employers and community events and locations,
- Promotion of ReEnergized by Design competition in local communities,
- Single family residential electric refrigerator replacement,
- Promotion of light bulb recycling boxes across the electric service area,

- Small Business Direct Install program outreach, small community-focused blitzes and customer follow up, The Energy Efficient Communities team created, promoted and staffed small community "blitzes' in Point Roberts, Ferndale and Tumwater. These intense multi-day events brought PSE's energy efficiency programs directly to the small businesses in these cities and provided instant savings by connecting the business owners with contractors who implemented rebate-qualifying measures.
- Promotion of Dealer channel programs, including Contractor Alliance Network and HomePrint,
- Support and promotion of commercial lighting events, general commercial and residential rebates promotion through presentations and community partnerships,

and multiple engagements with local customers and communities to provide guidance on participation in EE programs.

The team ensured that when customers in the communities they serve had questions about EE programs, they were guided to the right program leads to participate in the incentives offered. They also helped provide feedback to the programs in energy efficiency as the team directly interacts with customers who participate in the programs.

The EE Communities group also continued to link various communities with interest in EE to the variety of EE programs PSE has available. Examples of continued community engagement include the RePower Kitsap initiatives, the Whatcom Community Energy Challenge and the Eastside Green Business Challenge in the central King County area. Although the American Recovery and Reinvestment (ARRA) funding through the Washington State University Energy Extension's Community Energy Efficiency Pilot Program has ended, the program was granted state funding to continue their work for one year (July 2012 – June 2013). The EE Communities team remained engaged in 2012 in ensuring these grant recipients were aware of the existing EE programs PSE has available to the customers they were working with on their community-based EE projects.

The team also continued its role to increase the awareness of PSE employees about the reasons why PSE has energy efficiency programs and services, as well as the breadth of programs the department offers. This is with non-Customer Solutions/Energy Efficiency Staff that have contact with customers and their community groups, as well as the overall PSE employee base.

Customer Solutions believes that the more informed employees are, the better service they can provide to customers. These initiatives demonstrate the ways in which the Energy Efficiency Communities team executes continuous improvement initiatives to help ensure that customers are provided information on our programs in the various encounters they have with PSE employees.

One specific initiative is working with Gas First Response technicians to equip them with leave-behind materials to place on customer equipment that guides them to the energy advisors via phone and the Energy Efficiency website. The technicians were also trained in why PSE has energy efficiency programs and the types of programs that would be available to customers the technicians encounter.

Other awareness-raising activities include an employee energy fair, local office “brown bag” meetings, trainings and regular updates on program changes.

Two more team members were added mid-year 2012 to provide more comprehensive service to the King, Snohomish and Whidbey Island service areas.

Trade Ally Support

No Schedules

Description

Formerly named Local Infrastructure and Market Transformation, PSE re-named this function Trade Ally Support in order to more accurately represent the tasks and activities of this function. At the beginning of 2012, PSE retired its associated Schedules, electric & gas 270. In addition to revising its name, PSE also relocated the function from the (now eliminated) Support Activities to Portfolio Support, as this function applies to a broad spectrum of Customer Solutions functions and programs.

Trade Ally Support provides education and related services for:

- The adoption or expansion of energy-efficiency products and practices in local markets; and
- Conducting research toward the development of new conservation measures, programs or services.

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 services. Customer and service provider benefits primarily include education and information. These can include end-use training workshops, conferences and energy efficiency trade shows aimed at reaching a broad array of customers and trade allies. Similar to but narrower than Program Support, the Local Infrastructure and Market Transformation budget line item gives visibility to the annual membership dues PSE pays to trade associations and research organizations who support ongoing development and implementation of the wide variety of both Residential and Business Energy Management programs.

Memberships and Sponsorships

As discussed in the Introduction section of this report (page 32), PSE applies a great deal of rigor to ensure that Rider/Tracker ratepayer funds are used appropriately to add value to Customer Solutions conservation offerings when considering memberships.

While there are some memberships that are national in scope and have wide-ranging applications, there are some memberships that are paid from the Trade Ally Support account. These have a fairly narrow application, usually focused on local or regional conservation efforts. For 2012, those memberships included.[48]

- Building Owners and Managers Association of Seattle & King County – BOMA
- Electric League of the Pacific Northwest
- Northwest Energy Efficiency Council - NEEC

2012 Accomplishments and Activities

Energy efficiency programs continue to benefit from ongoing proactive relationships with broad-based trade allies including: the Building Owners and Managers Association (BOMA) of Seattle and King County; Northwest Energy Efficiency Council (NEEC); and the Electric League of the Pacific Northwest. For example, Electric League relationships were helpful in PSE establishing a formal presence on the Washington State Building Code Council Energy Code Technical Advisory Group this spring and summer. In this role we were proactive and effective supporting desired results on updated submetering language in the code. Annual membership dues for the three organizations named above were paid through this line item in the first quarter of 2012.

In the latter half of 2012, PSE Energy Efficiency staff participated as judges in BOMA's "The Office Building of the Year" (TOBY) competition among local property owners and managers. TOBY includes substantive categories in energy efficiency and sustainability performance. Further in the second half, the Electric League began planning work with PSE, Seattle City Light, Snohomish County PUD, and Northwest Energy Efficiency Council programs' energy efficiency (EE) staff on the 2013 Powerful Business Energy Conference. This biannual conference brings business customers, EE trade allies and utility staffs throughout the Puget Sound region together to hear and discuss all facets of the latest EE technologies, applications and services. The 2013 conference is scheduled for May 13th at Meydenbauer Center in Bellevue.

[48] These are included in Exhibit 1, Supplement 3 of this report, which lists all 2012 memberships and sponsorships.

Marketing Research

No Schedules

Description

Marketing Research conducts a variety of research studies and analyses to support program design, marketing strategies, and development of effective program promotion and customer communications for energy efficiency.

The focus of the Marketing Research function is on acquiring information about customers that is relevant for the development of programs, educational materials, and promotional campaigns that will be effective in encouraging program participation.

Through various techniques such as surveys, focus groups, and analysis of existing databases, Marketing Research provides understanding of customer perceptions, motivations and barriers to adoption of energy-efficient applications and behavior, as well as tracking customer awareness of program offerings and satisfaction with non-program specific education and information services. Marketing Research is also called upon for analysis of localized characteristics, attitudes, behavior, and energy usage trends, necessitating more geographically targeted research. Marketing Research expenses are driven by the customized nature of the work and the large sample sizes required in quantitative studies for results to be valid for multiple market segments and geographic areas.

The Marketing Research staff works closely with program evaluation, marketing communications, and program implementation staff to identify research needs that support the effective development, delivery, and evaluation of energy efficiency programs. These research needs are then coordinated and leveraged to result in a slate of research projects that are responsive to internal client needs, eliminate duplication of effort, and are cost-efficient.

PSE's conservation market research activities are divided into two basic components:

> Baseline Research with Broad Applications: This type of research provides strategic, foundational information about PSE customers that will be a common source of knowledge for the general planning and design of all energy efficiency programs and promotional campaigns.

Application-Specific Research: This research is focused on specific programs or promotional initiatives. It includes research that supports specific energy efficiency program promotion and communications campaigns. Other research efforts will be focused on tracking customer satisfaction with information services. Finally, research may be conducted to provide customer input on the design and implementation of specific programs, primarily using qualitative methods such as focus groups.

2012 Continuous Improvement

PSE adjusted its approach to conducting market research in 2012, which resulted in under-spending the expected budget. PSE relied much more heavily on inexpensive online survey tools which allowed the company to conduct most of its own surveys, without using outside consultants. Some market research activities were redirected into 2013 to support the upcoming 2014-15 biennial program planning process. Finally, some labor was also redirected to non-conservation work.

2012 Accomplishments and Activities

A Communications Study was completed in 2012, which looked at customer preferences for media and communication methods to learn about energy efficiency and PSE offerings and where customers go to get more information. PSE also conducted a number of customer satisfaction surveys that are designed to provide ongoing customer feedback on the multifamily direct install and retrofit programs, mobile home duct sealing, residential appliance rebates, HomePrint audits, and service provided by the Energy Advisors.

A Geospatial Information System (GIS) database was built in 2012 that contains monthly usage data for all PSE metered customers that can be mapped. This serves as a foundation for identifying target markets for program promotion, as well as support for community energy efficiency initiatives. This database was then used to conduct a number of geographically targeted marketing studies, particularly to identify locations for special events or promotions, and target markets for heat pumps and electric-to-gas water heater conversion.

PSE is an active participant in the region-wide Residential Building Stock Assessment (RBSA) being conducted by NEEA, which used on-site visits to collect detailed end use information, including approximately 300 homes in PSE's service area. PSE provided lists of customers to be sampled in the study, as well as gas bill histories for calculating end use energy consumption (electric bill histories will be a 2013 task).

In 2012, a draft regional database and draft single-family report were completed. PSE also participated in initial planning sessions for NEEA's Commercial Building Stock Assessment, which will be completed in late 2013 or early 2014.

EFFICIENCY RESEARCH & COMPLIANCE

Overview

This Sector of conservation-related activities and functions was created at the beginning of 2012 so that Customer Solutions may more accurately represent the nature and focus of the individual organizations. Functions relocated from the former Support Activities group include:

- Conservation Supply Curves
- Strategic Planning
- Program Evaluations
- Verification Team
- Program Support

Table 12a provides a 2012 summary of expenditures for the Research & Compliance group.

Table 12a: Research & Compliance 2012 Expenditures

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	% of Budget	
	Electric					Electric
	Gas					Gas
	Conservation Supply Curves	$ 156,841	$231,422	$ 388,262	91.6%	$ 423,659
	Strategic Planning	$ 29,767		$ 98,033		$ 350,289
	Program Evaluation	$ 921,100	$824,380	$ 1,745,480	86.4%	$ 2,021,028
	Verification Team	$ 191,122	$241,212	$ 432,335		$ -
	Program Support	$ 95,983	$185,703	$ 281,686	74.7%	$ 376,970
	Total Electric	**$ 1,394,813**	$1,550,982	**$ 2,945,796**	92.9%	$ 3,171,946
	Conservation Supply Curves	$ 39,447	$49,218	$ 88,666	140.1%	$ 63,306
	Strategic Planning	$ 7,933		$ 17,685		$ -
	Program Evaluation	$ 281,641	$233,039	$ 514,680	101.2%	$ 508,480
	Verification Team	$ 35,018	$42,794	$ 77,812		$ -
	Program Support	$ 8,433	$15,070	$ 23,503	38.9%	$ 60,435
	Total Gas	**$ 372,473**	$349,873	**$ 722,346**	114.3%	$ 632,221

As will be discussed in the following chapter, there were significant Evaluation and Verification Team activity and accomplishments in 2012.

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EFFICIENCY RESEARCH & COMPLIANCE DETAIL DISCUSSIONS

Conservation Supply Curves

No Associated Conservation Schedule

Description

One of the primary responsibilities of the Strategic Planning function is to complete a Conservation Potential Assessment for the company's Integrated Resource Plan (IRP). The Conservation Potential Assessment identifies the amount of energy savings potential that is technically and economically achievable over the 20-year planning horizon of PSE's IRP. The IRP, which is filed every two years, is the basis for PSE's electric and gas energy resource acquisition strategy, as well as the targets for our energy efficiency programs. The IRP analysis may also be used to derive the ten-year conservation potential and two year electric conservation target required to comply with the Washington Energy Independence Act (often referred to as I-937).

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

2012 Accomplishments and Activities

PSE began work on the conservation potential assessment for the 2013 IRP. Cadmus Group completed an assessment of the technical and achievable potentials for demand-side resources in 2012, which was presented to the IRP Advisory Group in November. These potentials are undergoing final review and will be incorporated into PSE's electric and gas resource portfolio analyses in early 2013.

Strategic Planning

No Associated Conservation Schedule

Description

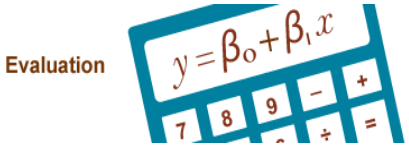
One of the primary responsibilities of the Strategic Planning function is to complete a Conservation Potential Assessment for the company's Integrated Resource Plan (IRP). The Conservation Potential Assessment identifies the amount of energy savings potential that is technically and economically achievable over the 20-year planning horizon of PSE's IRP. The IRP, which is filed every two years, is the basis for PSE's electric and gas energy resource acquisition strategy, as well as the targets for our energy efficiency programs. The IRP analysis may also be used to derive the ten-year conservation potential and two year electric conservation target required to comply with the Washington Energy Independence Act (often referred to as I-937). The function also provides program planning support, regulatory filings, and legislative review.

2012 Accomplishments and Activities

Conservation Strategic Planning is under budget. $130,000 was set aside for supplemental end use equipment saturation research for the IRP, which was determined to not be needed. The labor time associated with this discontinued research was devoted to other activities.

Program Evaluation

No Associated Conservation Schedule



Description

The Evaluation staff is committed to the verification of claimed energy savings and the continual improvement of energy efficiency service delivery to customers. The Evaluation Team investigates the cost effectiveness of all Customer Solutions as described in the EM&V Framework.[49] Utility Cost and Total Resource Cost benefit-to-cost ratios are the two primary cost-effectiveness tests performed, and, beginning with the 2012-2013 period, the Participant Cost Test and Ratepayer Impact Measure Test will also be calculated and documented. The latter two tests can help inform program design interests.

The Evaluation Team evaluates programs and measures in accordance with the EM&V Framework. Also, consistent with the four year evaluation cycle shown in the 2012-2013 Evaluation Plan,[50] Evaluations begun in 2012 for completion in 2013 include those for the Commercial & Industrial New Construction, Resource Conservation Manager, and Commercial Rebates and Small Business Lighting programs, as well as evaluations of, Showerheads and CFLs, Multifamily Air Sealing, Existing Single Family, Single Family and Multifamily New Construction, and Home Energy Reports.

PSE program implementation teams work together with the Evaluation team to inform the development of evaluation scopes of work. The Evaluation Team has also developed and will maintain a strategic evaluation plan, ensuring that all programs receive review on a four year cyclic basis.

The Evaluation staff is also closely engaged in the Measure Metrics process. Using the Evaluation Report Response (ERR), the Implementation and Evaluation Teams ensure that study findings are incorporated into the programs.

[49] Exhibit 8 of PSE's 2012-2013 Biennial Conservation Plan (BCP).

[50] Exhibit 6 of the BCP.

When an evaluation study is completed, findings and key recommendations are reviewed by the Implementation Team with assistance from the Evaluation Team. The Implementation Team then completes their input to the ERR, indicating what actions will be taken as a result of the evaluation findings. This ensures a closed-loop system with Evaluation findings and Implementation reactions and adjustments being documented in the Measure Metrics database.

In addition, the Evaluation Team is monitoring the Regional Technical Forum (RTF) and the Northwest Research Group (NWRG) for opportunities for collaboration with RTF interests, and among regional utilities with common evaluation needs. A budget reserve is also maintained for prioritized Other Projects that come up over the course of the year.

2012 Accomplishments and Activities

Several studies were completed in 2012. The studies include a portfolio evaluation of the Commercial & Industrial Retrofit Program, an evaluation of the Low-Income Weatherization Program, a Home Energy Report Evaluation, a Clothes Washer Savings Review, an Energy Efficient Communities Program Evaluation, and an independent third-party review of PSE's 2010-2011 electric conservation energy savings. Table 13a provides a status for each evaluation study completed in 2012.

Table 13a: Evaluation Projects Completed in 2012

Measure Category	Evaluation Study or Activity Title	Study Author	Study Date	Status
Commercial & Industrial Retrofit	Commercial and Industrial Energy Efficiency Retrofit Custom Programs Portfolio Evaluation	Navigant	2/3/2012	Complete
Low-Income Weatherization Program	Low-Income Weatherization Evaluation	Cadmus	4/16/2012	Complete
Home Energy Report	Puget Sound Energy's Home Energy Reports Program - Three Year Impact, Behavioral and Process Evaluation	DNV/KEMA	4/20/2012	complete
Clothes Washer	Regional Technical Forum Savings Review	Cadmus	4/16/2012	complete
Energy Efficient Communities	Energy Efficient Communities Program Evaluation	Navigant	8/17/2012	complete

Verification Team

No Associated Conservation Schedule

Consistent with interests and planning dating to the September 2010 Conditions Agreement, in 2012 PSE completed development and fully implemented a broad-based Verification function including customer site visits for our Residential and Commercial/Industrial rebate programs. With key help from KEMA in the second half of 2011 and first half of 2012, a comprehensive Verification Manual was completed in May 2012.

Composition

The Verification Team consists of four dedicated CS/EE staff members responsible for conducting on-site inspections and related activities to verify installation of energy efficiency measures for rebated equipment. This team confirms installed measure quantities, model numbers, site qualifications, equipment settings, and other related installation parameters through review of primary documentation, phone surveys, and onsite inspections. Verification of energy efficiency measures includes those installed and reported by trade allies, PSE contractors, and other third parties.

Objective

The Verification Team provides PSE program staff with an overarching process to improve the quality of program implementation and validate energy savings with a high degree of rigor by incorporating higher levels of measurement and verification activities. The team strives to meet this objective by combining detailed and documented statistical methods of analysis and sampling[51] with individualized field inspection protocols and documentation requirements tailored to each specific program.

[51] Sampling methods for randomly identifying measures or projects for verification, and a sampling tool to determine sample size for verification of each program has been developed in collaboration with DNV KEMA and deployed throughout 2012.

2012 Process Enhancements and Accomplishments

2012 was the first full year of operation for the Verification Team, and the team continues to mature with significant refinements in methodology, increased definition and documentation of processes, inclusion of additional programs, and enhanced and streamlined communication and reporting. In 2012, the Verification Team significantly expanded its scope by conducting over 2,600 field or phone verifications across 24 programs. This represents an increase of 274 percent over 2011 verification levels. Highlights of these enhancements and accomplishments include:

- Completed and fully deployed, in collaboration with KEMA, a verification sampling tool and related sampling protocols. This allows the verification team to identify and verify a sampling of program measure installations that is both random and statistically significant.

A Verification Team Quality Assurance Specialist verifies a condensing boiling in a multifamily installation.

- With input from KEMA, Completed and distributed a verification manual, including field procedures, sampling methodologies, inspection processes, reporting contents, and process documentation. This manual has been made available to all stakeholders to ensure their familiarity with the Verification Team processes and procedures.

- Deployed an updated and streamlined Verification Team database that is available to all stakeholders. This allows for more timely assignment of verification jobs and tracking job progress by the Verification Team, as well as enhanced reporting and analysis of results by program personnel to facilitate program quality.

- Identified and corrected bottlenecks in data flow between program teams and the verification team to improve coordination of efforts and ensure timely acquisition and completion of all available jobs by the Verification Team.

- Expanded Verification Team activities to include on-site verifications of the Fuel Conversion, Homeprint, and Single Family Weatherization programs.

- Completed plans, including developing forecasts and sample rates, to expand on-site verification activities to include additional Commercial and Residential programs in 2013. These plans include verification of Appliances, Commercial Kitchens, Hospitality, and Commercial Heating Equipment Programs.

- Initiated, through a third party vendor, an additional telephone-based verification process that will expand further in 2013.

Table 13b represents on-site project inspections completed by the Verification Team through 2012. It is important to note that verification by a home, project, business or dwelling can involve more than 100 individual measures.

Table 13b: Residential Verifications by Project

Program	Unit Definition	Total Number Verified
Heat Pump - Air Source	Measure	**280**
Heat Pump-Lockout Control	Measure	**152**
Heat Pump-Geothermal	Measure	**14**
FAF to HP Conversion	Measure	**95**
Water Heater- Storage, electric	Measure	**69**
Waste Water Heat Recovery	Measure	**1**
Gas Boiler	Measure	**16**
Gas Furnace	Measure	**415**
Gas Fireplace	Measure	**193**
Integrated Space and Water Heat	Measure	**37**
Hot Water Heat Pump	Measure	**8**
Ductless Heat Pump	Measure	**1**
Water Heater Storage Gas	Measure	**1**
Fuel Conversion	Measure	**76**
Homeprint--Phone Verification	Homes	**228**
Homeprint QA Review	Homes	**25**
Weatherization: Windows	Homes	**184**
Weatherization: Insulation	Homes	**1**
New Construction	Homes	**396**
Multi Family New Construction	Projects	**19**
Small Business Lighting	Businesses	**386**
Multi Family Retrofit/Existing	Projects	**7**
Low Income Weatherization	Dwelling Units	**6**
Totals		**2,610**

Customer Solutions/Energy Efficiency Third Party Implementer Programs

In addition to independent random verifications, the Verification Team also works with program staff to ensure that third party implemented programs document their verification process, have minimum requirements for on-site inspections, fully integrate their reporting requirements to be consistent with PSE reports, and conduct random sampling verification of third party projects. While each Third Party Implementer Program is responsible for its own verification activities, the PSE Verification Team also performs QA verifications of Third Party Implementer Programs to verify that their Measurement and Verification is reliable.

Program Support

No Associated Conservation Schedule

Description

This function includes management and support activities necessary for the strategic and tactical execution of the wide variety of both Residential and Business programs.

The Program Support budget includes labor costs by New Program Development and some Evaluation staff responsible for supporting, developing and improving program delivery processes in customer Energy Management.

Typical functions include internal and external review, adoption/rejection, development and integration of: new EE industry research, end-use technologies and applications; pre-pilot program proposals; construction codes; equipment standards; software and similar tools applications. Other examples include: support for biennial and strategic program planning; participation in regional initiatives and organizations including RTF, NWRG and NEEA; assessment, documentation, development and implementation of Measurement & verification and quality assurance/quality control protocols and methodologies; coordinating IRP DSM RFP and related development and bidding activity; and managing program benchmarking studies, best practices, continuous improvement and related support activities.

2012 Accomplishments and Activities

In alignment with the significance that PSE assigns to safety, New Program Development supported Business Energy Management in submitting an RFP and selecting a contractor to provide sub-metering/data-logging services for large custom C/I projects. The contractor was required to have the appropriate safety training for accessing electrical panels inside customers' facilities as well as the technical expertise to gather quality measurement data. Having an appropriately trained contractor provide this service removes PSE employee exposure to potential safety risks associated with this activity.

Other efforts include cost-effectiveness assessment for customer-owned un-metered street lights to upgrade to more efficient LED fixtures. Initial results, based on estimated market prices, show High Pressure Sodium to LED fixture upgrades for conventional pole-mounted cobra head fixtures are marginally not cost-effective.

We are continuing assessment in looking for a representative small number of projects that may pass cost-effectiveness tests under real market conditions and ongoing declines in LED fixture prices.

A streamlined in-house tool for calculating cost effectiveness for any general EE measure or program was also developed in 2012. The tool is a valuable device for program design and development staff to test cost-effectiveness potentials for new and updated programs and measures.

New Program Development staff also developed a commercial and residential energy efficiency program for the small remote community of Point Roberts. Our avoided costs there (exclusively BC Hydro) are comparatively higher than our normal resource portfolio; therefore, we are taking a focused approach to assure we cover all cost-effective potential as completely and efficiently as possible. Program services will include Energy Smart Grocer, Small Business Direct Install, HomePrint, and Duct Sealing/Direct Install.

Additional energy efficiency projects and functions performed or supported by New Program Development Staff in 2012 included:

- Teaming with Evaluation staff (on Load Shape data) and Budget and Admin staff (on Reporting criteria) for development and implementation of a monthly System Capacity Impact assessment from EE program savings. Capacity impacts reflect the value of energy efficiency programs' *load* reduction on PSE's electric transmission and distribution system during winter peak conditions. Peak load savings, summed by measure load shape contribution per program, are now reported monthly (as Megawatt, or "MW," Capacity Savings) in mainstream EE Programs Savings reports.
- Part-time Program Manager position support for the Small Business Lighting group during a staff medical leave of absence.
- An incremental cost study of Energy Efficient commercial boilers over standard efficiency boilers.
- Verification database and related data management and reporting tools development, implementation and support for Verification, Programs, Systems Channel, and Management staff.

Energy efficiency projects and functions performed or supported by New Program Development Staff in 2012 (continued):

- Customer bill data reporting and Energy Star Benchmarking software upgrade project - facilitated needs assessment and development work for new software tools meeting upgraded EPA/Energy Star data requirements going live in June 2013. New tool(s) will offer far-reaching benefits for PSE customers in multiple programs and venues, including Multi-Family/Low Income, Resource Conservation Manager, and others seeking improved compliance with Washington State building energy use reporting requirements.
- Ancillary Services / Spinning Reserve investigation for prospective PSE and large customer demand-side participation interests.

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OTHER ELECTRIC PROGRAMS OVERVIEW

There are four electric Customer Solutions programs for which savings are not claimed; Net Metering, Energy Renewable Energy Education and two Demand Response pilots. These programs are managed by teams comprised of four expert professionals that interact positively with customers to promote the effectiveness of demand response and small-scale renewables technologies.

Net Metering and Renewable Energy Education primarily focus on customer-side generation, including solar, wind, anaerobic digesters (biogas, etc.) and small-scale hydro. These systems are smaller than five megawatts (MW).[52] The Commercial/Industrial Load Control Pilot and the Residential Demand Response Pilot are differentiated from the other pilots due to their longevity specificity, and potential effect on the overall utility.

Net Metering and Renewable Energy Education are a part of the Customer Renewable Energy Programs team, directed by a department manager.

The Demand Response pilots are a part of the New Program Development & Evaluation team, also supervised separately by a department manager.

PSE saw an incredible rise in the number of net metering customer applications over the course the year and the response received on our solar school initiative has been gratifying. The Demand Response pilots have been very successful, with results meeting expectations.

Sector Performance

Table 14a provides a 2012 summary of expenditures and energy savings for Other Electric Programs.

[52] Larger systems fall under the considerations of PSE's Schedule 91, Cogeneration and Small Power Production.

Table 14a: Other Electric Program 2012 Expenditures

2012 Expenditures		2012 Semi-annual View				2012 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	% of Budget	
Electric	Electric					Electric
E150	Net Metering	$ 156,922	$205,634	$ 362,556	123.9%	$ 292,518
E248	Renewable Energy Education	$ 44,632	$59,442	$ 104,074	73.1%	$ 142,463
E271	C/I Load Control	$ 88,718	$10,899	$ 99,617	8.5%	$ 1,176,490
E249A	Residential Demand Response Pilot	$ 84,886	$1,213	$ 86,099	229.7%	$ 37,490
	Total Electric	**$ 375,158**	$277,188	**$ 652,346**	39.6%	$ 1,648,961

OTHER ELECTRIC PROGRAM DETAIL DISCUSSIONS

Net Metering

Schedule E150

Description

The Net Metering program provides interconnection services for qualifying customer-generators who employ a variety of renewable generating equipment—such as solar photovoltaic (solar PV), micro-hydro, wind, etc. 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,[53] 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.[54] Service under this schedule is limited to a total of 11.2 MW of cumulative nameplate generating capacity. This limit will increase to 22.4 MW on 1/1/14. Customer generation can be used to offset part or all of the customer-generator's electricity use.

At the time a customer enrolls in the Net Metering program, they are also provided the necessary information to receive annual benefits from the Production Metering, or the Renewable Energy Advantage Program, which is described in Schedule 151.

No direct customer incentives are provided as a part of these programs. As described in the following section, the Conservation Rider only funds appropriate administrative expenses, as provided by the indicated requirements.

Energy produced by customer-generator systems directly reduces energy used in the home or business from the grid. When energy generated exceeds home or business electrical loads, the excess energy flowing to PSE is separately metered and credited to the customer at the retail rate for future use.

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[53] 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.

[54] Revisions to Schedule 150, including increasing the maximum generator capacity to 100kW became effective June 12, 2006.

The Net Metering Program's year runs May 1 to April 30. Any excess credit each month is rolled forward to the following month. When the new program year ends on April 30, the credit is reset to zero.

Net Metering Expenses

The 2002 Stipulation Agreement, Section H.25 provides the authority to PSE to charge reasonable Net Metering administrative costs to its Conservation Rider:

> "Tariff-rider funds shall only be used on programs and their associated administrative costs that result in energy savings through energy efficiency investments or fuel switching. This may include reasonable administration costs for PSE's net metering program."

Further, as part of the 2008 Merger Agreement, Docket No. U-072375, the parties agreed to dedicate resources to market and promote net metering. As the number of net metering installations has dramatically increased over the past two years, the Net Metering program has added a new staff member to keep up with the volume of applications and annual production payments resulting from net metered renewable energy production.[55]

The median net metered customer system is 4.2 kilowatts (kW). This size system generates, on average, 4,200 kWh of energy annually.

During peak summer months, customers may actually carry a credit balance on their energy bill. This credit is applied each month, all the way through the following April, rather than resetting to zero in January; a modification led by PSE in 2007.

The largest residential system is 33.6 kW. The largest commercial net metered system is 99 kW.

2012 Continuous Improvement

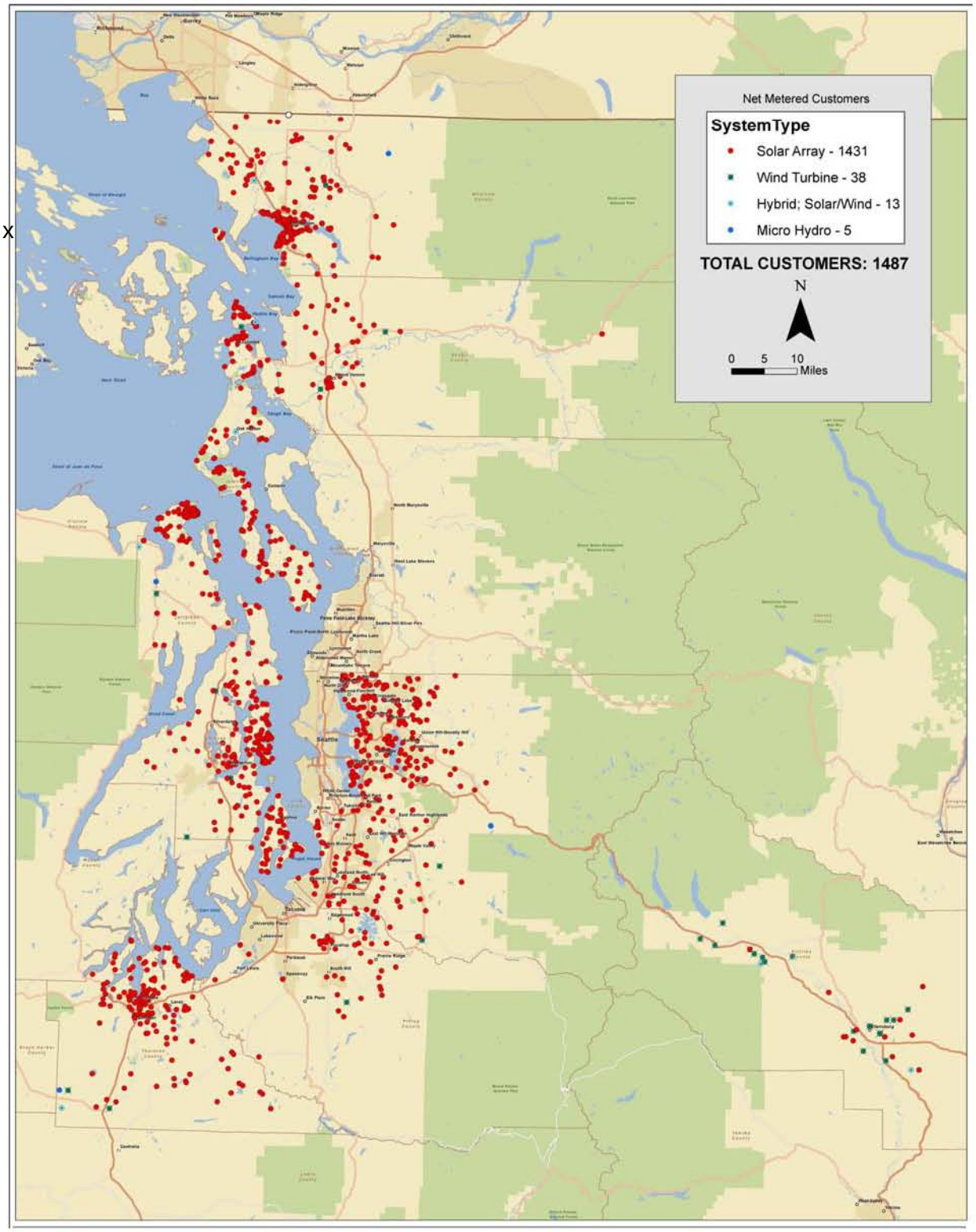
Some of the meter installation and tracking responsibility has been passed over to the program manager which ensures that the meter installation request is entered into the data system at the earliest date and allows for the maximum benefit to the customer.

[55] The Renewable Energy Advantage Program (REAP) administers renewable energy production payments to qualifying customers, consistent with RCW 82.16.120 and WAC 458-20. Funding and payments are not in any way associated with the Conservation Rider.

2012 Accomplishments and Activities

PSE added 414 new net metered customers in 2012, a 39 percent increase. This brings the total net metered customer up to over 1,450, with total generation capacity of over 7.8 MW. Figure 15a on the following page presents a map of the Net Metered customers; solar photovoltaic, wind, and hydro, installed throughout the PSE service territory as of January, 2013.

Figure 15a: Map of Net Metered Customers



Production Metering

Schedule 151

Schedule 151 is the venue through which PSE administers the state-authorized production payment to qualifying customer-generators. The program is also known as the renewable energy system cost recovery program in WAC 458-20. In the most recent program year, from July 1 2011 to June 30 2012, the payments totaled $ 1,106,000, which is significantly greater than the previous year's payment total of $525,000. It is important to note that the indicated payments were in no way funded by the Conservation Rider.

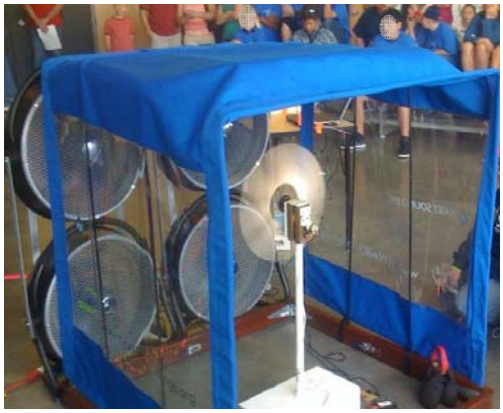
Renewable Energy Education

Schedule E248

Description

Renewable Energy Education provides grants for small scale renewable energy demonstration and education projects and to promote the acceptance of local energy development through brochures and displays. The program also provides unbiased subject matter expertise that customers may call on.

2012 Accomplishments and Activities



Students observe the results of turbine testing during a 2012 KidWind event at Central Washington University.

In 2012, PSE closed the grant program for small solar power demonstration projects, typically 1 kW installed on schools. We focused this year on wind power education. Wind turbine design has exploded in recent years with numerous technical improvements. To provide opportunities for students to delve into the science and technology of wind power, PSE sponsored an event for grades 4 through 12 in Kittitas County in the spring of 2012.

Twenty three teams of 115 students packed the new Fluke Interdisciplinary Lab at Central Washington University to conduct poster presentations showing teamwork, design and materials selection for their tabletop turbine. The high point involved teams setting up their turbine to be tested in a wind tunnel built by the KidWind Project. KidWind is an international education effort that has trained over 7,000 teachers and impacted more than 500,000 students in over 40 states since 2004. Prizes were provided to top three teams and the teacher who sponsored the best team.

Demand Response

Commercial/Industrial Load Control

Schedule E271

Residential Demand Response

Schedule E249A

Description

The Company developed, conducted and evaluated demand response pilot programs for both commercial/industrial and residential customers from 2007 through 2011. The pilots demonstrated that demand response programs, during peak market periods, could acquire demand-side capacity resources cost-effectively in the commercial-industrial sector. Subsequently, the 2011 IRP identified 50 MW of cost-effective capacity resource potential which could be acquired from a commercial-industrial demand response program over the period 2012 through 2015. The following provides a description of the type of demand response program that the Company is considering.

The purpose of this voluntary program would be to acquire short-term, dispatchable kW demand reduction from targeted large Commercial and Industrial (C/I) electric service customers. Program demand reductions can be a cost effective, emission-free resource during periods of peak electrical system demand or a reduction in available generation. Secondarily, the program may test the value-added and effectiveness of dispatchable customer demand reductions during temporary periods of localized transmission and distribution capacity constraint.

This program would be offered to qualifying customers to meet demand response targets identified in the Company's current Integrated Resource Plan. Customers would be targeted for enrollment based on kW load reduction value, time of day and seasonal availability, duration potential, willingness to use automated controls, and, in some cases, geographic location. Customer participation would be voluntary. Demand reduction performance would be incentivized.

Program implementation would utilize an experienced, competitively-selected, third-party demand response services provider (Aggregator). The service provider would execute capacity contracts with qualifying customers, provide detailed site assessments and enablement, interval meter data management and analysis, as well as performance reporting. The program would integrate customer information and initial site assessments with existing energy efficiency measures and services offered by PSE.

Program implementation would utilize an experienced, competitively-selected, third-party demand response services provider (Aggregator). The service provider would execute capacity contracts with qualifying customers, provide detailed site assessments and enablement, interval meter data management and analysis, as well as performance reporting. The program would integrate customer information and initial site assessments with existing energy efficiency measures and services offered by PSE.

2012 Accomplishment and Activities

Commercial/Industrial Load Control Pilot

In October 2011, PSE issued an RFP to provide program design and implementation for demand-side capacity reductions from targeted Commercial/Industrial customers.

While the 2011 IRP recommended this resource acquisition strategy, the decision to acquire resources, the timing, and the quantity of capacity of such additions are based on actual resource availability, cost in the marketplace, and ongoing need. PSE conducted a thorough analysis of the proposals and considered options for a demand response program. Commercial/industrial customers showed a strong preference for manual (non-automated) control of their loads with 1-hour-ahead notice during PSE's 2009 pilot program. With regard to managing peak load, automated demand response (10-minute response time) is preferred from the utility perspective. Demand response program costs are higher than supply-side alternatives at this time, and PSE does not currently have a program in place. PSE continues to monitor industry news regarding demand response technologies and benefits.

Residential Demand Response Pilot

PSE's Residential Demand Response (DR) Pilot was designed to assess the peak demand reduction achievable through the control of residential space and water heating equipment, and to assess the level of customer acceptance of that control.

The pilot was closed at the end of 2011 and the evaluation was completed in 2012 by Navigant. The pilot was successful in that it produced detailed estimates of load reductions by device type and relative seasonal/time of day load reduction information. The following presents a summary of key points from Navigant's Evaluation Report:[56]

- In the winter season, impacts averaged approximately 0.7 kW for water heater controls to nearly 2 kW for electric furnaces and nearly 3 kW for heat pumps.
- Morning events tended to produce more load reduction than did afternoon events and winter events more reduction than summer events.
- The average aggregate load curtailment for winter morning events was approximately 0.7 MW, and for summer events was approximately 0.1 MW.

The following provides key findings with regard to customer acceptance:

- 79 percent of those surveyed indicated that they were very or somewhat satisfied with the program
- Adding demand response control capability to heat pumps in customer homes is layered with both technical and participant comfort risks.
- Two-way communications between the load management software and control hardware installed in each home must maintain a high degree of connectivity to ensure reliable load sheds and restorations without need to engage customers in the process of troubleshooting or scheduling technical service visits to their homes.

PSE found residential direct load control (particularly in a winter peaking climate) was a challenging and complex undertaking, even with the most current technology available. The current plan for residential DR is to monitor the marketplace and advances in DR technology.

[56] A copy of the Navigant Demand Response report is available upon request.

The following tables from Navigant's Evaluation Report summarize the pilot impact data for winter events:

Average Impact per Successfully Controlled Device – Winter

	Water Heaters	Heat Pumps	Electric Furnaces	Baseboards
Morning (kW)	0.77	2.88	1.88	0.18
Afternoon (kW)	0.49	1.21	1.71	0.00
Average % of Devices Successfully Curtailed	57%	64%	64%	75%

Source: Navigant analysis

Average Aggregate Impact – Winter Mornings

	Water Heaters	Heat Pumps	Electric Furnaces	Baseboards	**Total**
Average Aggregate Impact (kW)	215	404	57	7	**683**
Average # of Participating Devices	478	219	47	53	
Average # of Devices Successfully Curtailed	272	140	30	40	
Average % of Devices Successfully Curtailed	57%	64%	64%	76%	

Source: Navigant analysis

Average Aggregate Impact – Winter Afternoons

	Water Heaters	Heat Pumps	Electric Furnaces	Baseboards	**Total**
Average Aggregate Impact (kW)	141	171	50	0	**361**
Average # of Participating Devices	480	218	47	53	
Average # of Devices Successfully Curtailed	291	141	29	40	
Average % of Devices Successfully Curtailed	61%	65%	62%	75%	

Source: Navigant analysis

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2012 STAKEHOLDER RELATIONS

Puget Sound Energy, along with its primary constituents, the WUTC Staff and the Conservation Resource Advisory Group (CRAG) sustained the momentum established in 2010. In keeping with our emphasis on meeting customer expectations, PSE implemented a number of process improvements to increase the clarity of information provided to Staff and the CRAG. Throughout 2012 we reduced redundancies, and maximized the value of each interaction; this included tailoring PSE's required filing documentation to the needs of its constituents.

Throughout the year, PSE received feedback, both directly and through casual reference, that its efforts were recognized and appreciated. Similarly, PSE recognizes that WUTC Staff and the CRAG expended significant effort to understand, become involved with, and help resolve several strategic and policy issues faced within 2012.

PSE is very appreciative of these efforts on the part of Staff and the CRAG.

Washington Utilities and Transportation Commission

PSE filings presented below are summaries of routine annual filings. Following the date and description of each filing the WUTC Docket Number is presented for easy reference.

February 15, 2012: 2011 Annual Report of Conservation Accomplishments UE-100177

On February 15, 2012, PSE filed its annual review of 2011 conservation savings and expenditure results, consistent with the Commission Second Supplemental Order #1 in Docket No. UE-970686 and condition K(8)(g). This report represented a significant step in providing a much higher level of program details and Customer Solutions transparency for its stakeholders.

March 1, 2012: Schedule 120, Electric Conservation Service Rider UE-100177

Consistent with condition K(8)(d) applied, requiring PSE to file its electric cost recovery Schedule on March 1, with an effective date of May 1.

June 1, 2012: 2010-2011 Biennial Conservation Achievement Report UE-100177

Consistent with RCW 19.285.070, WAC 480-109-040 and condition K(8)(h), PSE filed its BCR with the WUTC and Department of Commerce. Several appendixes were included providing a significant amount of detail.

August 15, 2012: 2012 Semi-Annual Report of Conservation Accomplishments UE-111881

On August 15, 2012, PSE filed its six-month review of conservation savings and expenditure results through June, consistent with the Commission Second Supplemental Order #1 in Docket No. UE-970686 and condition (8)(a).

December 1, 2012: 2013 Annual Conservation Plan UE-111881

PSE filed the 2013 Annual Conservation Plan (ACP), that included revisions initially filed with the 2012-2013 Biennial Conservation Plan. The revised plan includes an electric conservation savings target of 38.1 average MegaWatts, with planned expenditures of $94.4 million. The 2013 gas savings target was adjusted to a goal of 4.62 million Therms, with planned expenditures of $13.2 million. This filing satisfied condition (8)(b).

In addition to, several other noteworthy filings were also made in 2012.

April & September 2012: Exhibit 4: CS/EE List of Measures UE-100177

These filings represented updates to PSE's suite of measure offerings, consistent with total quality management principles.

June 1, 2012: Accounting Petition UG-120812

On June 1, 2012 Puget Sound Energy filed with the Commission a petition for Accounting Order authorizing accounting treatment of the natural gas conservation programs. This petition was granted allowing PSE's natural gas conservation programs to be administered the same as the electricity conservation programs.

August 15, 2012: Petition for Declaratory Order UE-111881

PSE filed with the commission on July 6, 2012 a Petition for a Declaratory Order clarifying the definition of "conservation" in the Energy Independence Act, Chapter 19.285 RCW. The petition was granted and became effective in August of 2012.

October 25, 2012: Decoupling Proposal UE-121697 & UG-121075

A proposal was filed by the NW Energy Coalition and PSE to implement electric and gas revenue decoupling mechanisms and to record accounting entries associated with the mechanisms. The proposal addresses the contribution of Company-sponsored conservation on earnings attrition. Action is pending.

November 1, 2012: NEEA Joint Savings Proposal UE-100171

PSE (along with the other two Washington Investor Owned Utilities) submitted a proposal on November 1, 2012 for a NEEA Savings Methodology revision to be applied to the 2014-2015 Plan. This action is currently pending.

Tariff Schedule Revisions

As part of its on-going continuous improvement practices, Schedules 83 (Electric) and 183 (Gas) receive routine evaluation and updating. Highlights of CS/EE Schedule revisions include:

Schedule 120

- Adjusted Conservation Rider rates that became effective May 1, 2012.

Schedules 83 and 183

- Added language that addresses custom grant re-payment options. Effective June 15, 2012.
- Proposed implementation plan for cessation of electric service in Jefferson County. The filing was suspended and subsequently withdrawn in October 2012, with the understanding that PSE will continue to offer electric energy efficiency programs and collect Electric Conservation Rider funding until the transition to Jefferson County PUD service.

Schedules 250, 251 and 262

- Added provisions that allow for grants on LED street lights. Effective November 2012.

Schedules 203, 205 and 208

- Changed Schedule numbers to align with program' electric counterparts. Effective December 2012.

Former Name & Schedule Number	New Name & Schedule Number	Result
Low Income Weatherization, **G203**	Low Income Weatherization, **G201**	**E201/G201**
Commercial/Industrial Retrofit, **G205**	Commercial/Industrial Retrofit, **G250**	**E250/G250**
Resource Conservation Manager, **G208**	Resource Conservation Manager, **G253**	**E253, G253**

WUTC Deliverables

Exhibit Revisions

In 2012, consistent with condition K(5), PSE continued the process of filing revisions[57] of its Program Details (Exhibit 3), and the List of Measures, Incentives & Eligibility (Exhibit 4) with the WUTC on an as-needed basis.

PSE continued the process of notifying the CRAG one week prior to revision filings, accompanied by a new measure details spreadsheet (described in the following CRAG section). Rather than filing replacement pages, the entire Exhibit(s) are submitted. Version numbers are indicated within the document footers to maintain version control.

Exhibit 3 was updated in this manner once in 2012, while Exhibit 4 was updated two times.[58]

In each case, the revised documents are posted for customer access on PSE.com.

[57] As new measures are offered, delivery methods or incentives are revised, program details change, etc.

[58] The CRAG was notified in the October 11 CRAG meeting that a fourth quarter update of Exhibit 4 was not submitted for filing in 2012, since it would have overlapped, and possibly conflicted with the 2013 version.

Conservation Resource Advisory Group

PSE acknowledges and is very appreciative for the amount of work and committed engagement demonstrated by the Conservation Resource Advisory Group (CRAG) throughout 2012. Through our collaborative process, PSE and the CRAG achieved significant milestones during the past year.

Background

The Conservation Resource Advisory Group (CRAG) was formed in response to a condition of the 2002 General Rate Case Stipulation Agreement. It consists of up to 15 Stakeholders and represents a wide variety of interests, including consumers, industry, and regional concerns. It also includes members of the Washington Utilities and Transportation Commission Staff. The CRAG works closely with Customer Solutions on a variety of conservation initiatives, most notably conservation tariff filings, savings goal setting and long-term conservation strategies.

Established in May, 2010, the CRAG vision statement provided a framework for all CRAG interactions throughout 2012.

Members actively participate in CRAG processes and provide advice on PSE decisions so that ratepayer funds are being used to achieve all cost-effective energy conservation in the most prudent, beneficial manner.

CRAG Vision

Throughout 2012, the CRAG consistently demonstrated qualities of the CRAG vision, established in May, 2010. All PSE – CRAG interactions were conducted with the utmost respect for potentially alternative views, all participants were fully engaged, and with customer benefit uppermost in mind.

2012 Continuous Improvement

Building on efficiencies that PSE implemented in 2010, PSE executed a number of new steps to improve efficiencies for CRAG members including:

- Enhancement of the Customer Solutions Regulatory Timeline into a more detailed two-year overview.
- Conserved resources and minimized printing and mailing costs by reducing the size of the ACP documentation to CRAG members.

Highlights of continuous improvement examples, continued:

- Development and publication of an enhanced CRAG compliance calendar. This new calendar incorporates Microsoft® Excel™ formulas to create a customizable calendar program.
- Quarterly updates of the Condition Compliance Checklist (discussed in detail in the Compliance chapter).
- Publication of the CRAG meeting action item list at each meeting.
- Use of GoToMeeting® to more easily facilitate remote meeting participation.
- Addition of presentation page numbers in meeting summaries to facilitate easier reference.
- A measure summary table that accompanies each Exhibit 4[59] update filing, which indicates the revision impacts, and reasons for the revision.

CRAG Activities

Apart from CRAG meetings and sub-committee meetings, PSE and the CRAG typically participate in other value-add activities. In addition to providing program background discussions and the 2012 CRAG Reference Manual for new WUTC Conservation Analysts, other highlights include:

- June 6: The Multifamily program hosted a field trip to observe the refrigerator decommissioning process.
- September 25 : Customer Solutions Staff conducted a Measure Metrics presentation for WUTC Staff.

Publication Updates

As noted in the WUTC Deliverables discussion on page 228, PSE provides the CRAG with several document drafts prior to filings. For instance, tariff Schedule revisions, Program Details (Exhibit 3) and the List of Measures, Incentives & Eligibility (Exhibit 4).

It has been a long-standing practice of providing the CRAG with a mark-up version and clean version of the documents, which enhances the ability to quickly view the applicable modifications. PSE also provides a summary of the changes in the notifying email.

[59] The Customer Solutions List of Measures, Incentives & Eligibility.

Accompanying the mark-up and clean copies of Exhibit 4, a spreadsheet is provided, which outlines every measure that is updated in that iteration. The measure's former and new savings value, incentive amount, and delivery method is noted, along with a short narrative that substantiates the revision reason. The list is cumulative, with the previous quarter's updates color-coded to avoid confusion.

These documents are always updated on the PSE.com website the business day immediately following the WUTC filing.

CRAG Meetings

In 2012, PSE met the requirements of condition (3)(b), by convening four CRAG meetings during the year. Every CRAG meeting includes several standing agenda items, including:

- Activities that have occurred since the previous meeting.
- CRAG meeting action item status.
- Attendees participating via conference call are emailed the meeting materials prior to the meeting call to order.

Each meeting is also followed by publication and distribution of meeting summary notes, which summarize meeting topics, agreements, and resulting action items.

The 2012 meetings focused primarily on program updates, condition compliance and 2013 ACP filing readiness. The following discussions provide summary views of the 2012 CRAG Meetings. Detailed meeting summaries are available upon request.

March 22 meeting summary:

The first CRAG meeting of the year began with a discussion focused around the Schedule 120 filing in which the effective dates of the gas and electric rate changes were reviewed. The Schedule 258 account 17.5 percent annual journal entry process and the customer bill effects were also reviewed and discussed. A proof sample of the May 2012 gas report card bill insert circulated for the attendees to review. The remainder of the meeting was left to discuss the Third-Party independent review of the 2010-2011 electric savings report. Finally, the group learned of the Customer Solutions Re-organization.

Key Outcomes

- Members agreed that non-substantive items, still in effect from the 2002 Stipulation Agreement (Docket No. UG-011571) should be reviewed and potentially incorporated into future biennial conditions.
- Preparations commenced for the 2010-2011 Biennial Conservation Report filing with the Department of Commerce and the WUTC.
- The group agreed on a date to review the final Third-Party independent review of the 2010-2011 electric savings report.

June 21 meeting summary:

Our second meeting of the year began with an overview of the June 6 field trip where members of the CRAG had the opportunity to experience a complete refrigerator decommissioning process. Next, a high-level summary of the 2012-2013 Biennial Conservation Achievement Report was given, indicating that the electric target was surpassed. It was uncertain whether the Commissioners would issue their determination during the July 27 WUTC open meeting. A wrap-up of the 2010-2011 Third-Party Review was provided, leading into a discussion about the 2012-2013 Verification Team, their methodology, and planned site visits. The remainder of the meeting included initiative and program updates.

Key Outcomes

- Accounting treatment ideas were proposed for the Schedule 120 reporting of Schedule 258 funding. PSE agreed to make the Verification Team Manual available for downloads to CRAG members.
- PSE supported the idea to engage a consultant to develop a 2012-2013 Third-Party Review RFP.

October 11 meeting summary:

This meeting began with a detailed look at the 2013 Annual Conservation Plan contents and format. Forecasts indicated that Customer Solutions would finish the year ahead of savings goals while spending customer dollars efficiently and prudently. This led to discussions on the Residential and Business Energy Management program updates and 2013 plans. The group discussed 2010-2011 Third-Party review recommendations with the point being made that many of these recommendations were initiated by PSE prior to the start of the review. The remainder of the meeting consisted of a discussion on LED Street Lighting and whether or not the Company should be able to claim savings for street lighting conversions.

Key Outcomes

- It was suggested that it would be worthwhile to schedule a separate CRAG meeting to discuss voltage optimization/general T&D issues together.
- It was generally agreed that PSE should pursue custom grant agreements for LED street lighting.
- PSE forwarded the final Steve Schiller 2012-2013 Third-Party review scoping document to the CRAG.

December 6 meeting summary:

The final meeting of 2012 was the first conference call-based meeting which included guests from SBW Consulting, Inc. The meeting began with a review of the forecasted year-end savings and expenditures figures. A recap of the 2013 Annual Conservation Plan filing was given, highlighting key points. The attendees then engaged in a discussion about the PSE/NW Coalition joint decoupling proposal. The remainder of the conference-call focused on SBW Consulting, Inc.'s 2012-2013 electric review plans and potential costs.

Key Outcomes

- Members agreed that it would be a good idea to put 2014-2015 target-setting on an early 2013 CRAG meeting agenda.
- PSE requested CRAG members to provide input on what they would like to see in SBW's scope of work for the 2012-2013 electric review.

GLOSSARY OF COMMONLY USED TERMS

Unless otherwise noted in a specific Conservation Schedule, the following commonly-used terms, used throughout and applicable only to this document[60] have the below noted meanings. Definitions or glossaries contained in other Customer Solutions documents, policies or guidelines referring to specific processes or unique functions shall have the meanings noted in those documents, policies or guidelines.

Definitions

Calculated Savings	This savings type is different than deemed values (described below). This term indicates that there is a pre-approved, stipulated input savings value (or cost) per measure. This value (or cost) is then multiplied by site-specific input values to arrive at the overall savings value (or cost). This term is used in the Savings Type field in Appendix B, List of Measures.
Channel	Within a Customer Solutions Residential or Business sector, an organization that is established to focus on the value chain—consisting of manufacturer distributor, dealer, contractor to the end-use customer—with the most similar market, delivery methods and ultimate purchasers or product users.
Conditions	Also "2010 Electric conservation Settlement Agreement Terms conditions", "Energy Independence Act conditions" or "Order 01, Docket No. UE-111881 conditions". Specific deliverables and stipulations by which the Company must operate or produce through the course of operating and managing energy efficiency programs during a specified biennium. In addition to compliance requirements outlined in Sections A through J and L, of the 2010 Settlement Agreement, the conditions are listed under Section K of the Agreed Conditions for Approval of Puget Sound Energy, Inc's 2010-2011 Biennial Electric Conservation Targets Under RCW 19.285 Docket No. 100177, and paragraphs 30 through 41 of Order 01. There are also additional sections that regulate the Company's energy efficiency operations.
Custom Savings	This savings type applies to conservation projects where a PSE EME performs specific evaluation and review of a unique customer site to determine savings values—therms or kWh—that apply only for that site. For this type of measure, there is insufficient information, the occurrence is too infrequent or it cannot be specifically defined to justify development of a Calculated or Deemed protocol.

[60] Some acronyms, such as "ECM" have a different connotation outside the purview of PSE or conservation activities. Outside of EES, "ECM" may mean "Electric Conservation Measure". Within PSE, though, it means "Electronically Commutated Motor".

Definitions, continued

Deemed Measure	As in a measure's deemed value; A savings (or cost) value that applies to a unit of specific measure, regardless of where or how the measure is installed. Measures for which it is possible to "deem" per unit energy savings, cost and load shape based on program evaluation data and engineering estimates. (For instance, one residential interior CFL lamp has a deemed value of 24 kWh per year.) This classification applies to both RTF and PSE deemed.
Direct Benefit to Customer (DBtC)	Rebates, grants, credits or services that are of value to customers. Services can include, but aren't limited to, credits on a monthly bill, upstream incentive provided to channel partners or trade allies—either within our service territory or regionally—and free energy efficient devices available by mail.
Direct Install Measure	A conservation measure that is installed by a PSE representative; either a PSE Staff member, a PSE contractor or PSE contractor—rather than a PSE customer—into a qualifying structure.
Electric Savings	Savings are defined and reported as those recognized in the first year of a measure's total expected life. PSE reports the total savings for the year that the measure was implemented, regardless of when it is installed. Savings are counted at the customer meter, not the busbar.
I-937	An informal reference to the 2006 voter initiative, The Washington Clean Energy Initiative. The vote resulted in the creation of RCW 19.285 and WAC 480-109, which is now referred to as the Energy Independence Act.
Measure	A product, device, piece of equipment, system or building design or operational practice used to achieve greater energy efficiency or to promote Fuel Conversion and Fuel Switching. Unless specifically enumerated in a specific Energy Efficiency Program, all Measures, proposed by Customers or otherwise, shall meet or exceed the efficiency standards set forth in the applicable energy codes, or, where none exists, "standard industry practice" as determined by the Company. Measures will meet common construction practices, and meet industry standards for quality and energy efficiency.[61] Measures must also meet cost-effectiveness standards.
Program	Programs may consist of a single measure, an assortment of related measures or a suite of measures that are related strictly by delivery type or customer segment.

[61] Schedule 83, section 4, Definitions, #m. Schedule 183, section 4, #l.

Definitions, continued

PSE Deemed	Relative to measure savings types (Custom, Calculated, PSE Deemed or RTF Deemed), these measures are supported by PSE engineering calculations or evaluation studies, in compliance with Settlement Agreement condition K(6)(c). This term is used in the Savings Type field in Appendix B, List of Measures.
RTF Deemed	Former reference to the RTF's UES (Unit Energy Savings). Relative to PSE savings types (Custom, Calculated, PSE Deemed or RTF Deemed), supported by RTF analyses, in compliance with Settlement Agreement condition (6)(b). This term is used in the Savings Type field in Exhibit 5, Supplements 1 and 2.
System	In this document, System may have the following meanings: 1) Any software program—supported by PSE's IT department or otherwise—or physical apparatus used to record, track, compile, report, archive, audit energy savings claims or financial data. 2) Electrical, and/or gas equipment that is either attached together or works in concert to provide space conditioning, plumbing functions or other end-uses associated with structures, such as HVAC systems, pumping systems, etc.

Acronyms

AIA	American Institute of Architects
aMW	Average MegaWatt. An expression of energy (versus "power"). It is used to express very large amounts of energy. The term represents an average of power (Megawatts [MW]) used over time (the standard term being one year or 8,760 hours). Thus, 1 aMW = 8,760 MWh.
AP	Accredited Professional
ARRA	American Recovery and Reinvestment Act
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BOMA	Building Owners and Managers Association
BPA	Bonneville Power Administration
CHP	Combined Heat & Power
CMS	Customer Management System. A PSE proprietary software application that tracks customer activities, inventory and rebate processing.
CRAG	Conservation Resource Advisory Group
DDC	Design, Development and Construction
DHW	Domestic Hot Water
EC Motor (ECM)	Electronically Commutated Motor
EES	Energy Efficiency Services; a department of Puget Sound Energy. This is the former name, prior to 2012, of the Customer Solutions department.
EME	Energy Management Engineer
EM&V	Evaluation, Measurement and Verification
ERR	Evaluation Report Response. A form used to complete an evaluation study's resultant actions.
GPM	Gallons Per Minute
HID	High Intensity Discharge (lamp type)
HVAC	Heating, Ventilation and Air Conditioning
kWh	Kilowatt Hour. 1,000 watt-hours = 1 kWh, which is equivalent to 10 100-watt incandescent lamps being turned on for one hour.
LED	Light Emitting Diode (lamp type)
LEED	Leadership in Energy and Environmental Design

Acronyms, continued

MEF	Manufacturer's Energy Factor (applies primarily to appliances)
MWh	Megawatt-hour. 1,000 kWh = 1 MWh
NEEA	Northwest Energy Efficiency Alliance
NEMA	National Electrical Manufacturers Association
O&M	Operations & Maintenance
RCW	Revised Code of Washington.
RTF	Regional Technical Forum, an advisory committee and a part of the Northwest Power and Conservation Council. The RTF develops standardized protocols for verifying and evaluating conservation.
TRC	Total Resource Cost: The cost to the customer and/or other party costs to install or have installed approved Measures plus Utility Costs and minus Quantifiable Benefits (or Costs).[62]
UC	Utility Cost: The Company's costs of administering programs included, but not limited to, costs associated with incentives, audited, analysis, technical review and funding specific to the Measure or program and evaluation.[63]
ULI	Urban Land Institute
USGBC	U.S. Green Building Council
WAC	Washington Administrative Code
WAMOA	Washington Association of Maintenance and Operations Administrators
WSEC	Washington State Energy Code
WUTC	Washington Utilities and Transportation Commission

[62] Schedule 83, section 4, Definitions, #z. Schedule 183, section 4, #x.

[63] Schedule 83, section 4, Definitions, #bb. Schedule 183, section 4, #z.

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CONCLUSION

This concludes the Customer Solutions' 2012 Annual Report of Energy Conservation Accomplishments.

Please refer to the Report's Exhibits and Supplemental reports for additional Customer Solutions details:

Exhibits Included in the 2012 Report of Conservation Accomplishments

Exhibit 1: 2012 Conservation Targets and Budgets versus Actual Achievements and Spending
Exhibit 2: Program Cost Effectiveness
Exhibit 9: Condition Compliance Checklist
Exhibit 10: Northwest Energy Efficiency Alliance 2012 report of accomplishments

Supplements

Exhibit 1 *(Table of savings and expenditures)*
- Supplement 1: Expenditures by Cost Element Group
- Supplement 2: 2012 Savings adjustments
- Supplement 3: 2012 Sponsorships and Memberships
- Supplement 4: Portfolio Measure Category Counts

Exhibit 5 PSE Prescriptive Measures
- Supplement 1: PSE Prescriptive Measures Offered during 2012
- Supplement 2: 2012 PSE Prescriptive Measure Revisions

Exhibit 6 (The Evaluation Plan is excluded from this report)
- Supplement 1: Evaluation studies with their associated Evaluation Report Responses (ERRs) performed in 2012

Customer Solutions looks forward to providing our 2012-2013 Biennial savings status on June 1, 2013.

Respectfully submitted,

The Men and Women of Customer Solutions

<<December 1, 2012. Please note that this document is the same as that provided in the 2012-2013 Biennial Conservation Plan. Readers will note that headers and footers have not been updated for purposes of 2013 Annual Conservation Plan reference.>>

Cumulative Ten-Year Conservation Potential

Statutory and Regulatory Requirements

RCW 19.285.040 requires that, beginning in 2010 and every two years thereafter, utilities must project their "cumulative ten-year conservation potential", including all electric savings that are "cost-effective, reliable and feasible". WAC 480-109-010 (1) says that this projection may be derived from either the utility's most recent IRP or the Northwest Power and Conservation Council's most recent regional power plan. Further guidance is provided in Condition (9)(a) of the Settlement Terms for Conservation in Docket UE-100177, which stipulates that the ten-year potential "must be based on a current conservation potential assessment study of PSE's service area".

As defined by WAC 480-109-007 (3), conservation is defined as "any reduction in electric power consumption" due to increased efficiency of:

- Energy Use, where PSE includes energy efficient building systems, high efficiency electric end use equipment, conversion of electric end uses to high-efficiency natural gas equipment, and high efficiency cogeneration systems to meet on-site customer load;
- Distribution, where PSE includes line phase balancing and conservation voltage reduction;
- Production, where PSE includes energy efficiency improvements at PSE electric production facilities.

The remainder of this section describes determination of the conservation potential and consistency of the company's methodology with that of the Northwest Power and Conservation Council (hereafter referred to as the "Council").

Identifying All Conservation Opportunities That Are Cost-Effective, Reliable, and Feasible

The ten-year cumulative conservation potential consists of the optimized level of energy use and distribution system conservation potential selected by PSE's resource portfolio model for the 2011 Integrated Resource Plan (IRP). It includes ramping the timing for achieving this potential so that all the economic achievable retrofit potential in existing buildings would be achieved in 10 years, not the full 20-year planning horizon of the IRP. In addition, PSE subsequently estimated the potential for electric energy savings from improvements to the efficiency of PSE's power generation facilities in Washington State. The methodology for deriving these potentials is explained more fully below.

The combined total of 2011 IRP potential plus production facility efficiency represents the total amount of conservation that is technically available, cost-effective, and achievable in the long run, based on the best information and analysis available. This includes all potential savings from any combination of utility programs, new codes and standards, and market transformation.

Consistency with Council Methodology

The methodology used to determine these potentials was consistent that that used by the Council to develop the 6th Northwest Power Plan. The conservation potential was built with a bottom-up approach, using individual energy-efficient technologies applied to appropriate end uses and building types to determine technical, economic, achievable potential.

Both PSE and the Council use similar Total Resource Cost (TRC) approaches to their economic analyses. In the spring of 2011, a sub-group of the Washington State Conservation Work Group was convened to examine the methodologies of all the state's electric investor-owned utilities relative to the Council methodology (see Attachment _). That sub-group concluded that all the utilities, including PSE, were generally consistent with the Council methodology. A few minor differences in methodology were identified, but none of these had significant impacts on the results. One minor difference in the economic analysis is that PSE analyzed bundles of measures with similar costs while the Council analyzes individual measures, but this does not appear to cause significant differences in results. Another minor difference is that PSE expresses its benefits and costs in nominal terms (includes inflation) while the Council uses real terms (excludes inflation), which does not cause any difference in relative cost-effectiveness since benefits and costs are treated equally. Finally, PSE uses its own after-tax cost of capital as the discount rate for present value calculations, while the Council uses a regional discount rate that combines utilities, customers, and BPA. Again, the absolute difference in discount rates is small and does not materially affect results

Figure 1 identifies the key elements of PSE's methodology, consistent with the methodology outline of published on the Council's website, except for minor differences noted above. Complete descriptions of PSE's technical and achievable potential are in Appendix K of the 2011 IRP. The derivation of the economic potential is presented in Chapter 5 and Appendix I of the 2011 IRP.

Figure 1
PSE Conservation Potential Consistency with Council Methodology

Technical Potential	Economic Potential	Achievable Potential
• Wide array of technologies, applied to all customer sectors • "Applicable" units, as determined by o Building characteristics o Fuel & equipment saturations o Equipment life/turnover o New & existing units o Measure interactions & substitutions • Calibrated to customer & load forecasts for PSE service area	• Economic screen uses TRC approach • Based on forecast of wholesale market prices • Energy and capacity savings shaped for time and seasonal differences • Use range of scenarios to account for uncertainty and risk • Use full incremental measure costs, plus applicable O&M and program admin. Costs • Benefits include energy, capacity, T&D losses and deferral • Non-energy benefits, 10% Power Act credit & environmental externalities included	• Annual acquisition levels based on IRP portfolio modeling where conservation competes against all other resources • Discretionary & lost opportunity potentials identified • Use ramp rates that accelerate discretionary retrofit measures, with 85% maximum market penetration • Potentials are revised based on new information and market experience gained since previous IRP

Efficiency improvements at electric production facilities were not projected in the Company's IRP. Therefore PSE developed a separate assessment of the conservation potential at its electric production facilities. This assessment included all hydro and thermal plants operated by PSE in the state of Washington. In 2009, an energy audit was conducted at each facility and efficiency improvements to all energy-consuming equipment were identified, totaling 27,224 MWh saved. It is assumed that all of this potential from production facilities is achievable in ten years and is distributed evenly across that period. Figure 2 summarizes the conservation potential for each generation plant.

Figure 2
Conservation Potential from PSE Electric Production Facilities

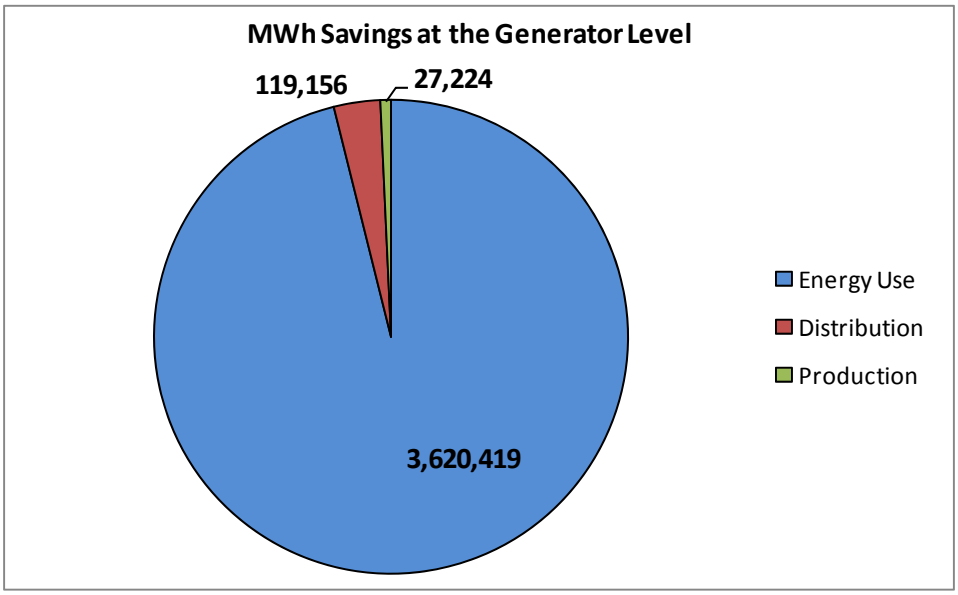
Facility	Measure	Energy Savings
Upper Baker	Lighting Upgrade	24,601 kWh
	Pumping Station Motors	45,000 kWh
	Pumping Station Transformers	51,000 kWh
	Pumping Station Controls	150,000 kWh
Lower Baker	Lighting Upgrade	59,300 kWh
Electron	Lighting Upgrade	20,061 kWh
Encogen	Lighting Upgrade	37,692 kWh
	VFD Air Compressor	127,000 kWh
Fredrickson	Lighting Upgrade	15,000 kWh
Fredonia	Lighting Upgrade	9,800 kWh
Mint Farm	Supply Gas Pressure Increase	19,000,000 kWh
	Lighting Upgrade	54,000 kWh
	Air Compressor Upgrade	77,709 kWh
	Exterior Sensors	6,900 kWh
	Cooling Tower	2,500,000 kWh
	Feedwater Pump	2,349,900 kWh
Goldendale	Lighting Upgrade	25,600 kWh
	Cooling Tower	2,520,000 kWh
	Compressed Air	35,000 kWh
Sumas	Lighting Upgrade	30,000 kWh
	Compressed Air	70,000 kWh
Whitehorm	Lighting Upgrade	15,000 kWh
	Totals	27,223,563 kWh
		3.1 aMW

Total Ten-year Conservation Potential

Based on the analysis described previously, PSE's total cumulative ten-year conservation potential is 3,766,799 MWh (429.9aMW) at the generator, which includes line loss savings from the customer meter back to the power generator (consistent with conservation council's basis for reporting energy savings). Expressed in terms of energy savings at the customer meter (excluding line loss savings), the ten-year potential is 3,531,508 MWh (403.1 aMW).

Figure 3 shows how the cumulative ten-year potential breaks out by type of conservation resource. As can be seen, the vast majority (96%) of the ten-year potential comes from Energy Use Conservation. Energy Use Conservation consists of improved building shell efficiency, high-efficiency electric end use equipment and controls, and electric-to-gas customer fuel conversion.

Figure 3
PSE Cumulative Ten-Year Conservation Potential (2012-2021)



Biennial Conservation Target

Statutory and Regulatory Requirements

RCW 19.285.040 requires that, once the ten-year conservation potential has been developed, utilities shall set a biennial electric conservation acquisition target which is no lower than the utility's two-year pro rata share of its ten-year potential.

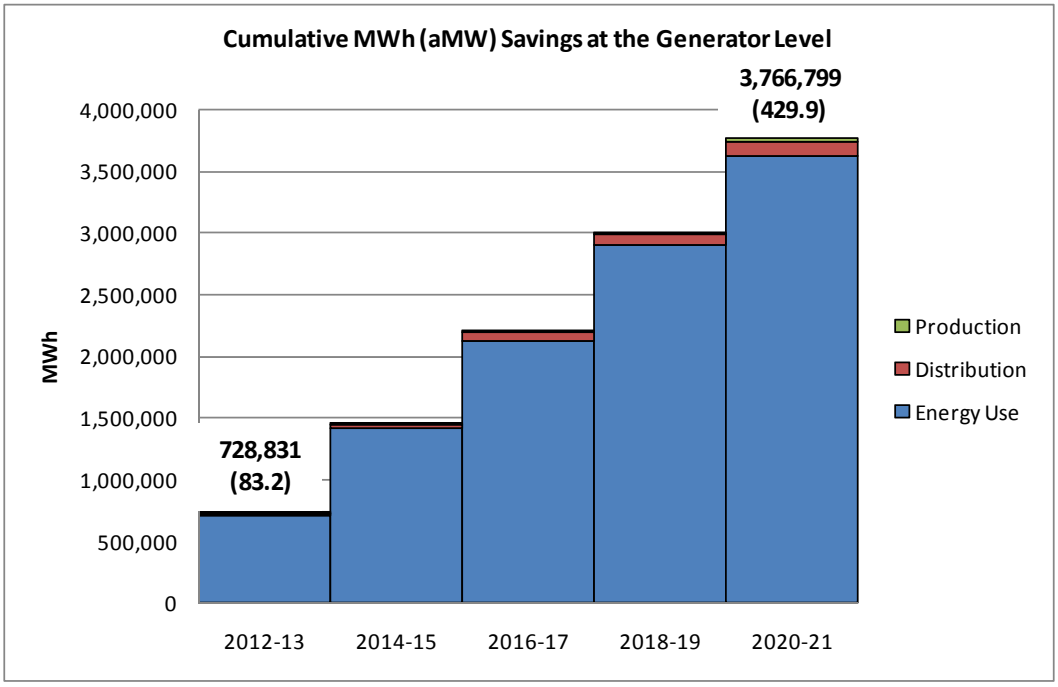
The WAC rule for setting the biennial target defines "pro rata" simply as "the calculation used to establish a minimum level for a conservation target" (WAC 480-109-007 (14)) and requires that the utility must document how the ten-year cumulative conservation potential was prorated (WAC 480-109-010 (2)).

Determination of Pro Rata Share of the Ten-Year Conservation Potential

The conservation potential in PSE's 2011 IRP assumes that all retrofit end use energy efficiency and fuel conversion potential is accelerated into a ten year period, while other types of conservation or demand-side resources are ramped in more gradually over time over natural measure life cycles or customer growth rates. This is consistent with previous IRP's and is intended as a general planning assumption to demonstrate that there is value to acquiring these resources as quickly as realistically possible, but that they cannot be acquired immediately.

The 2012 – 2013 two-year portion of the cumulative ten-year potential is 728,831 MWh (83.2 aMW) at the generator level. Figure 4 shows the cumulative savings by resource type for each biennial period over the next ten years.

Figure 4
PSE Cumulative Conservation Potential



However, not all the potential represented Figure 4 is realistically feasible to achieve through PSE-funded programs. The conservation potential includes electricity savings from all possible sources: utility programs, codes and standards, market transformation, and adoption of conservation measures outside of any programs or code requirements. Some conservation potential is therefore outside of PSE's control and ability to measure.

It is also not possible for a conservation potential assessment to fully capture all the market feasibility and uncertainty factors that can affect real-world program design and implementation. Projecting actual savings from programs is an imperfect science. The potential assessment represents the best possible estimate of achievable cost-effective savings, given the information available at that particular point in time. Assumptions are made on such things as the rate of customer replacement or adoption of a measure. Factors outside of the Company's control, such as the economy, adoption of more stringent energy efficiency codes, or introduction of a new technology, can influence whether a customer will invest in energy efficiency measures and what the baseline level of efficiency is.

Therefore, the company has made some additional pro rata adjustments to the cumulative conservation potential. These adjustments are intended to address changing market conditions, technical feasibility, timing issues, and other uncertainty factors beyond those considered in the company's conservation potential assessment. These additional factors are identified below.

- End Use Efficiency: Programs that are funded and operated by PSE will not achieve all the identified conservation potential over the next ten years, as this potential includes energy savings achieved through any means. Some of this potential will be acquired through the new Washington State Energy Code and new federal appliance standards which were adopted after completion of the conservation potential assessment for the 2011 IRP. Some potential savings may also be achieved by customers acting independently, outside of any utility, state, or regional program. The federal tax credits for the purchase of certain energy-efficient equipment, which helped create a demand "bubble" for these products, have been reduced. The loss of these tax credits, coupled with slower than expected economic recovery, is expected to depress consumer spending on appliance and equipment purchases in at least the short term. PSE has sought to offset some of this downside adjustment through a Request for Proposals process in 2011 to identify and implement additional measures or market delivery mechanisms that enhance the company's existing portfolio of programs.
- Production Efficiency from PSE Generation Facilities: The potential projects identified by PSE's production facility potential assessment require detailed engineering and economic feasibility studies. Implementation plans must also be developed and funding sources identified. PSE completed a more detailed feasibility analysis of the original potential assessment in 2011. This review found that lighting upgrades at most sites and a variable frequency drive upgrade at a combined-cycle plant were feasible and cost effective to implement in 2012 - 2013. Other measures in the potential assessment may be implemented in the future as existing equipment fails or after further study to verify energy savings and cost-effectiveness.
- Distribution System Efficiency: As with the conservation potential from PSE generation facilities above, actual implementation of distribution efficiency projects will require detailed engineering and economic feasibility studies, implementation plans and identification of funding sources. The target for 2012 -- 2013 includes projected savings from distribution system projects based on an informal feasibility review of eligible circuits.

The total effect of these prorated adjustments on the maximum cumulative conservation potential in the 2012 – 2013 biennium is shown in Figure 5. They amount to a reduction of 2.5% from the total conservation potential in 2012 -- 2013.

Figure 5
Pro Rata Adjustments to Cumulative Conservation Potential

	Generator Level Savings (MWh)	Generator Level Savings (aMW)	Less: 6.7% Line Losses*	Meter Level Savings (MWh)	Meter Level Savings (aMW)
End Use Efficiency	703,831	80.3		659,636	75.3
Distribution Efficiency	19,555	2.2		18,327	2.1
Production Efficiency	5,445	0.6		5,445	0.6
Total 2012-13 Potential	728,831	83.2		683,407	78.0
End Use Efficiency	-10,449	-1.2		-9,793	-1.1
Distribution Efficiency	-2,513	-0.3		-2,355	-0.3
Production Efficiency	-5,260	-0.6		-5,260	-0.6
Pro Rata Adjustments	-18,221	-2.1		-17,407	-2.0
2012-13 Target	**710,610**	**81.1**		**666,000**	**76.0**

** Line losses are not applicable to production facility efficiency since they occur at the point of generation.*

Biennial Conservation Target

The 2012 - 2013 biennial target, accounting for the pro rata adjustments described above, is 710,755 MWh (81.1 aMW) at the generator level. This is equivalent to 666,000 MWh (76.0) aMW) at the customer meter level (line loss adjustments excluded). The two-year target represents 18 percent of the total ten-year conservation potential. This target represents the company's pro rata share of all conservation potential available over ten years that is reliable, cost-effective, and feasible to achieve through its program efforts in the next two years.

As a point of comparison, using the Council's 6th Plan calculator (option 2), PSE's 2012-13 share would be 72.6 aMW at the generator level. This is less than the Company's target in Figure 5, which is 81.1 aMW at the generator level.

Figure 6 breaks down the target by type of conservation resource. Nearly all the target savings (98%) is expected to be achieved through end use efficiency programs. This proportion is consistent with the distribution of savings by resource type in the ten-year potential, shown previously in Figure 3.

Figure 6
2012 – 2013 Biennial Conservation Target