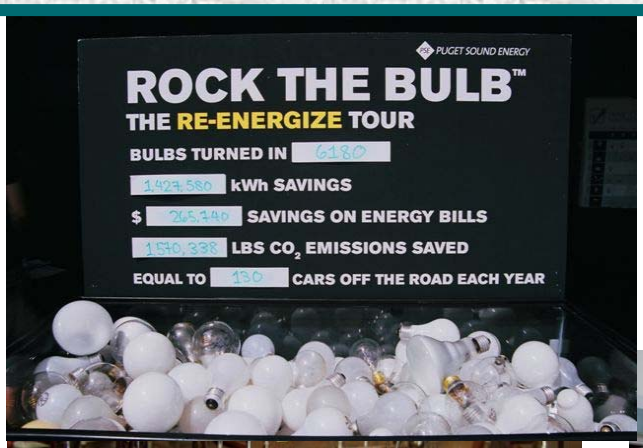
Energy Efficiency Services
2011 Annual Report of
Energy Conservation Accomplishments



PUGET SOUND ENERGY
The Energy To Do Great Things

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Supporting Documentation

Please note that the Exhibits noted below align with the Exhibit numbering system established in the 2011 Annual Conservation Plan, and continued into the 2012-2013 Biennial Conservation Plan (BCP), rather than create a new naming system (for instance, "Appendices" or "Attachments"), which may disturb any continuity between PSE filings.

Therefore, 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 simply add Supplements to any applicable, established Exhibit (maintaining the Exhibit numbering system from report-to-report).

Established Exhibits Included in the 2011 Report of Conservation Accomplishments

Exhibit 1: 2011 Conservation Targets and Budgets versus Actual Achievements and Spending

Exhibit 2: Program Cost Effectiveness

Exhibit 9: Condition Compliance Checklist

Established Exhibits Excluded from the 2011 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 (2011 ACP view)
- Supplement 2: 2011 Savings adjustments
- Supplement 3: 2011 Sponsorships and Memberships
- Supplement 4: Portfolio Measure Category Counts

Exhibit 2 *(Cost effectiveness tables)*

- Supplement 1: Electric and Gas Avoided Costs, and Cost-Effectiveness methodologies

Exhibit 4 *(The EES List of Measures, Incentives and Eligibility is excluded from this report)*

Supplement 1: EES Prescriptive Measures Offered during 2011

Supplement 2: 2011 EES 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 2011

DID YOU KNOW….

Included in the 2011 Annual Report of Energy Conservation Accomplishments are a significant number of facts and figures. While all of them are fascinating and pertinent to managing our business, the table below provides references to several that may be obscure, but are very interesting nevertheless!

Fact	Answer	Page Number
Residential Sector first-year therms saved and how that relates to number of average residences at the Portfolio level	1.6 million therms Almost 2,200 avg. residences[1]/1 year	63
Percent increase in portfolio-level aMW over the last five years (from 2007 – 2011)	57%	21
Residential Retail Channel CFL lamps distributed	Over 3.5 million	92
The number of on-site installation verification inspections conducted by the new Verification Team	Over 900	54
PSE uses this system developed in Germany for all of its financial reporting. "SAP" stands for this.	Systeme, Anwendungen und Produkte *(Systems, Applications and Products)*	42
The median KW size of PSE's net metered renewable energy systems	3.8 KW	215
The budgeted versus actual electric Direct Benefit to Customer expenditures in the Small Business Lighting program	Bud.- $6.2 million Act - $6.9 million	119
The percent of RTF Deemed electric measures reported in the Residential Sector	83%	72
The overall electric TRC B/C ratio for the Business Sector	2.79	123
The number of residential rebates processed internally in 2011 by EES staff.	Over 15,000	55
The number of customer calls answered by energy advisors	Over 91,000	74
Number of "hits" to energy efficiency "Savings & Energy Center" web pages in 2011	Over 900,000	77
The name of the Exhibit that represents the compliance status of EES' 2010 Electric Settlement Conditions	Exhibit 9	32

[1] Based on 2010 average residential usage of 749 therms and 11,202 kWh annually.

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GREETINGS FROM CAL SHIRLEY

Vice President, Energy Efficiency Services (EES)

Dear CRAG members, Commissioners, WUTC Staff, constituents, and valued customers:

I'm pleased to be able to present this review of Puget Sound Energy's 2011 conservation accomplishments, and am proud of the results that the men and women in EES achieved over the past year.

As the second year of the current biennium, 2011 was a year of significant achievements for PSE. By meeting aggressive annual electric and gas savings targets, the Company achieved its biennial conservation targets. Additionally, EES achieved compliance with ***all*** *2010 Electric Conservation Settlement Agreement conditions by year's end.*

These conservation targets are important not only for Energy Independence Act (I-937) compliance; the Company also has a particularly high stake in offsetting more costly construction or acquisition of new power generation.

2011 also saw a new level of Conservation Resource Advisory Group (CRAG) engagement throughout the year, with EES staff collaborating with CRAG members to resolve policy as well as tactical issues. It was gratifying to be a part of efforts such as participation in numerous sub-committee meetings, a group effort in developing the 2012-2013 BCP, working with CRAG members to create new budget and program detail elements, and the establishment of a new level of reporting detail which documents and illustrates the rigor with which we manage the business.

It is also satisfying that several studies conducted in 2011 by independent evaluators, including KEMA, SBW and Navigant confirmed that PSE manages its conservation programs well and is taking the appropriate continuous improvement steps to set new standards in the future.

PSE's commitment to our customers is at the forefront of every EES program; from making rebate applications more efficient and effective to minimizing the number of rebate coupons. The results discussed in this Annual Report reflect our commitment to provide the utmost in value in a transparent and prudent fashion, always with an eye towards continuous improvement, and fulfilling the role of stewards of our ratepayers' interests.

I extend my sincere thanks to all members of the CRAG and Washington Utility and Transportation Commission Staff who provided input and advice as we worked together throughout the year to achieve these positive results.

On behalf of all of the men and women of EES, here's to an exciting and productive 2012!

Sincerely,

Cal Shirley

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EXECUTIVE SUMMARY

Energy Efficiency Services' Annual Report of 2011 Conservation Accomplishments

Puget Sound Energy's ("PSE's" or "The Company's") Energy Efficiency Services (EES) department presents this Annual Report of 2011 energy efficiency program accomplishments and activities, consistent with condition K(8)(g) of the 2010 Electric Settlement Terms, Docket No UE-100177, requirements enumerated in the Commission's second supplemental order in Docket No. UE-970686, and principles outlined in the 2002 Stipulation Agreement, Docket Nos. UE-011570 and UG-011571. The report is associated with the Electric Conservation Rider and Natural Gas Conservation Tracker funding, and discusses activities, initiatives and accomplishments completed in the second year of this current biennium.

The report includes Portfolio reviews of overall EES 2011 accomplishments in the following pages. Sector overviews (Residential, Business, Regional, Support Activities and Other Electric Programs) provide a business unit level review. Details of financial and savings performance, measure category tables, program descriptions, and program accomplishments are included with each program overview. Programs are organized in the report according to their Schedule number for easy reference.

2011 was the first full year of EES operations under terms of the 2010 Electric Settlement Agreement (WUTC Docket No. UE-100177).

The agreement enumerates 70 separate terms and conditions, of which, 55 are deliverables required over the period of each biennium. By the end of 2011, EES completed 50 of the 55 total deliverables.

It is noteworthy that five of the 55, though, are those due in 2012.

Details are discussed in the Compliance section, and deliverables are listed in Exhibit 9, the Condition Compliance Checklist.

2011 Results

In 2011, EES exceeded energy savings goals 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 $77.9 million[2]; 85.8 percent of the year-end budget target.

The overall electric energy savings finished the year at 348,926 MWh or 39.8 aMW, which is 103 percent of year-end goal. These savings values were 18 percent higher than those achieved in 2010, while expenditures went down by 3.8 percent.

Gas expenditures were $15.5 million[3]; 80.3 percent of the year-end budget. The overall natural gas savings achieved in 2011 was 5.19 million therms or 108 percent of year-end goal. This result was 2.9 percent higher than results achieved in 2010, and expenditures went down by 22.2 percent. Table 1 provides 2011 results, along with the Total Resource Cost (TRC) Benefit-to-Cost ratios.

Table 1: EES 2011 Savings, Expenditures and TRC Results

2011	Savings	Expenditures	TRC B/C Ratio
Electric (MWh)	348,926	$77,865,547	2.65
Goal/Budget	338,960 (38.8 aMW)	$90,793,904	
Percent	102.9%	85.8%	
Gas (Therm)	5,186,721	$15,489,414	1.36
Goal/Budget	4,789,478	$19,280,456	
Percent	108.3%	80.3%	

348,926 MWh divided by 8,760 hours = 39.8 aMW
Savings are stated in terms of first-year annual figures, without line loses.

[2] Total includes $1.4 million of Other Electric Program expenditures. Other Electric Programs are not conservation based; for example, Small-Scale Renewables and Demand Response.

Total excludes Low Income Weatherization (LIW) Renewable Energy Credit (REC) expenditures of $1.9 million. The amount is noted only to provide an LIW savings reference.

[3] Total excludes PSE shareholder funding of $259,913 for Low Income Weatherization.

For the completed biennium of 2010-2011, electric expenditures were $152.9 million, 93.2 percent of budget, and conservation savings were 642,486 MWh (73.3 aMW); 103.3 percent of target. Gas two-year conservation expenditures and savings were $35.4 million, 106.1 percent of budget, and 10.17 million Therms; 112.3 percent of target, respectively. These figures will be formally presented in PSE's Biennial Conservation Report to the Department of Commerce on June 1, 2012, consistent with condition K(8)(h). The results of the completed Third-party Review of 2010-2011 Electric Savings (consistent with condition K(6)(g)) will be included and incorporated into the reported results.

EES finished 2011 with portfolio cost effectiveness ratios of greater than 1.0. In 2011, the electric Utility Cost (UC) benefit-to-cost ratio was 3.88 and Total Resource Cost (TRC) of 2.65. Gas ratios were UC of 2.80 and TRC of 1.36. These tests were performed in compliance with condition K(10)(a). Although not required under terms of the 2010 Electric Settlement Agreement, PSE performed these tests for gas programs as well.

All business units within EES contributed to improvements in cost management and productivity enhancements while maximizing customer value and the customer experience. EES teams brought key processes in-house, and developed innovative tools to manage increased customer demand and reduce inventory expenses.

Teams enhanced the rigor with which savings and expenditure tracking and reporting is conducted, and improved the communication and interaction with the Conservation Resource Advisory Group (CRAG), making significant advancements in operational transparency and information exchange. EES completed several departmental quarterly audits and key noteworthy evaluation studies that supported the Company's business methodologies.

In 2011, in collaboration with the CRAG, EES resolved and enhanced a key conservation Schedule, and completed its EM&V Framework, which includes eight guidelines and protocol documents. EES also filed its 2012-2013 Biennial Conservation Plan, a comprehensive publication which earned significant accolades from several Stakeholders.

Details of these and other EES accomplishments are contained in the program discussions that follow.

Energy Independence Act Compliance

By the end of 2011, PSE achieved complete compliance with all[4] of the 2010 Electric Settlement deliverables, as well as applicable gas deliverables still in effect from the 2002 Stipulation Agreement, Docket Nos. UE-011570 and UG-011571. The Company appreciates the significant effort demonstrated by CRAG members and other Stakeholders in collaborating with, and providing guidance and review for EES staff.

Building on a successful relationship established in 2002, EES staff consistently worked to ensure that all communications and information provided to and reviewed by the CRAG was consistent with the requirements outlined in 2010.

[4] It is important to note that some sections of the 2010 Settlement Terms are explanatory or declaratory, rather than indicating a specific deliverable.

THANK YOU!

BOB STOLARSKI

Director, Customer Energy Management (CEM)

Dear CRAG members, Commissioners, WUTC Staff, constituents, and valued customers:

I would like to take this opportunity to recognize and thank everyone that helped to build an efficient, clean resource — a "conservation power plant". Offsetting more expensive traditional generation resources is Customer Energy Management's key goal.

Energy efficiency starts with our customers—over one million strong, who provide the funding, and make energy efficient choices every day. Whether participating in PSE's energy efficiency programs, or simply choosing to use our limited electric/natural gas resources wisely, I extend a hearty **thank you**!

Retailers, contractors, and all of our trade allies are our energy efficient partners; providing expertise, installation, and "boots on the ground" sales staff to actively engage our customers, allowing easy participation in our programs. As an extension of the CEM staff I would like to **recognize** you for your dedication to helping to build our lowest cost resource.

PSE energy efficient programs would not be as effective without regional resources such as the Conservation Resource Advisory Group, the Northwest Power and Conservation Council, the Regional Technical Forum, Northwest Energy Efficiency Alliance, and our neighboring utility colleagues. These organizations collaborated to bring nationally recognized energy efficiency solutions to our customers in the most cost-effective manner possible. We **appreciate** your commitment to working together on the Pacific Northwest energy future.

Finally, I want to personally acknowledge the devoted men and women of PSE's Energy Efficiency team, who daily deliver innovative energy efficiency programs that provide customers cost-effective solutions to reduce their energy bills, and help the environment. This team consistently exceeds customer expectations while meeting challenging goals and demonstrating fiscal responsibility. I am **grateful** for your hard work & dedication.

Thank you very much—and I look forward to working with you all to achieve our 2012 energy efficiency goals!

Sincerely,

Robert Stolarski

Bob Stolarski

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INTRODUCTION

This section will provide a more detailed Portfolio-level discussion of 2011 Energy Efficiency Services' results, while touching on Sector-level factors.

Organization

This EES 2011 Annual Report of Conservation Accomplishments will provide detailed discussions of the results of the EES conservation programs, and all related activities and functions that contributed to the 2011 results. Readers will notice a continued evolution in the "look and feel" of the annual EES report. Most significantly, the inclusion of Sector and Program-level expenditure comparisons of actual 2011 results against budgeted figure presented in PSE's 2011 Annual Conservation Plan, filed with the WUTC in November 2010. There is also new Compliance section. Additionally, EES solicited feedback from our constituents and incorporated several improvements in this presentation, including a re-structuring of the report's program-level content, intended to maintain the "flow" of the 2011 Annual Conservation Plan.

In addition to portfolio-level overviews and sector highlights; which will provide financial results in the ACP-detailed format, and measure savings type distribution, the report includes program-level budget and savings target tables that allow readers to review first-half 2011 results, measure installation summaries, including measure categories and types installed, and measurement & verification continuous improvement processes. The layout follows the sequence of the Company's Budgets and Savings results table, Exhibit 1[5] of this report, for easy reference. Furthermore, the Glossary and Definition section has been moved to the end of the report, allowing readers to access key information quickly. A value-add element in the 2010 report, program photos were eliminated this year to conserve file size.

Lastly, the organization and naming tenants of the Exhibits and Attachments has evolved since the filing of PSE's 2011 ACP. The first significant change was the re-naming of "Appendices" to that of "Exhibits" in that document. That Exhibit naming tenant was continued in developing the 2012-2013 Biennial Conservation Plan (BCP). And now in this report, to maintain continuity, PSE will carry on the same Exhibit numbering as found in the 2012-2013 BCP. 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 that are germane to a year-end review, however. We have labeled those as 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 iii.

[5] It is important to note that the 2011 Exhibit 1 view differs significantly from the 2012-2013 view.

A revised format for EES' Exhibit 1, expenditures and savings, was presented in the 2011 Semi-annual Report in August. This same format for EES is used in this report.

It is important to note that the Sector designations, Schedule numbers, and program descriptions are different than those filed and approved in Exhibit 1 as a part of the 2012-2013 Biennial Conservation Plan.

That version will be presented in the 2012 Semi-annual Report.

Compliance

This 2011 EES Annual Report of Conservation Accomplishments is consistent with the Second Supplemental Commission order, #1 in Docket Nos. UE-970686, and condition K(8)(g). A detailed 2011 compliance results discussion is located in the new Compliance section of this report, starting on page 30.

It is noteworthy that, in the interest of brevity and to avoid repetition, PSE will use the terms "condition K(n)(n)" or "Section N(n)" when referencing deliverables outlined in the 2010 Electric Settlement Terms, Docket No. UE-100177[6], rather than "…condition k(n)(n) of the 2010 Electric Settlement Terms, Docket No. UE-100177…" at each instance.

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

Contents Summary

PSE will detail within this report:

- Overall EES Summary Results
  - Expenditures and Savings , both portfolio and sector views
  - Five-year trends
  - Direct Benefit to Customers
  - Cost Effectiveness
  - Measure Savings by type
  - Staff highlights
- EES EM&V Activities and accomplishments
- Residential and Business Sector overviews and summary results, including five-year trends
  - Program-by-program details
- Support Activities and Other Electric Program recaps
  - Details for each support activity, Small Scale Renewables, and Demand Response Pilot programs
- Stakeholder Relationships
  - Washington Utilities and Transportation Commission
  - Conservation Resource Advisory Group
- Exhibits:

[6] Within the 2010 Electric Settlement Terms, "Conditions" apply specifically to Section K. There are also specific PSE deliverables in several other Section of the 2010 Electric settlement Terms.

1. Overall EES expenditure and savings results, electric and gas
2. Cost Effectiveness results by program
9. Condition Compliance Checklist

As noted in the table of contents, these Exhibits (enumerated in the 2012-2013 Biennial Conservation Plan) are not plans[7], and are included in this report. There are relevant Supplements to excluded Exhibits, however, and these are noted below.

- Supplements to Exhibits
  - Exhibit 1
    a. Supplement 1: 2011 expenditures by Cost Element Group (ACP view)
    b. Supplement 2: 2011 Savings adjustments
    c. Supplement 3: 2011 Sponsorships and Memberships
    d. Supplement 4: Portfolio-level tables of measure types and projects
  - Exhibit 2
    a. Supplement 1: Electric and Gas Avoided Costs, and Cost-Effectiveness methodologies
  - Exhibit 4 *(The EES List of Measures, Incentives and Eligibility is excluded from this report)*
    a. Supplement 1: EES Prescriptive Measures Offered during 2011
    b. Supplement 2: 2011 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

Updates and revisions from PSE's 2010 Annual Report on Energy Conservation Accomplishments include:

- Added project/project type/measure type/number of measures tables to the conclusion of each program details discussion. This makes for a more comprehensive and easier program-by-program review for readers.

  The enumerated measures counts are derived from actual EES system data. The figures are combined (for instance, "Ductless Heat Pumps" are combined with "Geothermal Heat Pumps" and "Air-source Heat Pumps") and rounded for presentation effectiveness purposes.

  They are intended to present to readers a relative idea of the scale and scope of programs' accomplishments, rather than audit tools.

[7] For instance, Exhibit 6 is the Evaluation Plan, Exhibit 7 is the Marketing Plan, etc.

Simplified counts of projects/homes/building/etc., implemented in the 2010 Annual Report, are provided as a Supplement to Exhibit 1.

- Added new Portfolio and Sector-level views, comparing the 2011 Annual Conservation Plan budgets by cost element groups to actual expenditures.
- Added sidebar discussions to highlight particularly interesting EES facts or accomplishments, while omitting program-oriented photos, which consumed a large amount of memory.
- Added a new Compliance section.
- Added a Sponsorship/Member Supplement in response to stakeholder inquiries.
- Added significant value to the EM&V section, with revised discussions throughout.

Energy Efficiency Services 2011 Results

2011 concludes the current biennium, and PSE exceeded its biennial savings goals of 71.0 aMW and over 9 million therms. Table 1a presents a portfolio view of EES expenditures and savings for electric and gas for 2011. Later in the discussion, the 2010-2011 results are presented.

PSE acknowledges and is very appreciative of the significant effort demonstrated by CRAG members throughout 2011.

This year reflected a new level of partnership, collaboration, and a commitment to working toward maximizing ratepayer value for all EES' conservation programs.

Thank you, CRAG members!

2011 was a year of evolution and continued development for EES. EES 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.

Seven CRAG meetings were conducted—on a monthly basis during one four-month stretch—with many additional sub-committee meetings convened throughout the year.

PSE's commitment to delighting its customers resulted in several revisions to the way in which its programs were implemented. Rebate forms were streamlined or eliminated, the range of incentives and measures was broadened, contractor interface was improved, and, by deploying energy advisors to the PSE regional offices, we offered walk-in contact with our customers.

With review and guidance from the CRAG, PSE created its first Biennial Conservation Plan, which included an unprecedented level of program detail and transparency into the department's operations, and the rigor with which we protect ratepayer funding. Several elements, not required by a condition, were added to maximize its value to Stakeholders. New, more detailed reporting was added, existing savings and tracking guidelines were revised and EES formalized many existing processes in documenting its first EM&V Framework. Several CRAG members participated in this development, as well.

Independent evaluations conducted in 2011 validated our program design and business practices. Studies performed by SBW, KEMA, Navigant, and EMI confirmed that EES' savings tracking, measurement & verification practices, Commercial/Industrial Retrofit programs, and incentive development, respectively, are well designed and executed, and are in keeping with industry standards. It is our intention to build on these results, and optimize processes and documentation.

PSE also contributes to regional conservation efforts. As an active participant in the RTF and the Northwest Research Group, our evaluation staff provided input to the development of consistent evaluation standards, and the development of updated load shape data.

We continued our cooperation with other regional organizations in 2011, contributing to the Washington State Conservation Working Group, the standardization of business customer rebates across utilities, LED quality standards, the Regional Technical Forum, and the Northwest Energy Efficiency Alliance.

As you will read in the detailed program reviews, EES continues to building on its successes, strive for continuous improvement, and provide the maximum support to trade allies, distributors, contractors, builders, developers, retailers, and our vendors.

Table 1a provides the EES portfolio view of 2011 electric and gas savings and expenditures. Table 1b provides the preliminary view of 2010-2011 biennial results. These savings values will be trued up prior to the PSE biennial report filed with the Department of Commerce in June 2012, per condition K(8)(h).

Table 1a: Overall EES 2011 Results

	Savings	Expenditures
Electric (MWh)	348,926	$77,865,547
Goal/Budget	338,960 (38.8 aMW)	$90,793,904
Percent	102.9%	85.8%
Gas (Therm)	5,186,721	$15,489,414
Goal/Budget	4,789,478	$19,280,456
Percent	108.3%	80.3%

348,926 MWh divided by 8,760 hours = 39.8 aMW
Savings are stated in terms of first-year annual figures.

Expenditures and Savings

2011 Results

As noted in Table 1a on page 15, EES finished 2011 at 85.8 percent of budget in electric expenditures and at 80.3 percent in gas expenditures ($77.9[8] million, electric and $15.5[9] million gas). Results are further detailed in Table 1c, Expenditures by Sector and Table 1d, Savings by Sector, on page 18.

EES finished the year above goal in electric and gas savings; 39.8 aMW—equivalent to 31,000 average residential homes for 2011[10]—and 5.19 million therms, enough to heat 6,900 average residential homes for 2011[11].

Biennial Results

PSE will file its final 2010-2011 biennial conservation results consistent with requirements outlined in condition K(8)(H), RCW 19.285.070, and WAC 480-109-040(1). 2010-2011 combined results are provided in Table 1b.

Table 1b: Overall EES 2010-2011 Results

	Savings	Expenditures
Electric (MWh)	642,486	$152,873,565
Goal/Budget	621,960 (71.0 aMW)	$164,080,000
Percent	103.3%	93.2%
Gas	10,168,779	$35,400,347
Goal/Budget	9,054,000	$33,350,000
Percent	112.3%	106.1%

642,486 MWh divided by 8,760 hours = 73.3 aMW

[8] Including Other Electric Program (Renewables & Demand Response) expenditures of $1,417,689. This amount is included in the total electric expenditures noted in Table 1a.
Total excludes Low Income Weatherization (LIW) Renewable Energy Credit (REC) expenditures of $1.9 million. The amount is noted only to provide an LIW savings reference.
[9] Excludes LIW shareholder funding of $259,913.
[10] Based on an average usage of 11,202 kWh per year per average electric residence, per 2010 figures.
[11] Based on an average usage of 749 therms per year per average gas-heated residence, per 2010 figures.

Portfolio Expenditures by Cost Element Group

Tables 1c and 1d provide a Portfolio view of 2011 electric and gas (respectively) expenditures by cost element group, as defined in Exhibit 1 detail pages of the 2011 Annual Conservation Plan (ACP). The actual spending is compared against figures in the specific format provided in the 2011 ACP. Please note that program-level views are provided in the same format in the Residential and Business Sector overviews.

Table 1c: 2011 EES Electric Expenditures by Cost Element Group

	Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
Residential Budget Totals	$ 1,945,082	$ 325,241	$ 1,434,059	$ 2,573,547	$ 93,505	$ 3,724,813	$ 35,067	$ 276,052	$ 22,558,224	$ 32,965,589
Actual Expenditures	*$ 1,743,443*	*$ 176,082*	*$ 1,159,158*	*$ 1,776,301*	*$ 192,900*	*$ 3,345,174*	*$ 81,301*	*$ 12,966*	*$ 20,246,742*	*$ 28,734,067*
Business Budget Totals	$ 2,657,891	$ 50,307	$ 1,706,165	$ 170,350	$ 85,000	$ 2,075,825	$ 20,000	$ 5,994	$ 39,661,733	$ 46,433,265
Actual Expenditures	*$ 2,403,667*	*$ 69,012*	*$ 1,462,179*	*$ 50,531*	*$ 150,950*	*$ 2,317,505*	*$ 13,635*	*$ 42,060*	*$ 32,647,844*	*$ 39,157,384*
NEEA Budget Totals									$ 5,260,640	**$ 5,260,640**
Actual Expenditures	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 5,241,606*	*$ 5,241,606*
Support Activities Budget Totals	$ 896,929	$ 338,625	$ 646,065	$ -	$ 55,760	$ 2,316,250	$ 13,900	$ 351,106	$ -	$ 4,618,636
Actual Expenditures	*$ 810,205*	*$ 52,308*	*$ 510,067*	*$ 14,941*	*$ 56,202*	*$ 1,619,456*	*$ 5,249*	*$ 247,520*	*$ (1,124)*	*$ 3,314,801*
Other Electric Budget Totals	$ 375,566	$ -	$ 236,607	$ 8,000	$ 18,300	$ 600,000	$ 22,500	$ 9,300	$ 245,500	$ 1,515,773
Actual	*$ 324,703*	*$ -*	*$ 192,652*	*$ 2,678*	*$ 19,929*	*$ 675,874*	*$ 3,430*	*$ 49,684*	*$ 148,739*	*$ 1,417,689*
Grand Total Budget	**$ 6,414,312**	**$ 714,173**	**$ 4,022,895**	**$ 2,751,897**	**$ 252,565**	**$ 9,255,732**	**$ 91,467**	**$ 642,452**	**$ 67,187,254**	**$ 90,793,902**
Actual Expenditures	*$ 5,282,017*	*$ 297,403*	*$ 3,324,057*	*$ 1,844,451*	*$ 419,981*	*$ 7,958,009*	*$ 103,615*	*$ 352,229*	*$ 58,283,785*	*$ 77,865,547*

Table 1d: 2011 EES Gas Expenditures by Cost Element Group

	Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
Residential Budget Totals	$ 856,817	$ 76,459	$ 588,910	$ 198,932	$ 22,754	$ 1,876,879	$ 12,520	$ 64,183	$ 7,342,462	$ 11,039,916
Actual Expenditures	*$ 697,628*	*$ 47,774*	*$ 448,937*	*$ 184,981*	*$ 53,317*	*$ 984,188*	*$ 9,571*	*$ (6,538)*	*$ 3,979,593*	*$ 6,399,452*
Business Budget Totals	$ 735,708	$ 32,516	$ 483,981	$ 43,650	$ 16,000	$ 398,245	$ 9,500	$ 1,960	$ 5,230,520	$ 6,952,079
Actual Expenditures	*$ 575,903*	*$ 8,438*	*$ 345,332*	*$ 13,596*	*$ 27,160*	*$ 247,168*	*$ 3,044*	*$ 4,985*	*$ 6,911,762*	*$ 8,137,388*
Support Activities Budget Totals	$ 207,687	$ 142,825	$ 165,543	$ -	$ 17,240	$ 610,550	$ 3,300	$ 53,243	$ -	$ 1,288,461
Actual Expenditures	*$ 234,052*	*$ 23,848*	*$ 152,632*	*$ 3,360*	*$ 10,596*	*$ 525,551*	*$ 737*	*$ 3,884*	*$ (2,087)*	*$ 952,574*
Grand Total Budget	**$ 1,800,212**	**$ 251,799**	**$ 1,238,433**	**$ 242,582**	**$ 55,994**	**$ 2,885,674**	**$ 25,320**	**$ 119,386**	**$ 12,572,982**	**$ 19,280,455**
Actual Expenditures	*$ 1,507,583*	*$ 80,060*	*$ 946,901*	*$ 201,937*	*$ 91,072*	*$ 1,756,908*	*$ 13,352*	*$ 2,341*	*$ 10,889,259*	*$ 15,489,414*

2011 EES Sector Results

Tables 1e and 1f provide sector-level 2011 savings and expenditure figures, separated into semi-annual totals. Figure 1a illustrates the proportions of those savings and expenditures by sector.

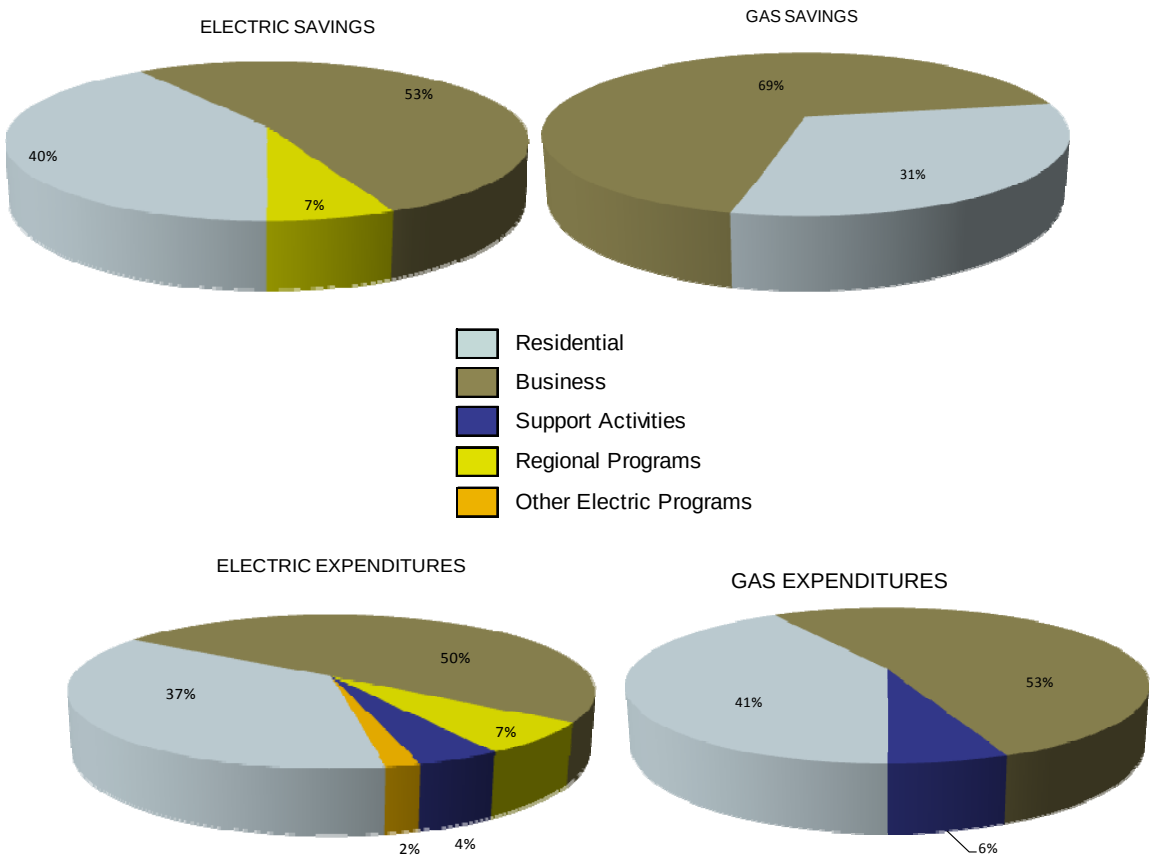
Table 1e: EES 2011 Expenditures by Sector

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Residential Sector						
	Electric	$ 11,247,129	$17,486,938	$28,734,067	87.2%	$ 32,965,589
	Gas	$ 3,288,754	$3,110,698	$6,399,452	58.0%	$ 11,039,916
Business Sector						
	Electric	$ 14,010,382	$25,147,002	$39,157,384	84.3%	$ 46,433,266
	Gas	$ 2,536,937	$5,600,451	$8,137,388	117.0%	$ 6,952,079
	Northwest Energy Efficiency Alliance	$ 2,551,762	$2,689,844	$5,241,606	99.6%	$ 5,260,640
Support Activities						
	Electric	$ 1,415,635	$1,899,166	$3,314,801	71.8%	$ 4,618,636
	Gas	$ 401,190	$551,384	$952,574	73.9%	$ 1,288,461
	Other Electric Programs	$ 640,138	$777,551	$1,417,689	93.5% 0	$ 1,515,773

Table 1f: EES 2011 Savings by Sector

2011 Savings		2011 Semi-annual View				2011 Target
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total 2010	YE % of Goal	
Electric	Electric					Electric
Gas	Gas					Gas
	Residential Sector					
	Electric	64,044	77,301	141,345	102.6%	137,741
	Gas	688,335	958,042	1,646,377	77.9%	2,114,228
	Business Sector					
	Electric	64,082	119,999	184,081	103.6%	177,719
	Gas	964,605	2,575,739	3,540,344	132.3%	2,675,250
	Northwest Energy Efficiency Alliance	11,750	11,750	23,500	100.0%	23,500
	Support Activities					
	Electric	0	0	0		0
	Gas	0	0	0		0
	Other Electric Programs					

Figure 1a: EES 2011 Expenditures and Savings Percentages



Residential Sector Overview

Residential Retail programs, especially spiral and specialty CFLs, realized significant success in 2011, with greater than anticipated customer participation.

Business Sector Overview

The Business Sector put significant emphasis on the "ReEnergize Your Lighting" messaging to prepare customers for upcoming federal lighting efficiency requirements. Lighting measures in general were highly cost-effective.

Five – Year Trends

The following figures represent electric and gas savings and expenditures for completed years 2007 through 2011. Figure 1b indicates that PSE's electric conservation efforts have resulted in a 57 percent increase in savings since 2007. Figure 1c indicates that gas savings increased considerably; over 94 percent. On the expenditure side, electric spending has increased slightly over 113 percent, while gas spending increased 93 percent since 2007.

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.

Figure 1b: EES Electric Programs; Savings and Expenditures – Five-year Trends

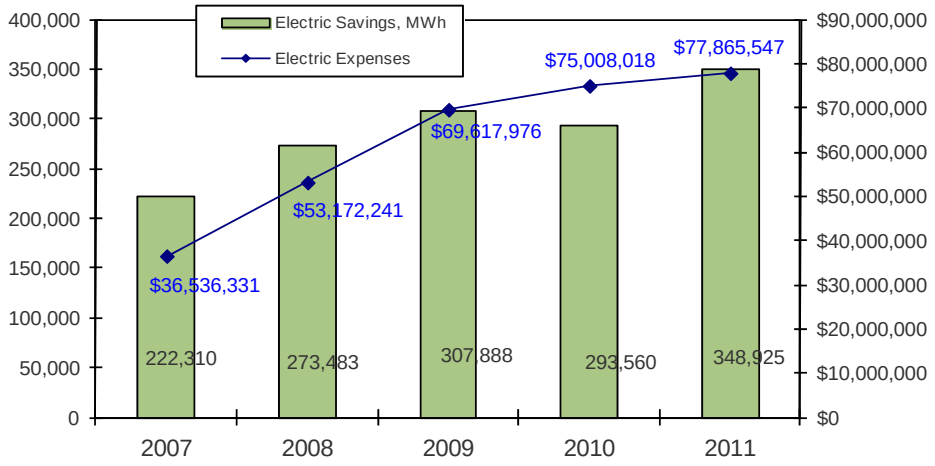
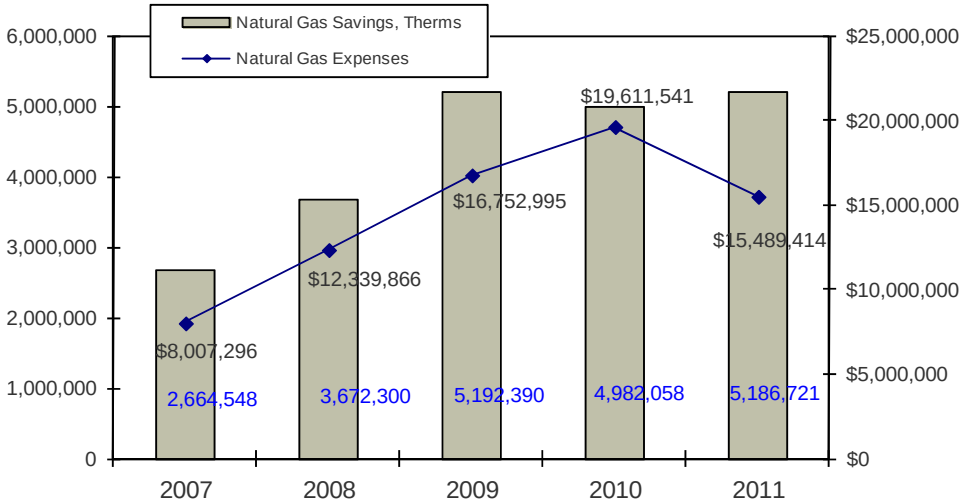


Figure 1c: EES Gas Programs; Savings and Expenditures – Five-year Trends



Cost Effectiveness Ratios

In compliance with Settlement Agreement condition K(10)(a), EES performed the Utility Cost and Total Resource Cost tests at the portfolio level, which are indicated in Table 1g below. Details supporting these ratios are contained in Exhibit 2 of this report.

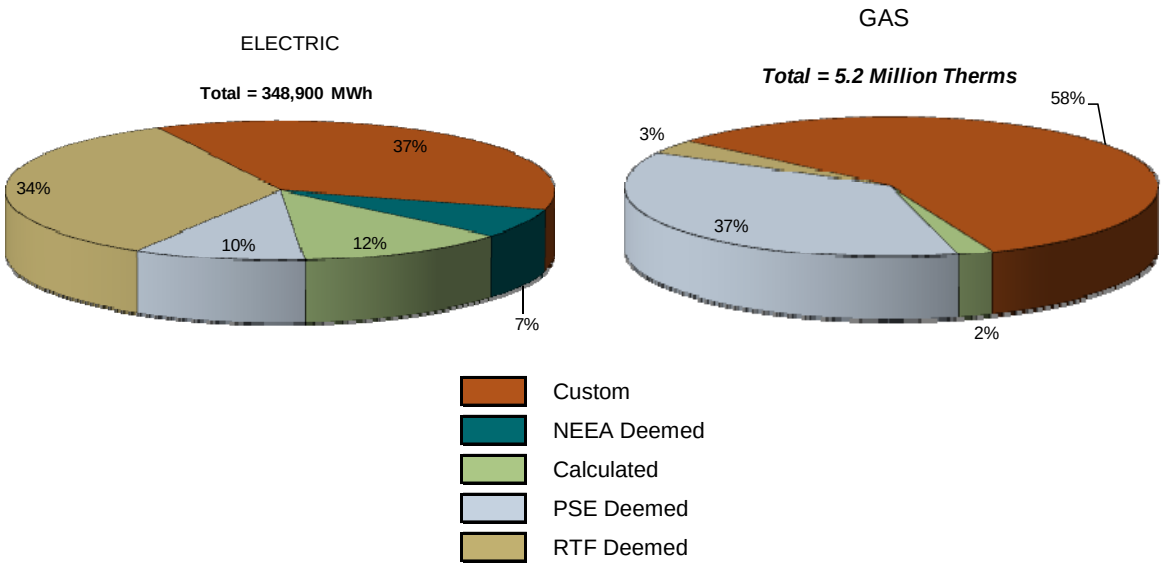
Table 1g: Overall EES Cost-effectiveness Benefit/Cost Ratios

Benefit to Cost Ratios		
	Utility Cost	Total Resource Cost
Electric	3.88	2.65
Gas	2.80	1.36

Ratio of Savings by Measure Type

Figure 1h 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 section, starting on page 237 of this report.

Figure 1h: 2011 Savings Distributions by Measure Savings Type



Measure Details

Savings claims are regularly audited at various stages of measure development. From the time that a measure is implemented and its value and source of savings is added to the Measure Metrics database, it is regularly verified against the savings values logged in the EES tracking systems. Savings are internally reviewed and audited both on a monthly rolling basis and a formal stand-alone quarterly audit.

In Supplement 1 of Exhibit 4, EES presents complete measure tables for programs whose suites of offerings consist of deemed or selected calculated measures[12]. The savings type information addresses condition K(6)(b) and (c). Since the majority of Business Sector measures are custom engineering calculations, only the Business Rebates program (Schedule 262 for both electric and gas) will list deemed and calculated Measure Detail tables.

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

[12] Active measures as of December 31, 2011.

Measure tables included in Supplement 1 of Exhibit 4 indicate the number of instances a particular measure category appears in the program's suite of offerings. Measures are listed and compiled according to equipment or usage type by Schedule. They are then separated into fuel types. A number of measures (residential clothes washers for instance) may apply to more than one program within that Schedule and thus, may be noted several times.

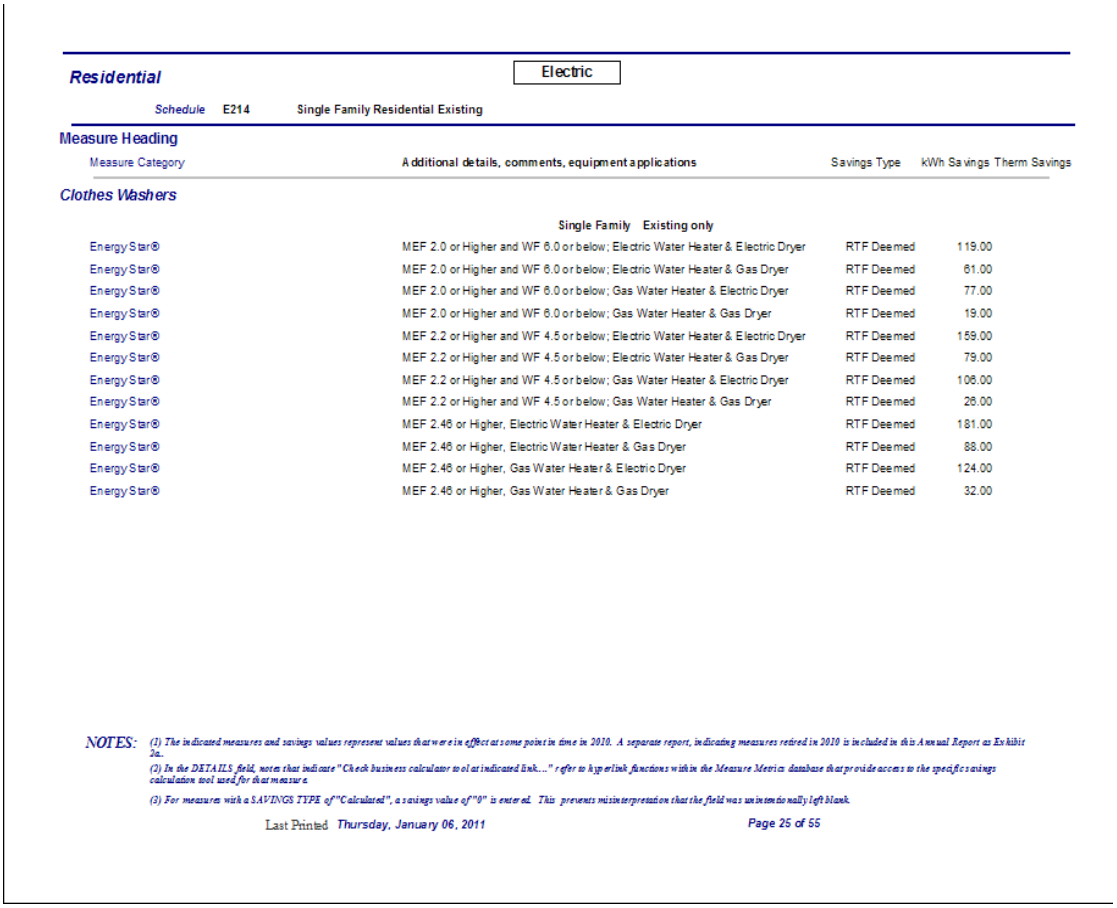
Each clothes washer variation is listed according to water heater and dryer type:

- 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 levels, for a total of 12 possible listings, as illustrated in the example Single Family Existing[13] table, Figure 1d:

[13] Extracted from Supplement 1 to Exhibit 4, EES List of Measures, Incentives & Eligibility.

Figure 1d: Sample Page of Supplement 1 to Exhibit 4; 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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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 Supplement 1 to Exhibit 4.

It is noteworthy that each measure noted in this report's measure tables represents a record in the Measure Metrics database. The database also manages an extensive list of retired measures. These are maintained to ensure that EES can track the history of energy savings claims, incentive amounts, measure life, etc. Furthermore, there is not a direct correlation of the number of combinations noted in the program tables and the measures listed in Exhibit 4[14].

[14] For instance, whereas there are 12 variants of residential clothes washers in Measure Metrics and the EES Tracking database, the EES List of Measures, Incentives & Eligibility (Exhibit 4) lists clothes washers by incentive amount; two.

Supplement 2 to Exhibit 4 lists all measures that were retired, and the retirement reasons, in 2011. 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. Retired measures are only considered "cancelled" when the noted measure is removed from Exhibit 4, and the notation within the "Retired Reason" field indicates that the measure is no longer offered.

By the end of 2011, there were a total of 130 EES staff members.

Not all EES staff charge their time to the Rider/Tracker. The Lease Services, Gas Planning and Green Power teams, for instance, are strictly O&M. A portion of the Efficiency Communications team also charges their time to O&M as well.

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 2011. 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. Supplement 4 to Exhibit 1 also provides a summary view of project and dwelling unit counts by measure grouping.

Memberships and Sponsorships

EES staff derives value for customers by engaging in memberships and sponsorships. Memberships provide EES staff with additional technical resources, professional training, provide a path for EES 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 Schedule 270, Market Transformation and Local Infrastructure discussion, beginning on page 189.

EES considers sponsorships very carefully, and typically avoids sponsorships unless we can actively promote our efficiency programs to participants. EES 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. Supplement 3 of Exhibit 1 enumerates membership and sponsorship payments made in 2011, along with the sponsorship questionnaire.

2011 Continuous Improvement

In 2011, the 123 skilled EES professionals involved with Rider/Tracked-funded programs worked diligently throughout the year to achieve the results noted in this report. Our focus on continuous improvement led to new and innovative operational processes, reduced costs, enabled increased levels of savings verification, maximized productivity and above all, exceed PSE customer expectations.

That is our primary goal, along with utilization of their funding contributions wisely and prudently.

Throughout the year, each EES Sector improved operational processes. Examples include:

- Reducing service costs in the Retail Channel.
- Reducing inventory storage fees.
- Allowing residential Low Income Agencies to evaluate cost-effectiveness before a measure is installed.
- Establishing a system to track Small Business Lighting contractors.
- Managing community involvement and streamlining residential net meter installation processes,

which are only a few examples of what readers will learn in the coming pages.

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2011 COMPLIANCE

Since 2002, when the first set of EES operational guidelines were formed as a part of the General Rate Case Stipulation Agreement (Docket Nos. UE-011570 and UG-011571), PSE has met or exceeded many important deliverables. Among the most notable is surpassing conservation savings targets in the majority[15] of years. Throughout that time, numerous audits, reviews, and investigations, including on-site visits from WUTC Staff, other stakeholders, and independent auditors[16] have found that EES is routinely in complete compliance with laws and requirements. In nine years, no audit findings were recorded during these reviews.

PSE's 2002 Stipulation Agreement was used as the foundation for establishing its current 2010 Electric Conservation Settlement Terms, Docket No. UE-100177, and those of other Washington utilities. Obligations are consistent with those that PSE has abided by since 2002, including the natural gas requirements not outlined in the 2010 Electric Conservation Settlement Terms.

Notable additions, such as a requirement to document an EM&V Framework and protocols, created the opportunity for PSE to present to stakeholders several processes and policies under which PSE has successfully operated for a number of years prior to the passage of I-937, the Energy Independence Act (EIA), and implementation of RCW 19.285. One-time exceptions, particularly condition K(6)(g), provided a new opportunity for PSE to validate the veracity of its 2010 and 2011 electric savings claims.

RCWs and WACs

The Company filed its Ten-Year Conservation Potential and its Biennial Conservation Target, Docket number UE-111881 on October 28, 2011, in compliance with RCW 19.285 and WAC 480-109. The plan was approved by the Commission on December 15, 2011.

Commission Orders

This 2011 EES Report of Conservation Accomplishments is consistent with Commission order #1 in its Second Supplementary Order, Docket No. UE-970686.

EES provides a dedicated staff whose primary objective is to ensure compliance with all RCWs, WACs, 2002 GRC Stipulation Agreement and 2010 Electric Settlement deliverables.

Making certain that EES filings are completed thoroughly and in a timely fashion, that CRAG members have all the information that they need to make informed decisions and recommendations, and conveying information indicating that ratepayer funds are used appropriately on prudent conservation efforts makes up the remaining portion of this team's responsibilities.

[15] The 2003 gas savings was 95% of goal. In 2005, electric savings were 96% of goal. In 2006, electric savings were 99% of goal.

[16] During the years in which PSE participated in the BPA's C&RD and CRC programs, Ernst & Young conducted two comprehensive audits of those programs, with no audit findings.

2010 Electric Settlement Terms

By the end of 2011, EES completed every deliverable[17] of the 2010 Electric Settlement Agreement, Docket No. UE-100177. We are grateful to the CRAG members for their focus and significant contributions to our success. Since the implementation of the Settlement Terms in October 2010, PSE 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 maintained compliance with those gas-specific requirements still in effect in the 2002 Stipulation agreement, Docket Nos. UE-011570 and UG-011571.

Deliverables

One of the most notable and impactful conditions in the 2010 Electric Settlement Agreement was the requirement to file a Biennial Conservation Plan (BCP). Three key milestones were required in the months leading up to the ultimate filing. In compliance with condition K(8)(f), PSE filed its 2012-2013 BCP with the WUTC on October 28, 2011. Several elements of the BCP also addressed 2010 Settlement Terms requirements, including collaborating with CRAG members on the development of the EM&V Framework. PSE earned noteworthy praise from parties filing comments on PSE's 2012-2013 Biennial Conservation Plan, including the NorthWest Energy Coalition, who said:

> "PSE staff has been diligent about responding to information requests from advisory group members, discussing concerns as they arise, and seeking collaborative resolution of issues. PSE also does a fantastic job of providing CRAG members with needed materials, including detailed documents tracking progress towards meeting each of the conditions approved in conjunction with its 2010/2011 conservation target in Docket No. UE-100177."[18]

Several other deliverables were satisfied with the filing of the BCP, including (actual condition language is paraphrased):

- F(11) – Program Budget
- K(3)(a)(i)(1) – Involve the CRAG with EM&V Framework development
- K(3)(a)(v) – Involve the CRAG with Tariff modifications
- K(3)(a)(vi)(1) – Involve the CRAG with Marketing
- K(3)(a)(vi)(2) – Involve the CRAG with Incentive-setting
- K(3)(a)(ix) – Budget Review with the CRAG

[17] It is important to note that some sections of the 2010 Settlement Agreement are declaratory or explanatory, rather than indicating a specific deliverable or requirement.
[18] Excerpted from NW Energy Coalition's Docket No. UE-111811 December 7, 2011 comment letter.

Additionally:

- K(4)(a) – Annual budget may be submitted as part of (BCP)
- K(4)(b) – Budgets must be built from the bottom - up
- K(5) – Program Details
- K(7) – Program Design Principles
- K(8)(f) – Three milestone deliverables prior to filing BCP

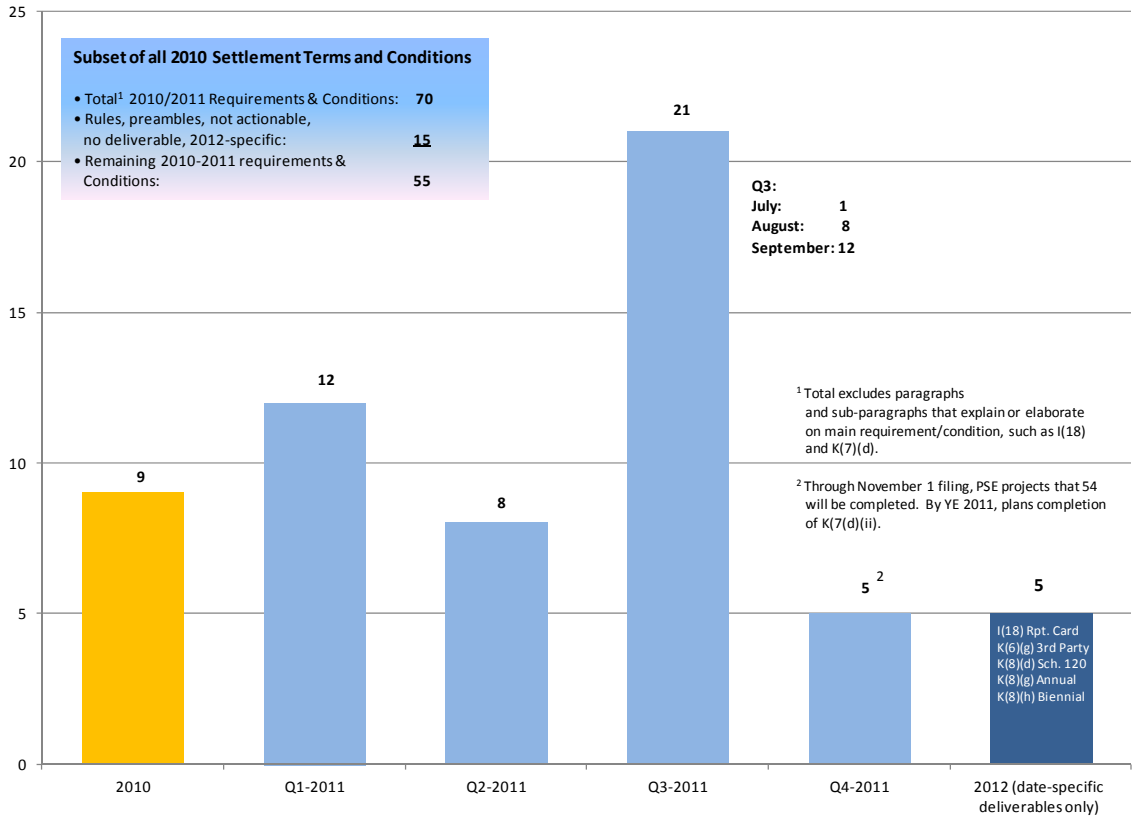
This Annual Report is also consistent with condition K(8)(g).

Exhibit 9

In addition to the summary information presented in Figure 2a: 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 the various deliverables listed in the 2010 Electric Settlement Agreement, and how PSE will convey compliance to the CRAG, we first examined those portions of the sections that were primarily declarative or informational, rather than indicative of a specific deliverable. Of those, nine were completed by PSE in 2010, following Commission Order 5, formalizing the Agreement. Similarly, five are due in 2012 (this 2011 Annual Report is one of the five). The remaining deliverables were used to calculate the compliance percentage, which, as is noted above, was 100 percent for this completed biennium.

Figure 2a: 2010-2011 Condition Compliance by Quarter



EES 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 EES.

Each business unit within EES 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 EES that impact the overall Evaluation, Measurement and Verification of all EES programs, whether they be related to savings claims verification, auditing financial expenditures or managing the systems and archived used as bases for EES performance.

PSE's EM&V Framework—required under condition K(3)(a)(i)(1), which reads:

> Development of a written framework for evaluation, measurement, and verification (EM&V) as implemented by PSE 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, 2012-2013.

can be found as an Exhibit (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 EES. 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.

2011 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 2011 performance expectations relative to deliverables and accomplishments, and are not intended to duplicate or contradict the Framework's content.

Evaluation Studies

Pursuant to condition K(6)(f), Supplement 1 to Exhibit 8 of this report contains all evaluation studies completed, either by EES Evaluation department staff or third-party consultants, in 2011. In one of the more significant EES studies, field work and analysis was completed for the wide-ranging evaluation of C&I Retrofit Programs. The Residential Demand Response Pilot Evaluation and the EES Review of M&V Practices was completed in December 2011. ERRs are not yet completed for these, and they are not included with this report. They will, however be available for review in the 1st quarter of 2011.

Additional studies include an Evaluation of PSE's Quality Assured Duct Sealing Program, an Evaluation of the Multi Family Existing Program, a Review of PSE's Policies and Approaches to Energy Efficiency Program Incentives, an Effective Evaluation Research Report and a PC Power Management Impact Study.

At the time of this report publication, Evaluation Report Responses (ERRs) are unavailable for the latter two, and they are not included with this report. The ERRs will be available for review in the first quarter of 2012.

A complete list of evaluation studies completed in 2011 is provided in the Support Activities Section of this report, Table 10l under the Program Evaluation heading. A discussion of resource prioritization is also contained in the EM&V Framework on page 6.

Evaluation Report Responses

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 Evaluation Report Response (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[19]. 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,[20] adjusting the incentive level or revising the savings value at a prescribed interval.

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

[20] 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".

2011 Evaluation Accomplishments and Activities

Nine ERRs were generated in response to four evaluation studies and logged into the Evaluation tracking database. These are attached in Supplement 1 of Exhibit 8. 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.

Additionally, EES has included a study that was not part of an evaluation; the 2011 Rock the Bulb Campaign Effectiveness Debrief. This report contains valuable marketing and program details, as reported by several Rock the Bulb constituents. There is no associated ERR for this debrief.

M&V Discussion

Process Highlights

In Figures 3a and 3b, we provide a graphical representation of the issues that must be addressed and reconciled through Evaluation, Measurement and Verification processes. It is interesting to note the absence of flow indices, or process arrows. This is because most of the indicated steps occur concurrently, rather than in a process flow. Further, each activity represented below may also be represented by at least one complete process flow. Although the noted activities and functions in the Response side of the diagrams are highlighted and summarized in this report, these detailed processes are omitted, so that we may concentrate on PSE's 2011 accomplishments, rather than process discussions.

Descriptions of PSE measurement & verification (M&V) policies, protocols, guidelines and processes as well as an estimate M&V costs were required under condition K6(f)(ii) which reads:

> *"Measurement & Verification – PSE shall provide detailed descriptions of its measurement & verification (M&V) policies, protocols, guidelines, and processes to the CRAG for review and advice. Additionally, PSE shall provide to the CRAG an estimate of the costs associated with the detailed M&V plan and PSE will maintain activities at levels that are at least commensurate with regional peers."*

KEMA was engaged to conduct the M&V cost study and perform an assessment of PSE's M&V practices and a review of best practices. In the fourth quarter of 2011, KEMA produced three documents:

1) an Assessment of PSE's M&V and Review of Best Practices,
2) A PSE M&V Cost Study, and
3) A PSE M&V Policies, Guidelines, Protocols & Processes document. PSE has also contracted with KEMA to assist PSE's Verification Team, formed in 2011, with the development of sampling protocols for program and measure verification inspections during the first quarter of 2012.

The KEMA study is attached as Supplement1 of Exhibit 8.

Measurement

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

PSE considers measurement to be the accurate counting 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.

Energy Efficiency Services' Energy Management Engineers are exceptionally qualified to perform conservation analyses. Every Senior EME and each EME has earned their Professional Engineer credential, which must be renewed every two years. Additionally, several EMEs have earned their CEM (Certified Energy Manager) credential.

On every custom grant project, the EME will review each customer-proposed measure for estimated savings accuracy. A second, more senior EME will validate the savings estimate before a grant agreement is executed.

PSE requires documentation of lighting hours for C&I retrofit projects with estimated annual lighting energy savings of 300,000 kWh or more. Documentation of lighting hours may consist of data logging of actual lighting hours, utilization of energy interval data, or review of automated lighting control software Metering of other C&I projects is at the discretion of the QC Reviewer and the EME. In addition, EME's are thoroughly checking multiple sources to estimate lighting hours for all custom lighting projects. All custom C&I projects have pre and post inspections.

Measure Savings

Savings Values

Supplement 1 to Exhibit 4 of this report lists the savings values for all prescriptive, (RTF Deemed---now referred to as Unit Energy Savings [UES] and PSE Deemed) and selected calculated measures by program (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 EES's *Guidelines for Measure Revisions* or *Guidelines for Measure Creation,* made available to all EES staff in 2010. 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 EES is compliant with Settlement Agreement condition K(6) and can demonstrate prudence for all savings claimed.

Residential measures and their savings values are evaluated either independently by RTF-sponsored evaluations or as a part of a program's suite of offerings during a routine EES evaluation[21].

Conservation measures installed as a part of Commercial/Industrial custom grants are unique, in that every grant project is evaluated by a PSE EME. (See the sidebar discussion on page 38.)

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

Savings Claims

A key component of PSE's EM&V processes is the assurance of savings claim accuracy. Since 2008, PSE has implemented several processes and guidelines to ensure that the accuracy of its savings claims, 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.

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

Savings Adjustments

Although EES maintains robust processes and systems to ensure accurate savings and financial tracking, there are infrequent instances when an adjustment is necessary. Supplement 1 to Exhibit 1 lists and describes all electric and gas savings adjustments that were performed throughout 2011. Another practice that has been in place since 2007 is the savings adjustment process. This process is included in the EES *Guidelines for Ensuring the Accuracy of Electric and Gas Savings Claims*. Although rare, savings claims adjustments are periodically necessary. For example, a vendor may mistakenly identify some clothes washers from a previous month and add them into the next month's total. Data entry errors also occur infrequently and are 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).

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

The EES Budget team manages a formal adjustment process, which includes documenting answers to the following five questions.

- What happened ("savings were overstated by 10,000 kWh last month", etc.)?
- How was the need for adjustment discovered?
- 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.)?

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

Supplement 1 to Exhibit 1 of this report is comprised of gas and electric savings adjustment tables, indicating the date, reason and adjustment amount—in therms or kilowatt hours. The tables represent all savings adjustments processed throughout the year. The adjusted figures are added to or subtracted from the total in the "Savings Adjusted" month.

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 the manager, Budget and Administration. 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.

Table 3c 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[22]. This hypothetical circumstance illustrates several overriding tenants 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 EES's *Measure Revision Guidelines.*

[22] 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.

Table 3a: 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.

Figure 3a is a sample of one adjustment entry provided in the Supplement 1 to Exhibit 1.

Figure 3a: Sample of 2011 Adjustments from Supplement 1 to Exhibit 1

Supplement 1 to Exhibit 1

2011 Savings Adjustments

Electric

Inde	Sector	Channe	Program	UOM	Adjustment reason	Consequence	Adjustment Type (Addition or subtraction of savings)	Savings date affected	kWh adjustment amount (Positive amount = addition; negative amount "(nn)" = subtraction)
11	Residential	Dealer	Weatherization	kWh	Contractor incorrectly reported weatherization measure, mis-identifying home's heating type as electric instead of gas.	Savings were over-reported by 11,898 kWh	Subtraction	Sep-10	(11,898)

Also important to measuring the savings accuracy of EES claims, it is necessary to ensure that measures are retired when their savings value, incentive levels or delivery methods are revised. Supplement 2 to Exhibit 4 of this report reflects all measures that were retired at time in 2011.

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 Supplement 2 to Exhibit 4, 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.

EES Tracking and Reporting

SAP and CLX (described in the accompanying sidebar) are enterprise systems and are used throughout the Company. SAP provides all EES financial information, including vendor contracts, material orders[23], staff pay and expense reporting, and overhead allocations. In 2011, EES trained key program staff on SAP tasks that are essential to their business in order to expedite the flow of information. This allowed for more effective response to contractor invoice queries, material tracking, and contract status inquiries.

CSY (primarily oriented to Business sector rebate and grant activity) and CMS (primarily used in Residential rebate and customer interaction tracking) are key EES measurement and tracking tools. It is CSY's monthly reporting that directly feeds the EES Tracking Master for the Business sector. Several CMS data are used in compiling Residential tracking metrics, which are fed to the EES Tracking Database.

It is noteworthy that several of these systems also play a critical role in savings and expenditure verification processes. CLX will be discussed in more detail in the Verification section, as it is used extensively in both the Residential and Business Energy Management Sectors primarily as a verification tool.

EES 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 Residential tracking database 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 EES presents data to its stakeholders.

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.

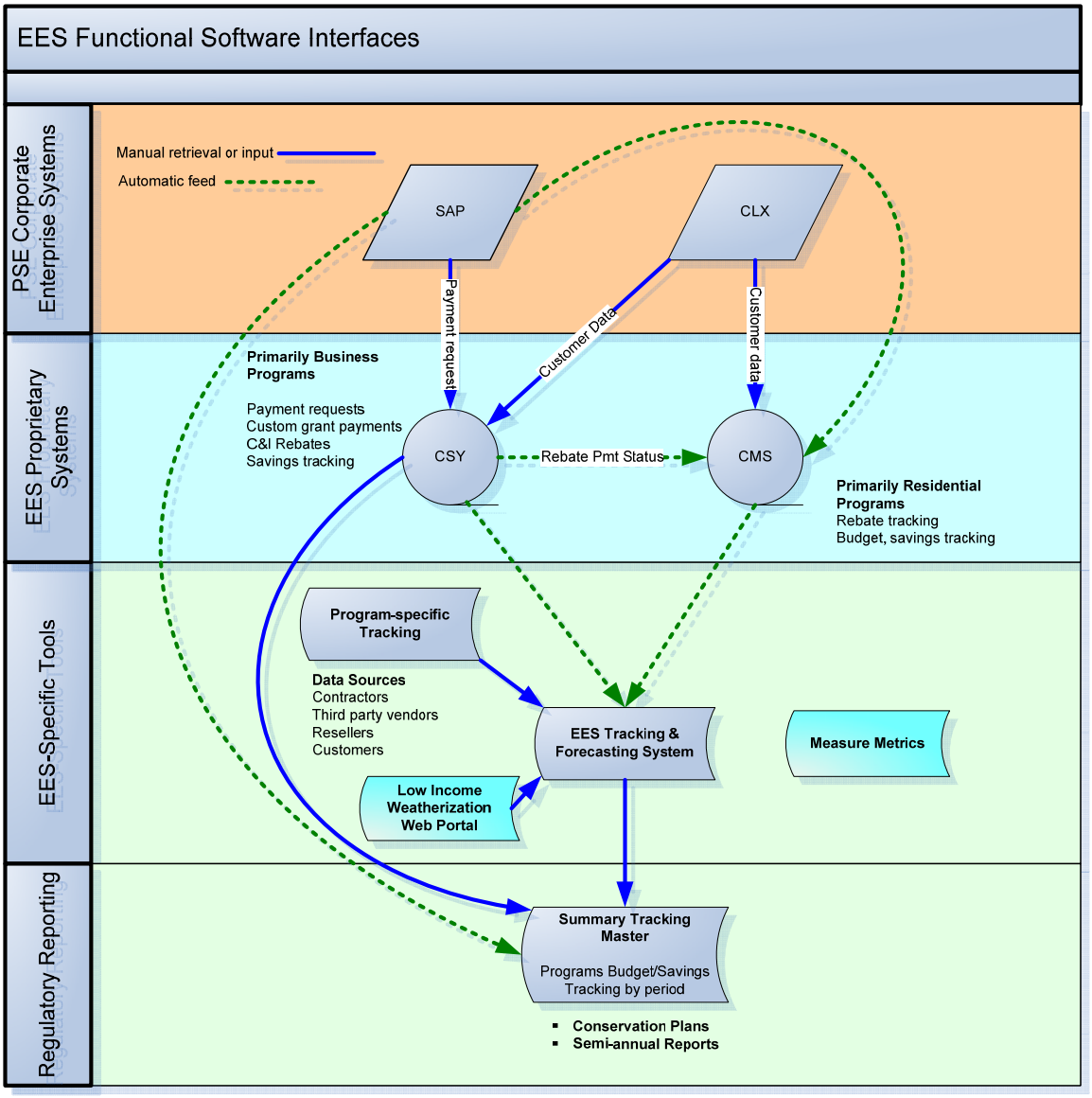
CLX (Customer LinX) – A proprietary system used for managing customer billing information, meter data (meter readings, ID numbers, structure history, etc.) and tracking outages. CSY and CMS pull customer usage data and basic account information (name, address, account number) from the data warehouse.

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.

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

Figure 3b, and associated descriptions provide background on what the systems do, how they assemble data and how the data is processed to the resulting reports. It is important to note that many business tools; spreadsheets, flowcharts, checklists, etc., utilized by individual programs or EES staff members which feed some of those listed here, are not outlined in this document.

Figure 3b: EES Energy Management Tracking and Reporting Interface



EES Tracking & Forecasting System

Primarily geared towards tracking Residential Energy Management conservation activity, the EES Tracking Database also tracks some Business activity. This database is managed by the Systems Channel.

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

- Read-only
- Write savings
- Create queries
- Developer

Systems Channel staff made numerous enhancements to the EES Tracking Database in 2011, including:

- Commercial/Industrial tracking capabilities
- Measure cost-effectiveness calculations

Figure 3c is a screen shot of the EES Tracking and Forecasting System main page, accessed by authorized EES staff members.

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 3c: EES Tracking and Forecasting System Interface

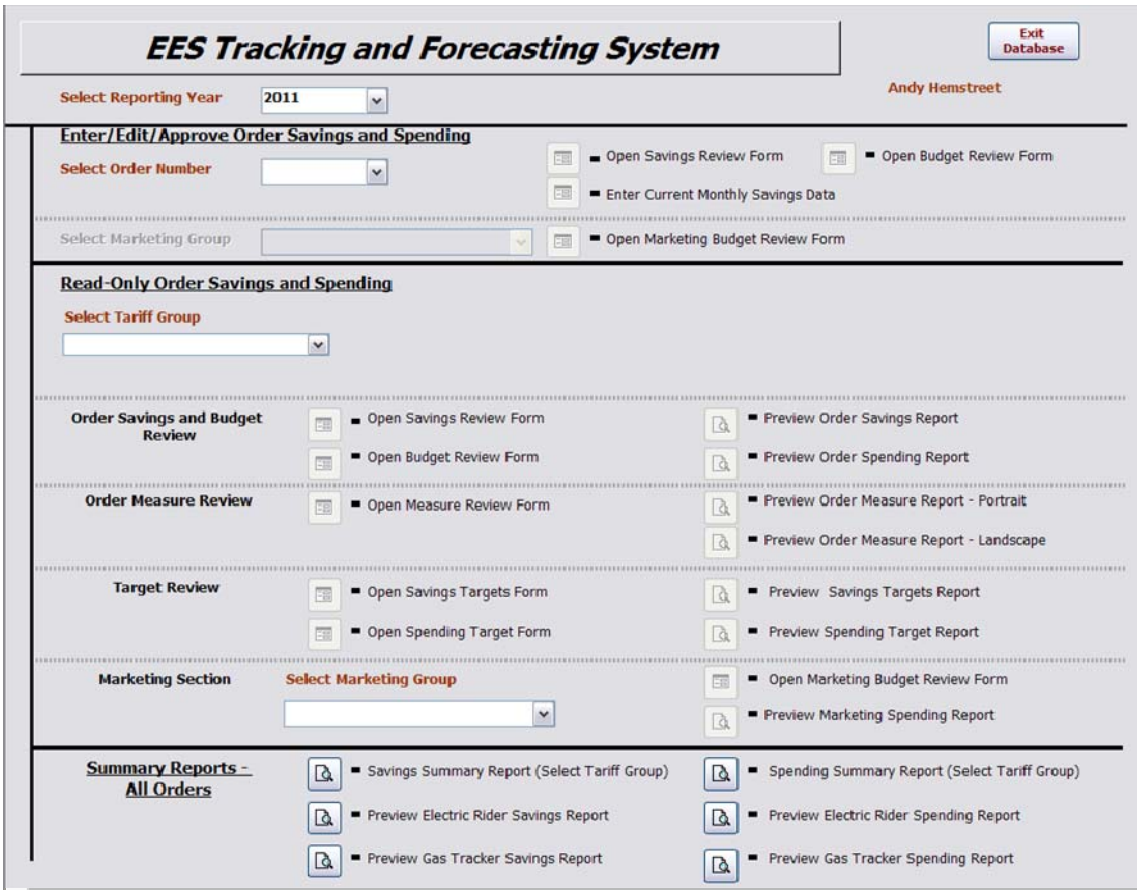
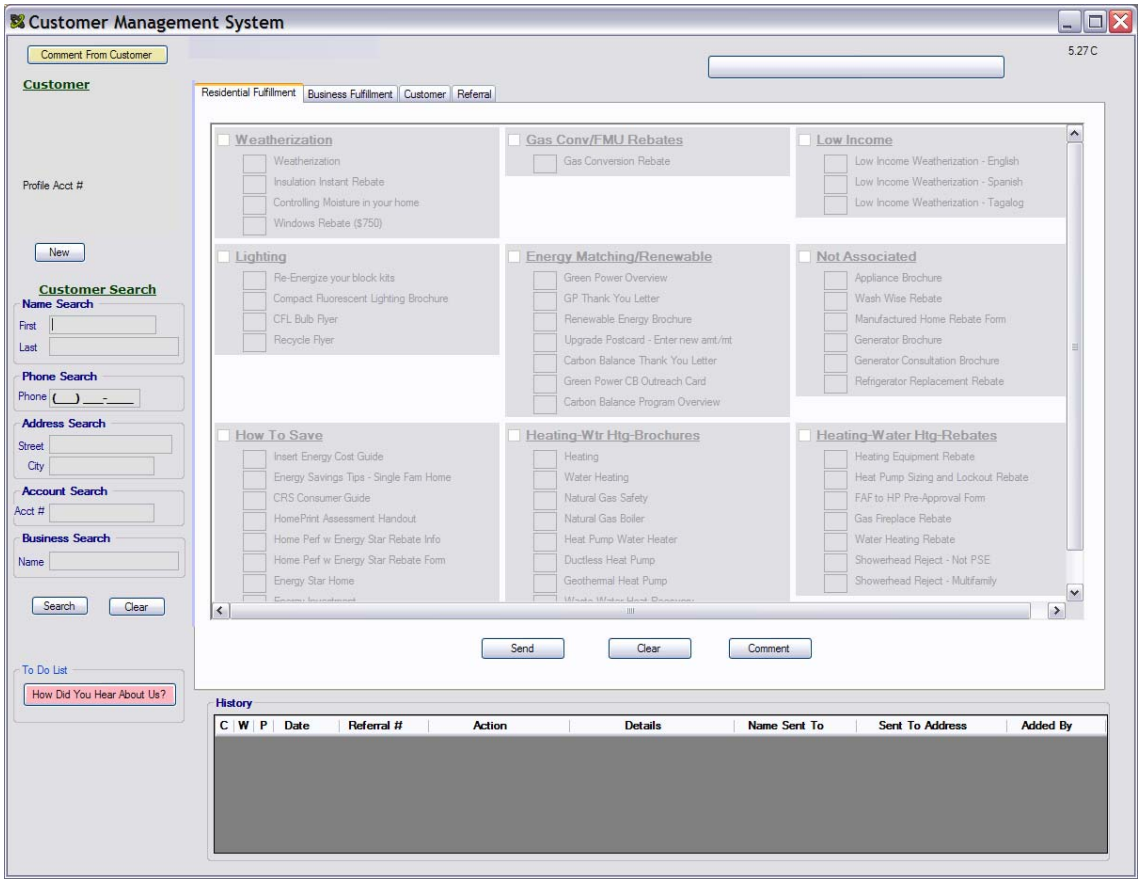


Figure 3d is a representation of EES' CMS system interface.

Figure 3d: EES Tracking and Forecasting System Interface



Measure Metrics

The Measure Metrics system serves both a Measurement and Verification role in EES. Its primary purpose is to archive detailed measure information, and provide easy retrieval of pertinent data. The database portion of the system is also critical in providing aggregate savings tracking verification, as a key point of reconciliation in the baseline savings calculation determination.

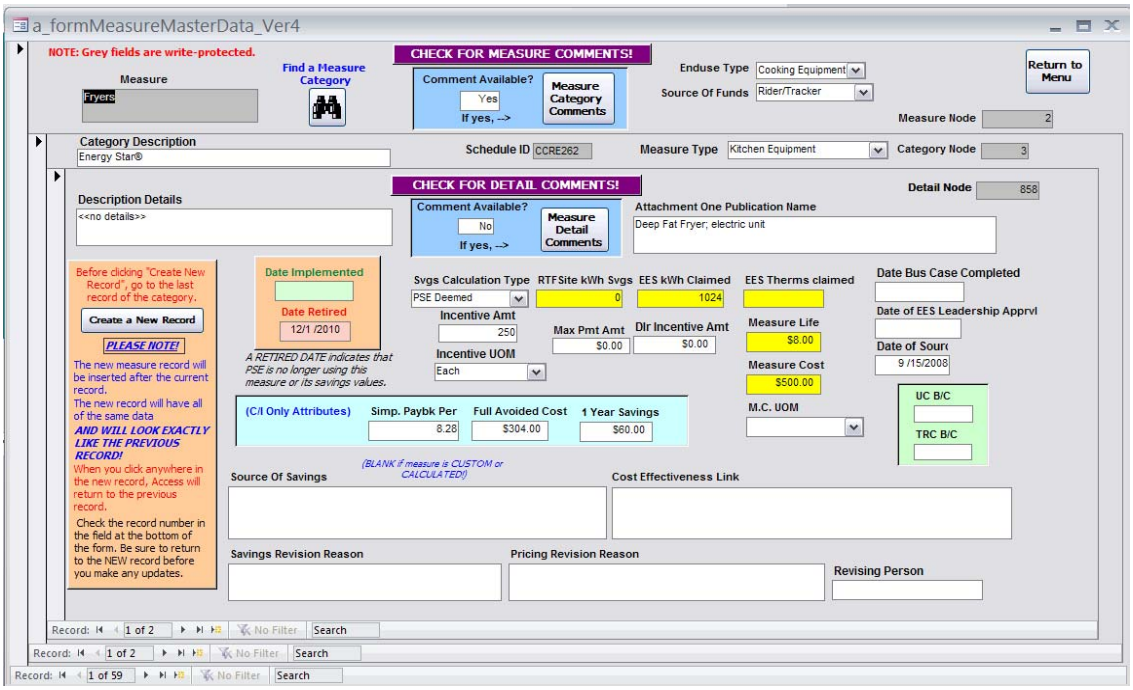
Several enhancements were made to both the archiving process and the database in 2011.

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:

- Tracks the author of all implemented and retired measures.
- Logs all database revision.
- Provides clearer incentive parameters[24].

Enhancements were also made to the dedicated Evaluation database, which also tracks evaluation studies; including authors, topics and programs affected. The archival system also tracks Evaluation Report Responses (ERRs), linking evaluation studies to any resultant change(s) in delivery methods, incentive or savings values. Figure 3e is an illustration of one of the Measure Metrics database interfaces available for authorized users.

Figure 3e: EES Measure Metrics Input/Edit Interface



[24] For instance, in previous versions, the database could not report on a measure whose incentive was to be split 40% to the reseller, 60% to the customer (hypothetically). In these cases, a text comment would be entered at the measure detail table level, which would require a specific query. Now, the incentive field will indicate (again, hypothetically), "$400 to reseller, $600 to customer".

Program-Specific Tracking

Many EES programs use sophisticated Excel-based tracking tools to ensure consistently accurate reporting of customer[25] 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[26]. All are integral in providing the finest level of detail possible during routine internal program audits.

PSE considers 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 results performed or managed by EES staff contributes to confirming and/or determining the cost-effectiveness of programs and measures. EES Evaluation Staff, often working with third party consultants, employ a high degree of rigor and review in determining program savings, persistence, and consequent cost-effectiveness, with results expressed in terms of Utility Cost (UC) Benefit-to-Cost 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 to the 2012-2013 Biennial Conservation Plan.

PSE's program-level detailed view of electric and gas cost-effectiveness results for 2011 is attached to this report as Exhibit 2. The three supporting documents mentioned above; Calculation of Electric Avoided Costs, Calculation of Gas Avoided Costs, and Calculating the Cost-Effectiveness of Puget Sound Energy's Energy Efficiency Programs, are attached as Supplement 1 to Exhibit 2.

2011 Measurement Accomplishments and Activities

49 savings claims adjustments were made; 32 electric, 17 gas. Details are provided in Supplement 2 of Exhibit 1.

[25] Where possible. In the case of retailer CFL sales for instance, customer-specific data isn't available.
[26] As presented to CRAG members during a 2010 Small Business Lighting field trip.

In 2011 the System Channel developed a tool for "Rock the Bulb" events to verify customer eligibility and track bulb exchanges for participating PSE customers.

In 2010 the campaign had used a web based tool that cost over $100,000 to develop and manage. In 2011, the tool was no longer available, so the Systems channel team took on the task of creating an easy-to-use solution at no additional cost to the Retail Channel.

Improved Inventory Control

The Systems Channel new inventory control system continues to provide benefits throughout EES. This new tool clearly monitors and tracks program brochures, promotional materials and lighting products as they are used for mailings, events, and programs. This system has allowed the group to help reduce waste, lower storage costs, decrease collateral charges in nearly every department. Savings in printing and storage fees for 2011 are in excess of $200,000.

Verification

EES 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[27] being counted accurately?
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. EES also verifies that the savings values indicated by evaluation studies, engineering analyses, or the RFT 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 EES, 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.

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.

Business Sector Custom Grants

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

[27] 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[28]. 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.

Table 3b provides the number of measures verified by site inspections for Business programs in 2011.

Table 3b: Commercial/Industrial Custom Grant Verifications by Program

Commercial/Industrial Custom Grants	Number of Measures Verified	
Program	Electric	Gas
C/I Retrofit	775	101
C/I New Construction	67	28
Large Power User/Self-Directed	16	

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 $7,000. 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.

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

Measure Installation Verification

A key development during 2011 was the creation and implementation of a dedicated team of individuals that performs on-site verifications of measure installations for both the Residential and Business Sectors.

EES Verification Team

Composition

The Verification Team consists of five dedicated EES staff members responsible for conducting on-site inspections to verify the installation of measures for rebated equipment. They confirm the measure quantities and model numbers, including those installed and reported by trade allies, PSE contractors and other third parties. The Verification Team's inspection approval is not required for incentive payment, given that invoices are verified by individual program teams during review.

The Verification Team may, on request of the program implementation manager, conduct pre incentive payment verifications[29].

Objective

The Verification Team provides PSE program staff with a way to improve the quality of program documentation and validate energy savings with a high degree of rigor by incorporating higher levels of measurement and verification activities.

Process Development

Beginning in the first quarter, the team developed quality assurance policies and procedures, which outline comprehensive steps that ensure accuracy and prevent errors, in preparation for on-site verifications. During this time, the Verification Team focused mainly on validating the installation of retrofit measures for the residential space & water heating program, and small business lighting (SBL) programs. This allowed the team to hone their processes and test the validity of anticipated verification assumptions.

In the third quarter, the Verification Team activities were expanded to include on-site verifications for Single Family New Construction, Multifamily New Construction and Multifamily Retrofit, Low Income Weatherization, and Single Family program verifications. During this period, each program provided a list of random projects that were eligible for on-site visits, based on rebate terms and conditions.

Each of the Verification Team members were assigned to work directly with the program implementation manager and their teams to ensure coordination and process revisions as program measures and verification changes were implemented throughout the year.

[29] For instance, in the case of a residential water heater, it is often easier to gain access to a customer's water heater site prior to the installation of a replacement unit.

By the end of 2011, the Verification Team was in the process of streamlining verification efficiency to include standardizing program management deliveries, field inspection protocols and processes, and inspection scheduling. Highlights of those Verification Team efforts include:

- Development of a verification manual, including field procedures, sampling methodologies, inspection processes, reporting contents, and process documentation. The outline for the verification manual was begun in 4th Q. 2011. It will include procedures that provide task commonality and efficiencies for various program job transmittal and delivery processes. This manual will be made available for all stakeholders to ensure their familiarity with the Verification Team processes and procedures. A draft verification manual is expected to be outlined in the first quarter of 2012.

- Conducted program manager interviews to identify program optimization opportunities. This included creating forms and process documentation for clearer communication outlining the diversity and complexity of the various partnering program processes.

- Creation of program process maps which streamlined efficient data management across programs.

- Developed inspection templates to provide details captured at every site visit. Findings can be communicated to the program implementation manager.

- Collaborated with KEMA to draft protocols and a sampling tool that can used to help determine sample rates. The sampling tool is currently in development and will identify the quantity and randomness of sampling to ensure Verification Team objectives are being achieved, and will provide recommendations for the number of verification inspections to be made. Recommendations on sampling variables, and sample sizes for each program/measure is also in development. This is expected to be outlined and tested by the first quarter of 2012.

Table 3c represents on-site project inspections completed by the Verification Team through 2011. A key distinction in the indicated metric is project-versus-measure. One project may include more than one measure. It is important to note that the Verification Team performed many on-site inspections for the Small Business Lighting program. Each SBL project may include more than 100 individual measures.

Table 3c: Residential Verifications by Project

2011 Measures	Channel	Completed Project Installations Verified
FAF to HP Conversion	Dealer	**4**
Ductless Heat pump	Dealer	**1**
Gas Boiler	Dealer	**15**
Gas Fireplace (pilot)	Dealer	**19**
Gas Furnace	Dealer	**98**
HomePrint	Dealer	**98**
Heat Pump- Air Source	Dealer	**54**
Heat Pump-Geothermal	Dealer	**6**
Heat Pump-Lockout Control (pilot)	Dealer	**18**
Multifamily New Construction	Multifamily	**8**
Multifamily Retrofit (3rd party)	Multifamily	**7**
Small Business Lighting - Pre	Business	**22**
Small Business Lighting - Post	Business	**253**
SF Gas Weatherization (3rd party)	Dealer	**7**
Single Family New Construction	Multifamily	**200**
Single Family New Construction Energy Star (3rd party)	Multifamily	**24**
Water Heater Heat Pump	Dealer	**29**
Water Heater Storage Electric	Dealer	**8**
Water Heater Storage Gas	Dealer	**24**
Water Heater Tankless .82	Dealer	**26**
Water Heater Tankless .95	Dealer	**29**
Low Income Weatherization	Multifamily	**3**
Totals		**953**

EES Third Party Implementer Programs

The Verification Team 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 will be responsible for its own verification activities, PSE will sample Third Party Implementer Programs to verify that their Measurement and Verification is reliable.

Measure Count Verification

In addition to verifying the savings value of installed measures, and attributes such as “is the applicant a PSE customer?”, “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 processing of residential retrofit rebates (windows, heat pumps, furnaces, water heaters, and gas conversion) increased substantially in 2011. Table 3d provides a summary of rebates processed by EES 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. Rebates excluded from these counts include, but aren't limited to: appliance rebate applications processed by third-party contractors, retailer mark-downs, refrigerator decommissioning, all Business rebates and grants, and any residential (primarily Multifamily) grants.

Table 3d: 2011 In-House Residential Rebates Paid

Residential Rebates Processed			
Program	**Count**		**$ Paid**
ESH	19	$	5,700
FCR	279	$	349,033
RCR	208	$	116,721
RNC	1,433	$	324,975
RRR	8,977	$	2,466,500
HMP	4,818	$	433,620
TOTAL	**15,734**	**$**	**3,696,549**

ESH: ENERGY STAR® Manufactured Homes
FCR: Fuel Conversion Rebates
RCR: Residential Calculated Rebates (Windows[30], insulation, payment adjustments[31])
RNC: Residential New Construction
RRR: Residential Retrofit Rebates (Furnaces, Heat Pumps, Water Heaters, etc.)
HMP: HomePrint Assessments[32]

[30] Windows were offered for a limited time during 2011.
[31] There were exceptionally few of these instances. Similar to the EES savings adjustment process, outlined earlier in this section, incentive payments infrequently require adjustments. For instance, if a customer requested a rebate for a tier 1 heat pump, but the rebate analyst verified that it was actually a Tier 2 heat pump, a payment adjustment request (PSE paid $200 for the Tier 1 heat pump, versus $800 to which the customer was entitled to for the Tier 2 heat pump) would be processed along with the corresponding savings adjustment request.
[32] An incentive of $90 is paid to the HomePrint contractor, which is then passed along to the customer in the form of reduced measure installation fees.

Business Grants and Rebates

The Business Sector also saw a significant number of incentives paid in 2011. Additional details relative to the below grants is provided in the respective program discussions in the Business Energy Management/Programs sections. Table 3e represents a summary of BEM grants and rebates paid in 2011. 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 3e: 2011 Business Sector Incentives Paid

	# Electric-only Projects	# Gas-only Projects	Electric Grant/Rebate Amt	Gas Grant/Rebate Amt
Retrofit	621	95	$ 10,640,000	$ 3,520,000
Industrial	49	4	$ 1,800,000	$ 660,000
Energy Smart Grocer GRANTS	295	0	$ 110,000	$ -
Energy Smart Grocer REBATES	142		$ 1,420,000	
New Const	42	22	$ 7,740,000	$ 2,140,000
RCM	102	62	$ 260,000	$ 250,000
SBL	1,853		$ 6,860,000	
Traffic Signals	42		$ 30,000	
Large Power Non-449	9		$ 990,000	
Large Power 449	6		$ 700,000	
Rebates	1,161	317	$ 1,850,000	$ 280,000
Gas Boiler Tune ups		62		$ 20,000

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 EES 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.

Departmental Program Audits

Another process that EES employs to verify the veracity of its claims is the departmental program audit, performed by two independent business analysts in the Budget and Administration team. In 2010, EES formalized its policy of performing internal program audits each quarter. Audits have clear prioritizations and criteria as well as a set of steps to "drill down" to the highest level of detail where possible.

Annual program audits have been performed since 2008[33]. Program audits include a focus on both savings and financial accuracy. In addition to formal, quarterly audits, savings and expenses are reviewed monthly against the plan[34] and internal order numbers[35].

In 2011, the Budget and Administration team conducted three departmental audits, including one vendor process reviews. None resulted in process revisions or audit findings.

[33] In 2011, departmental audits were conducted in the Multifamily Retrofit, Single Family Weatherization and Single Family Appliances programs.
[34] Budgets and targets aren't set on a monthly basis; rather, a linear, 12-month average is applied.
[35] Internal order number checks include: assuring that invoices are paid against correct accounts, incentives paid are classified correctly, etc.

RESIDENTIAL SECTOR

Overview

Customer Base
The Residential Sector provides a comprehensive range of incentives, rebates, contractor referrals, information, and conservation value-added services for a wide variety of residential customers. The Residential structure types supported are equally varied, including single family, multifamily and low income dwellings.

Types of Incentives, Measures and Services
The Residential Sector offers a wide variety of incentives and Direct Benefits to Customers (DBtC) including mail-in rebates, point-of-sale (POS) discounts for energy-efficient products, no-charge measures such as showerheads and directly-installed CFL lamps provided to customers during HomePrint evaluations and services such as refrigerator replacement and decommissioning. PSE also participates in limited-time promotions in cooperation with selected retails or other partners. These promotions may consist of giveaways, special one-time pricing on selected measures, or cross-merchandising with similar measures.

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

One of the primary tools used to provide maximum exposure to energy conservation programs is our training expertise. Through our extensive training programs, contractors are certified in rigorous insulation installation techniques, HVAC installation, and standards. We train retailers in providing product mark-downs at the point of sale, and HomePrint audit contractors are provided stringent guidelines on home review techniques. EES conducts several vendor seminars throughout the year to ensure that all customer touch points have the most up-to-date information and customer satisfaction skills.

29 professionals who are passionate about providing exemplary customer service comprise the Residential Energy Management (REM) Sector. Four teams, each staffing a specific channel, make up REM.

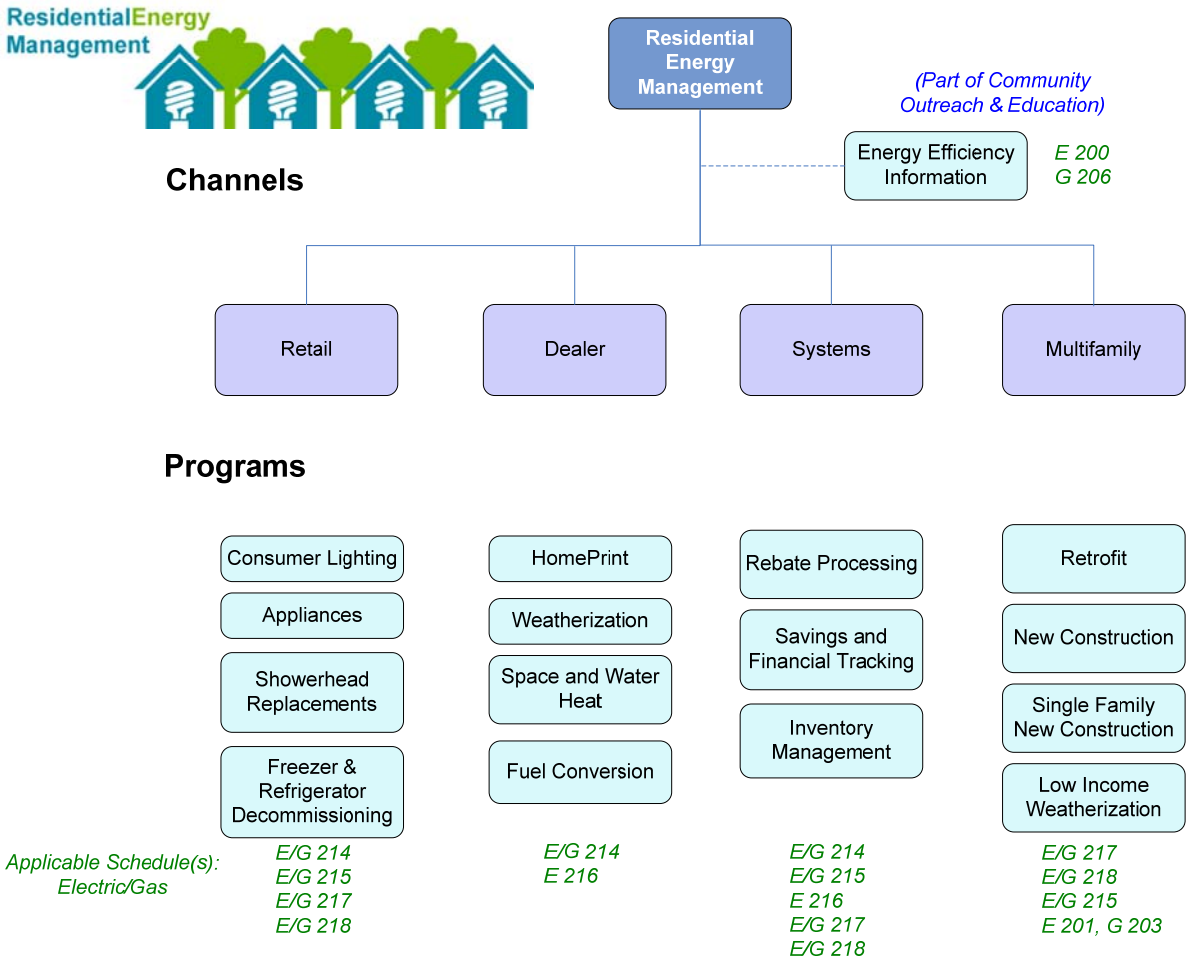
Each Channel is comprised of a market manager, one or more program managers, program coordinators, and program implementers. Each is focused on a specific program, consisting of one or more measures, and is dedicated to performing their responsibilities as good stewards of ratepayer funds.

The Residential Sector also includes a consulting engineer, system analysts, rebate analysts, and administrative specialists.

Organizational Structure

Residential Energy Management is made up of 29 dedicated managers, analysts, accomplished employees, along with third-party vendors who are committed to exceeding our customers' expectations while working to maximize conservation savings. 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 4a.

Figure 4a: Residential Energy Management Organizational Structure



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 replacement and decommissioning, appliances, and energy efficient lighting. As the above chart indicates, this channel provides services covered by several Conservation Schedules.

Dealer Channel

The Dealer Channel's target market constituency consists primarily of resellers and contractors that sell, install and service HVAC systems, water heating systems, windows, insulation, and provide HomePrint 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.

Systems Channel

The Systems Channel plays an important support role within EES. This group provides the department with the right tools, resources, and people to assist in managing their respective businesses. Rebate processing, customer fulfillment, program analysis, and savings reporting are some of the critical services this group provides.

The group has staff dedicated to process many of the residential rebates offered by its delivery channels. Rebates for windows, heat pumps, furnaces, water heaters, gas conversion, and new construction are all processed in-house.

The Systems Channel was instrumental in designing and building a customer management system (CMS) to track customer requests logged by the team of Energy Advisors in its call center. This system enables the group to manage the daily mailings to its customers as well as internal requests for brochures and supplies for program-related events.

The group's analysts handle research and data requests, program analysis, savings tracking and systems support for the various managers within Residential EES. The team is now building an integrated tracking and reporting system within CMS. This database system will merge information captured from all of its residential efficiency programs (run both internally and by outside vendors) to provide analysis to its internal program managers as well reporting to outside agencies.

Multifamily Channel

In addition to facilitating the installation and usage of energy efficiency measures within multifamily structures (both new and existing), this channel also manages Single Family New Construction activities.

The Multifamily New Construction program manages relationships with developers and contractors to implement cost-effective projects, many of which involve custom engineering calculations. This program collaborates extensively with a Business Sector Energy Management Engineer (EME) in developing grants, along with prescriptive incentives.

The Single Family New Construction program manages relationships with lighting showrooms (whose clientele are largely builders and developers), and builders directly, including single-proprietor and large regional operations.

Low Income Weatherization programs are also implemented in the Multifamily Channel.

Program and Services Development

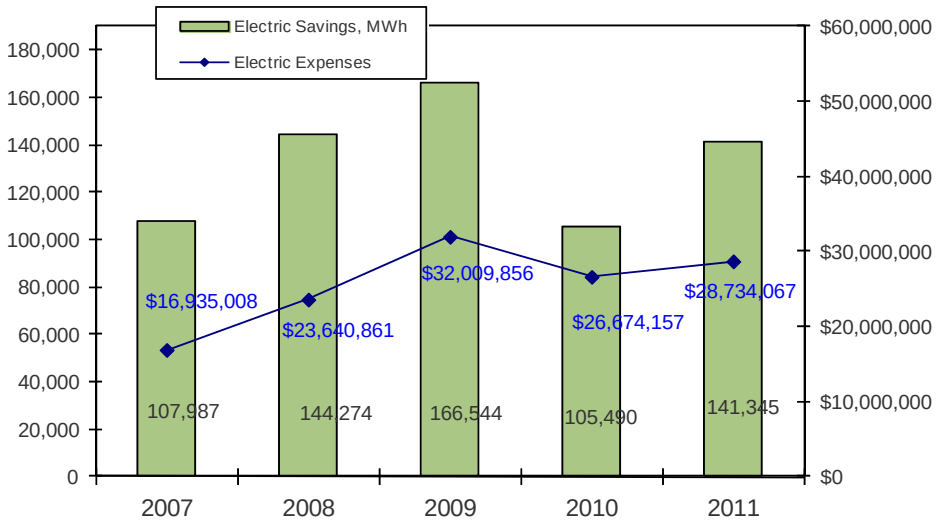
The Residential Sector regularly reassesses its suite of offerings to ensure that Customers have access to incentives and measures that will save them the maximum amount of energy and money. We partner with the Evaluation staff to review savings claim figures, delivery methods, measure costs and program cost effectiveness.[36]

This effort includes the development of pilot programs, which expose customers to newer technologies, new and innovative marketing techniques to create a sense of excitement about energy conservation, and different types of incentives and value-added services.

Five-Year Trends

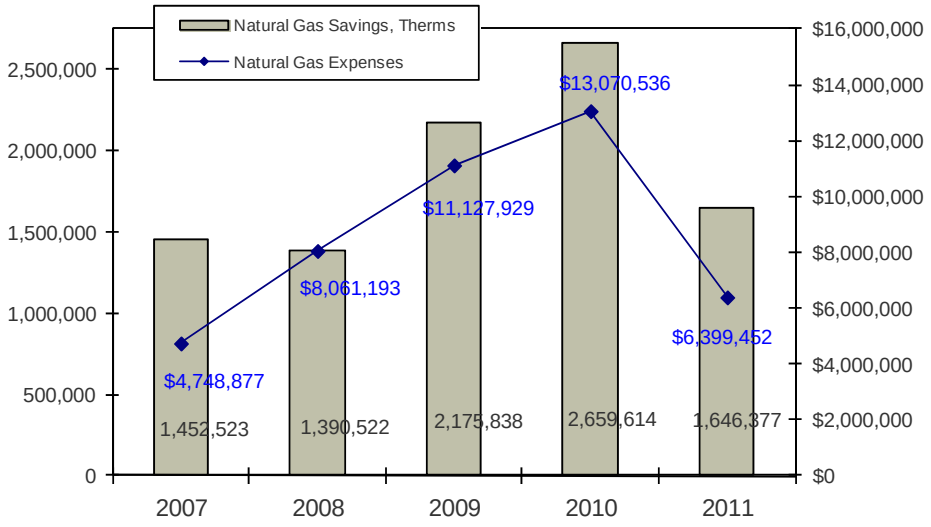
As illustrated in Figure 4b, the five-year trends indicate an average annual increase in electric savings of 7.7 percent and an overall 30.9 percent increase from 2007 to 2011. Figure 4c illustrates an average annual increase in gas savings of three percent and an overall 13.3 percent increase from 2007 to 2011.

Figure 4b: Residential Electric Savings (MWh) and Expenditures Five-Year Trends



[36] A detailed description of Evaluation activities is located on page 125 of this report.

Figure 4c: Residential Gas Savings and Expenditures Five-Year Trends



2011 Summary

Electric Programs

PSE's Single Family Electric retail programs, namely specialty and spiral CFL's, realized significant success in 2011 with greater than anticipated customer participation. This increased demand was accomplished through trade ally and community outreach along with targeted marketing efforts.

Sector expenditures in 2011 finished at $28.7 million or 84 percent of year-end budget. Residential electric programs achieved savings of 141,345 MWh (16.1 aMW), which is 103 percent of year-end savings goals.

Natural Gas Programs

PSE's Single family Gas existing weatherization program, space heat program (90% furnaces), and water heat program (0.67 Energy Star storage water heaters), realized less than anticipated customer participation in 2011.

Sector expenditures in 2011 finish the year at $6.4 million, or 58 percent of year-end budget. Residential gas programs achieved savings of 1.6 million Therms, which is 78 percent of year-end savings goals.

Key Results Drivers

The highlights below are discussed further in the Residential program reviews in section 5.

Retail Measures

- The Rock the Bulb campaign which started in the second quarter of 2011 and The Holiday Outreach campaign in November and December were two retail campaigns that helped drive 2011 electric savings.

- Opower Home Energy Reports savings claims, approximately 5,000 MWh, and 300,000 therms, were added to the savings portfolio for the first time since the inception of the pilot program. Rigorous evaluation and stakeholder review allowed the full CRAG to support verified savings. In late 2011, the CRAG provided its unanimous support for PSE to claim provisional 2011 electric and gas conservation savings for Home Energy Reports, based upon the following conditions:

    - The savings indicated in this report may be adjusted as part of a "true-up", based upon survey findings due in the spring of 2012.
    - PSE will include the quartiling elements in the survey protocols.
    - 2012-2013 savings and survey will focus on calendar years.
    - PSE will seek to understand the actions of participants and non-participants in the customer surveys.

Contractor Involvement

- Contractor engagement is powerful factor in the success of our weatherization and HVAC programs. Residential Energy Management's Dealer Channel addressed the downturn in the economy by increasing efforts to help contractors secure jobs by hosting a number of brown bag events to increase the awareness of PSE's programs and increased the incentive amounts on weatherization and some HVAC measures. In addition the group added electric windows as a measure. They are concentrating their efforts on jobs where funding is available – energy efficient products and appliances. Consequently more and more contractors in the marketplace are selling and installing rebate eligible energy efficient products and appliances – at greater levels than originally anticipated.

2011 Residential Programs Results

Tables 4a and 4b provide, respectively, at a program level, a comparison of 2011 actual expenditures to budgeted amounts presented in the 2011 Annual Conservation Plan. The 2011 performance of overall spending and savings for each program in the Residential Sector is indicated in Table 4b and 4c[37].

Table 4a: Residential 2011 Electric Expenditures versus Budget Performance

Schedule	Program Name		Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
200	Information Services Budget		$ 453,667	$ -	$ 285,810	$ 61,596	$ 6,696	$ 343,237	$ 300	$ 15,000	$ -	$ 1,166,306
		Actual	*$ 396,972*	*$ -*	*$ 231,455*	*$ 27,609*	*$ 24,819*	*$ 391,689*	*$ 9,897*	*$ 3,565*	*$ -*	*$ 1,086,006*
201	Low Income Weatherization Budget		$ 131,471	$ 117	$ 82,827	$ 4,532	$ 5,085	$ 117,203	$ 459	$ 8,258	$ 2,041,511	$ 2,391,463
		Actual	*$ 127,632*	*$ -*	*$ 78,643*	*$ 1,203*	*$ 10,882*	*$ 32,337*	*$ 1,652*	*$ 554*	*$ 2,034,922*	*$ 2,287,825*
202	Energy Education Budget		$ 99,904	$ -	$ 62,939	$ 4,000	$ 216	$ 31,994	$ -	$ -	$ -	$ 199,053
		Actual	*$ 63,270*	*$ -*	*$ 37,117*	*$ 1,245*	*$ 4,722*	*$ 5,759*	*$ 23*	*$ 2,676*	*$ -*	*$ 114,811*
214	Single Family Existing Budget		$ 821,132	$ 197,719	$ 641,999	$ 2,315,400	$ 64,640	$ 1,829,487	$ 29,872	$ 226,045	$ 13,564,932	$ 19,691,227
		Actual	*$ 788,743*	*$ 97,634*	*$ 541,260*	*$ 1,694,934*	*$ 120,175*	*$ 1,898,036*	*$ 59,042*	*$ 3,933*	*$ 12,549,462*	*$ 17,753,219*
215	Single Family New Construction Budget		$ 139,241	$ 37,000	$ 111,031	$ 45,852	$ 5,800	$ 261,224	$ 2,000	$ 5,000	$ 856,800	$ 1,463,949
		Actual	*$ 93,436*	*$ 19,542*	*$ 68,865*	*$ 18,845*	*$ 7,515*	*$ 188,787*	*$ 1,202*	*$ 444*	*$ 454,225*	*$ 852,860*
216	Fuel Conversion Budget		$ 64,571	$ 11,530	$ 47,943	$ 36,024	$ 1,128	$ 521	$ 636	$ 1,587	$ 839,679	$ 1,003,618
		Actual	*$ 32,752*	*$ 7,049*	*$ 24,250*	*$ 6,509*	*$ 2,782*	*$ 1,175*	*$ 4,047*	*$ 126*	*$ 351,173*	*$ 429,864*
217	Multi-Family Existing Budget		$ 120,756	$ 64,569	$ 120,461	$ 55,193	$ 6,340	$ 618,552	$ 480	$ 11,155	$ 4,248,785	$ 5,246,290
		Actual	*$ 148,600*	*$ 44,729*	*$ 117,235*	*$ 17,618*	*$ 14,688*	*$ 541,305*	*$ 4,247*	*$ 1,300*	*$ 4,115,036*	*$ 5,004,759*
218	Multi-Family New Construction Budget		$ 78,600	$ 9,600	$ 55,566	$ 22,950	$ 1,200	$ 3,000	$ 120	$ 3,000	$ 534,500	$ 708,536
		Actual	*$ 65,590*	*$ 4,742*	*$ 42,658*	*$ 8,196*	*$ 4,857*	*$ 743*	*$ 852*	*$ 253*	*$ 390,340*	*$ 518,230*
249	Pilots Budget		$ 19,601	$ 2,306	$ 13,802	$ 22,000	$ 1,200	$ 18,000	$ 1,200	$ 4,200	$ 144,715	$ 227,024
		Actual	*$ 11,292*	*$ 2,387*	*$ 8,331*	*$ 46*	*$ 1,300*	*$ 146*	*$ 160*	*$ 46*	*$ 49,661*	*$ 73,367*
249	Home Energy Reports Budget		$ 16,140	$ 2,400	$ 11,680	$ 6,000	$ 1,200	$ 501,594	$ -	$ 1,807	$ 327,302	$ 868,123
		Actual	*$ 15,156*	*$ -*	*$ 9,345*	*$ 94*	*$ 1,160*	*$ 280,872*	*$ 180*	*$ 70*	*$ 306,247*	*$ 613,126*
	Residential Budget Totals		$ 1,945,082	$ 325,241	$ 1,434,059	$ 2,573,547	$ 93,505	$ 3,724,813	$ 35,067	$ 276,052	$ 22,558,224	$ 32,965,589
		Actual Expenditures	*$ 1,743,443*	*$ 176,082*	*$ 1,159,158*	*$ 1,776,301*	*$ 192,900*	*$ 3,345,174*	*$ 81,301*	*$ 12,966*	*$ 20,246,742*	*$ 28,734,067*

[37] In Table 3a, Gas Programs, Schedule G214, Energy Star Appliances, the expenditures are captured under the electric portion of that program. Gas savings are derived from analyses of rebate applications from PSE gas service territories.

Table 4b: Residential 2011 Gas Expenditures versus Budget Performance

Schedule	Program Name		Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
206	Information Services Budget		$ 221,485	$ -	$ 139,536	$ 15,396	$ 3,292	$ 98,359	$ 200	$ 8,000	$ -	$ 486,267
		Actual	*$ 229,001*	*$ 76*	*$ 133,498*	*$ 17,302*	*$ 14,210*	*$ 140,988*	*$ 3,522*	*$ 1,497*	*$ -*	*$ 540,093*
203	Low Income Weaterization Budget		$ 31,824	$ -	$ 20,049	$ 550	$ 293	$ 5,613	$ 300	$ 1,878	$ 828,873	$ 889,379
		Actual	*$ 45,868*	*$ -*	*$ 28,222*	*$ 433*	*$ 3,600*	*$ 2,665*	*$ 567*	*$ 185*	*$ 630,709*	*$ 712,248*
207	Energy Education Budget		$ 24,976	$ -	$ 15,735	$ 996	$ 54	$ 8,004	$ -	$ -	$ -	$ 49,765
		Actual	*$ 28,140*	*$ -*	*$ 16,461*	*$ 317*	*$ 2,037*	*$ 2,643*	*$ 6*	*$ (12,033)*	*$ -*	*$ 37,571*
214	Single Family Existing Budget		$ 371,292	$ 37,534	$ 257,561	$ 124,440	$ 12,480	$ 1,562,172	$ 9,500	$ 44,265	$ 5,244,129	$ 7,663,374
		Actual	*$ 211,816*	*$ 18,886*	*$ 141,759*	*$ 145,659*	*$ 18,371*	*$ 707,848*	*$ 2,943*	*$ 1,443*	*$ 2,526,070*	*$ 3,774,794*
215	Single Family New Construction Budget		$ 93,672	$ 24,000	$ 74,133	$ 30,568	$ 5,250	$ 4,320	$ 1,200	$ 5,000	$ 427,250	$ 665,394
		Actual	*$ 86,895*	*$ 16,310*	*$ 62,936*	*$ 9,975*	*$ 6,900*	*$ 1,036*	*$ 1,090*	*$ 432*	*$ 257,850*	*$ 443,424*
217	Multi-Family Existing Budget		$ 40,378	$ 6,918	$ 30,742	$ 6,133	$ 242	$ 46,680	$ -	$ 1,261	$ 474,421	$ 606,776
		Actual	*$ 30,368*	*$ 4,911*	*$ 21,494*	*$ 2,395*	*$ 2,425*	*$ 38,974*	*$ 496*	*$ 549*	*$ 195,524*	*$ 297,136*
218	Multi-Family New Construction Budget		$ 58,200	$ 4,500	$ 39,501	$ 5,250	$ 300	$ 600	$ 120	$ 1,800	$ 200,650	$ 310,921
		Actual	*$ 47,872*	*$ 4,798*	*$ 32,082*	*$ 8,801*	*$ 3,219*	*$ 581*	*$ 719*	*$ 219*	*$ 138,500*	*$ 236,792*
249	Pilots Budget		$ 3,459	$ 2,306	$ 3,632	$ 12,000	$ 600	$ 18,000	$ 1,200	$ 1,200	$ 70,000	$ 112,397
		Actual	*$ 6,786*	*$ 2,793*	*$ 5,775*	*$ 30*	*$ 1,774*	*$ 88*	*$ 97*	*$ 36*	*$ 129,000*	*$ 146,378*
249	Home Energy Reports Budget		$ 11,532	$ 1,200	$ 8,021	$ 3,600	$ 243	$ 133,131	$ -	$ 779	$ 97,138	$ 255,644
		Actual	*$ 10,883*	*$ -*	*$ 6,710*	*$ 69*	*$ 782*	*$ 89,366*	*$ 131*	*$ 52*	*$ 103,024*	*$ 211,016*
	Residential Budget Totals		$ 856,817	$ 76,459	$ 588,910	$ 198,932	$ 22,754	$ 1,876,879	$ 12,520	$ 64,183	$ 7,342,462	$ 11,039,916
		Actual Expenditures	*$ 697,628*	*$ 47,774*	*$ 448,937*	*$ 184,981*	*$ 53,317*	*$ 984,188*	*$ 9,571*	*$ (6,538)*	*$ 3,979,593*	*$ 6,399,452*

Table 4c: 2011 Residential Electric and Gas Expenditures

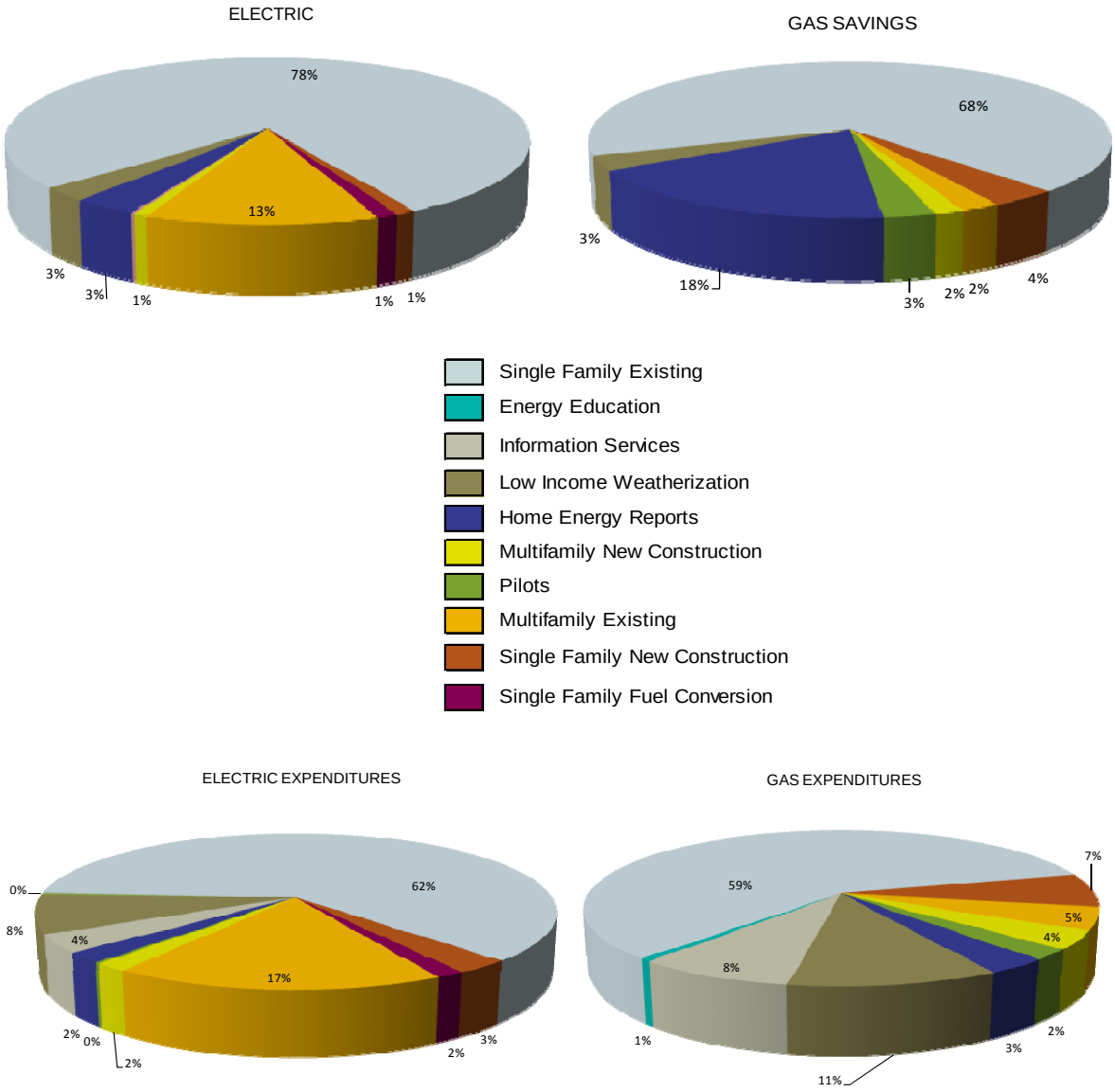
2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E200	Residential Information Services	$ 468,790	$ 617,216	$ 1,086,006	93.1%	$1,166,306
E201	Low Income	$ 168,741	$ 2,119,084	$ 2,287,825	95.7%	$2,391,463
E202	Energy Education	$ 56,695	$ 58,116	$ 114,811	57.7%	$199,053
E214	Single Family Existing	$ 7,393,664	$ 10,359,555	$ 17,753,219	90.2%	$19,691,227
E215	Single Family New Construction	$ 513,401	$ 339,459	$ 852,860	58.3%	$1,463,949
E216	Single Family Fuel Conversion	$ 241,417	$ 188,447	$ 429,864	42.8%	$1,003,618
E217	Multi Family Existing	$ 1,822,488	$ 3,182,271	$ 5,004,759	95.4%	$5,246,290
E218	Multi Family New Construction	$ 197,821	$ 320,409	$ 518,230	73.1%	$708,536
E249	Pilots, excluding:	$ 29,183	$ 44,184	$ 73,367	32.3%	$227,024
	Home Energy Reports	$ 354,929	$ 258,197	$ 613,126	70.6%	$868,123
	Total Electric Programs	$ 11,247,129	$ 17,486,938	**$ 28,734,067**	87.2%	$32,965,589
G203	Low Income	$ 328,940	$ 383,308	$ 712,248	80.1%	$889,379
G206	Residential Information Services	$ 259,330	$ 280,763	$ 540,093	111.1%	$486,267
G207	Energy Education	$ 16,117	$ 21,454	$ 37,571	75.5%	$49,765
G214	Single Family Existing	$ 2,066,370	$ 1,708,424	$ 3,774,794	49.3%	$7,663,374
G215	Single Family New Construction	$ 249,871	$ 193,553	$ 443,424	66.6%	$665,394
G217	Multi Family Existing	$ 98,642	$ 198,494	$ 297,136	49.0%	$606,776
G218	Multi Family New Construction	$ 88,725	$ 148,067	$ 236,792	76.2%	$310,921
G249	Pilots, excluding:	$ 74,951	$ 71,427	$ 146,378	130.2%	$112,397
	Home Energy Reports	$ 105,808	$ 105,208	$ 211,016	82.5%	$255,644
	Total Gas Programs	$ 3,288,754	$ 3,110,698	**$ 6,399,452**	58.0%	$11,039,917

Table 4d: 2011 Residential Electric and Gas Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E200	Residential Information Services	n/a	n/a	n/a		0
E201	Low Income	973	2,742	3,715	247.5%	1,501
E202	Energy Education	0	0	0		0
E214	Single Family Existing	54,510	55,653	110,163	100.6%	109,501
E215	Single Family New Construction	1,013	528	1,541	49.8%	3,094
E216	Single Family Fuel Conversion	877	730	1,607	37.8%	4,249
E217	Multi Family Existing	6,184	11,668	17,852	102.2%	17,463
E218	Multi Family New Construction	370	712	1,082	92.1%	1,175
E249	Pilots, excluding:	117	175	292	38.5%	758
	Home Energy Reports	0	5,093	5,093		0
	Total Electric Programs	64,044	77,301	**141,345**	102.6%	137,741
G203	Low Income	19,634	31,111	50,745	110.3%	46,020
G206	Residential Information Services	0	0	0		0
G207	Energy Education	0	0	0		0
G214	Single Family Existing	592,926	513,426	1,106,352	60.7%	1,821,743
G215	Single Family New Construction	34,739	25,855	60,594	58.9%	102,850
G217	Multi Family Existing	6,329	28,750	35,079	41.9%	83,713
G218	Multi Family New Construction	10,875	15,286	26,161	75.4%	34,702
G249	Pilots, excluding:	23,832	22,608	46,440	184.3%	25,200
	Home Energy Reports	0	321,006	321,006		0
	Total Gas Programs	688,335	958,042	**1,646,377**	77.9%	2,114,228

Figure 4d contains representations of proportions of EES Residential programs savings and spending for electric and gas.

Figure 4d: 2011 Residential Sector Savings and Expenditures, as Percents of Totals



The individual program discussions in the Residential Programs section will provide additional details of our 2011 achievements.

Residential Cost-Effectiveness

Table 4f represents the actual calculated Utility Cost and Total Resource Cost benefit-to-cost (B/C) tests for the Residential Sector.

Table 4f: 2011 Residential Sector Cost Effectiveness Tests

Benefit to Cost Ratios		
	Utility Cost	Total Resource Cost
Electric	3.70	2.66
Gas	2.89	1.30

Table 4g and Table 4h provide highlights of data[38] used to determine the Sector's UC B/C and TRC B/C, respectively. The complete UC and TRC tables are presented in Exhibit 2 of this report.

[38] Some columns, included in the Exhibit 2 Cost-Effectiveness tables, are excluded in Table 4f for brevity. Exhibit 2 contains all pertinent columns used to calculate the UC and TRC benefit-to-cost ratios.

Table 4g: Residential Sector 2011 Electric Cost Effectiveness Data

Schedule Number	Program Name	All Cost-Effectiveness Tests: kWh Savings	Utility Cost and TRC Tests: Program Overhead Costs	Utility Cost and TRC Tests: Total Incentive Payments	TRC Test: Incremental Measure Costs	TRC Test: Other Contributions	Utility Cost Test: Total Utility Costs	TRC Test: Total Resource Costs	Utility Cost Test: Benefit Cost Ratio	Total Resource Cost Test: Benefit Cost Ratio
E201	**Low Income Wx Total**	**3,715,732**	**$246,205.90**	**$3,966,633.85**	**$3,966,633.85**	**$0.00**	**$4,212,839.75**	**$4,212,839.75**	**1.73**	**1.87**
	Low Income WX	1,965,467	$246,205.90	$2,041,618.96	$2,041,618.96	$0.00	$2,287,824.86	$2,287,824.86	1.69	1.86
	Low Income REC	1,750,265	$0.00	$1,925,014.89	$1,925,014.89	$0.00	$1,925,014.89	$1,925,014.89	1.77	1.88
E214	**Single Family Existing**	**110,163,028**	**$4,962,294.01**	**$12,790,926.34**	**$26,267,512.54**	**$739,050.96**	**$17,753,220.35**	**$31,242,251.55**	**4.41**	**2.75**
	Residential Lighting Rebate	86,062,465	$2,681,343.00	$6,283,529.00	$11,988,809.30	$0.00	$8,964,872.00	$14,670,152.30	5.01	3.37
	Residential Space Heat	4,958,459	$317,655.74	$1,532,306.00	$5,481,609.00	$0.00	$1,849,961.74	$5,800,064.74	6.08	2.13
	Residential Water Heat	405,064	$62,605.04	$82,750.00	$151,168.00	$0.00	$145,355.04	$213,773.04	3.68	2.75
	Refrigerator Decommissioning	2,579,239	$201,038.00	$512,133.00	$512,133.00	$0.00	$713,171.00	$713,171.00	2.84	3.13
	Energy Star Clothes Washers	2,758,876	$782,189.00	$1,533,370.00	$3,275,348.00	$0.00	$2,315,559.00	$4,057,537.00	1.40	0.88
	Residential Showerheads	3,801,550	$116,166.53	$124,033.00	$124,033.00	$0.00	$240,199.53	$240,199.53	15.25	16.78
	SF Weatherization	1,768,897	$329,177.36	$294,005.64	$1,578,206.58	$0.00	$623,183.00	$1,907,383.94	6.78	2.44
	SF Existing ARRA Weatherization	3,923,750	$24,682.07	$1,390,205.00	$2,121,255.96	$731,050.96	$1,414,887.07	$2,145,938.03	4.32	3.13
	HomePrint	3,435,873	$340,218.97	$758,044.00	$754,399.00	$8,000.00	$1,098,262.97	$1,106,262.97	1.39	1.53
	Primary Refrigerator Replacement	468,855	$43,055.30	$280,550.70	$280,550.70	$0.00	$323,606.00	$323,606.00	2.20	2.42
	It's Cool	0	$1,643.00	$0.00	$0.00	$0.00	$1,643.00	$1,643.00	-	-
	Consumer Electronics NEEA	0	$12,757.00	$0.00	$0.00	$0.00	$12,757.00	$12,757.00	-	-
	TV Turn-in	0	$49,763.00	$0.00	$0.00	$0.00	$49,763.00	$49,763.00	-	-
E215	**Single Family New Construction**	**1,540,565**	**$361,555.15**	**$491,304.93**	**$526,813.74**	**$0.00**	**$852,860.08**	**$888,368.89**	**2.15**	**2.27**
	NC Electric	1,435,887	$361,555.15	$485,604.93	$502,797.93	$0.00	$847,160.08	$864,353.08	1.86	2.01
	NC Energy Star MF Home	104,678	$0.00	$5,700.00	$24,015.81	$0.00	$5,700.00	$24,015.81	44.36	11.58
E216	**Single Family Fuel Conversion**	**1,606,500**	**$79,640.76**	**$350,223.00**	**$1,207,041.00**	**$0.00**	**$429,863.76**	**$1,286,681.76**	**1.83**	**1.40**
E217	**Multifamily Existing Total**	**17,852,426**	**$1,019,778.10**	**$3,984,980.78**	**$5,721,200.58**	**$0.00**	**$5,004,758.88**	**$6,740,978.68**	**4.01**	**3.28**
E218	**Multifamily New Construction**	**1,082,197**	**$127,890.00**	**$390,340.00**	**$390,340.00**	**$0.00**	**$518,230.00**	**$518,230.00**	**2.55**	**2.81**
E249	**Residential Pilots**	**5,384,632**	**$636,532.00**	**$49,961.00**	**$117,650.00**	**$0.00**	**$686,493.00**	**$754,182.00**	**1.59**	**1.59**
	Single Family Existing Pilot	292,101	$23,406.00	$49,961.00	$117,650.00	$0.00	$73,367.00	$141,056.00	9.03	5.17
	Home Energy Reports- Legacy	5,092,531	$199,367.06	$0.00	$0.00	$0.00	$199,367.06	$199,367.06	2.15	2.36
	C7/Whatcom/Bainbridge Projects	0	$254,998.94	$0.00	$0.00	$0.00	$254,998.94	$0.00	-	-
	Home Energy Reports 2012	0	$158,760.00	$0.00	$0.00	$0.00	$158,760.00	$0.00	-	-
E200	**Energy Information**	**0**	**$1,086,005.88**	**$0.00**			**$1,086,005.88**	**$1,086,005.88**	**-**	**-**
E202	**Energy Education**	**0**	**$114,811.43**	$0.00		**$0.00**	**$114,811.43**	**$114,811.43**	**-**	**-**
	Total Residential Energy Management	**141,345,080**	**$8,634,713.23**	**$22,024,369.90**	**$38,197,191.70**	**$739,050.96**	**$30,659,083.13**	**$46,844,349.93**	**3.70**	**2.66**

Table 4h: Residential Sector 2011 Gas Cost Effectiveness Data

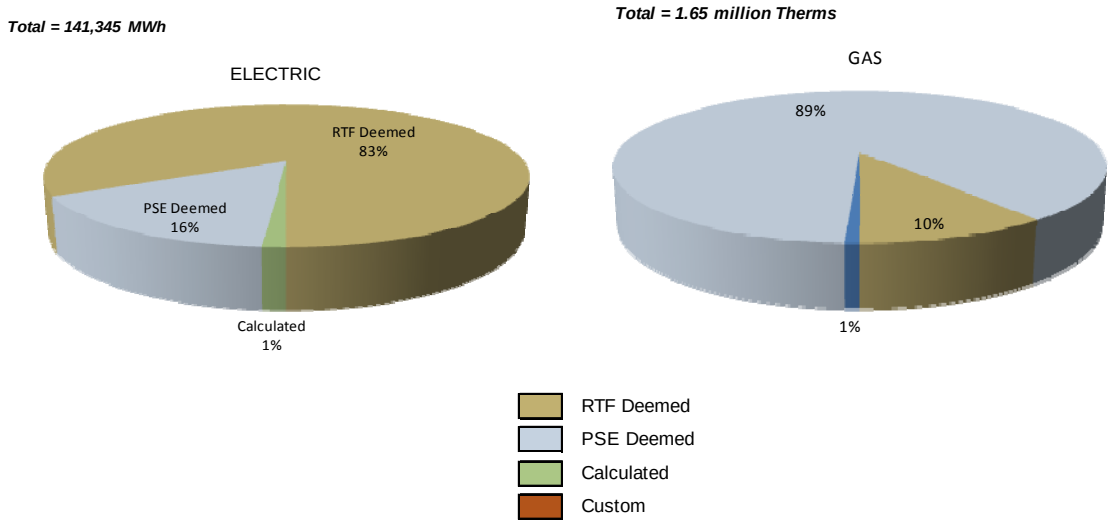
Schedule Number	Program Name	All Cost-Effectiveness Tests: Therm Savings	Utility and TRC Tests: Program Overhead Costs	Utility and TRC Tests: Total Incentive Payments	TRC Test : Incremental Measure Costs	TRC Test: Other Contributions	Utility Cost Test: Total Utility Costs	TRC Test: Total Resource Costs	Utility Cost Test: Benefit Cost Ratio	Total Resource Cost Test: Benefit Cost Ratio
G203	**Low Income WX**	**50,745**	**$ 81,485**	**$ 630,764**	**$ 630,764**	**$ -**	**$ 712,248**	**$ 712,248**	**1.17**	**1.17**
G214	**Residential Single Family Existing**	**1,106,352**	**$ 1,363,993**	**$ 2,410,801**	**$ 9,193,470**	**$ -**	**$ 3,774,794**	**$ 10,557,463**	**4.00**	**1.43**
	Residential Space Heat	399,140	$ 206,884	$ 471,200	$ 3,150,119	$ -	$ 678,084	$ 3,357,003	7.84	1.58
	Residential Water Heat	111,071	$ 98,423	$ 245,400	$ 1,148,010	$ -	$ 343,823	$ 1,246,433	4.16	1.15
	Residential Appliances	30,465	$ -	$ -	$ -	$ -	$ -	$ -	NA	NA
	Residential Showerheads	162,535	$ 153,593	$ 201,611	$ 201,611	$ -	$ 355,204	$ 355,204	3.60	3.60
	Home Print	284	$ 29,727	$ 98,700	$ 98,700	$ -	$ 128,427	$ 128,427	0.01	0.01
	Single Family Retrofit-Wx	391,233	$ 865,645	$ 1,261,844	$ 4,462,984	$ -	$ 2,127,489	$ 5,328,629	3.11	1.24
	Single Family AARA	11,624	$ 9,720	$ 132,046	$ 132,046	$ -	$ 141,766	$ 141,766	1.11	1.11
G249	**Residential Pilots**	**367,446**	**$ 228,394**	**$ 129,000**	**$ 362,490**	**$ -**	**$ 357,394**	**$ 590,884**	**2.63**	**1.59**
	Fireplace Pilot	46,440	$ 17,378	$ 129,000	$ 362,490	$ -	$ 146,378	$ 379,868	4.51	1.74
	Home Energy Reports	321,006	$ 92,925	$ -	$ -	$ -	$ 92,925	$ 92,925	3.01	3.01
	C7/Whatcom/Bainbridge Projects		$ 50,051	$ -	$ -	$ -	$ 50,051	$ 50,051		
	Home Energy Reports 2012		$ 68,040	$ -	$ -	$ -	$ 68,040	$ 68,040		
G215	**Single Family New Construction**	**60,594**	**$ 185,574**	**$ 257,850**	**$ 586,587**	**$ -**	$ 443,424	**$ 772,161**	**1.70**	**0.98**
G217	**Multifamily Existing**	**35,079**	**$ 101,612**	**$ 195,524**	**$ 717,917**	**$ -**	$ 297,135	**$ 819,529**	**2.02**	**0.73**
G218	**Multifamily New Construction**	**26,160**	**$ 98,293**	**$ 138,499**	**$ 138,499**	**$ -**	$ 236,792	**$ 236,792**	**1.15**	**1.15**
G206	**Residential Energy Efficiency Information**		**$ 540,093**	**$ -**	**$ -**	**$ -**	$ 540,093	**$ 540,093**	**0.00**	**0.00**
G207	**Energy Education**		**$ 37,571**	**$ -**	**$ -**	**$ -**	$ 37,571	**$ 37,571**	**0.00**	**0.00**
	Total Residential Efficiency Programs	**1,646,377**	**$ 2,637,014**	**$ 3,762,437**	**$ 11,629,727**	**$ -**	**$ 6,399,452**	**$ 14,266,741**	**2.89**	**1.30**

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[39] 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[40], it is apparent that the majority of Residential savings are derived from RTF Deemed (UES) measures[41].

[39] In 2011, the RTF revised the term "RTF Deemed" to "UES": Unit Energy Savings.
[40] A similar chart is included in the Business Sector Overview, beginning on page 125
[41] A complete list of prescriptive and calculated measures used by PSE is included in this Annual report as Appendix B.

Figure 4f: Residential Sector Savings Distributions by Measure Type



RESIDENTIAL PROGRAMS

Residential Energy Efficiency Information

Schedules E200/G206

Description

Functions and staffing teams that make up the Energy Efficiency Information cost element provide services to both residential and business customers. They are Energy Advisors, Energy Efficiency Brochures (on-line & hard copy), CMS, On Line Services, and Events.

In 2011, several Stakeholders expressed a need to have these functions more clearly identified within the generic "Information Services" program identifier found in the 2010 Appendix B[42]. In response, the Company included a more detailed spending plan, separated by the noted categories above, in the 2011 Annual Conservation Plan. Although Business customers also receive a small portion of some of these services, the program descriptions are presented here, in the Residential Sector section of this report. The applicable Business Programs section of the report (Schedule 260, page 148) will note any Business-specific activities, but will for the most part, reference back to this discussion.

It is noteworthy that this will be the final report structured in this way. In future reports, these functions and groups are included in the Portfolio Support section of all Exhibits, and they will not be distinguished between Residential and Business activities.

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

Energy Advisors

The Energy Advisor Department is a unique, customer solution operation within Energy Efficiency Services. The scope of this expert 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.

[42] The 2010 and 2011 Appendix B identified planned conservation savings and expenditures. Reporting of actual savings and expenditures, as well as 2012-2013 planned savings and expenditures are now included in a document called Exhibit 1.

The Energy Advisor Department receives numerous accolades from satisfied customers throughout the year.

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

(The customer's) bill was very high and is excited to try the different options she was referred to. The Energy Advisor took his time, was very informative and wasn't irritated with the several questions she had.

(The customer) wanted to tell (the EES staff member) what an amazing person we have working here. Energy Advisor was patient, went above and beyond to help them, looked out for the customer's interest and was very kind. She is very happy with our services we provide and wanted to pass along what an asset this EA is to our team.

(The customer) passed along compliments about an energy advisor that was very, very informative, excellent, courteous and very helpful. He wanted to make sure we knew this in case our call was not recorded.

Customer inquiries increased seven percent from 2010 overall, and for much of the year the department maintained a very high degree of customer service at a reduced staffing level. In June, four energy advisors were hired to backfill the vacant positions, and were fully on-board assisting customers in September. In a continuing effort to support our regional business offices and connect with our communities, we have deployed two more energy advisors to the Regional EA team. Bellingham business office, and Kitsap Service Center are now staffed with an energy advisor, in addition to the South Whidbey (Freeland) Business Office and Olympia Business Office.

The regional energy advisor efforts have increased employee awareness of energy efficiency across the Company, with cross-departmental training and presentations. The regional energy advisors have connected with our customers and have increased visibility with PSE's local communities.

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 5a presents key energy advisor metrics.

Table 5a: Information Services Energy Advisor Metrics

Energy Advisors	
Metric	**Number**
Phone calls	92,000
Bill inserts	572
Events staffed	73
Email responses	3,400

The metrics noted in Table 5a represent:

- Phone calls are both Residential Sector, and a portion of Business Sector activity.
- Bill inserts are those which request customer to take some action; call an energy advisor, apply for literature, apply for a rebate, etc.

- Events 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.

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[43]; 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 EES' goal to mail it (them) by the next business day. Table 5b provides the number of brochures mailed to customers in 2011. The Number of Brochures Mailed indicates those that were specifically requested by a customer over the course of 2011. Brochures Distributed at Events includes the 211 events listed in Table 5d on page 78, and other community meetings, field visits, or other internal or customer presentations.

Table 5b: Information Services Brochure Distribution

Brochures	
No. of Brochures Mailed	**15,600**
Brochures Distributed at Events	**371,000**

CMS (Customer Management System)

As described in the sidebar on page 44, the 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. 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.

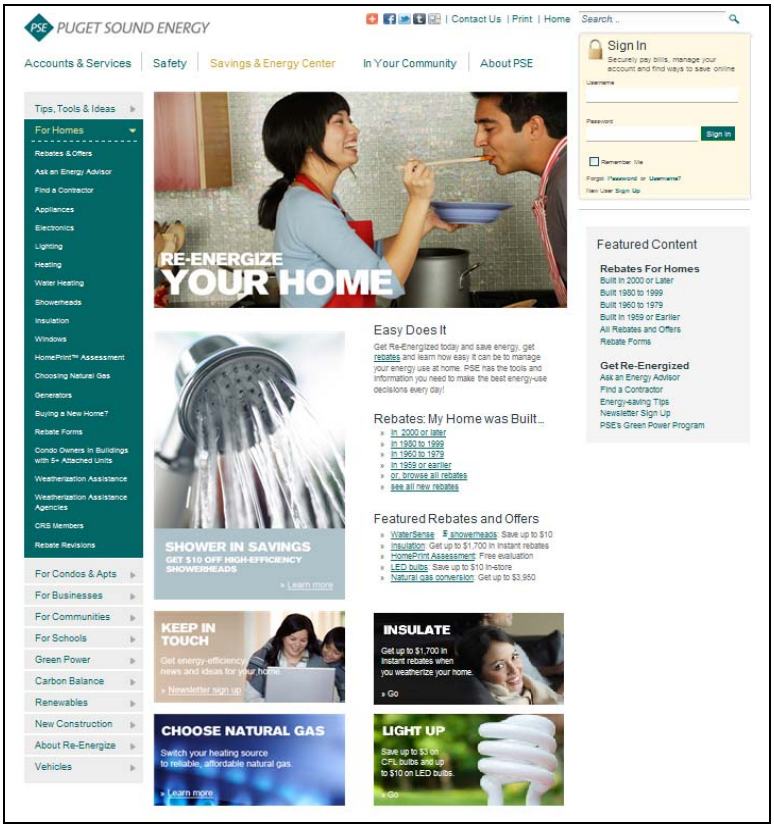
[43] Some are required by regulations.

On Line Services

To assist customers with information and questions, a section of the PSE web site (www.pse.com) is dedicated to energy efficiency and energy management for customers that prefer on-line services. PSE provides "Energy at Home", a quarterly e-newsletter promoting energy efficiency services. This free service contains articles about energy efficiency, timely seasonal tips, links to PSE program information and coupons for energy efficient products.

A similar bimonthly "Energy in Business" e-newsletter features case studies of PSE energy efficiency projects, as well as announcements of upcoming training opportunities. Other services include an email box, and links from a customer's Energy Tracker information and graphs to energy efficient tips and ideas. Figure 5a illustrates the Residential Sector home page on the PSE.com website.

Figure 5a: EES Residential Website on PSE.com



On-Line Self-Audit

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

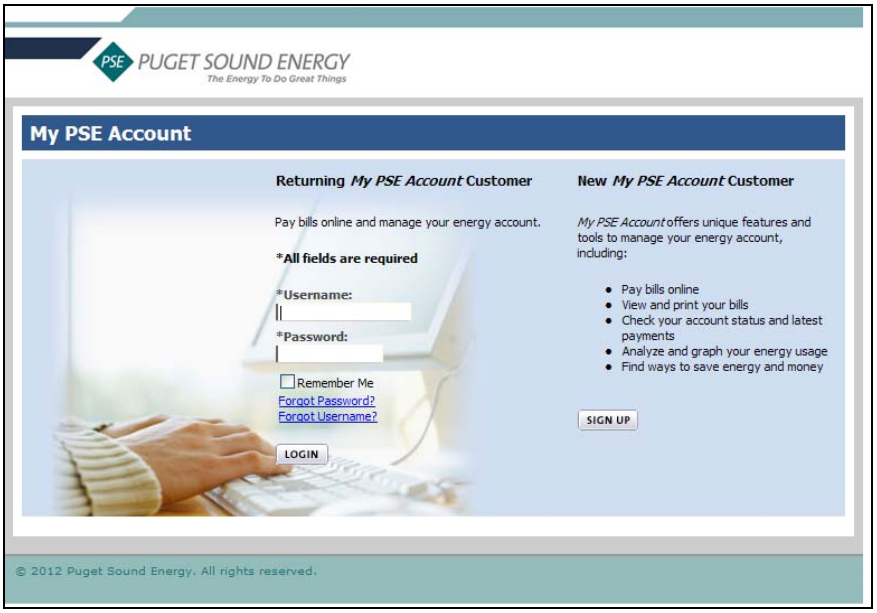
MY PSE Account

Incorporates easy-to-navigate tabs and menus that a customer can use to query their billing history and details and an analyzer tool that explains what is included in their bill. An Example of a My PSE Account home page is illustrated in Figure 5b. Customers can access energy analysis tools to better understand what changes can be made to reduce energy usage. Below is a sample energy tools page. The Business Energy Profile is available only to online users. Table 5c provides details on the number of customers visiting EES-specific sites on PSE.com. This information is also available in the Mainstreaming Green (in the Support Activities section of this report) discussion on page 192.

Table 5c: Information Services On-Line Metrics

On-line Services
The new PSE.com saw more than 2,324,000 unique visitors since launch in April 2011, an increase of more than 36% over the same period the year prior.
The energy-efficiency dedicated "Savings & Energy Center" received more than 920,000 pageviews with an average time of about 1 minute 25 seconds spent on each page, an increase of more than 30% in pageviews over the old website, during the same period the year prior.
There were more than 124,000 views of the residential Rebates & Offers page, an increase of 55% over the same period the year prior, on the old website. The commercial Rebates & Incentives page received more than 13,000 pageviews.
There were more than 20,900 views of the Ask an Energy Advisor inquiry form page, an increase of 38% over the same period the year prior, on the old website.
There were more than 24,500 views of the Contractor Referral Service referral page, an increase of 34% over same period the year prior, on the old website.
There were more than 8,600 views of the Energy-efficient Product Store Locator Map; more than 5,000 views of the Interactive Rebate Finder and more than 3,000 views of the Re-Energize splash page.

Figure 5b: My PSE Account Home Page on PSE.com



Events

The below discussion pertains to both Residential Energy Management and Business Energy Management Sector activity. A specific Business Sector discussion is presented in the Business Programs Section of this report, under Schedule 260 on page 148.

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

The niche markets of Single-family New Construction (SFNC) and Multifamily Retrofit (MF/R) programs target direct-to-business customers ranging from builders, developers, apartment complex owners and property managers - to contractors and various green building associations. Event outreach is one way to educate larger volumes of customers. Each year the program/marketing teams analyze the previous year's accomplishments and identify upcoming events being offered by various industry partners, targeting those that give the highest yield of savings return.

Various business tactics and marketing outreach are planned for each: including but not limited to, program educational presentations, new collateral development, media buys, logo visibility in programs and event websites, creation of booth displays and special signage, e-new releases, signup request forms to track new leads, customer surveys, and post debrief follow-ups.

Event Team Accomplishments

The EES Events Strategy Team launched a new events management system to improve the customer experience in December. The advantage of the new database offers an on-line event request form, multiple search functions, a web-based events calendar, tracking and reporting options, and the ability to easily access historical information in one central location. The Event Management software module is also designed to improve and deploy event agendas. Communications and statistics all reside in one central location, so that every staff member has access to the most up-to-date and accurate information for any event on which they are working.

The Events Team created and implemented new “customer interactive" displays in 2011. By operating various controls, customers interact with and receive visual, fascinating feedback on interesting and pertinent efficiency measures. Displays also educate customers on renewables topics. These displays showcase PSE"s energy efficiency and renewable energy programs, services and rebates, and demonstrate how customers can save energy, money and help the environment. The displays are used at a variety of event booths where PSE staff will talk with customers. The three displays are:

- Bright Ideas for Savings. This shows a customer what types of energy-saving CFL lighting is best for different areas of their home.
- Re-Energize with Renewables is an interactive display that shows customers what happens when people install solar panels at home, and how their home-generated power interacts with the utility grid.
- Seal up Your Savings is designed to give customers a hands-on way to discover how making simple changes, such as addition insulation or sealing ducts at home can have a real impact on their energy use, and on their bills.

Table 5d provides a summary of 2011 events in which PSE participated.

Table 5d: Residential Events

Residential Events	
Type	**Count**
Home Shows	7
Residential Energy	138
Single Family New Construction, Multifamily	6
Community	58
Energy Education	2
TOTAL	**211**

In 2011, the Event Team were key contributors in promoting and coordinating the 2011 version of Rock the Bulb[44] by providing details of upcoming Rock the Bulb events to stakeholders and EES constituents. The Team also provided logistics support for all of the CFL bulbs distributed at the events. We assisted with the distribution of an average of 80,000 CFL's and 40,000 low flow shower heads per event.

Events that stood out this year were: Micro Soft Product Fair – 10,000 employees visited the event. Boeing Employee Awareness – Resulted in very engaging and positive response from Boeing employees. Zhome Grand Opening – brought in 8,500 people over seven weekends.

Multifamily Retrofit and Single Family New Construction Accomplishments

In 2011, the Single Family New Construction program accomplished three large-scale conferences and worked in collaboration with other industry partners in managing eight smaller to mid-sized workshops/roundtable/trainings. For the Multifamily Retrofit program, a program that offers incentives to property owners with complexes of five or more attached units, exhibited at five major events in 2011 and hosted several intimate trainings such as the Weatherization Contractor Training (in collaboration with the Dealer Channel).

One lead at a Multifamily event can result in a tremendous amount of energy savings, as one complex could contain hundreds of dwelling units. Depending on the event type, a typical return for a large-scaled event may generate approximately 35 leads and can attract 15,000 attendees.

Information Services Performance

Table 5e provides a 2011 summary of expenditures for Residential Information Services, including its component elements.

[44] The 2011 Rock the Bulb program is reviewed in detail in the Residential Retail Channel discussion in this section.

Table 5e Residential Information Services 2011 Performance

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E200	Residential Information Services					
	Brochures (off-line/on-line)	$ 13,639	9,342	22,981		
	E-News	$ 3,190	2,858	6,048		
	Events	$ 83,182	67,122	150,304		
	Residential CMS - Elec	$ 58,909	113,192	172,101		
	Residential Energy Efficiency Information	$ 47,057	33,864	80,921		
	Enhanced Online tools	$ 58,463	81,661	140,124		
	Energy Advisors	$ 204,351	309,175	513,526		
Subtotals		$ 468,791	617,215	**1,086,006**	93.1%	$1,166,306
G206	Residential Information Services					
	Brochures (off-line/on-line)	$ 7,478	6,094	13,572		
	E-News	$ 2,603	2,858	5,461		
	Events	$ 36,486	19,055	55,541		
	Residential CMS - Elec	$ 25,774	47,509	73,283		
	Residential Energy Efficiency Information	$ 11,887	8,466	20,353		
	Enhanced Online tools	$ 24,955	21,726	46,681		
	Energy Advisors	$ 150,148	175,053	325,201		
Subtotals		$ 259,331	280,762	**540,093**	111.1%	$486,267

Low Income Weatherization

Schedules E201/G203

Description

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 a 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.

Program Performance

Tables 5f and 5g provide a 2011 summary of expenditures and energy savings for the Low Income Weatherization program.

Table 5f: Low Income Weatherization 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E201 Low Income		$ 168,741	$2,119,084	$2,287,825	95.7%	$ 2,391,463
G203 Low Income		$ 328,940	$383,308	$712,248	80.1%	$ 889,379

Table 5g: Low Income Weatherization 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E201 Low Income		973	2,742	3,715	247.5%	1,501
G203 Low Income		19,634	31,111	50,745	110.3%	46,020

2011 Program Revisions

Several new measures were implemented in 2011 including, ductless heat pumps and gas and electric water heating.

The Washington Utilities and Transportation Commission allowed PSE to use up to $2.285 million in Renewable Energy Credit (REC) proceeds to fund low-income conservation in 2011. This included the application of the funds for repairs as well as energy efficiency measures in such a way that it captured cost effective conservation.

2011 Accomplishments and Activities:

The Low Income Weatherization program made a significant improvement to the presentation of its measures in Exhibit 4 (the List of Measures, Incentives & Eligibility) in Q3 2011.

Rather than listing all measures and measure types by structure classification separately—which consumed a substantial number of pages—the measures were re-organized into a single, measure type table.

This way, on a single page, readers can now directly compare the incentive amounts for single family, multifamily and mobile homes. This revision considerably improved the value of the document and saved over four pages of text.

Table 5h: Low Income Weatherization Measure Highlights

Measure *(stated in number of units, unless otherwise*	Gas	Electric	Total
Attic Insulation (in sq.ft, all R-values)	92,000	303,000	395,000
CFL Fixtures		9,000	9,000
Common Area Lighting (projects)		3	3
Common Area HVAC (projects)	1		1
Duct Insulation (sq. ft.)	8,000	3,000	11,000
Duct Sealing	50	200	250
Ductless Heat Pump		8	8
Electric Water Heater, 0.95 EF		4	4
Floor Insulation (in sq. ft., all R-values)	97,000	386,000	483,000
Gas Furnace Replacement	10		10
Hot Water Pipe Wrap	20	300	320
Refrigerator Replacement		500	500
Screw-in CFL		1,000	1,000
Setback Thermostat		80	80
Structure Sealing (CFM_{50} Reduction)	109,000	290,000	399,000
Showerheads	1	90	91
Tankless Water Heaters, 0.90 EF	80		80
Wall Insulation (sq. ft.)	68,000	26,000	94,000
Water Heating Boiler Replacement	2		2
Windows (all U-values, sq. ft.)	1,000	71,000	72,000

Energy Education

Schedules E202/G207

Description

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 provide energy conservation education to adults, based on language and social economic status, which have had little exposure to the energy conservation ideas and materials. Customers are provided an easy-to-follow enrollment process via a website address or telephone call, to participate in education workshops. There, individuals learn ways to reduce their energy usage, including an explanation of the Save Energy Save Money (SESM)[45] program. The SESM program is an easy to implement concept, which can produce immediate, tangible positive energy savings.

PSE provided background information to the Seattle Housing Authority and Central Area Motivation Program (CAMP) agencies were interested in developing their own SESM program. The Coalition for Refugees from Burma & Eastside Cooperative customer clients were two new outreach agencies who received workshops. PSE helped with the workshops by providing an interpreter, and coached attendees in understanding the elements their PSE energy bill and the various payment options.

In another energy education initiative, Independent Colleges of Washington and PSE reviewed college research grant proposals from science and engineering students. In one notable proposal, students from Seattle's University's Summer Undergraduate Research Program presented their research results to PSE staff, titled: Using Smart Grid Technology to Promote Energy Efficiency and Conservation in Student Housing. In the study, a total of 20 multi-bedroom on-campus apartments were observed. In ten of the units, energy data logging equipment was installed to documented real-time electric consumption. The behavior of all residents of the 20 units was then compared. Of the proposals from the five ICW colleges, this proposal was awarded a $10,000 PSE grant.

Program Performance

Tables 5i provides a 2011 summary of expenditures for the Energy Education program.

[45] As outlined in various HopeLink quarterly customer newsletters.

Table 5i: Energy Education 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E202	Energy Education	$ 56,695	$58,116	$114,811	57.7%	$ 199,053
G207	Energy Education	$ 16,117	$21,454	$37,571	75.5%	$ 49,765

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. Note: 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 downlights.
- 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 tankless water heaters, 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 programs, which are detailed in the following pages:

1. Retail and Consumer Channel
2. Dealer Channel

Program Performance

Tables 5j and 5k provide a 2011 summary of expenditures and energy savings for the Single Family Existing group.

Table 5j: Single Family Existing 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E214	Single Family Existing					
	HomePrint + Water heat	$ 603,416	640,202	1,243,618		
	Residential EE Lighting Rebate	$ 3,640,847	5,325,668	8,966,515		
	Space Heat	$ 750,037	1,100,925	1,850,962		
	Refrigerator Decommissioning	$ 288,077	425,094	713,171		
	Energy Star Appliances	$ 1,077,927	1,623,758	2,701,685		
	Showerheads	$ 30,148	210,052	240,200		
	Weatherization	$ 1,003,131	1,033,939	2,037,070		
Subtotals		$ 7,393,583	10,359,638	**17,753,221**	90.2%	$19,691,227
G214	Single Family Existing					
	HomePrint	$ 128,427	0	128,427		
	Water Heat	$ 186,869	156,954	343,823		
	Space Heat	$ 388,435	289,649	678,084		
	Showerheads	$ 37,453	317,751	355,204		
	Weatherization	$ 1,325,237	944,018	2,269,255		
	Energy Star Apliances	$ -	0	0		
Subtotals		$ 2,066,421	1,708,372	**3,774,793**	49.3%	$7,663,374

Table 5k: Single Family Existing 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	**Programs**	**Q1 & Q2**	**Q3 & Q4**	**Total**	**YE % of Goal**	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E214	Single Family Existing					
	HomePrint + Water heat	1,364	2,477	3,841		
	Residential EE Lighting Rebate	45,140	40,923	86,062		
	Space Heat	2,241	2,717	4,958		
	Refrigerator Decommissioning	1,091	1,488	2,579		
	Energy Star Appliances	1,338	1,890	3,228		
	Showerheads	29	3,773	3,802		
	Weatherization	3,307	2,386	5,693		
Subtotals		54,510	55,653	**110,163**	100.6%	109,501
G214	Single Family Existing					
	HomePrint	8,398	85	8,483		
	Water Heat	57,778	45,094	102,872		
	Space Heat	248,567	150,573	399,140		
	Showerheads	2,724	159,811	162,535		
	Weatherization	257,801	145,056	402,857		
	Energy Star Apliances	17,658	12,807	30,465		
Subtotals		592,926	513,426	**1,106,352**	60.7%	1,821,743

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 and of course, energy efficient lighting. As the above chart indicates, this channel provides services covered by several Conservation Schedules.

Residential Retail Program

This program collaborates with retailers and manufacturers of energy efficient products – such as lamps, light fixtures, lighting controls, showerheads, electronics, and appliances such as water heaters, primary heating equipment, 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.

2011 Program Revisions

In June 2011 PSE launched a refrigerator replacement program. The program was heavily promoted through PSE's Low income assistance program HELP (Home Energy Lifeline Program), the Goodwill, food banks, The Salvation Army and low income agencies. The program was enthusiastically received by our customers.

2011 Accomplishments and Activities:

In November and December PSE launched a Holiday Outreach Campaign. Customers took a pledge to install the items and to take other energy-saving actions in their home. The campaign pledged 80,000 CFL bulbs, and 40,000 low-flow showerheads.

Rock the Bulb Re-Energized Tour

This year's campaign focused on PSE's lower income and ethnic customer throughout our service territory.

The campaign was conducted in nine cities over nine weekends and consisted of a bulb exchange and energy efficiency educational opportunities.

The success of the Rock the Bulb campaign was the subject of a write up in a social marketing college text book, Social Marketing Influencing Behavior for Good The chapter Deciding on Messages, Messengers and Creative Strategies, discussed PSE strategy to assess, develop, launch, promote and track the results of the campaign.*

**Nancy R. Lee and Philip Kotler, Social Marketing Influencing Behaviors for Good, fourth edition, Sage Publications Inc. 2011.*

This resulted in over 3,800,000 kWh and 149,500 therm savings and touched roughly 40,000 PSE customers. The campaign involved six PSE offices and 75 event locations.

The Retail Channel expanded our refrigerator measure offerings to include a refrigerator replacement program that generated 621 units, at 468,855 kWh savings. PSE customers can exchange their old refrigerator for a new refrigerator. This is a much targeted program toward lower income PSE customers.

One of the key components of having successful programs is ensuring that customers are aware of your offerings. This year there was a PSE Mariners' night. This included in stadium appliance displays and signage for 14 games. This also included a radio campaign that went for 45 days.

Table 5l provides an overview of Retail Channel measures reported in 2011 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 5l: Overview of 2011 Retail Channel Measure Activity

Category	Measure Type	Electric	Gas
Appliances			
	Clothes Washers	17,000	
	Refrigerator Replacement	1,200	
	Refrigerator/Freezer Decommissioning	5,700	
Water Heat			
	Showerheads	25,000	21,000
Lighting			
	Fixtures	42,000	
	Lamps	3,700,000	

The Dealer Channel's 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.

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

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.

2011 Program Revisions

In August 2011, due to changing market conditions, the insulation incentive was increased from up to $200 per measure to up to $400 per measure. Incentives for qualifying windows installed in PSE electrically heated homes were also added in August.

Space and Water Heating

The program manages incentives and installations of gas furnaces, heat pumps, boiler systems and domestic water heaters.

2011 Program Revisions

- Due to cost effectiveness factors, in October the Company decided to suspend the gas water heating programs. Customers that were in the process of applying for rebates were able to do so through December 2011. The gas water heating program will not be part of the 2012 portfolio.

- In an effort to bolster HVAC savings, the company increased incentives for ductless heat pumps in August. As a result, the program saw higher than normal levels of participation toward the end of the year.

2011 Dealer Channel Accomplishments

Contractor events were a big part of the Dealer Channel's mission in 2011. Dealer Channel staff held events to increase the awareness of HVAC measures, weatherization programs and information for PSE auditors.

As a result of a high degree of collaboration between the State, PSE's contractor UCONS, and the management team from PSE, the ARRA-funded mobile home duct sealing program was one of the Dealer Channels success stories in 2011. The program also drew praise from the State's administrators.

There was a strong effort to engage contractors and increase awareness around HVAC and electric water heater incentives in 2011. The group hosted a number of events regionally to promote measures. In the first quarter alone over 300 contractors participated in these events.

Table 5m represents the measures, grouped by types that were reported in 2011. 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 5m: Overview of 2011 Dealer Channel Measure Activity

Group	Measure Type	Electric	Gas
Mobile Home			
	Duct Sealing	3,700	
	Showerheads	3,800	
	Pipewrap	900	
	CFL Lamps	19,000	
HomePrint			
	Water Heater Turn-down	3	20
	Showerheads	40	20
	CFL Lamps	93,000	
Space/Water Heat			
	Water Heaters	400	1,500
	Furnaces		4,300
	Boilers		100
	Waste Heat Recovery	1	
	Heat Pumps	2,400	
Weatherization			
	Attic Insulation (SqFt)	182,000	1,000,000
	Wall Insulation (SqFt)	23,000	322,000
	Floor Insulation (SqFt)	142,000	971,000
	Duct Insulation	120	1,200
	Duct Sealing	170	1,700
	Windows (SqFt)	27,000	720
	Hot Water Pipewrap		100
	Showerheads		210

Single Family Fuel Conversion

Schedule E216

This program 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 Multifamily Channel, 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[46] 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.

Program Performance

Tables 5n and 5o provide a 2011 summary of expenditures and energy savings for the Fuel Conversion program.

Table 5n: Single Family Fuel Conversion 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
E216	Single Family Fuel Conversion	$ 241,417	$188,447	$429,864	42.8%	$ 1,003,618

[46] 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…"

Table 5o: Single Family Fuel Conversion 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
E216	Single Family Fuel Conversion	877	730	1,607	37.8%	4,249

2011 Program Revisions

There were no revisions to the Fuel Conversion program during 2011.

2011 Accomplishments and Activities:

The Dealer Channel works hard to incorporate fuel conversion messaging and promotion in conjunction with other outreach activities. HVAC contractors have embraced the program since it was introduced. Table 5p illustrates a summary of measure types installed in the Single Family Fuel Conversion program during 2011.

Table 5p: Key Fuel Conversion Activities

Measure Categories	Electric
Space and Water Heat	40
Water Heat only	210
Space Heat only	30

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). EES works with these partners to market energy efficient equipment to their customers. EES encourages the purchase and installation of energy efficient products for their construction projects.

The Multifamily channel includes Single Family New Construction, Multifamily Retrofit and Multifamily New Construction programs. The Channel also includes the Low Income Weatherization program. It's one of the four Channels of customer service delivery within the Residential Sector.

A dedicated market manager oversees activity in this channel. His staff includes program managers for each program, two program coordinators and a program implementer.

The Multifamily Channel staff track project status, measure installations, vendor payment accuracy, respond to customer inquiries, manage county agency expectations, and ensure customer satisfaction.

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: And ENERGY STAR or EcoRated Manufactured homes, which is unique to this program.

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

Program Performance

Tables 5q and 5r provide a 2011 summary of expenditures and energy savings for the Single Family New Construction program.

Table 5q: Single Family New Construction 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E215 Single Family New Construction		$ 513,401	$339,459	$852,860	58.3%	$ 1,463,949
G215 Single Family New Construction		$ 249,871	$193,553	$443,424	66.6%	$ 665,394

Table 5r: Single Family New Construction 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E215 Single Family New Construction		1,013	528	1,541	49.8%	3,094
G215 Single Family New Construction		34,739	25,855	60,594	58.9%	102,850

2011 Program Revisions

There were no revisions to the New Construction program during 2011.

2011 Accomplishments and Activities:

In 2011 the region's largest production builder, Quadrant Homes, committed to becoming a 100% Energy Star home builder.

PSE launched the Advanced Lighting Package (ALP 80) program to adhere to the new 2009 Washington State Energy Code (WSEC) requirement of 50% high efficacy fixtures in all newly constructed homes. In order to qualify for our $300 incentive, builders must install a minimum of 80% ENERGY STAR fixtures. By year end, nine builders have signed on at 100% participation.

Table 5s represents a summary of measures, grouped by type, reported in 2011.

Table 5s: Single Family New Construction 2011 Measure Summary

Measure Categories	Electric	Gas
Whole House Fan	470	
Furnace		200
Refrigerator	150	
Clothes Washers	90	
Water Heaters		1,100
CFL Lamps	3,100	
CFL Fixtures	18,000	
Heat Pumps	8	
Duct Sealing		350
Manufactured Homes	20	

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 which 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.

In October of 2011 the much anticipated completion of the zhome set off a series of events.

The multifamily project in the Issaquah Highlands touts net zero energy use and seeks to push the envelope when it comes to building design and best practices.

Over 8,500 took advantage of the 1 hour in depth tour of the complex over 7 weekends. Another 6,700 attended 103 classes associated with the project and the zhome website had 47,000 hits from all 50 states and 131 countries.

PSE was a project partner and a number the staff was involved with the events associated with the project.

Program Performance

Tables 5t and 5u provide a 2011 summary of expenditures and energy savings for the Multifamily Existing program.

Table 5t: Multifamily Existing 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E217	Multi Family Existing	$ 1,822,488	$3,182,271	$5,004,759	95.4%	$ 5,246,290
G217	Multi Family Existing	$ 98,642	$198,494	$297,136	49.0%	$ 606,776

Table 5u: Multifamily Existing 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E217	Multi Family Existing	6,184	11,668	17,852	102.2%	17,463
G217	Multi Family Existing	6,329	28,750	35,079	41.9%	83,713

2011 Accomplishments and Activities:

In the fourth quarter of 2011 refrigerator replacements were added to the program. As a result of staff's engagement, the program was very successful; adding 1,310 units to finish out the year. The staff also worked closely with the Business Energy Management department to incorporate commercial measures in multifamily buildings.

Table 5v provides a general overview of measure categories reported in the Multifamily Retrofit program in 2011. 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.

Table 5v: Multifamily Existing 2011 Savings

Measure Categories	Electric	Gas
Calculated	5	
Hot Water Pipewrap	16,000	
Boilers (Calculated)		2
Attic Insulation (SqFt)	1,800,000	156,000
Floor Insulation (SqFt)	271,000	11,000
Wall Insulation (SqFt)	400	
Windows (SqFt)	98,000	19,000
CFL Fixtures	4,300	
CFL Lamps	192,000	
Water Heaters	2	
Showerheads	14,000	
Refrigerators	5	

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. For measures and incentives that apply to existing structures, please refer to the Multifamily, Existing Program Measures.

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.

Program Performance

Tables 5w and 5x provide a 2011 summary of expenditures and energy savings for the Multifamily New Construction program.

Table 5w: Multifamily New Construction 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E218	Multi Family New Construction	$ 197,821	$320,409	$518,230	73.1%	$ 708,536
G218	Multi Family New Construction	$ 88,725	$148,067	$236,792	76.2%	$ 310,921

Table 5x: Multifamily New Construction 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E218	Multi Family New Construction	370	712	1,082	92.1%	1,175
G218	Multi Family New Construction	10,875	15,286	26,161	75.4%	34,702

2011 Program Revisions

There were several program changes in 2011 due to the implementation of the 2009 Washington State Energy Code. The definition changed for multifamily structures to be three or more connected dwelling units. It was previously five or more units. PSE retired window incentives for low-rise construction for electric customers and eliminated all window incentives for gas customers. In addition, there were a number of revisions that included incentives levels for common area heat recovery, common area heat pumps, package terminal (through the wall) heat pumps and for garage VFD (variable frequency drives) fan ventilation.

2011 Process Improvements

In mid-2011, the multifamily team added a licensed architect to work with multifamily new construction developers. This new staff member is also a member of the State's Technical Advisory Group (TAG) for Washington State Energy Codes (WSEC).

2011 Accomplishments and Activities:

Notable projects completed in 2011 included the Link Apartments (200 units) which won 2011 NAIOP (National Association of Industrial and Office Properties) Multifamily Project of the Year award and the Station at Othello Park (351 units) which is the first new mixed-use project on Sound Transit's Link Light Rail line.

Table 5y provides a general overview of measure categories reported in the Multifamily New Construction program in 2011. 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.

Table 5y: Multifamily New Construction 2011 Measure Summary

Measure Categories	Electric	Gas
Refrigerators	700	
Clothes Washers	300	
Dishwashers		800
Windows (SqFt)	34,000	16,000
Garage CO DCV w/ VFD fan control	60	
CFL Fixtures	2,300	
Corridor Lighting Reductions (SqFt)	686,000	
Stairwell Bi-level Lighting	40	
Garage Lighing Reduction (SqFt)	7,800,000	
Showerheads	100	1,400
Boilers (calculated)		656,000
Water Heat (calculated)		474,000
Calculated	1	1
Heat Pumps	1,800	

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 Settlement Agreement condition K(7)(d), pilots will only claim energy savings that achieve energy savings sufficient to demonstrate cost-effectiveness by passing the TRC test.

PSE plans to achieve it savings targets using programs and measures that have been proven through either RTF or engineering calculations and evaluated to meet or exceed cost effectiveness thresholds.

Program Performance

Tables 5z and 5aa provide a 2011 summary of expenditures and energy savings for the Pilots program.

Table 5z: Pilots 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E249 Pilots, excluding:		$ 29,183	$44,184	$73,367	32.3%	$ 227,024
Home Energy Reports		$ 354,929	$258,197	$613,126	70.6%	$ 868,123
Subtotal		$ 384,112	$ 302,381	$ 686,493	62.7%	$ 1,095,147
G249 Pilots, excluding:		$ 74,951	$71,427	$146,378	130.2%	$ 112,397
Home Energy Reports		$ 105,808	$105,208	$211,016	82.5%	$ 255,644
Subtotal		$ 180,759	$176,635	$357,394	97.1%	$ 368,041

Table 5aa: Pilots 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E249 Pilots, excluding:		117	175	292	38.5%	758
Home Energy Reports		0	5,093	5,093		0
Subtotal		117	5,268	5,385	710.4%	758
G249 Pilots, excluding:		23,832	22,608	46,440	184.3%	25,200
Home Energy Reports		0	321,006	321,006		0
Subtotal		23,832	343,614	367,446	1458.1%	25,200

Table 5bb Illustrates pilot measures with associated savings reported in 2011.

Table 5bb: Pilots 2011 Measure Activity

Measure Categories	Electric	Gas	Both Electric and Gas
Heat Pump Sizing & Lockout Controls	210		
Fireplaces		650	
Home Energy Reports (approx. homes)			24,000
LED Downlighting	4,500		

2011 pilot programs include:

- *Heat Pump Sizing and Lock out Controls*

  This pilot measure was delivered through an existing contractor network, to assure properly sized heat pump systems by following industry standard sizing recommendations, and by installing an outdoor control (thermostat) that will sense outdoor temperatures. This control will lock out inefficient auxiliary heat down to specified temperatures in order to achieve full energy saving potential of heat pump systems. PSE offered this pilot to 1,000 single family homes throughout PSE's service territory. With better that 20 percent participation rate in 2011 it was decided to offer this as a program in 2012.

- *Home Energy Reports*

  Home Energy Reports are customized reports mailed directly to PSE customers that help each residential customer better understand their home electric and gas consumption, motivate them to conserve and provide targeted calls to action tailored to help each customer save money and improve energy efficiency. The initial pilot included 40,000 combined gas and electric single family households. To further evaluation needs one third of the original pilot was removed from the program to test for measure life persistence. The program continues to run at a reduced level of 24,000 with an estimated 5,000 MWh and approximate 300,000 Therms of annual energy savings.

  In late 2011, the CRAG provided its unanimous support for PSE to claim provisional 2011 electric and gas conservation savings for Home Energy Reports, based upon the following conditions:

  - The savings indicated in this report may be adjusted as part of a "true-up", based upon survey findings due in the spring of 2012.
  - PSE will include the quartiling elements in the survey protocols.
  - 2012-2013 savings and survey will focus on calendar years.
  - PSE will seek to understand the actions of participants and non-participants in the customer surveys.

- *Natural Gas Fireplaces*

  - High-efficiency direct vent gas fireplaces provide heat directly in the room. Advances in gas heating technology make these heat sources safe and easy to operate. Units must be direct vented with sealed combustion. PSE will utilize our existing contractor network for installation.

  - The manufacturers and distributors engaged their contractor base to help promote qualifying measures and made the program a success. In 2011, 645 qualifying units were sold.

- LEDs and LED downlighting.

  - There is a high degree of agreement among those associated with energy efficiency as to the potential for LED lighting (Light Emitting Diodes). LEDs provide excellent quality lighting, long product life and more flexibility than one experiences in CFL's. One key difference is in dimming capability.

  - Early in 2011, many retailers were lukewarm toward giving the product much shelf space. During the last quarter that changed as prices have been steadily dropping and customers have been excited to try the product. Retailers have now more widely embraced them. In August, PSE started offering incentives for the product and to date nearly 4,800 units have been sold. It was decided to convert the pilot to a program in 2012.

BUSINESS SECTOR

Overview

Readers will find that EES uses the term "Business" and "Commercial/Industrial (C/I)" interchangeably within this and following sections of the report. As the EES 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

A variety of offerings are available and tailored to meet the needs of our customer base. PSE has incentives for efficiency improvements for both existing and new buildings and equipment. Prescriptive rebates are used for small lighting projects, motors, kitchen equipment, heating/cooling equipment, etc. Other prescriptive incentives are available for more complex projects such as Building Energy Optimization for existing buildings. Custom grants are used for large lighting projects and complicated projects such as HVAC modifications, heat recovery, process improvements, boiler upgrades and replacements, whole-building new construction, etc.

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. 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.

Business Energy Management is comprised of 43 dedicated individuals.

The custom grants group is the largest group in the Business Energy Management organization; both in terms of staffing and in conservation savings impact. Three teams of Energy Management Engineers (EMEs,) led by three Supervising Engineers, focus on specific geographical areas within the PSE territory. Additionally, each team focuses on specific programs and technologies. Overall the group consists of 3 supervisors, 17 consulting, senior, and associate EMEs. They are supported by a three person Contracts Administration team.

The commercial rebates team includes a supervisor, four engineers, a program manager, program coordinator, program implementer, a business analyst, and an administrative specialist.

The building performance team includes a supervisor, a senior EME, an EME, two program managers, two application analysts, an associate application analyst, and a temp to assist the team with analysis.

Who We Work With

PSE works directly with the following entities to promote and deliver business efficiency programs:

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

Organizational Structure

The Business Sector is comprised of 43 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.

The engineering teams are responsible for administering custom grants and managing sector-specific programs such as Energy Smart Grocer 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 consists of a mix of engineers, program managers and implementers 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 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 Senior 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.

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

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 Burlington, Bothell, Bellevue, Bremerton, Kent, and Olympia.

Figure 6a provides a summary view of Business Energy Management's organizational structure. It illustrates the primary customer sectors served, measure delivery channels and incentive types.

Figure 6a: 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

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
E257	LED Traffic Lights				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.

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." PSE 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, etc.) We also make use of our Energy Efficient Technology Evaluation tariff to research 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 6b, the five-year trends indicate an average annual increase in electric savings of 17 percent and an overall 86 percent increase from 2007 to 2011. Figure 6c illustrates an average annual increase in gas savings of eight percent and an overall 40 percent from 2007 to 2011.

Figure 6b: Business Sector Electric Savings (MWh) and Expenses

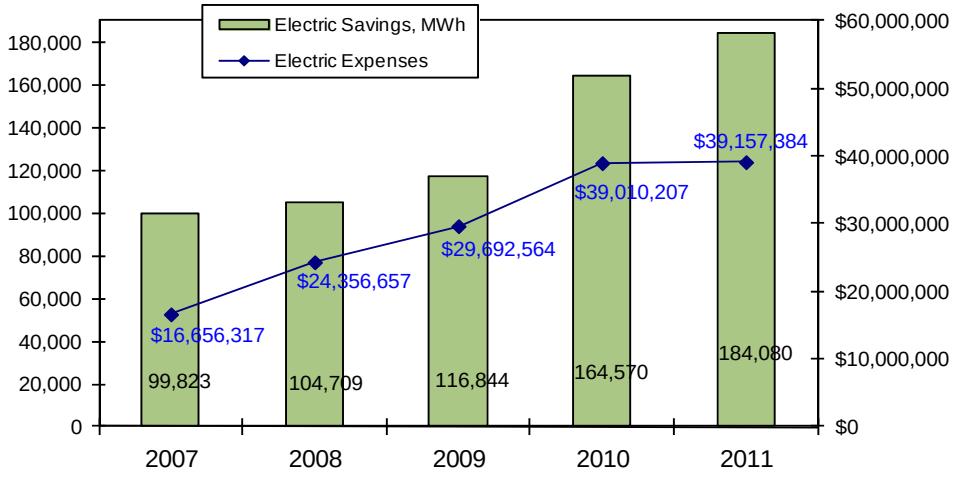
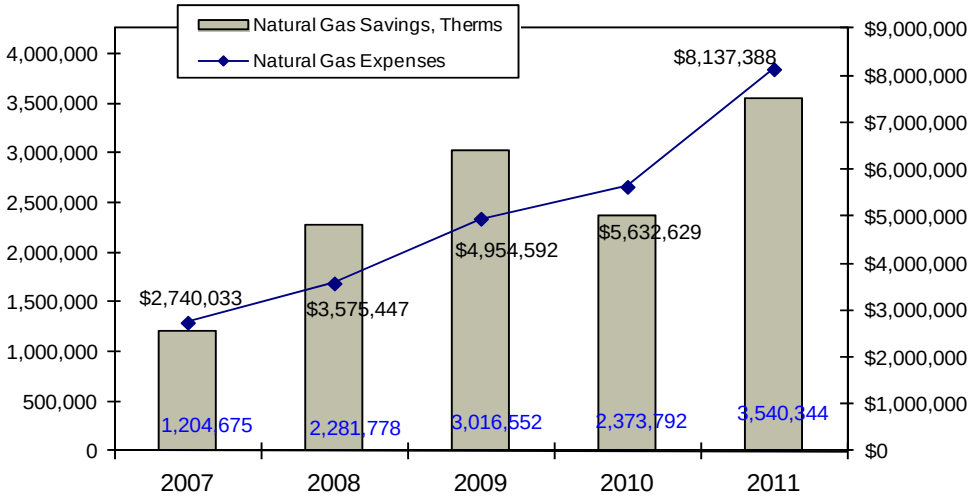


Figure 6c: Business Sector Gas Savings (Therms) and Expenses



2011 Summary

Electric Programs

The Business Energy Management team achieved record savings through custom grants and rebates in 2011. The effects of the economic downturn and fall-off in new construction activity led many contractors to utilize energy efficiency incentives to help them market their electric retrofit projects, and stimulus funding through the Office of the Superintendent of Public Instruction (OSPI) and the Department of Commerce contributed a significant portion of the savings.

The Small Business Lighting rebate program experienced continual growth in participation. A similar trend was experienced in other rebate programs and the quantity of custom grant measures funded.

While new construction starts were down significantly, existing project closeout activity continued throughout the year.

2011 saw program expenditures finish the year at $3.1 million, or 84 percent of year-end budget. Commercial/Industrial electric programs achieved savings of 184,080 MWh (21.0 aMW), which is 104 percent of year-end savings goals.

An evaluation of the C/I Electric Retrofit Program and the Large Power User Self-Directed Program by Navigant Consulting determined an *as evaluated* realization rate of 102.3 percent for the projects “as evaluated” in their current operational state, which includes effects of any operational changes since project completion.

Natural Gas Programs

The custom grant retrofit program yielded significant savings in 2011 as a result of some large space heating upgrade projects, ventilation controls and heat recovery measures. The new construction program achieved significant savings from several large projects.

The commercial rebates program achieved significant savings in 2011 from re-start of the low flow pre-rinse spray head and faucet aerator direct-install programs.

Business gas program expenditures finished the year at $8.1 million, or 117 percent of year-end budget. The sector achieved savings of 3.5 million therms in 2011, which is 132 percent of year-end savings goals.

An evaluation of the C/I Gas Retrofit Program by Navigant Consulting determined *evaluated* realization rate of 100.3 percent for the projects “as evaluated” in their current operational state, which includes effects of any operational changes since project completion.

Key Results Drivers

Electric Programs

Business Energy Management electric efficiency programs achieved 104 percent of savings goal at 84 percent of program budget. Program administrative costs tracked close to budget throughout 2011, but expenditures on customer incentives were less than budgeted due to the following primary reasons:

- Customer incentives in the Schedule 258 Large Power User Self-Directed Program were approximately $4.5 million less than budgeted due to delays in project initiation likely due to uncertainty surrounding this program while it was reviewed by the CRAG and revised in accordance with I-937 settlement conditions. Additionally, projects completed under the Schedule 258 program in 2011 were highly cost effective and received incentive amounts per unit savings less than budgeted for 2011.
- To prepare customers for upcoming changes in federal lighting efficiency requirements and to ensure program goals were met in 2011, significant emphasis was placed on "Re-Energize Your Lighting" messaging and special year-end events were coordinated with commercial lighting distributors to promote point-of-sale incentives for high-efficiency CFL and LED lighting products. This contributed to Commercial Rebate programs exceeding savings goals without significantly exceeding incentive budgets due to the high cost-effectiveness of lighting rebate measures. Additionally, highly cost-effective electric savings were achieved beyond goal in the Commercial Rebates program through re-start of direct installation of low flow pre-rinse spray heads and faucet aerators that yielded significant electric savings.
- The C/I Electric Retrofit program experienced delays in completion of planned stimulus funded projects, particularly in the education sector. Effects of these delays were offset by increased participation in the Energy Smart Grocer program. The completed Energy Smart Grocer measures were highly cost effective, which provided cost savings and helped the C/I Retrofit program to end the year under budget for incentive payments.

Natural Gas Programs

Business Energy Management natural gas efficiency programs achieved 132 percent of savings goal in 2011 at 117 percent of program budget. Program administrative costs were under budget in 2011 due to program staff spending more time working on electric efficiency programs and less time on gas projects than anticipated. Customer incentives exceeded budgeted amounts for gas programs due primarily to completion of large new construction projects in the healthcare sector. C/I Gas Retrofit incentives tracked relatively proportional to the increased amount in achieved savings. Commercial Rebate programs exceeded savings goals while incentive payments remained below budget due to highly cost effective low flow pre-rinse spray head and faucet aerator direct installs that yielded significant natural gas savings from reduced energy use for water heating.

Details of Business Sector results are included in the program overviews in Section 7.

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2011 Business Programs Results

Tables 6a and 6b provide, at a program level, a comparison of 2011 actual expenditures to budgeted amounts presented in the 2011 Annual Conservation Plan.

Table 6a: Business Sector 2011 Electric Expenditures versus Budgets

Electric

Schedule	Program Name		Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
250	CI Retrofit Budget		$ 1,114,505	$ 9,816	$ 708,322	$ 11,900	$ 51,000	$ 1,139,750	$ 8,800	$ 2,394	$ 17,025,000	$ 20,071,487
		Actual	*$ 1,465,417*	*$ 69,012*	*$ 906,308*	*$ 10,468*	*$ 87,563*	*$ 1,937,048*	*$ 7,451*	*$ 13,495*	*$ 14,001,374*	*$ 18,498,136*
251	CI New Construction Budget		$ 243,364	$ 6,135	$ 157,184	$ 17,500	$ 3,400	$ 71,750	$ 400	$ -	$ 7,750,000	$ 8,249,734
		Actual	*$ 57,287*	*$ -*	*$ 33,833*	*$ 5,166*	*$ 3,763*	*$ 7,996*	*$ 154*	*$ 451*	*$ 7,740,464*	*$ 7,849,113*
253	RCM Budget		$ 451,072	$ 6,135	$ 288,040	$ 9,450	$ 12,750	$ 373,250	$ 3,600	$ 3,600	$ 650,000	$ 1,797,897
		Actual	*$ 233,447*	*$ -*	*$ 137,894*	*$ 1,622*	*$ 18,601*	*$ 260,653*	*$ 1,198*	*$ 6,755*	*$ 375,112*	*$ 1,035,282*
255	Small Business Lighting Budget		$ 348,949	$ 1,841	$ 220,997	$ 28,500	$ 8,500	$ 89,250	$ 2,800	$ -	$ 6,210,000	$ 6,910,836
		Actual	*$ 344,835*	*$ -*	*$ 204,807*	*$ 4,755*	*$ 25,014*	*$ 20,320*	*$ 2,125*	*$ 2,330*	*$ 6,861,229*	*$ 7,465,414*
257	LED Traffic Signals Budget		$ 8,308	$ -	$ 5,234	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ 33,543
		Actual	*$ 304*	*$ -*	*$ 180*	*$ 2*	*$ 10*	*$ 3*	*$ 1*	*$ 1*	*$ 33,010*	*$ 33,510*
258	Large Power Users/ Self-directed Budget		$ 83,083	$ -	$ 52,342	$ -	$ -	$ 178,300	$ -	$ -	$ 6,255,000	$ 6,568,725
		Actual	*$ 3,309*	*$ -*	*$ 1,948*	*$ 14*	*$ 112*	*$ 24,819*	*$ 10*	*$ 16,784*	*$ 1,697,572*	*$ 1,744,567*
260	Energy Information Budget		$ 26,632	$ 15,338	$ 26,441	$ 49,000	$ -	$ 40,265	$ 2,600	$ -	$ -	$ 160,276
		Actual	*$ 9,918*	*$ -*	*$ 5,809*	*$ 11,918*	*$ 585*	*$ 19,413*	*$ 1,244*	*$ 50*	*$ -*	*$ 48,937*
262	Rebates Budget		$ 381,979	$ 11,043	$ 247,604	$ 54,000	$ 9,350	$ 183,260	$ 1,800	$ -	$ 1,751,733	$ 2,640,768
		Actual	*$ 289,152*	*$ -*	*$ 171,399*	*$ 16,586*	*$ 15,302*	*$ 47,254*	*$ 1,454*	*$ 2,195*	*$ 1,939,083*	*$ 2,482,425*
	Business Budget Totals		$ 2,657,891	$ 50,307	$ 1,706,165	$ 170,350	$ 85,000	$ 2,075,825	$ 20,000	$ 5,994	$ 39,661,733	$ 46,433,265
		Actual Expenditures	*$ 2,403,667*	*$ 69,012*	*$ 1,462,179*	*$ 50,531*	*$ 150,950*	*$ 2,317,505*	*$ 13,635*	*$ 42,060*	*$ 32,647,844*	*$ 39,157,384*

Table 6b: Business Sector 2011 Gas Expenditures versus Budgets

Gas

Schedule	Program Name		Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
205	CI Retrofit Budget		$ 402,042	$ 5,522	$ 256,765	$ 5,100	$ 7,040	$ 136,000	$ 2,375	$ 560	$ 3,268,000	$ 4,083,403
		Actual	*$ 297,615*	*$ 8,438*	*$ 180,783*	*$ 2,044*	*$ 12,913*	*$ 88,391*	*$ 1,334*	*$ 1,386*	*$ 4,184,086*	*$ 4,776,988*
251	CI New Construction Budget		$ 127,048	$ 5,522	$ 83,519	$ 7,500	$ 6,080	$ 27,750	$ -	$ -	$ 1,229,800	$ 1,487,218
		Actual	*$ 30,801*	*$ -*	*$ 18,217*	*$ 2,382*	*$ 1,479*	*$ 5,297*	*$ 87*	*$ 184*	*$ 2,136,994*	*$ 2,195,441*
208	RCM Budget		$ 168,589	$ 5,522	$ 109,690	$ 4,050	$ 2,560	$ 188,250	$ 3,325	$ 1,400	$ 280,000	$ 763,386
		Actual	*$ 168,223*	*$ -*	*$ 99,385*	*$ 945*	*$ 9,594*	*$ 133,418*	*$ 767*	*$ 3,136*	*$ 246,715*	*$ 662,184*
260	Energy Information Budget		$ 11,414	$ 15,338	$ 16,853	$ 21,000	$ -	$ 36,265	$ 2,850	$ -	$ -	$ 103,720
		Actual	*$ 6,102*	*$ -*	*$ 3,573*	*$ 5,111*	*$ 344*	*$ 19,372*	*$ 539*	*$ 30*	*$ -*	*$ 35,072*
262	Rebates Budget		$ 26,615	$ 614	$ 17,154	$ 6,000	$ 320	$ 9,980	$ 950	$ -	$ 452,720	$ 514,352
		Actual	*$ 73,161*	*$ -*	*$ 43,375*	*$ 2,079*	*$ 2,830*	*$ 690*	*$ 316*	*$ 250*	*$ 343,968*	*$ 466,668*
	Business Budget Totals		$ 735,708	$ 32,516	$ 483,981	$ 43,650	$ 16,000	$ 398,245	$ 9,500	$ 1,960	$ 5,230,520	$ 6,952,079
		Actual Expenditures	*$ 575,903*	*$ 8,438*	*$ 345,332*	*$ 13,596*	*$ 27,160*	*$ 247,168*	*$ 3,044*	*$ 4,985*	*$ 6,911,762*	*$ 8,137,388*

The 2011 performance with semi-annual breakdowns for each program in the Business Sector is indicated in Tables 6c and 6d.

Table 6c: Business Sector 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E250	C/I Retrofit	$ 6,975,156	$11,522,980	$18,498,136	92.2%	$20,071,487
E251	C/I New Construction	$ 1,502,783	$6,346,330	$7,849,113	95.1%	$8,249,734
E253	Resource Conservation Manager - RCM	$ 441,266	$594,016	$1,035,282	57.6%	$1,797,897
E255	Small Business Lighting Rebate	$ 3,441,574	$4,023,840	$7,465,414	108.0%	$6,910,836
E257	LED Traffic Signals	$ 19,131	$14,379	$33,510	99.9%	$33,543
E258	Large Power User - Self Directed	$ 588,856	$1,155,711	$1,744,567	26.6%	$6,568,725
E260	Commercial Energy Efficiency Information	$ 42,569	$6,368	$48,937	30.5%	$160,276
E262	Commercial Rebates	$ 999,047	$1,483,378	$2,482,425	94.0%	$2,640,768
	Total Electric Programs	$ 14,010,382	$25,147,002	**$39,157,384**	84.3%	$46,433,266
G205	C/I Retrofit	$ 1,800,400	$2,976,588	$4,776,988	117.0%	$4,083,403
G208	RCM	$ 285,748	$376,436	$662,184	86.7%	$763,386
G251	C/I New Construction	$ 179,988	$2,015,453	$2,195,441	147.6%	$1,487,218
G260	Commercial Energy Efficiency Information	$ 28,861	$6,211	$35,072	33.8%	$103,720
G262	Commercial Rebates	$ 241,940	$224,728	$466,668	90.7%	$514,352
	C/I Tracker AFUCE	$ -	$1,035	$1,035		
	Total Gas Programs	$ 2,536,937	$5,600,451	**$8,137,388**	117.0%	$6,952,079

Table 6d: Business Sector 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E250	C/I Retrofit	28,131	51,465	79,596	102.0%	78,000
E251	C/I New Construction	3,881	14,557	18,438	119.0%	15,500
E253	Resource Conservation Manager - RCM	8,228	16,963	25,191	77.5%	32,500
E255	Small Business Lighting Rebate	11,672	13,387	25,059	109.0%	23,000
E257	LED Traffic Signals	709	467	1,176	235.2%	500
E258	Large Power User - Self Directed	2,785	6,609	9,394	67.6%	13,900
E260	Commercial Energy Efficiency Information	0	0	0		0
E262	Commercial Rebates	8,676	16,551	25,227	176.2%	14,319
	Total Electric Programs	64,082	119,999	**184,081**	103.6%	177,719
G205	C/I Retrofit	492,329	584,622	1,076,951	137.9%	781,000
G208	RCM	334,229	1,097,922	1,432,151	102.3%	1,400,000
G251	C/I New Construction	28,424	440,261	468,685	163.9%	286,000
G260	Commercial Energy Efficiency Information	0	0	0		0
G262	Commercial Rebates	109,623	452,934	562,557	270.1%	208,250
	Total Gas Programs	964,605	2,575,739	**3,540,344**	132.3%	**2,675,250**

Figures 6d and 6e show the relative savings and expenses for all EES Business programs.

Figure 6d: Business Sector 2011 Savings, as percents of totals

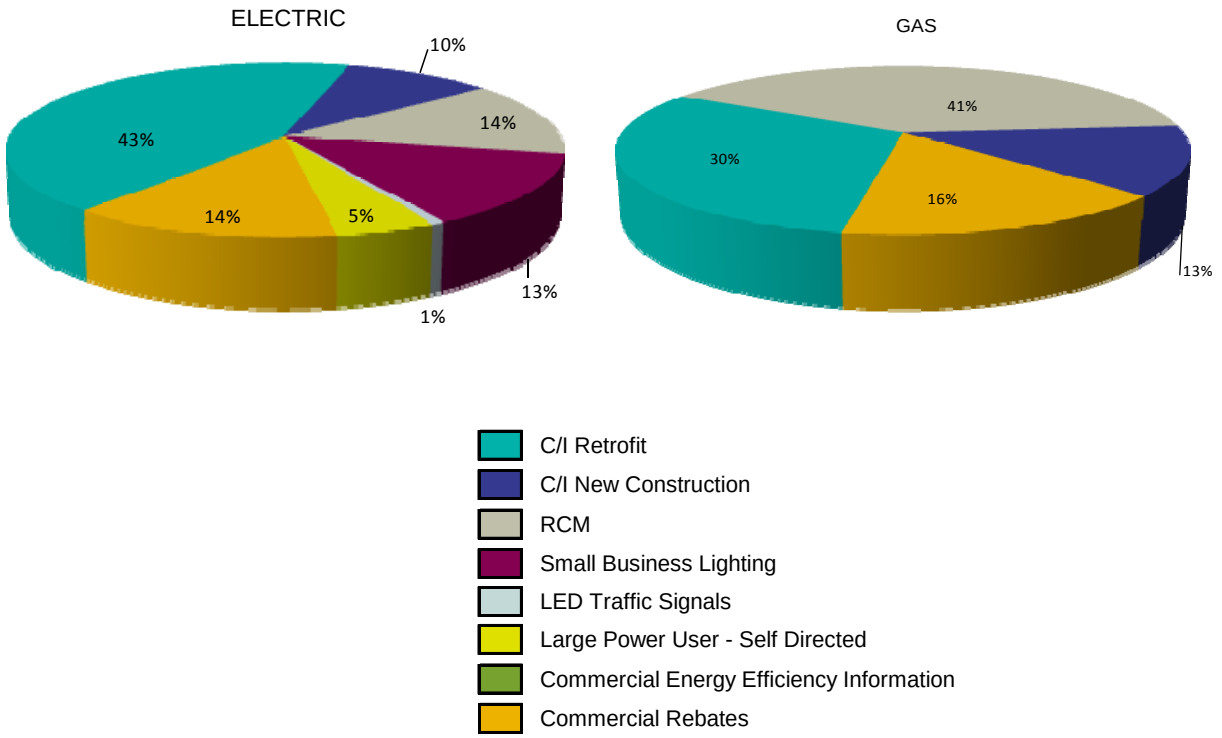
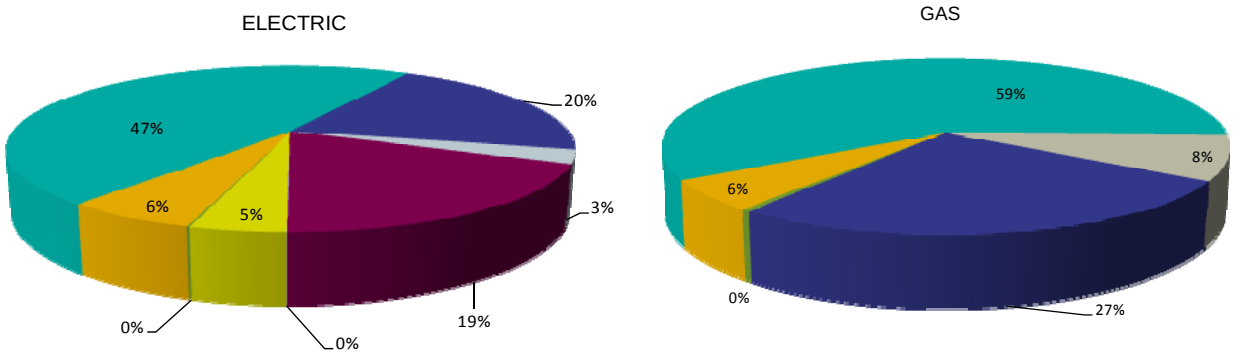


Figure 6e: Business Sector 2011 Expenses, as percents of totals



Business Energy Management Cost-Effectiveness

Table 6e represents the Utility Cost and Total Resource Cost benefit-to-cost ratios for the Business Sector.

Table 6e: Business Sector Cost Effectiveness Tests

Benefit to Cost Ratios		
	Utility Cost	**Total Resource Cost**
Electric	4.60	2.79
Gas	3.05	1.49

Table 6f and Table 6g provide highlights of data[47] used to determine the Sector's UC B/C and TRC B/C, respectively. The complete UC and TRC tables are presented in Exhibit 2 of this report.

[47] Some columns, included in the Exhibit 2 Cost-Effectiveness tables, are excluded in Table 6e for brevity. Exhibit 2 contains all pertinent columns used to calculate the UC and TRC benefit-to-cost ratios.

Table 6f: Business Sector 2011 Electric Cost Effectiveness Data

Schedule Number	Program Name	All Cost-Effectiveness Tests: kWh Savings	Utility Cost and TRC Tests: Program Overhead Costs	Utility Cost and TRC Tests: Total Incentive Payments	TRC Test: Incremental Measure Costs	TRC Test: Other Contributions	Utility Cost Test: Total Utility Costs	TRC Test: Total Resource Costs	Utility Cost Test: Benefit Cost Ratio	Total Resource Cost Test: Benefit Cost Ratio
E250	Commercial/Industrial Retrofit	79,595,974	$3,950,413.98	$14,547,722.25	$34,732,677.07	$0.00	$18,498,136.23	$38,683,091.05	5.06	2.66
E251	Commercial/Industrial New Construction	18,437,630	$108,648.75	$7,740,464.00	$9,648,605.00	$0.00	$7,849,112.75	$9,757,253.75	2.97	2.62
E253	Resource Conservation Manager	25,190,993	$771,752.00	$263,530.00	$1,914,402.00	$0.00	$1,035,282.00	$2,686,154.00	6.41	2.72
E255	Small Business Lighting	25,058,942	$605,384.86	$6,860,029.00	$9,239,882.00	$0.00	$7,465,413.86	$9,845,266.86	3.73	3.11
E257	LED Traffic Lights	1,176,230	$500.00	$33,010.00	$278,953.00	$0.00	$33,510.00	$279,453.00	18.12	2.39
E258	High Voltage, Self-Directed	9,393,575	$46,995.44	$1,697,572.00	$2,366,036.00	$0.00	$1,744,567.44	$2,413,031.44	6.20	4.93
E262	Business Rebates	25,227,144	$566,961.52	$1,915,463.28	$6,624,563.07	$0.00	$2,482,424.80	$7,191,524.59	6.96	2.64
E260	Business Energy Efficiency Information	0	$48,936.98	$0.00	$0.00	$0.00	$48,936.98	$48,936.98	-	-
	Gas Conservation Comm/Ind Tracker AFU	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	-	-
	Total Business Energy Management	**184,080,488**	**$6,099,593.53**	**$33,057,790.53**	**$64,805,118.14**	**$0.00**	**$39,157,384.06**	**$70,904,711.67**	**4.60**	**2.79**

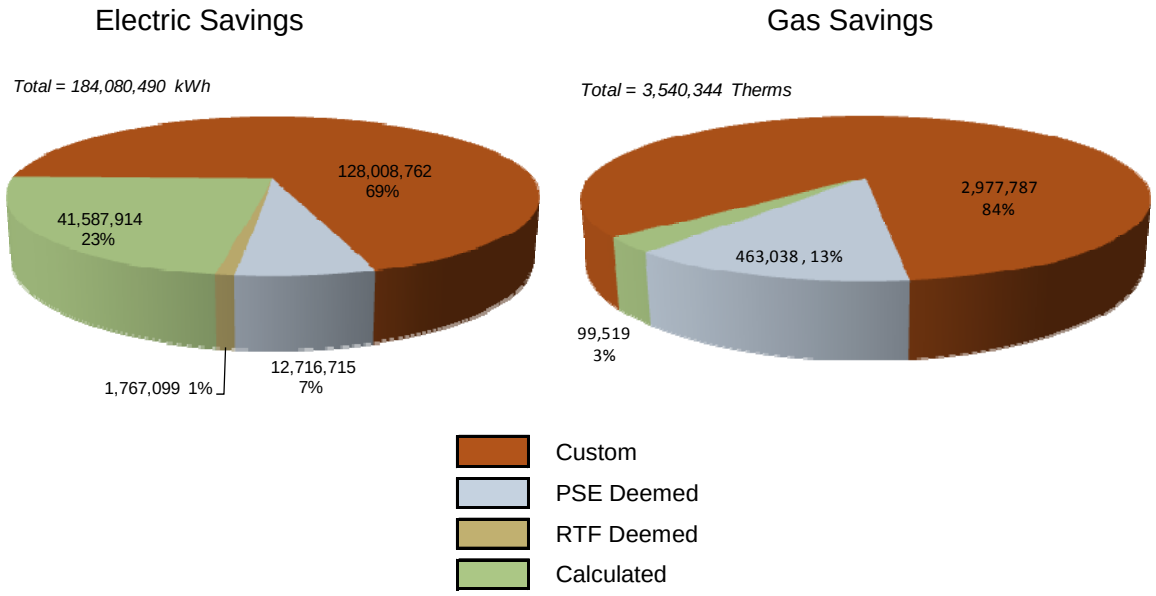
Table 6g: Business Sector 2011 Gas Cost Effectiveness Data

Schedule Number	Program Name	All Cost-Effectiveness Tests: Therm Savings	Utility and TRC Tests: Program Overhead Costs	Utility and TRC Tests: Total Incentive Payments	TRC Test : Incremental Measure Costs	TRC Test: Other Contributions	Utility Cost Test: Total Utility Costs	TRC Test: Total Resource Costs	Utility Cost Test: Benefit Cost Ratio	Total Resource Cost Test: Benefit Cost Ratio
G205	Commercial / Industrial Retrofit	1,076,951	$ 602,777	$ 4,174,211	$ 8,683,317	$ -	$ 4,776,988	$ 9,286,094	2.80	1.44
G251	Commercial/Industrial New Construction	468,685	$ 58,447	$ 2,136,994	$ 4,273,988	$ -	$ 2,195,441	$ 4,332,435	2.37	1.20
G208	Resource Conservation Manager	1,432,151	$ 411,209	$ 250,975	$ 1,034,956	$ -	$ 662,184	$ 1,446,165	5.46	2.50
G262	Commercial Rebates	562,557	$ 101,852	$ 364,816	$ 1,494,346	$ -	$ 466,668	$ 1,596,198	5.60	1.64
G260	Business Energy Efficiency Information	0	$ 35,072	$ -			$ 35,072	$ 35,072	0.00	0.00
	Gas Conservation Comm/Ind Tracker AFUCE	0	$ 1,035	$ -	$ -	$ -	$ 1,035	$ 1,035	0.00	0.00
	Total Commercial Programs	**3,540,344**	**$ 1,210,392**	**$ 6,926,996**	**$ 15,486,607**	**$ -**	**$ 8,137,388**	**$ 16,696,999**	**3.05**	**1.49**

Savings Distributions by Measure Type

Figure 6f 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[48].

Figure 6f: Business Sector Savings Distributions by Measure Type



Business Revisions

With increased goals in 2011 and significant growth in demand for services and incentives, the Business team took several significant steps throughout the year to increase productivity while maximizing quality.

- We improved project management tools and reviewed processes to improve worker efficiency and throughput.
- We implemented more stringent QC review requirements for all programs.
- We revised our program offerings in response to changing market conditions.
- The WUTC approved several changes to the Large Power User Self-Directed Program, including a new cost allocation methodology.

Details of these changes and improvements are included in Business Programs, Section 7.

[48] 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 EES Energy Management Engineers.

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BUSINESS PROGRAMS

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 Building Energy Optimization Program (BEOP) 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, 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. For example, measure-specific incentives are provided through the Energy Smart Grocer Program (ESG).

Program Performance

Tables 7a and 7b provide a summary of 2011 expenditures and energy savings for the Commercial/Industrial Retrofit program.

Table 7a: Business Retrofit 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget		
Electric	Electric	Dollars					Electric
Gas	Gas	Dollars					Gas
E250 C/I Retrofit		$ 6,975,156	$11,522,980	$18,498,136	92.2%	#	$ 20,071,487
G205 C/I Retrofit		$ 1,800,400	$2,976,588	$4,776,988	117.0%	#	$ 4,083,403

Table 7b: Business Retrofit 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E250 C/I Retrofit		28,131	51,465	79,596	102.0%	78,000
G205 C/I Retrofit		492,329	584,622	1,076,951	137.9%	781,000

2011 Accomplishments and Activities:

As shown in Tables 7a and 7b above, the program exceeded the 2011 goal and the electric program was under budget.

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.

- PSE added a new Enhanced Lighting Retrofit option that provides increased incentives for customers who do comprehensive retrofits, addressing all lighting, inside and out. Other C/I retrofit program incentive amounts remained unchanged through 2011.
- To prepare our customers and lighting contractors for new Federal Efficiency Standards that will take effect in 2012, PSE has stepped up customer awareness through the “Re-Energize Your Lighting” messaging.

- Rebates for group re-lamping to reduced-wattage T8 lamps were developed to replace the custom analysis approach, which was initially used to gain experience with this measure. Incentives for this measure are now being processed more efficiently by the Commercial Rebates group under Schedule 262.
- Completions of K-12 and higher education efficiency projects receiving stimulus funding through the Office of the Superintendent of Public Instruction (OSPI) and the Department of Commerce contributed a significant portion (12.6%) of the total electric savings for the Retrofit program. Retrofit projects driven by ARRA stimulus funds contributed less than 1% of total savings.
- The Building Energy Optimization Program (BEOP) continued to bring in new customers. New participants are in the large office building, K-12 and hospital categories. In addition there has been repeat business from a customer with multiple office buildings and chiller plants. Several projects entered into the final bonus, or performance phase in which customers demonstrate that they can maintain the efficiency improvements that were implemented.

  We continued to provide close supervision for providers in their first jobs to assure quality work and help them fully understand program requirements. Several new providers were qualified to participate, while a few qualified providers left due to changing employment. Two additional Energy Management Engineers were trained to work with customers on the BEOP program to help meet the demand.

  PSE partnered with the Electric League, other local utilities, NEEA and others to present a three-day "Practical Existing Building Commissioning Workshop," attended by commissioning providers, utility customers, and utility staff. It was valuable to raise awareness and understanding of benefits and best practices in Building Energy Optimization.
- PSE's Energy Smart Grocer Program saw significant growth in participation in 2011.

Gas

The majority of gas project savings in 2011 resulted from large space heating upgrade projects, ventilation controls and heat recovery measures. OSPI and ARRA projects contributed less than 1 percent of total gas savings for the Retrofit program.

Miscellaneous

- PSE's Energy Management Engineers provided support for two 3rd party evaluations: KEMA Review of PSE Measurement & Verification Practices which stated PSE's M&V processes "are in line with or exceed similar practices among utility peers," and Navigant's Commercial and Industrial Energy Efficiency Retrofit Custom Programs Portfolio Evaluation which published an "As Evaluated" Realization Rate of 100.3 percent for the Gas Retrofit program, and 102.3 percent for the Electric Retrofit program. PSE's engineers were involved in reviewing proposals submitted in response to the RFP, contractor selection, data requests, meetings with contractors, explaining the program to contractors, reviewing preliminary reports, etc.

- To enhance service to specific market sectors, 2012 program planning efforts resulted in several new contracted programs for 2012. Three contracts were initiated in 2011 for retrofit programs beginning in early 2012. One program targets small to mid-sized data centers. Two programs are designed to achieve low-cost / no-cost efficiency improvements. One focuses on industrial manufacturing processes, while the other supports customers in tuning up commercial building systems. With these new programs and the existing Energy Smart Grocer program, PSE will have four contracted programs serving the commercial and industrial retrofit markets in 2012.
- PSE made several revisions to its project tracking systems to improve the ability to forecast savings and budget results for projects in various stages of completion.
- To ensure quality LED lighting products are installed under the custom grant program, regional LED qualification criteria coordinated through the Lighting Design Lab, became a requirement for LED products installed through the custom grant retrofit program. All PSE installed LED products are required to be on one of the coordinated lists.

2011 Results by Project and Measure Type

Table 7c 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 7c: Commercial/Industrial Retrofit Projects and Measures

Project Type	Count	
Electric savings only	644	
Gas savings only	80	
Both electric and gas savings	42	
Energy Smart Grocer (Elec. Only)	286	
TOTAL	1,052	
Measure Type	**Electric**	**Gas**
Lighting	602	0
HVAC	83	68
Domestic Hot Water	1	5
Envelope	11	11
BEOP*	15	1
Energy Smart Grocer	388	0
Other	63	16
TOTALS	1,163	101

* BEOP Measures refer to project phases completed

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. Four 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 70 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 is a whole building prescriptive approach applicable to office, school and retail facilities less than 100,000 square feet. PSE recommends standardized packages of efficiency measures that typically yield savings of 10 percent or more versus a facility constructed to the minimum requirements of Washington State Energy Code. Due to the time required for design and construction, these projects typically take two or more years to complete.

The fourth path includes Prescriptive Basis incentives for Measures that are eligible for rebates under Schedule 262E/262G, Commercial and Industrial Incentive Program. This makes it simpler for customers and trade allies to determine the potential incentive amount for these measures: i.e. the incentive amount for a Measure is the same as that which is available under Schedule 262E/262G. Typically, eligible measures would be included in a standard grant agreement, along with other measures as described in the first path above. Energy savings for eligible measures 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.

Program Performance

Tables 7d and 7e provide a summary of 2011 expenditures and energy savings for the Commercial/Industrial New Construction program.

Table 7d: Business New Construction 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget		
Electric	Electric	Dollars					Electric
Gas	Gas	Dollars					Gas
E251 C/I New Construction		$ 1,502,783	$6,346,330	$7,849,113	95.1%	#	$ 8,249,734
G251 C/I New Construction		$ 179,988	$2,015,453	$2,195,441	147.6%	#	$ 1,487,218

Table 7e: Business New Construction 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E251 C/I New Construction		3,881	14,557	18,438	119.0%	15,500
G251 C/I New Construction		28,424	440,261	468,685	163.9%	286,000

2011 Program Revisions

A new Washington State Energy Code was scheduled for adoption on July 1, 2010, but was delayed until January 1, 2011 by the Governor due to its potential impact on the State's economy. Since we compare costs and savings to a code-compliant option, projects receiving building permits in 2011 are affected by the change. The prescriptive whole building path was not available for buildings permitted in 2011, but was utilized for projects that were permitted prior to the Energy Code change.

2011 Accomplishments and Activities:

As shown in Tables 7d and 7e above, the program significantly exceeded the savings goal for the year.

Electric

Completion and payment of projects slowed from previous years. Projects continued to consist of the normal program mix: a few large projects providing significant energy savings combined with an aggregate of smaller projects.

A majority of the electric savings are attributed to large healthcare projects, large office buildings, and several school projects.

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

Gas

A majority of the gas savings are attributed to a large healthcare project, a large high school, and several large office projects.

2011 Results by Project and Measure Type

Table 7f 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 new building project might include an envelope measure, lighting measure, and HVAC measure.

Table 7f: Commercial/Industrial New Construction Projects and Measures

Project Type	Count	
Electric savings only	26	
Gas savings only	6	
Both electric and gas savings	38	
TOTAL	70	
Measure Type	**Electric**	**Gas**
Lighting	13	0
HVAC	21	11
Domestic Hot Water	1	3
Envelope	1	1
Commissioning	6	4
Other	10	0
Whole Building (Model)	10	8
Whole Building (Prescriptive)	5	1
TOTALS	67	28

Resource Conservation Manager

Schedules E253/G208

Description

First shared-program completed its final contract with outstanding results across all three years to achieve a total of nine percent reduction in electricity relating to 2.6 million kWh.

The second Annual RCMMys were awarded to customers who demonstrating outstanding efforts in RCM program implementation.

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 baseload 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).

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.

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;

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. Grant 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.

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.

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.

Program Performance

Tables 7g and 7h provide a summary of 2011 expenditures and energy savings for the Resource Conservation Manager program.

Table 7g: Resource Conservation Manager 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget	
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget			
Electric	Electric	Dollars					Electric	
Gas	Gas	Dollars					Gas	
E253 Resource Conservation Manager - RCM		$ 441,266	$594,016	$1,035,282	57.6%	#	$ 1,797,897	
G208 RCM		$ 285,748	$376,436	$662,184	86.7%	#	$ 763,386	

Table 7h: Resource Conservation Manager 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E253 Resource Conservation Manager - RCM		8,228	16,963	25,191	77.5%	32,500
G208 RCM		334,229	1,097,922	1,432,151	102.3%	1,400,000

Process Improvements

RCM program staff continued to focus on improving program mechanics, documentation, and support resources. This year the team expanded by adding an Associate Application Analyst to the Data Team, a Sr. EME to the program management team, and a Temp to assist the PM team in year-end analysis. Two program focus groups were held to gather customer input for program improvements, and an RCM Salary Survey was initiated to realign measure cost and incentive with current market. The annual savings process was fine-tuned and all year-end documentation was standardized and templates finalized. In addition, the team adopted standards for formatting customer electronic files and aligned several existing customer files to match that standard. Finally, a professional services contract was signed with LPB Energy for ongoing maintenance and technical support of UM Pro and Server; and also with Itron to upgrade Energy Interval Services from version 4.0 (2005) to current version 7.0.

2011 Accomplishments and Activities:

As of December 31, 2011, there were more than 100 customers engaged in PSE's RCM program. Collectively, these efforts helped to manage energy and resources in over 154 million square feet of facility space and impacted roughly 7,200 PSE accounts.

Program growth included the addition of two new customers. Several customers reached the end of their initial three-year agreement and signed a "renewal grant" for a second three-year term. Approximately 30 percent of all RCM customers are now in a "renewal" phase, six of these are in a second or third renewal meaning they have been involved in the program for over six years.

Newly-formed shared-RCM programs, which combine smaller entities into a portfolio of sufficient size to participate in the RCM program, began to complete their first-year deliverables. WSU's Energy Extension office is also supporting these programs, and according to WSU, the shared-programs being implemented outside of PSE's service territory lack formal utility support and have a hard time getting off the ground. The PSE-supported shared programs indicated they strongly benefited from PSE's assistance and experience. Many of these customers demonstrated solid initial progress and became showcase success stories for the shared-program concept.

To support customers' energy accounting efforts, program staff facilitates the on-going maintenance of 96 Utility Manager Databases. This year the data team processed roughly 2,400 data extractions from PSE systems to deliver monthly billing data to customers. In addition, the data team managed more than 6,800 AMR meters in PSE's Energy Interval Services; approximately 530 of these were activated in 2011. There are an additional 136 meter activation requests pending.

The RCM training calendar kicked off in March when nearly 100 customers participated in the 4th annual RCM program meeting. The program meeting brings all RCM participants together for both training and networking opportunities. In addition to the program meeting, this year's training calendar included eight day-long training sessions and two regional networking events. To date, the program has offered 56 training courses with a total of nearly 900 registrants.

As part of our continued partnership with Building Operator Certification (BOC) and NEEC, 48 customers participated in four technical webinars, all of which were also hosted by PSE in order to include BEM employee participation. The RCM program provided training stipends to three customers who successfully completed BOC Level 1 Certification.

Miscellaneous:

Below, are some summary statistics related to 2011 RCM activity:

- The program managed 88 RCM contracts.
- More than 100 customers are served under those RCM contracts.
- These represent 7,200 PSE customer accounts.
- At least 32 customers are in a "renewal" phase, that is, the second term of their participation.
- Six customers have more than one renewal, meaning they have been in the program for over six years.
- There are five Shared RCM Programs including one for small independent businesses.
- Approximately 2,400 data extractions were pulled from PSE systems and delivered to customers.
- There were more than 6,800 AMR meters managed in PSE's Energy Interval Services; approximately 530 activated in 2011 with an additional 136 pending activation requests.

2011 Results by Customer Sector

Table 7i below shows the number of customers participating in the RCM program, and the total facility area in each major customer sector.

Table 7i: Number of RCM Customers and Facility Area by Sector

Customer Sector	No. of Customers	Facility SqFt	% based on SqFt
School Districts	36	54,738,000	36%
Government	39	41,929,000	27%
Military	1	17,200,000	11%
Commercial	6	15,656,000	10%
Higher Education	11	11,507,000	7%
Grocery	2	6,448,000	4%
Hospitals	4	5,337,000	3%
Industrial	3	920,000	1%
Non Profit	1	321,000	0%
TOTALS	103	154,056,000	100%

Small Business Lighting Rebates

Schedule E255

Description

The Small Business Lighting program provides a menu of lighting retrofit rebate options that meet the needs of most small business customers and maintains a network of lighting contractors and vendors that effectively serve small businesses. Rebates cover a wide variety of efficient conversions including incandescent, fluorescent, high intensity discharge (HID), exit signs, and lighting control options.

Program Performance

Tables 7j and 7k provide a summary of 2011 expenditures and energy savings for the Small Business Lighting program.

Table 7j: Small Business Lighting 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget		
Electric	Electric	Dollars					Electric
Gas	Gas	Dollars					Gas
E255 Small Business Lighting Rebate		$ 3,441,574	$4,023,840	$7,465,414	108.0%	#	$ 6,910,836

Table 7k: Small Business Lighting 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E255 Small Business Lighting Rebate		11,672	13,387	25,059	109.0%	23,000

2011 Program Revisions

New measures were added to the program for integral LED lamps in response to customer interest, much improved quality, and rapidly decreasing costs which have made these measures cost effective. A multi-utility group, led by PSE, decided on appropriate criteria for qualifying products and set forth a regional standard, which was adopted by utilities in Oregon, Washington, and Idaho.

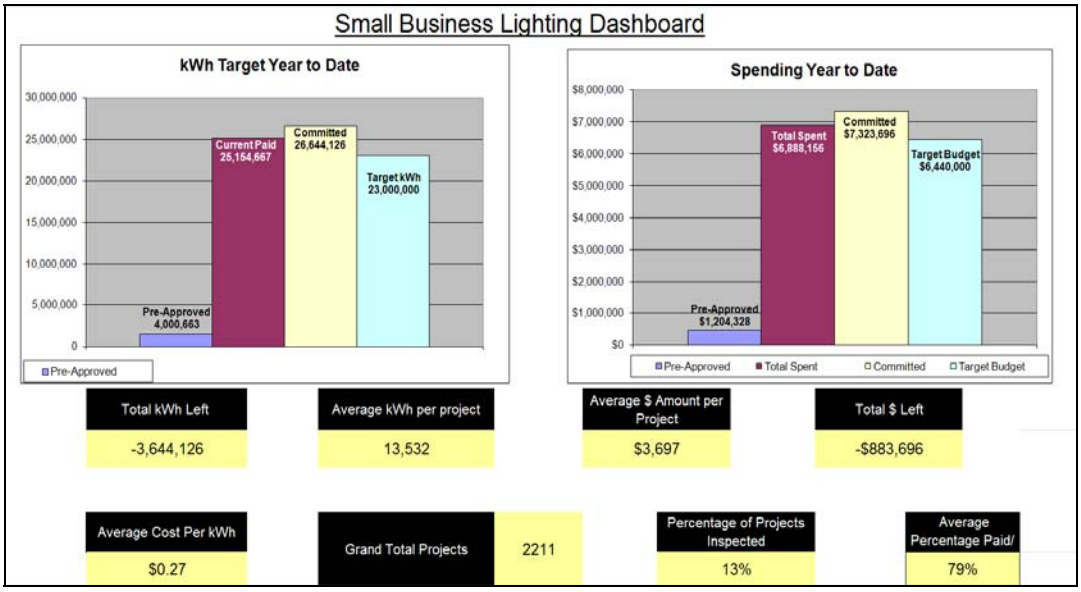
Rebates for group re-lamping to reduced wattage T8 lamps were added to provide customers who have already upgraded to T8 an opportunity for efficiency improvement as well as preparing them for the changes in Federal Efficiency Standards regarding linear fluorescent lighting.

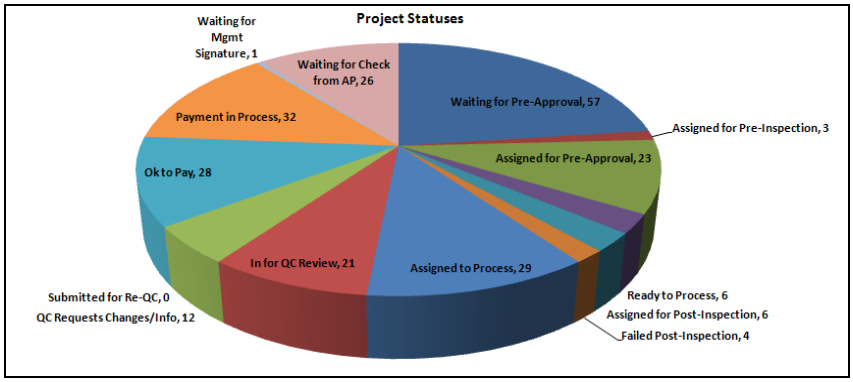
Process Improvements

Contractor training on program processes and requirements allowed for a better flow of work and an increase in total projects completed. Members of the Small Business Lighting and Commercial Lighting Rebate Teams conduct this training, typically on a monthly basis, so that the attendees are able to become familiar with all the programs and the staff that manage them.

An enhanced quality control process improved overall project quality and accuracy. A checklist was created that includes all the major steps required to prepare a project for payment. Every project is passed on to a peer in the program to review all steps. The manager responsible for signing and approving the project verifies key project components again prior to final approval. Figure 7a is a representative screen image of the Small Business Lighting dashboard, used to provide status on a wide variety of lighting projects.

Figure 7a Screen Image of the Small Business Lighting Dashboard





2011 Accomplishments and Activities:

Table 7l 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 7l: Number of Small Business Lighting Measures Installed

Measure	Electric
T12 to T8 measures	56,000
Other lighting measures	43,000
Total measures	99,000
T12 to T8 % of Total measures	56.3%

LED Traffic Signals

Schedule E257

Description

The program educates public-sector customers with traffic control authority (cities, counties, and DOT's) on the benefits of installing red, green and yellow LED traffic signals. Customers must receive electric service from PSE to qualify for the rebates, and customers with unmetered accounts must document all connected load at the intersection.

Program Performance

Tables 7m and 7n provide a 2011 summary of expenditures and energy savings for the LED Traffic Signals program.

Table 7m: LED Traffic Signals 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget		
Electric	Electric	Dollars					Electric
Gas	Gas	Dollars					Gas
E257 LED Traffic Signals		$ 19,131	$14,379	$33,510	99.9%	#	$ 33,543

Table 7n: LED Traffic Signals 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E257 LED Traffic Signals		709	467	1,176	235.2%	500

2011 Program Revisions

There were no revisions to the LED Traffic Signals program during 2011.

Process Improvements

An enhanced quality control process improved overall project quality and accuracy. A checklist was created that includes all the major steps required to prepare a project for payment. Every project is passed on to a peer in the program to review all steps. The manager responsible for signing and approving the project verifies key project components again prior to final approval.

2011 Accomplishments and Activities:

This program significantly exceeded its annual savings goal. A portion of the savings is due to municipalities that leveraged their ARRA funding to provide greater economic benefit to the local communities.

2011 Results by Number of Measures Installed

Table 7o below shows the number of LED Traffic Signals installed. For example, a two-sided traffic light might have 6 measures installed (2 green, 2 yellow, 2 red).

Table 7o: Number of LED Traffic Signals Installed

Measure	Total
LED Traffic Signal	2,900

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.

In September 2011, a revised program was filed to implement the Peak Credit Method for calculating Schedule 120 Rider rates for non-retail wheeling customers.

Allocations increased from $7.4 M to $12.2 M for non-retail wheeling customers.

A total of 33 customers at 39 locations are allotted Schedule 258 funding.

Notably, the program cycle extended by one year to total 5 years to enable customers to utilize their increase in allocations.

As of December 31, 2011, 31 projects are signed and ready for implementation.

An ACEEE research report stated, "The PSE program is an excellent example of how to leverage the flexibility inherent in a self-direct program."

Program Performance

Tables 7p and 7q provide a summary of 2011 expenditures and energy savings for the Large Power User/Self-Directed program.

Table 7p: Large Power User/Self Directed 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
E258	Large Power User - Self Directed	$ 588,856	$1,155,711	$1,744,567	26.6% #	$ 6,568,725

Table 7q: Large Power User/Self Directed 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
E258	Large Power User - Self Directed	2,785	6,609	9,394	67.6%	13,900

2011 Program Revisions

In response to the 2010 Electric Settlement Condition K(11)(c), PSE worked with the CRAG to review cost allocation methodology included in the 2002 Settlement Agreement and in Docket No. UE-970686 prior to the 2011 Schedule 120 filing. Per results of this review, PSE applied the Peak Credit Method (vs. a fixed rate) in setting Schedule 120 rates for non-retail wheeling customers eligible for the Large Power User Self-Directed Program. This change was approved by the WUTC in September of 2011. As a result, total incentives for the non-retail wheeling customers increased from approximately $7.4 million to $12.2 million. Additionally, PSE began withholding program administration fees (7.5 percent) and NEEA market transformation fees (10 percent) from non-retail wheeling customers and revised incentive allocations for non-retail wheeling customers to collect program administration and market transformation fees that were previously uncollected. Due to the significant increase in customer allocations in the second year of the program cycle, PSE worked with the CRAG to extend the current program cycle by one year to total five years to enable customers to utilize the increase in allocations. The deadline for project completion in this cycle is now Dec. 31, 2014, with allocations based on collections through December 31, 2013.

2011 Accomplishments and Activities:

Uncertainty of the program's future and individual customer allocation amounts, due to regulatory proceedings, appears to have delayed project development and implementation activities in 2011, with the program providing savings that were lower than target.

In October, 2011, ACEEE published a research report on all "opt-out" and "self-direct" industrial efficiency programs in the US, titled, "Follow the Leaders: Improving Large Customer Self-Direct Programs". The primary focus was on the components of self-direct programs critical to their success and efficacy. The report states, "Puget Sound Energy administers one of the more creatively structured self-direct programs in the nation …". The report goes on to say, "The PSE program is an excellent example of how to leverage the flexibility inherent in a self-direct program." The report concludes, "… most self-direct programs lack at least one of the critical components identified as necessary to maximize the cost-effective energy efficiency in their target sectors." PSE's Large Power User/Self-Directed program includes all of these critical components.

The December 31, 2011 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.

2011 Results by Project and Measure Type

There were 15 projects completed in 2011. Table 7r below shows the number of measures installed. A project may include more than one measure.

Table 7r: Large Power/Self-Directed Number of Measures

Measure Type	Number, Electric
Lighting	8
Process	4
HVAC	2
Other	2
TOTALS	16

Business Information Services

Schedule E260/G260

Description

Comprehensive descriptions of EES's Information Services' integrated activities are provided in the Residential Programs section, beginning on page 73 of this report. Many of the functions and services outlined in the Residential Programs discussion are applicable to the Business Sector. Slight differences include:

Energy Advisors

In 2011, time allocated to the Business Sector of Information Services was 0.5 of a Full Time Employee. 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.

On-line Services

The On-Line Business Energy Profile is applicable to small businesses. Figure 7b shows a view of Energy Efficiency Services' Business Website on PSE.com

Figure 7b: EES Business Website on PSE.com

Events

The Business Sector primarily focuses on trade shows, and specific events that pertain primarily to Commercial or Industrial customers.

2011 Activities and Accomplishments

Business Energy Management (BEM) has been visible at a variety of events sponsored by professional organizations, local business organizations and at national conferences during 2011. Giving presentations was the most prominent activity for BEM staff with examples including the manager of Business Energy Management on The Power of Utility Company Incentives. The 2011 Powerful Business Conference represented a successful joint effort of the Puget Sound area utilities.

As exhibitors, BEM has been part of the tradeshows for the numerous customer-based organizations including the Northwest Food Service show, Washington Lodging Association, Healthcare Sector Seminar and the Washington Schools Nutrition Association. Table 7s indicates the total of Business-related events in which EES was a sponsor or participant.

Table 7s: Business-related Events in 2011

Business Events	
Type	**Count**
Business Energy	24
TOTAL	**24**

Program Performance

Table 7t represents 2011 summaries for Business Information Services.

Table 7t: Business Information Services 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget	
Schedule	**Programs**	**Q1 & Q2**	**Q3 & Q4**	**Total**	**YE % of Budget**			
Electric	Electric	Dollars					Electric	
Gas	Gas	Dollars					Gas	
E260 Commercial Energy Efficiency Information		$ 42,569	$6,368	$48,937	30.5%	#	$	160,276
G260 Commercial Energy Efficiency Information		$ 28,861	$6,211	$35,072	33.8%	#	$	103,720

Commercial Rebates

Schedules E262/G262

Description

PSE offers fixed rebates for select, commonly applied Measures to commercial customers. Rebate measures are those with energy savings that can reasonably be standardized over a wide variety of applications, and that have competitive market pricing to ensure cost-effectiveness. The 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
- Green Motor Rewind

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.

The Commercial Rebates team includes a variety of programs, from kitchen equipment, HVAC, refrigeration, appliances, and PC controllers.

The group includes a supervisor, four engineers, a program manager, program coordinator, program implementer, a business analyst, and an administrative specialist.

Together, they track and verify measure installations, process rebates, incentive payments ,and reseller incentives.

The team has also been instrumental in leading the development of the Lighting Design Lab, and in managing contractor and vendor performance.

Program Performance

Tables 7u and 7v provide a summary of 2011 expenditures and energy savings for the Business Rebates program.

Table 7u: Business Rebates 2011 Expenditures

2011 Expenditures		2011 Semi-annual View					2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget		
Electric	Electric	Dollars					Electric
Gas	Gas	Dollars					Gas
E262 Commercial Rebates		$ 999,047	$1,483,378	$2,482,425	94.0%	#	$ 2,640,768
G262 Commercial Rebates		$ 241,940	$224,728	$466,668	90.7%	#	$ 514,352

Table 7v: Business Rebates 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Goal
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Goal	
Electric	Electric	MegaWatt-Hours				Electric
Gas	Gas	Therms				Gas
E262 Commercial Rebates		8,676	16,551	25,227	176.2%	14,319
G262 Commercial Rebates		109,623	452,934	562,557	270.1%	208,250

2011 Program Revisions

Commercial Kitchen: Savings for Hot Food Holding Cabinets were adjusted to reflect Regional Technical Forum assumptions. PSE coordinated with staff from Seattle City Light, Snohomish County PUD, and Tacoma Power to implement rebate levels for this program that are the same. This was done to simplify the program for customers and vendors.

Premium HVAC Service: Airflow testing was discontinued as a requirement for standard service. It was found to have no effect on the program outcome and, because it is very time consuming, this change is expected to encourage contractors to perform the service more often.

PC Power Management: After an evaluation study provided information supporting savings and other aspects of the measure, the program was re-opened with minor adjustments in claimed energy savings at the beginning of 2011.

Commercial Lighting: New measures were added to the program for integral LED lamps in response to customer interest, much improved quality, and rapidly decreasing costs. A multi-utility group, led by PSE, decided on appropriate criteria for qualifying products, which were adopted by utilities in Oregon, Washington, and Idaho. Rebates for low wattage T8 lamps were added to provide customers who have already upgraded to T8 an opportunity for efficiency improvement. To prepare our customers and lighting contractors for new Federal Efficiency Standards that will take effect in 2012, PSE has stepped up customer awareness through the "Re-Energize Your Lighting" messaging.

Process Improvements

Dashboards were added to the program tracking spreadsheet so that individual program information is more readily available.

Premium HVAC Service: Improvements were made to reporting from NEEC to PSE to speed up reporting and the payment process.

An enhanced quality control process improved overall project quality and accuracy. A checklist was created that includes all the major steps required to prepare a project for payment. Every project is passed on to a peer in the program to review all steps. The manager responsible for signing and approving the project verifies key project components again prior to final approval.

2011 Accomplishments and Activities:

Table 7w below shows the number of measures, by category, installed in 2011. 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 7w: Number of Business Rebate Measures Installed by Type

Program Group	Measure Type	Total Measures	Electric	Gas
Commercial Kitchens				
	Cooking Equipment	210	90	120
	Refrigeration	50	50	-
Water Heating		-	-	-
	Dishwashers	100	40	60
	Commercial Washers	290	170	120
	Spray Heads Contracted	3,990	2,240	1,750
	Spray Heads Direct Install	520	390	130
	Laundry Water Heating	-	-	-
	Restaurant Water Heating	20	-	20
HVAC		-	-	-
	HE HVAC (Tons)	1,820	1,690	130
	Prem. HVAC Service	1,420	930	490
	VSDs (Horsepower)	5,000	5,000	-
	Portable Classroom Controls	110	110	-
	ECMs (Square Feet)	46,540	46,540	-
	Programmable T-stats	20	20	-
	Hospitaltiy	100	100	-
Lighting (non-SBL)		-	-	-
	Commercial Lighting	27,220	27,220	-
	Lighting Markdown	22,760	22,760	-
PC Power Management		-	-	-
	PC Power Manager	3,530	3,530	-
Misc. Equipment				
	Green Motor Rewinds	7	7	-
	Premium Efficiency Motors	2	2	-

REGIONAL EFFICIENCY PROGRAMS AND RELATIONSHIPS

Northwest Energy Efficiency Alliance

Schedule E254

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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 2011, Puget Sound Energy invested $5.26 million in NEEA, or 13.9% of its total funding. This report summarizes NEEA's 2011 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.

Program Performance

Tables 8a and 8b provide a year-to-date summary of expenditures and energy savings for the Northwest Energy Efficiency Alliance program.

Table 8a: NEEA 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Northwest Energy Efficiency Alliance		$ 2,551,762	$2,689,844	$5,241,606	99.6%	$ 5,260,640

Table 8b: NEEA 2011 Savings

2011 Savings		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total 2010	YE % of Goal	
Electric	Electric					Electric
Gas	Gas					Gas
Northwest Energy Efficiency Alliance		11,750	11,750	23,500	100.0%	23,500

2011 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 the service area of Puget Sound Energy (PSE) from January 1 through December 31, 2011. PSE appreciates the considerable effort demonstrated by NEEA to assemble the following discussion.

FILLING THE ENERGY EFFICIENCY 'PIPELINE' FOR PUGET SOUND ENERGY

NEEA's top focus, as prioritized by stakeholders, is to bring new energy-efficient technologies and practices to the market to increase the long-term potential of energy efficiency. In partnership with its funders, including Puget Sound Energy, NEEA is now actively engaged in more than 40 projects investigating technologies and practices that will have broad benefits for the region. By leveraging resources from across the region, NEEA provides a mechanism for the individual utilities to invest in emerging technologies in a way that minimizes risk to any single funder and maximizes potential benefits for all. Emerging technology initiatives currently underway at NEEA represent a 20-year savings potential to the region of over 1700 aMW. They include:

RESIDENTIAL

HEAT PUMP WATER HEATERS (HPWH) – According to the 6th Power Plan, HPWHs represent potential regional savings of 490 aMW by 2030. In 2011 NEEA revised the Northern Climate Specification for Heat Pump Water Heaters in partnership with the Northern Climate Heat Pump Water Heater task force. Puget Sound Energy played a crucial role with key staff participating in the task force. The revised specification provides guidance to manufacturers for developing HPWHs that meet ENERGY STAR criteria while delivering comfort and energy performance in Pacific Northwest climates. The revised specification will help accelerate regional market adoption of this technology. Also in 2011, NEEA:

- Released a qualified products list for HPWHs that meet the Northern Climate Specification. Qualified products, (2 tier-I units and 1 tier-II unit), deliver both energy savings and comfort anywhere in the Northwest, including Puget Sound Energy territory.
- Hosted a HPWH workshop May 25-26 in Seattle, with participants from Puget Sound Energy, Bonneville Power Administration, Energy Trust of Oregon, Snohomish PUD, Seattle City Light, Idaho Power, Canada and the Northeast U.S. The workshop resulted in two new working groups on technical issues and regional program design.
- Visited 377 retail locations in Puget Sound Energy territory to educate retailers and consumers on the best applications of HPWH technology in cooler climates to maximize potential energy savings. NEEA also supported Puget Sound Energy's distribution of updated incentive information via the regional consumer website smartwaterheat.org.

RESIDENTIAL TEST BED - In 2011, NEEA completed the design of a 100-home Residential Test Bed study, the first of its kind in 25 years to take a detailed look at home energy use in the Northwest. In Puget Sound Energy territory, 30 homes are slated to participate in this study. Results will provide: 1) detailed information about energy use by consumer electronics, lighting, appliances, HVAC and hot water; 2) and, real-world data from in-home trials of emerging residential energy efficiency technologies; 3) a baseline to compare future residential technologies for use in Puget Sound Energy territory and across the region.

COMMERCIAL

SOLID-STATE LIGHTING, **NETWORK OUTDOOR LIGHTING CONTROLS –** Solid-state (LED) street lights combined with network lighting controls represent potential savings to the Northwest of between 44-100 aMW over the next 20 years. In 2011, NEEA completed a market study of outdoor network lighting controls for streetlights and launched a visual performance test of LED streetlights with the City of Seattle (scheduled for completion in March 2012). Results from this test will inform the municipal application of solid-state streetlights across Puget Sound Territory and the region. NEEA is also providing technical support to the Illuminating Engineering Society, which sets standards for acceptable outdoor lighting illumination levels, to help influence illumination standards associated with use of LEDs in solid state lighting.

COMMERCIAL LIGHTING SOLUTIONS - Lighting represents up to 43% of the total electric load in commercial buildings and is an important target for utility commercial portfolios. In collaboration with Northwest utilities, NEEA launched a Comprehensive Commercial Lighting initiative in 2011 that targets lighting trade allies. The goal of this initiative is to determine what combination of enhanced training, incentives and program requirements might drive lighting trade allies to deliver projects that redesign lighting systems, rather than simply replacing fixtures. NEEA is providing Puget Sound Energy with on-going learning from these comprehensive lighting pilots to assist with the development of Puget Sound's own comprehensive lighting effort.

LUMINAIRE-LEVEL LIGHTING CONTROLS – In 2011, NEEA partnered with Puget Sound Energy and other Northwest utilities to study the energy savings potential of luminaire-level lighting controls. Lighting controls are considered the next big energy saving measure for utilities. However, there are significant barriers to adoption and proper implementation, including behavior change. This 'proof-of-concept' study, which is expected to generate results in Q3 2012, will address several research questions:

- Are luminaire-level lighting controls easy to install as claimed by the manufacturer?
- Do they save energy in the out-of-box configuration and how much energy is saved by tuning the controls?
- Are end-users happy with the control logic?
- How well do the control power meters capture actual power usage?

EXISTING BUILDING RENEWAL - Commercial buildings consume enormous amounts of energy, approximately 40% of all electricity loads. In fact, NEEA estimates that if just 16 % of the commercial building space made energy efficiency renovations, regional energy savings could reach nearly 100 average megawatts (aMW) by 2025. NEEA's Existing Building Renewal (EBR) initiative will offer a comprehensive suite of resources to help building owners in the Northwest evaluate and achieve savings of 30% or more through whole-building retrofits. These resources will include a web tool to help walk building owners through the process of a deep energy retrofit, and an integrated set of building-type specific measures that can be implemented to achieve a deep energy savings. This initiative represents potential savings to the region of 120 aMW over the next 15 years, and will create value for Puget Sound Energy by providing a platform for significant savings and incentive opportunities.

INDUSTRIAL/ AGRICULTURAL

GREEN PUMPS - In 2011, NEEA initiated a contract with the Green Motors Practices Group to study refurbishment techniques that both restore aging industrial pumps and deliver energy efficiency at levels at or above original (refurbishment can result in an estimated 6-7% increase in pump efficiency). The long-term goal of this initiative is to develop a refurbishment specification that repair shops can replicate and establish a deemed savings value to allow pump refurbishers in Puget Sound territory and across the region to collect rebates. Savings for this initiative have not yet been calculated, but the strategy could be deployed across numerous markets including agriculture, industrial, commercial and municipal water.

INDUSTRIAL REFRIGERATION - In 2011, NEEA partnered with the National Refrigeration Engineers and Technicians Association (RETA) on a strategy to develop energy efficiency certification for refrigerator operators. This strategy consists of curriculum development, pilot testing of certification in the region, and continuing education, and will directly result in energy-savings through hands-on training exercises. This initiative is significant as the first example of high-impact (i.e. resulting in energy savings) industrial training with the potential to influence a national-level market (as RETA is a national association). In late 2011, NEEA presented this strategy to the Puget Sound Area RETA chapter who agreed to participate in demonstration classes for its members in 2012.

COMMUNICATION AND TRAINING – NEEA's bi-weekly 'Tech Talk' bulletin provides regular updates on emerging technology initiatives to regional stakeholders including those in the Puget Sound area. In 2011, NEEA's Emerging Technology group convened several webinars to facilitate regional information sharing and collaboration around emerging technology initiatives, including:

- Using System Dynamics to Forecast Emerging Technologies
- Deep Savings in Commercial Buildings
- Solid State Streetlight Visual Performance Study
- Network Streetlight Controls
- NEEA Emerging Technology 2012 Draft Plan
- Packaged Roof Top Unit HVAC Systems for Commercial Buildings
- Luminaire Level Lighting Controls - Proof-of-concept field study
- Residential stretch building codes
- Residential windows

ACCELERATING MARKET ADOPTION

NEEA leverages the power of millions of energy consumers in the Northwest to influence key market actors, remove barriers and build market capacity for energy efficiency. With support from funders like Puget Sound, NEEA designs and executes strategic market interventions to create lasting change and deliver long-term savings to the region.

RESIDENTIAL

Electricity demand in the Northwest is projected to grow by 7,000 average megawatts (aMW) between 2010 and 2030[49]. Residential electricity use, particularly with consumer electronics and air conditioning in homes, accounts for significant portions of this increase. To combat this rising energy growth, NEEA collaborates with upstream market actors (e.g. utilities, builders, manufacturers, retailers and dealer networks) in the residential sector to accelerate market adoption of energy-efficient products, services and practices.

NORTHWEST ENERGY STAR HOMES - Through its Northwest ENERGY STAR Homes initiative NEEA helps accelerate market adoption of energy-efficient homes and builds market capability through education and training. The success of the Northwest ENERGY STAR Homes initiative was critical in preparing the market for adoption of a new Washington residential energy code effective January 1, 2011.

- In 2011, State Providers certified 506 homes in Puget Sound territory as Northwest ENERGY STAR Homes. NEEA works in collaboration with Puget Sound Energy to provide training and other resources to builders and verifiers to increase market share of energy-efficient homes. As of November, 2011, market share of energy-efficient homes in Washington State was 13.2%, exceeding NEEA's 2011 regional goal of 11%.
- NEEA trained 57 builders, 110 appraisers and 23 HVAC installers (in partnership with Puget Sound Energy) in Puget Sound Energy territory to strengthen market capacity to offer Northwest ENERGY STAR Homes to customers. In 2011, 29 new builders in Puget Sound Energy territory started offering Northwest ENERGY STAR Homes to its customers.
- NEEA worked to support sales of Northwest ENERGY STAR Homes and to increase homebuyer awareness through realtor training and promotional activities. In 2011, NEEA trained 203 realtors in Puget Sound Energy service territory.
- NEEA launched the *Welcome Home* campaign to drive targeted pre-qualified home buyers to builders' model homes. Puget Sound Energy collaborated with NEEA by offering cooperative funding to participating builders to off-set campaign-related costs. The campaign leveraged market platforms and partnerships to increase consumer awareness for energy-efficient homes. In Washington State, the campaign recruited 16 builders of energy-efficient homes, for a total of 45 houses, and invested $38,000 in paid media including public service announcements, print and radio advertising.

DUCTLESS HEAT PUMPS (DHPs) - NEEA's Northwest Ductless Heat Pump Pilot project is designed to accelerate market adoption of ductless heat pumps (DHPs) and to increase the market capacity to deliver this energy-efficient technology. With the potential for approximately one million installations in the Northwest, DHPs have the potential for significant long-term savings by replacing energy-intensive electric resistance heat.

[49] The Northwest Power and Conservation Council's 6th Power Plan

- NEEA supports DHP installations in Puget Sound Energy territory by building infrastructure, through its Master Installer program, to support product delivery. Master Installer status allows consumers to identify contractors who are experienced with ductless technology, committed to great customer service, and follow industry best-practices. In 2011, Puget Sound Energy incented 520 DHP installations across its territory.
- To continue to improve the energy efficiency of DHPs available in the U.S., NEEA provided input on the ENERGY STAR "Most Efficient" category and inclusion of DHPs. (The current ENERGY STAR label is not an effective metric of ductless heat pump efficiency for the Northwest.)
- To increase DHP retail sales and accelerate market adoption, NEEA engaged the retail market including The Home Depot, to increase consumer interaction with DHP technology and provide new delivery channels.
- To increase market adoption of DHPs, NEEA coordinated with Washington utilities and trade ally networks to communicate the Washington Department of Labor and Industries decision that indoor disconnect switches will not be required on most residential DHP installations.

CONSUMER ELECTRONICS - Through its Consumer Electronics initiative, NEEA helps increase market availability and consumer adoption of "most-efficient" televisions within the service territory of Puget Sound Energy. The goal of NEEA's regional midstream retail and training strategy is to encourage major retailers to recognize energy efficiency as an important product attribute, and increase consumer awareness of 'Most Efficient' (ENERGY STAR v. 5) televisions, and.

- NEEA visited 416 participating retail locations in Puget Sound Energy territory, distributing 4690 pieces of point-of-purchase material, and delivering 497 training sessions with sales associates. As a result of NEEA's activities, participating retailers representing 70-80% of the Northwest television market are exceeding the 2011 objective that 28% of sold TVs meet or exceed the most efficient specification (ENERGY STAR version 5.3 for Televisions). This represents significant energy savings for the Puget Sound region.
- To further help retail customers identify the most efficient products NEEA launched the *Energy Forward* regional marketing campaign in partnership with Sears and other utility partners. The campaign, which was hosted on Facebook and promoted through retail locations, received 445 entries. NEEA and Puget Sound Energy coordinated to announce campaign winners, two of whom were Puget Sound Energy customers.
- To increase market availability of 'most efficient' televisions, NEEA continued to advance utility retail partnerships and drive awareness of energy efficiency as an important product attribute at the buying offices of major retailers including Walmart - the world's largest retailer.
- To promote energy efficiency standards, NEEA actively participates in national initiatives to raise voluntary specifications and standards for consumer electronics. In 2011, NEEA submitted comment letters to ENERGY STAR in order to help ensure

increased stringency, maximize energy savings opportunity, and seek better alignment with utility programs.

COMMERCIAL

The 6th Power Plan estimates that energy use in the commercial sector will increase between 6,700-9,200 aMW by 2030. NEEA's commercial initiatives accelerate the adoption of energy-efficient products, practices and services within the commercial sector, and help decision-makers see energy efficiency as a bottom line and competitive opportunity. The following are highlights from NEEA's 2011 commercial initiatives:

COMMERCIAL REAL ESTATE –NEEA's Commercial Real Estate Initiative works to promote and foster energy- efficient building-management practices among building owners. By overcoming barriers to the management, operation, financing and marketing of energy-efficient commercial buildings, NEEA is helping to make energy efficiency a measurable asset in commercial properties.

- With public and private sector partners, co-founded Seattle 2030 District, a high-performance building district aimed at reducing environmental impacts of the downtown Seattle business district through a 50% reduction in energy consumption below the national average by 2030.
- Through the "Kilowatt Crackdown", NEEA, BOMA King County, and utility partners including Puget Sound Energy, challenged building owners to benchmark their energy use and work to reduce it over a two-year period. In total, 71 buildings representing over 21 million square feet of office space participated in the competition. Participants received free scoping studies, outlining recommendations for operational and capital improvements to increase energy efficiency. This will lead to both operational and retrofit opportunities in Puget Sound Energy's service territory.
- To advance adoption of Strategic Energy Management in the commercial building sector, NEEA's Real Estate Market Partners Program engaged property management firms in Puget Sound Energy Territory:
    - NEEA worked with Henbart LLC, a premier real estate company with properties in Puget Sound Energy territory, to produce scoping studies for two buildings totaling 132,437 square feet. As a result, Henbart implemented 56% of NEEA recommendations and is benchmarking energy performance of newly-acquired properties through the ENERGY STAR portfolio manager tool
    - NEEA partnered with Kidder Mathews, one of the largest independent Real Estate firms on the west coast to produce scoping studies for buildings in Puget Sound Energy territory. The Firm implemented 39% of NEEA's technical recommendations, and is planning building-level energy performance reporting, training, and increased tenant engagement in 2012.
    - NEEA worked with Wright Runstad, a Seattle-based real estate development and operating company to provide scoping studies for 11 buildings totaling 4.1 million square feet. The firm implemented 25% of NEEA recommendations to improve building energy efficiency.

- NEEA hosted the "2011 BetterBricks Awards" for Puget Sound, honoring energy efficiency leaders in the commercial building market. This event honored 12 winners from 22 nominations, with 218 business leaders attending.
- To drive awareness of energy-efficient commercial building opportunities in Puget Sound markets and elsewhere, NEEA published the Green Building Opportunity Index, which drew local and national prominence, with numerous references by national media.

HEALTHCARE – NEEA partnered with state healthcare engineering associations, the national chapter of the American Society of Healthcare Engineers (ASHE) and ENERGY STAR to develop the ASHE Energy Efficiency Commitment ("E2C") campaign. Participating facilities are challenged to benchmark their energy performance work toward improving energy efficiency by 10% through low-cost/ no-cost operational improvements. In Puget Sound Energy territory 8 healthcare facilities are participating in the campaign.

- Completed the 10-part E2C Peer Technical Forum, an online series offered in partnership with ASHE region 10. NEEA developed the series to support participants in the ASHE Region 10 E2C Benchmarking Campaign to improve the performance of their hospitals.

NEW BUILDING DESIGN - To deliver a powerful suite of building services state-wide to designers, owners and operators, NEEA supports the Seattle Integrated Design Lab (IDL) along with Puget Sound Energy.

- In 2011, the Seattle Integrated Design Lab received a US Department of Energy grant to develop 'Target 100' hospital prototypes for 5 climate zones across the US. Prototypes must have a simulated energy use of no more than 100 EUIs[50] (Energy Use Index), thus the name 'Target 100'. This represents approximately 60% in energy savings from a typical hospital facility.

- In late 2011, Puget Sound Energy completed the validation of savings from a new acute care hospital built by Swedish Hospital and Medical Center. NEEA contributed to the achievement of these savings through both the Integrated Design Lab (which was involved in supporting the design and construction of the building) and NEEA's BetterBricks initiative (which worked with Swedish to develop a strategic energy management plan that became the basis for establishing a highly aggressive energy performance goal for this hospital). The result was a validated energy savings of over 5.6 million kWh per year, which will directly benefit Puget Sound Energy's customer.

TRAINING AND EDUCATION

- To build regional market knowledge and capability, and support the City of Seattle's energy performance disclosure efforts, NEEA delivered 5 energy benchmarking

[50] EUI = total amount of energy used by a building per square foot of floor area, metered on an annual basis.

courses to more than 200 Puget Sound-area building operators including customers of Puget Sound Energy. Attendees created an account in the ENERGY STAR Portfolio Manager, and learned how to enter their utility data, set energy targets and track energy performance.

- NEEA accelerated adoption of energy-efficient practices in commercial building operations by delivering 10 Building Operator Certification (BOC) courses across the region in 2011. Presented through International Building Operators Association, Northwest Energy Efficiency Council, and Northwest Energy Education Institute, the course increases building operators' skills and knowledge of energy-efficient operations and maintenance best practices. Two-hundred and forty building operators attended, including 133 from Washington State.
- To help remove real estate industry barriers to quantifying energy efficiency and then to link investments in energy efficiency to increased asset and property values, NEEA offered two innovative courses for industry professionals. "Value Beyond Cost Savings" and "Adding Value to Commercial Real Estate through Building Performance". In total, over 40 investors, energy professionals and appraisers attended including some from Puget Sound Energy territory.
- To teach professionals how to use energy modeling to design more energy-efficient buildings, NEEA partnered with IDL Seattle to deliver 'Performance Modeling', a 10 week course.

INDUSTRIAL/ AGRICULTURAL

Within the industrial and agricultural sectors, NEEA helps to facilitate the establishment of industry-wide energy efficiency goals, and supports regional stakeholders to advance best practices.

CONTINUOUS ENERGY MANAGEMENT - NEEA developed *Continuous Energy Improvement* as a widely-accessible energy efficiency methodology that results in validated energy savings of 2% on average, year over year, in participating industrial facilities. In 2011, NEEA worked with partner utilities to design a version of *Continuous Energy Improvement* that served as a pathway to the new ISO 50001 international standard for energy management (adopted in June 2011). Regional utilities including Puget Sound Energy can now offer this standard to industrial customers to support their efficiency and business goals. NEEA is further supporting regional implementation of the new standard by developing tools to overcome barriers to adoption.

FOOD PROCESSORS - NEEA continues to work with U.S. Dept. of Energy and Northwest Food Processors Association (NWFPA) to set an industry-wide energy intensity reduction goal of 25% in 10 years, and 50% in 20 years. The 2010 Industrial Energy Savings Memo reports final energy savings of 0.3 aMW for the state of Washington from direct involvement of *Continuous Energy Improvement* at food processing facilities in 2010.

STRATEGIC ENERGY MANAGEMENT - In January 2011, NEEA partnered with BPA, Energy Trust of Oregon and Washington State University Extension Energy Program to host 80 industrial decision-makers at the 3rd Annual Northwest Industrial Energy Efficiency Summit to advance Strategic Energy Management practices by manufacturing leaders. By sponsoring and promoting the event, NEEA is building regional market capability and increasing market adoption of energy-efficient business practices within the industrial sector.

SMALL/MEDIUM INDUSTRIAL - NEEA is developing and configuring a whole-product strategic energy management solution for small-to medium-sized manufacturing businesses in the Northwest that will enable industry groups to reduce group-wide energy intensity. In 2011, NEEA formed Small-Medium Industrial working group with representatives from Puget Sound Energy, Bonneville Power, Energy Trust, Washington State University and the Northwest Food Processors Association. This group will convene in 2012 to discuss how to implement NEEA's Small/ Medium Industrial Initiative in order to enhance and maximize impact from existing efficiency programs in the region.

TRAINING - To embed best-practices for industrial energy efficiency, and to increase adoption of energy efficiency in Puget Sound Energy territory, NEEA trained 6 Puget Sound Energy customers from 2 separate facilities. Trainings offered were: 1) Compressed Air Energy Management - Level 1, and, 2) Energy Management: Introduction to Best Practices.

CODES & STANDARDS

NEEA supports energy codes development, training, and education in Washington State in partnership with the Department of Commerce, the Washington State University Energy Extension Program and the Northwest Energy Efficiency Council. NEEA views codes and standards as the end game of NEEA's market transformation effort by permanently "locking in" savings through regulatory requirements.

ENERGY CODES – In 2011, NEEA provided funding to develop curriculum and train 748 building officials and design and construction professionals in Puget Sound Energy's service territory on the Washington State Energy Codes. As a result of these efforts code compliance should increase leading directly to increased savings in new construction. NEEA also visited 15 local building departments across Washington to obtain information on energy code data collection and enforcement practices. This information will allow NEEA to target code training dollars in the state most effectively.

STANDARDS - To advance more stringent federal appliance and equipment standards in support of the region's energy efficiency goals, NEEA participated in a broad range of national standards rulemakings including: clothes washers; general service fluorescent & incandescent reflector lamps; central air conditioners & heat pumps; residential water heaters; regional standards enforcement & compliance; and, set-top boxes. Also in 2011:

- DOE published its final rule on florescent lamp ballast standards, which was heavily informed by NEEA's comments and considerable data-analysis. The new standard, which will be implemented in 2014, will save the region an estimated 26 aMW annually
- NEEA contributed key comments to US Environmental Protection Agency on the proposed ENERGY STAR Water Heater Specification. This resulted in discussions about integrating NEEA's revised northern specification for Heat Pump Water Heaters into federal test procedures and standards.

- NEEA submitted comments to the US Department of Energy's Office of Hearings and Appeals (OHA) arguing against General Electric's petition to exempt its modified spectrum florescent lamp products from efficiency standards that take effect in July 2012. NEEA successfully argued that exempting these products would create a loophole in the efficiency regulations. OHA denied GE's petition.
- NEEA launched a 50-household study of clothes dryers use in the Northwest. The study will explore in a real-world setting typical household dryer use, including number and weight of average laundry loads, and energy demand. The DOE will use this data to design a realistic test procedure to evaluate clothes dryers against its new standard. Similarly, NEEA also launched a household-study of refrigerator/ freezers ice-makers to characterize typical energy-use, and develop a realistic test standard.

DELIVERING ON REGIONAL ADVANTAGE

NEEA is the only alliance of public and private electric utilities with national and global upstream market partners that represents the entire four-state region in the Northwest. NEEA aggregates resources to develop economies of scale and mitigate risk to individual utilities. NEEA uses its unique role as a regional organization to leverage resources across the Northwest to maximize energy efficiency.

In 2011, NEEA's Stakeholder Services group continued its efforts to support Puget Sound Energy, other regional utilities, and energy efficiency organizations through market research, collaboration and information sharing. These activities support the region by leveraging economies of scale associated with regional information services, events and training, and providing a mechanism for the region to share information and accelerate learning.

EFFICIENCY CONNECTIONS NORTHWEST- is the region's energy efficiency conference, the only event developed by and for regional utility professionals from both public-and investor-owned utilities. Developed in partnership with regional utilities, the conference facilitates collaboration and sharing of information, experiences and best practices across the region**.**

EFFICIENCY CONNECTIONS NORTHWEST 2011 was held in Tacoma Washington, November 2-3, with 37 registered attendees from Puget Sound Energy.

CONDUITNW.ORG – Developed in partnership with NEEA, regional utilities with additional support from Bonneville Power Administration, "Conduit" is a new online community that facilitates information-sharing, coordination and collaboration among energy efficiency stakeholders in the Northwest. Launched in May 2011, Conduit will directly benefit Puget Sound Energy by allowing staff to share best practices, learn about new technologies, promote events and leverage the collective knowledge of the region. Conduit currently has over 1,200 registered users in the Northwest, including 57 from Puget Sound Energy.

NORTHWEST RESEARCH GROUP – To conduct and coordinate regional market research, foster peer-review, and facilitate knowledge-sharing, NEEA re-established the Northwest Research Group. The Northwest Research Group is facilitated by NEEA and brings together the region's evaluators, market researchers and planners. Key personnel from Puget Sound Energy participate in this effort.

REGIONAL ENERGY EFFICIENCY MESSAGING AND TOOLKIT - In partnership with the new Regional Marketing Coordinating Council NEEA initiated the Regional Energy Efficiency Marketing Toolkit project. Key deliverables from this project include an energy-efficiency messaging platform and marketing tool-kit for use by utilities.

REGIONAL COORDINATION POTENTIAL ASSESSMENT - At the request of the Regional Portfolio Advisory Committee, in 2011 NEEA initiated a systematic review of areas where coordination might benefit the region's utilities.

EVALUATION AND MARKET RESEARCH

NEEA is committed to having both its current and past initiatives evaluated by objective third-party evaluators in order to continuously validate and refine its market transformation work. NEEA's Market Research and Evaluation group issued the following third party reports in 2011:

1. Analysis of 2010 energy savings from CEI - Report concluded validated electric savings of 2.6 aMW in 2010. Overall, the validation results are positive, showing a trend of increasing annual savings, for total 10.8 aMW savings from 2006-2010.

2. 2010 Long Term Monitoring and Tracking Report - Estimates 2.9 aMW additional energy savings from five previously funded NEEA initiatives: ENERGY STAR Residential Windows, Building Operator Certification, SAV-AIR and Drive Power.

3. Long-term Northwest Residential Lighting Tracking and Monitoring Study – Completed the third long-term monitoring and tracking study of compact florescent lights, which concludes that minor changes occurred in availability, affordability and diversity of CFLs across the region. The report concludes that CFL sales levels are likely to plateau as most consumers surveyed for this report do not plan to install more CFLs until their existing bulbs burn out.

4. Market Progress Evaluation Report #6 of the Industrial Initiative – Report concluded that 36 percent of the food processing target market is currently practicing Continuous Energy Improvement (CEI), surpassing NEEA's 2009 goal of 13 percent. The majority of the participating facilities practicing CEI attributed their decision to NEEA, NEEA's contractors, and/or local utility programs based on CEI.

5. Market Progress Evaluation Report #5 of the BetterBricks Initiative - Report concluded that the BetterBricks initiative had met the bulk of its 2010 objectives in each of its 4 target markets, but was unable to associate changed business practices with energy savings that could be validated by a third party.

6. Market Progress Evaluation Report #3 of the 80 Plus initiative: Concludes 80 PLUS initiative has made strong progress in transforming the market for energy-efficient power supplies. Market share of 80 PLUS market was 0% in 2005, growing to the current estimate of 37 % of desktop PCs sold in the U.S

7. Market Progress Evaluation Report #1 of the Northwest Ductless Heat Pump Initiative – Concludes that the DHP initiative has had significant market impact: manufacturers are incorporating NEEA program elements into their training and marketing materials; 80% of HVAC contractors have installed at least one DHP; utility program administrators cite improvement in installation quality among installers likely as a result of NEEA's Master Installer Program. As of October 2011, over 12,000 DHPs have been installed through the Initiative region wide. Homeowners continue to express high levels of satisfaction with the technology and overall purchase process.

8. Ductless Heat Pump Impact and Process Evaluation - Lab Testing: Concludes two ductless heat pump (DHP) models (Fujitsu 12RLS and Mitsubishi FE12NA) demonstrate high performance. Both models have the ability to deliver significant energy savings in both retrofit and new applications.

9. Ductless Heat Pump Pilot (DHP) Project: Concludes DHP pilot successfully engaged with supply-chain market actors (i.e. manufacturers, distributors and installers), Northwest utilities and home owners and installed 7,116 ductless heat pumps (DHPs) region-wide as of November 2010.

10. Market Progress Evaluation Report #1 of the Consumer Electronics initiative – Concludes that the Northwest market for energy-efficient televisions is transforming, but was unable to quantify the initiative's role in this change. The difficulty in determining initiative-related market effects stems from the dynamic nature of the market. In spite of these difficulties, the evaluator concludes that NEEA's initiative did make positive contributions to increase the market share of energy-efficient televisions.

11. Consumer Electronics Market Research Report: Provides opportunity assessment and market characterization for four residential consumer electronics products: TVs, desktop PCs, game consoles, and streaming media devices. These products, along with other entertainment and IT plug load devices, represent a growing portion of residential electricity consumption.

12. Northwest Residential Code Savings for Idaho, Montana and Washington - Finds that savings from the most recently adopted residential energy codes were 1.8% in Idaho, 4.6% in Washington , and 7.4% in Montana with an overall weighted average of 4.2% for the three states. In energy terms, this amounts to a total savings of about 4,704 MWh (537 aMW) and 732,483 therms for the approximately 27,000 housing units expected to be completed in 2010.

REGULATORY COMPLIANCE/ STAFF INTERACTION

NEEA is committed to serving its regional stakeholders across diverse geographic areas and markets. We encourage stakeholder participation in our processes. During 2011, Puget Sound staff interacted with NEEA as follows:

Puget Sound Participation in NEEA Board, Advisory Committee and Other Public Meetings:

- **NEEA BOARD MEETINGS:** Board Member Calvin Shirley (Puget Sound VP of Energy Efficiency Services) participated in NEEA's 2011 Board of Directors Meetings.

- **NEEA ADVISORY COMMITTEE MEMBERS REPRESENTING PUGET SOUND:**

  NEEA Industrial Advisory Committee: Chao Chen, Supervising Industrial Energy Management Engineer

  NEEA Residential Advisory Committee: Jeff Tripp, Manager, Residential Energy Management

  NEEA Emerging Technologies Advisory Committee: Rem Husted, Consulting Engineer

  NEEA Commercial Advisory Committee: David Landers, Manager, Business Energy Management

  NEEA Regional Portfolio Advisory Committee: Bob Stolarski, Director of Customer Energy Management

  NEEA Cost Effectiveness Advisory Committee: Eric Brateng, Senior Evaluation Analyst

  Northwest Research Group: Eric Brateng, Senior Evaluation Analyst, Bobbi Wilhelm, Senior Evaluation Analyst, Bob Yetter, Market Researcher

  Regional Marketing Coordinating Council: Grant Ringel, Director, Corporate Communications

EFFICIENCY CONNECTIONS NORTHWEST: Puget Sound staff was very involved in the success of the second annual EFFICIENCY CONNECTIONS NORTHWEST Conference, Nov. 2-3, 2011 in Tacoma, WA. Puget Sound Energy led a break-out session entitled – "Monitoring and Verification: What's New in the Region and Around the Nation.", and Bob Stolarski served on the conference Program Committee. Finally, three Puget Sound Energy staff participated as session moderators/speakers: David Landers, Rich Hazzard and Mark Lenssen.

REGULATORY AND COMPLIANCE PARTICIPATION

NEEA staff, management and Board members interact directly with Commissioners and their staff as well as indirectly, through utilities. During the reporting period, NEEA participated in the following activities with regulatory or legislative bodies:

- NEEA presented to the Washington Utilities and Transportation Commission about its activities in the State of Washington, the Pacific Northwest Region, and NEEA's practices and methodologies. Members from Avista Corp. and Public Counsel, Office of the Attorney General, and the Northwest Energy Coalition attended the presentation. Discussion centered on NEEA's delivered value to Washington Ratepayers.

- At the request of the WUTC, NEEA's Director of Emerging Technology Jeff Harris attended the Washington Conservation Working Group, Docket UE-110001, as both a subject matter expert and a representative of NEEA. Working group meeting were well attended by all the major utilities, several vendors and advocacy groups as well as representatives from the national laboratories and the state's attorney general's office. The discussion advanced in this forum resulted in the release of a Commission staff document giving guidance to utilities on filing information and other Commission matters relating to energy efficiency.

ADDITIONAL INFORMATION

For additional information NEEA's 2011 Quarterly Performance Reports and the 2006-2010 Annual Reports are available online.

NEEA is committed to serving its regional stakeholders across diverse geographic areas and markets. We encourage stakeholder participation and appreciate input at all NEEA's Board meetings, Advisory Committee meetings and energy efficiency events around the region. The next NEEA Board of Directors meeting is February 27-28, 2012, in Seattle, Washington and the general public is invited. Please contact Beth McQueston at 503-688-5433 for meeting details.

For additional information please see the "NEEA 2011 Update" submitted to PSE. NEEA organizational reports are available online. See the NEEA 2010 Quarterly Performance Reports and 2006-2009 Annual Reports.

NEEA is committed to serving its regional stakeholders across diverse geographic areas and markets. NEEA encourages stakeholder participation in their open input processes. Interaction is encouraged at NEEA Board meetings, Advisory Committee meetings and energy efficiency events around the region.

The next NEEA Board of Directors meeting is February 18, 2011 in Seattle, Wash. and the general public is invited. Please contact Lis Saunders at 503-688-5495 for meeting time and location details.

Questions or comments on this report? Please contact Virginia Mersereau, Communications Manager, vmersereau@neea.org

Regional Technical Forum (RTF)

Background

In 1996, Congress required the Northwest Power Planning Council (Council)[51] 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:

- 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

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

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, EES will use RTF Deemed measure savings in order to comply with the 2010 Electric Settlement Agreement conditions in section K(6):

> (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.

2011 Accomplishments and Activities

PSE continues its participation with the RTF. Several EES staff members are involved in RTF measure related subcommittees. A member of the Evaluation team is a voting member of the RTF. In 2011, the Regional Technical Forum (RTF) met monthly, 12 times. Comprehensive meeting minutes and presentation materials are available at RTF meetings. Multiple UES Measures and Standard Protocol Measures were reviewed, and approved, or sent back for more analysis by the RTF during these meetings. The PSE EES staff participated in several RTF subcommittees including the Commercial Rooftop HVAC, Direct Use of Gas, Grocery Refrigeration, Ground Source Heat Pump, Measure Cost and Non-energy Benefits, Measure Life, Performance Tested Comfort Systems, Residential Weatherization, Variable Capacity Heat Pump and the Operations subcommittees.

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. Two meetings have been held so far in 2011.

Staff from PSE, Seattle City Light, Snohomish County PUD, Avista, Idaho Power, Pacific Corp, Energy Trust of Oregon (ETO), Northwest Energy Efficiency Alliance (NEEA), and the Washington and Idaho utility commissions have attended. To date, the group has benefited from regional input for NEEA's Residential Building Stock Assessment and the Non-Residential Building Stock Assessment. Participants look forward to greater awareness of research and evaluation activities throughout the region.

Regional Participation

PSE's Contributions beyond its Service Territory

Throughout 2011, PSE partnered with several Puget Sound utilities, including Tacoma Power, Snohomish County PUD and Seattle City Light on energy efficiency initiatives.

WashWise

PSE ended its involvement with the WashWise program in consultation with area utilities. The decision to do so will save significant ratepayer dollars in program administration and deliver a higher level of customer service.

Commercial Kitchens

Two members of the Business Rebates team were made members of the Washington Restaurant Association's Green Team in 2011. They directly contribute to the Association's Conserve Program. This program is now recognized by the National Restaurant Association. The program provides an on-line application that is a simple way for owners to find and employ easy-to-implement cost effective measures for their restaurants. The Business Rebate market manager was nominated for the WA Restaurant Association Allied Member of the Year award, presented as a part of their Toast Our Finest event.

PSE also partnered with Seattle's Community Power Works ARRA-funded program, in cooperation with Seattle City Light. The program helps small restaurants improve their energy efficiency by as much as 15 percent by establishing relationships between contractors and vendors for commercial kitchen equipment.

Commercial Lighting

PSE collaborated with the Bremerton Chamber of Commerce in coordinating a business lighting mark-down event in local retail establishments in the later part of 2011. In ten events, low-cost or free LED lamps were provided to area contractors. The events provided a significant amount of information to the contractors about efficient lighting and resulted in new avenues of opportunities to influence purchasing decisions.

All regional utilities are now using the tool created by PSE in an effort to minimize lesser-quality LED technology and identify high-quality LED products in the market. Regional contractors now have consistent expectations among the utilities, allowing them to streamline their operations and offer enhanced products to their customers.

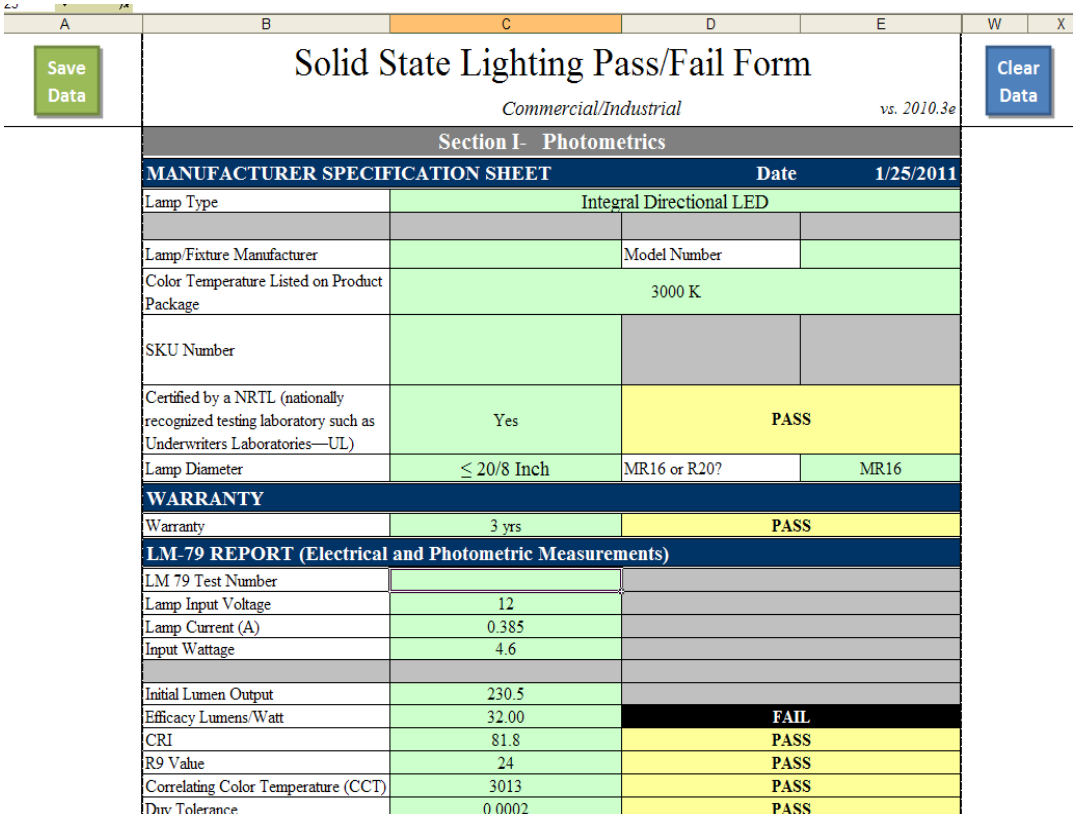
This tool, launched in December of 2010, the Energy Trust of Oregon, Tacoma Power, Snohomish County PUD, Seattle City Light and BPA have all adopted this new method of qualifying LEDs for their programs.

It is also supported by NEEA and there is now a regional qualified LED list which appears on the Lighting Design Lab's website:

http://lightingdesignlab.com/LEDlists.php

Several national webinars have been conducted by PSE on this innovative tool. Figure 8a is a screen shot of the Solid State Lighting Pass/Fail Form.

Figure 8a: LED Lighting Qualification Tool



Save Data

Clear Data

Solid State Lighting Pass/Fail Form

Commercial/Industrial *vs. 2010.3e*

Section I- Photometrics			
MANUFACTURER SPECIFICATION SHEET		**Date**	**1/25/2011**
Lamp Type	Integral Directional LED		
Lamp/Fixture Manufacturer		Model Number	
Color Temperature Listed on Product Package	3000 K		
SKU Number			
Certified by a NRTL (nationally recognized testing laboratory such as Underwriters Laboratories—UL)	Yes	**PASS**	
Lamp Diameter	≤ 20/8 Inch	MR16 or R20?	MR16
WARRANTY			
Warranty	3 yrs	**PASS**	
LM-79 REPORT (Electrical and Photometric Measurements)			
LM 79 Test Number			
Lamp Input Voltage	12		
Lamp Current (A)	0.385		
Input Wattage	4.6		
Initial Lumen Output	230.5		
Efficacy Lumens/Watt	32.00	**FAIL**	
CRI	81.8	**PASS**	
R9 Value	24	**PASS**	
Correlating Color Temperature (CCT)	3013	**PASS**	
Duv Tolerance	0.0002	**PASS**	

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 EES 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.

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

Several PSE employees were also key contributors to the Washington State Conservation Working Group in 2011.

EFFICIENCY SUPPORT ACTIVITIES

Overview

The teams that comprise the Support Activities group play a critical role in EES' success in consistently achieving conservation targets within budget parameters. Much of what EES does and offers to customers is dependent on the work performed by these teams.

EES' 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 2011. Expenditures finished the year at 72 percent of budget for electric and 73 percent of goal for gas. Several community alliances have been established with excellent progress on ARRA-related projects. The efforts within this team have also developed effective marketing programs, completed significant evaluation projects and refined internal support processes.

Comprised of 39 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.

Functional Group Performance

Table 9a provides a year-to-date summary of expenditures and energy savings for the Support Activities team.

Table 9a: Support Activities 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E241	Community Efficiency Manager		$0	$0		$ -
E261	Energy Efficient Technology Evaluation	$ 667	$0	$667	3.6%	$ 18,777
E270	Local Infrastructure, Mkt Transformation	$ 43,240	$0	$43,240	60.9%	$ 71,049
	Conservation Supply Curves	$ 105,414	$92,221	$197,635	62.7%	$ 315,064
	EES Market Integration	$ 92,497	$80,696	$173,193	65.2%	$ 265,625
	Energy Efficient Green Communities	$ 69,297	$105,350	$174,647	71.7%	$ 243,545
	Mainstreaming Green	$ 37,809	$255,555	$293,364	57.4%	$ 511,000
	Strategic Planning & Market Research	$ 276,032	$315,542	$591,574	62.6%	$ 945,016
	Program Evaluation	$ 646,068	$900,311	$1,546,379	97.8%	$ 1,581,303
	Verification Team	$ -	$79,894	$79,894		$ -
	K(6)(g) Third-party review			$0	0.0%	$ 250,000
	Program Support	$ 144,611	$69,598	$214,209	51.3%	$ 417,257
	Total Electric	$ 1,415,635	$1,899,167	**$3,314,802**	**71.8%**	**$ 4,618,636**
G261	Energy Efficient Technology Evaluation	$ 235	$0	$235	1.2%	$ 18,811
G270	Local Infrastructure, Mkt Transformation	$ 3,276	$0	$3,276	7.4%	$ 44,302
G241	Community Efficiency Manager	$ -	$0	$0		$ -
	Conservation Supply Curves	$ 28,803	$27,086	$55,889	71.0%	$ 78,766
	EES Market Integration	$ 40,890	$28,121	$69,011	60.6%	$ 113,825
	Energy Efficient Green Communities	$ 30,943	$38,500	$69,443	75.5%	$ 91,955
	Mainstreaming Green	$ 18,743	$110,104	$128,847	58.8%	$ 219,000
	Strategic Planning & Market Research	$ 74,420	$75,795	$150,215	63.6%	$ 236,254
	Program Evaluation	$ 195,431	$256,434	$451,865	113.7%	$ 397,475
	Verification Team	$ -	$15,345	$15,345		$ -
	Program Support	$ 8,449	$0	$8,449	9.6%	$ 88,073
	Total Gas	$ 401,190	$551,385	**$952,575**	**73.9%**	**$ 1,288,461**

Figure 9a is a representation of proportions of EES Support Activities spending for electric and gas. Tables 9b and 9c represent, for electric and gas respectively, the 2011 actual expenditures by cost element group compared to the same budgeted figures presented in the 2011 Annual Conservation Plan.

Figure 9a: Support Activities 2011 expenses as percents of totals

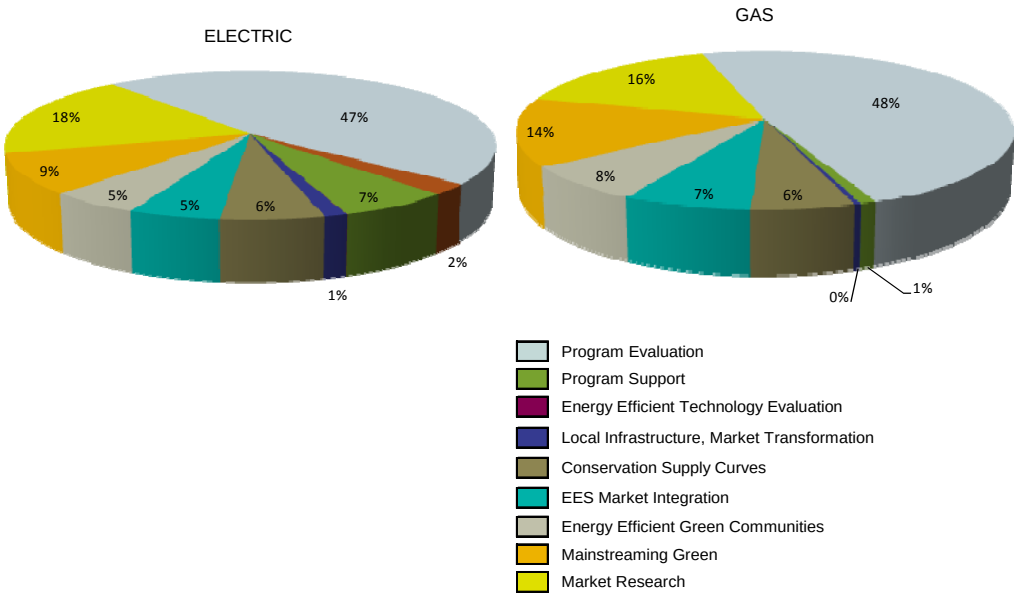


Table 9b: Support Activities 2011 ACP View, Electric Expenditures

Electric

Schedule	Program Name	Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
261	Energy Efficient Technology Evaluation Budget	$ 4,154	$ -	$ 2,617	$ -	$ -	$ -	$ -	$ 12,006	$ -	$ 18,777
	Actual	*$ 397*	*$ -*	*$ 236*	*$ 4*	*$ 23*	*$ 6*	*$ 0*	*$ 0*	*$ -*	*$ 667*
270	Local Infrastructure & Mkt Transformation Budget	$ 2,300	$ -	$ 1,449	$ -	$ -	$ -	$ -	$ 67,300	$ -	$ 71,049
	Actual	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 43,240*	*$ -*	*$ 43,240*
	Conservation Supply Curves Budget Demand profile data collection Electric Efficiency RFP	$ 112,800	$ -	$ 71,064	$ -	$ 1,600	$ 128,000	$ 1,600	$ -	$ -	$ 315,064
	Actual	*$ 94,139*	*$ -*	*$ 55,542*	*$ -*	*$ -*	*$ 47,955*	*$ -*	*$ -*	*$ -*	*$ 197,635*
	EES Market Integration Budget		$ 170,625	$ 81,000	$ -	$ 14,000	$ -	$ -	$ -	$ -	$ 265,625
	Actual	*$ 47,623*	*$ 52,308*	*$ 58,812*	*$ 671*	*$ 7,818*	*$ 5,659*	*$ 184*	*$ 118*	*$ -*	*$ 173,193*
	Energy Efficient (Green) Communities Budget	$ 133,825	$ -	$ 84,310	$ -	$ 18,760	$ 5,250	$ 1,400	$ -	$ -	$ 243,545
	Actual	*$ 99,613*	*$ -*	*$ 60,377*	*$ 91*	*$ 8,917*	*$ 5,261*	*$ 83*	*$ 305*	*$ -*	*$ 174,647*
	Mainstreaming Green Budget		$ 168,000	$ -	$ -	$ -	$ 343,000	$ -	$ -	$ -	$ 511,000
	Actual	*$ 4,681*	*$ -*	*$ 2,762*	*$ 6,036*	*$ 410*	*$ 278,869*	*$ 606*	*$ -*	*$ -*	*$ 293,364*
	Market Research Budget	$ 263,200	$ -	$ 165,816	$ -	$ 3,200	$ 508,000	$ 3,200	$ 1,600	$ -	$ 945,016
	Actual	*$ 256,198*	*$ -*	*$ 150,913*	*$ 7,414*	*$ 11,302*	*$ 164,070*	*$ 643*	*$ 1,035*	*$ -*	*$ 591,574*
	Program Evaluation Budget	$ 166,750	$ -	$ 105,053	$ -	$ 14,000	$ 1,282,000	$ 3,500	$ 260,000	$ -	$ 1,831,303
	Actual	*$ 133,990*	*$ -*	*$ 79,015*	*$ 210*	*$ 15,381*	*$ 1,116,442*	*$ 107*	*$ 202,359*	*$ (1,124)*	*$ 1,546,379*
	Program Verification Team										
	Actual	*$ 48,421*	*$ -*	*$ 28,669*	*$ 138*	*$ 2,084*	*$ 324*	*$ 34*	*$ 224*	*$ -*	*$ 79,894*
	Program Support Budget	$ 213,900	$ -	$ 134,757	$ -	$ 4,200	$ 50,000	$ 4,200	$ 10,200	$ -	$ 417,257
	Actual	*$ 125,144*	*$ -*	*$ 73,742*	*$ 376*	*$ 10,267*	*$ 870*	*$ 3,594*	*$ 216*	*$ -*	*$ 214,209*
	Support Activities Budget Totals	$ 896,929	$ 338,625	$ 646,065	$ -	$ 55,760	$ 2,316,250	$ 13,900	$ 351,106	$ -	$ 4,618,636
	Actual Expenditures	*$ 810,205*	*$ 52,308*	*$ 510,067*	*$ 14,941*	*$ 56,202*	*$ 1,619,456*	*$ 5,249*	*$ 247,520*	*$ (1,124)*	*$ 3,314,801*

Table 9c: Support Activities 2011 ACP View, Gas Expenditures

Gas

Schedule	Program Name	Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
261	Energy Efficient Technology Evaluation Budget	$ 4,154	$ -	$ 2,617	$ -	$ -	$ -	$ -	$ 12,040	$ -	$ 18,811
	Actual	*$ 142*	*$ -*	*$ 84*	*$ -*	*$ 3*	*$ (0)*	*$ 0*	*$ 6*	*$ -*	*$ 235*
270	Local Infrastructure & Mkt Transformation Budget	$ 2,300	$ -	$ 1,449	$ -	$ -	$ -	$ -	$ 40,553	$ -	$ 44,302
	Actual	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 3,276*	*$ -*	*$ 3,276*
	Conservation Supply Curves Budget	$ 28,200	$ -	$ 17,766	$ -	$ 400	$ 32,000	$ 400	$ -	$ -	$ 78,766
	Actual	*$ 27,610*	*$ -*	*$ 16,290*	*$ -*	*$ -*	*$ 11,989*	*$ -*	*$ -*	*$ -*	*$ 55,889*
	EES Market Integration Budget		$ 73,125	$ 34,700	$ -	$ 6,000	$ -	$ -	$ -	$ -	$ 113,825
	Actual	*$ 14,611*	*$ 23,848*	*$ 22,634*	*$ 147*	*$ 2,721*	*$ 4,913*	*$ 81*	*$ 55*	*$ -*	*$ 69,011*
	Energy Efficient (Green) Communities Budget	$ 49,733	$ -	$ 31,332	$ -	$ 8,040	$ 2,250	$ 600	$ -	$ -	$ 91,955
	Actual	*$ 40,623*	*$ -*	*$ 24,567*	*$ 41*	*$ 1,862*	*$ 2,236*	*$ 32*	*$ 81*	*$ -*	*$ 69,443*
	Mainstreaming Green Budget		$ 69,700	$ -	$ -	$ -	$ 149,300	$ -	$ -	$ -	$ 219,000
	Actual	*$ 1,881*	*$ -*	*$ 1,110*	*$ 2,963*	*$ 378*	*$ 122,213*	*$ 302*	*$ -*	*$ -*	*$ 128,847*
	Market Research Budget	$ 65,800	$ -	$ 41,454	$ -	$ 800	$ 127,000	$ 800	$ 400	$ -	$ 236,254
	Actual	*$ 67,092*	*$ -*	*$ 39,520*	*$ -*	*$ 2,471*	*$ 40,590*	*$ 259*	*$ 283*	*$ -*	*$ 150,215*
	Program Evaluation Budget	$ 57,500	$ -	$ 36,225	$ -	$ 2,000	$ 300,000	$ 1,500	$ 250	$ -	$ 397,475
	Actual	*$ 67,643*	*$ -*	*$ 39,887*	*$ 153*	*$ 2,600*	*$ 343,490*	*$ 52*	*$ 128*	*$ (2,087)*	*$ 451,865*
	Program Verification Team										
	Actual	*$ 9,286*	*$ -*	*$ 5,498*	*$ 27*	*$ 417*	*$ 63*	*$ 7*	*$ 47*	*$ -*	*$ 15,345*
	Program Support Budget	$ 51,750	$ -	$ 32,603	$ -	$ 720	$ -	$ 1,200	$ 1,800	$ -	$ 88,073
	Actual	*$ 5,164*	*$ -*	*$ 3,041*	*$ 29*	*$ 144*	*$ 58*	*$ 4*	*$ 9*	*$ -*	*$ 8,449*
	Support Activities Budget Totals	$ 207,687	$ 142,825	$ 165,543	$ -	$ 17,240	$ 610,550	$ 3,300	$ 53,243	$ -	$ 1,288,461
	Actual Expenditures	*$ 234,052*	*$ 23,848*	*$ 152,632*	*$ 3,360*	*$ 10,596*	*$ 525,551*	*$ 737*	*$ 3,884*	*$ (2,087)*	*$ 952,574*

EES support activities are those that are necessary to implement conservation measures, perform Evaluation, Measurement and Verification (EM&V) functions[52], increase consumer awareness of EES 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 EES 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 EES results. Support Activities expenses are spread over the portfolio for purposes of calculating cost-effectiveness. Only Other Electric Programs[53] expenditures are excluded from cost effectiveness calculations.

It is noteworthy that three of these activities have a corresponding Schedule: 241, 261 and 270. This is because, although there are no associated savings claims, they directly affect customers by either offering a service, information or a benefit, and they have a specific budget line item in Exhibit 1.

Business Revisions

Programs within the Support Activities 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 rigorous evaluation process steps, the following program- specific reviews will outline key EES achievements and revisions.

[52] Discussed in detail in the EM&V section of this report.
[53] Net Metering, Small-Scale Renewables and Demand Response pilots.

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SUPPORT ACTIVITIES

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 bogus claims and those that might truly be the new emerging technology that deserves attention.

Program Performance

Table 10a provides a summary of 2011 expenditures for the Technology Evaluation activity.

Table 10a: Technology Evaluation 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E261 Energy Efficient Technology Evaluation		$ 667	$0	$667	3.6%	$ 18,777
G261 Energy Efficient Technology Evaluation		$ 235	$0	$235	1.2%	$ 18,811

2011 Accomplishments and Activities:

Enhanced control for small commercial rooftop systems: A few products have been introduced which significantly enhance the functionality of conventional wall thermostats for rooftop heating/cooling equipment. Enhanced features include improved economizer operation, demand controlled ventilation, fan cycling or variable speed fan operation, and Web-based access to remotely adjust setpoints and schedules. The principles of operation appear sound. Standardized energy calculations have been developed and provide savings estimates of approximately 50% of the electric energy and 40% of the gas energy used by rooftop equipment. PSE has initiated grant agreements with eight customers to-date, and are waiting on post-installation data to validate savings estimates and for customer satisfaction feedback.

Farm Worker Housing project update: Construction for this project began in August, following delays due to financing, and design changes. La Venture Family Housing, located in Mount Vernon, is a multifamily development of 42 townhouses and flats providing housing to workforce/farmworker families at 50% and 60% of median income. PSE provided a grant to employ enhanced sustainability and energy efficiency in this showcase project.

NEEA natural gas market transformation: PSE and several other natural gas utilities in the region are working with NEEA to develop a market transformation plan for energy efficient natural gas opportunities. Work began in 2010, and continues through 2011, to refine the plan to optimize region-wide benefits.

LED Retrofit Modules: LED lighting technology is changing rapidly; efficiencies are improving and the cost is coming down. LED fixtures and screw-in replacements for incandescent lamps are readily available. PSE met with a local manufacturer that is developing a screw-in replacement for HID street lights and high bay applications. The manufacturer's goal is to provide a more cost effective option for customers to improve energy efficiency. The product is still in the prototype stage.

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

Local Infrastructure & Market Transformation

Schedules E270/G270

Description

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 27), PSE applies a great deal of rigor to ensure that Rider/Tracker ratepayer funds are used appropriately to add value to EES 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 Local Infrastructure, Market Transformation account. These have a fairly narrow application, usually focused on local or regional conservation efforts. For 2011, those memberships included[54]:

- Building Owners and Managers Association of Seattle & King County – BOMA
- Consortium for Energy Efficiency - CEE
- Electric League of the Pacific Northwest
- Northwest Energy Efficiency Council - NEEC

Program Performance

Table 10b provides a 2011 summary of expenditures for the Infrastructure and Market Transformation activity.

[54] These are included in Supplement 3 of Exhibit 1 of this report, which lists all 2011 memberships and sponsorships.

Table 10b: Infrastructure and Market Transformation 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
E270 Local Infrastructure, Mkt Transformation		$ 43,240	$0	$43,240	60.9%	$ 71,049
G270 Local Infrastructure, Mkt Transformation		$ 3,276	$0	$3,276	7.4%	$ 44,302

2011 Accomplishments and Activities:

BOMA

The Building Owners and Managers Association (BOMA) of Seattle King County is a professional trade association whose members own, manage or serve the commercial real estate industry. PSE's active involvement in BOMA provides direct opportunities to keep energy efficiency programs and services positioned in full view of owners and managers of the largest commercial buildings in our service area. The regional kW Crackdown competition, utilizing the EPA/Energy Star Portfolio Manager commercial building energy benchmarking tool, was implemented through BOMA for Puget Sound region in 2010 and 2011. Similarly, PSE Business Energy Management staff served as judges on BOMA's regional TOBY (The Office Building of the Year), awards which include overall energy and cost-efficiency metrics, over the past two years.

CEE

The Consortium for Energy Efficiency (CEE) is comprised of efficiency program administrators from across the U.S. and Canada who work together on common approaches to advancing efficiency. Through joining forces, the individual efficiency programs of CEE are able to partner not only with each other, but with other industries, trade associations, and government agencies. By working together at CEE, administrators leverage the effect of their funding dollars, exchange information on effective practices and, by doing so, and achieve greater energy efficiency for the public good. PSE has continued to participate in CEE's Evaluation and Behavior interest groups throughout 2011.

Electric League

The Electric League of the Pacific Northwest promotes common business interests of the electrical industry, particularly including energy efficiency. Its members include electrical contractors, engineers, equipment manufacturers and distributors, as well as Puget Sound Energy, Seattle City Light and Snohomish County PUD. In January 2011, the Electric League hosted a Building Commissioning workshop for Existing Buildings in the Puget Sound region sponsored by member utilities, NEEA and BPA. The workshop was sold out with over 80 attendees.

In June 2011, the Electric League also hosted the biennial Powerful Business Conference, a full-day conference and trade show at Meydenbauer Center in downtown Bellevue. The conference targeted and updated both customers and trade allies of the energy efficiency industry with issues and interests of regional, national and global concern.

NEEC

The Northwest Energy Efficiency Council (NEEC). is a non-profit trade association supporting the business interests of energy efficiency service providers throughout the region. NEEC member companies provide products and services and assist in the development and implementation of energy efficiency programs. NEEC advocates an affordable, energy efficient future for commercial, industrial and residential customers by:

- Promoting energy efficient products and services as the cleanest and lowest cost energy resource;
- Serving as the voice of the industry in state and local program and policy issues; and
- Providing members with the most up-to-date information within the industry.

Much like the Electric League, NEEC members are a vital link in the overall delivery chain of energy efficiency services to customers in all market sectors. PSE's support is modest and similar in scope and scale to BOMA, consisting predominantly of annual dues contribution.

Mainstreaming Green and Market Integration

No Conservation Schedule

Description

The Mainstreaming Green and Market Integration initiatives are designed to significantly improve the ability of EES's effort to communicate the "why and how" of energy efficiency.

Market Integration

The Market Integration initiative consists only of salary costs of employees working on Mainstreaming Green-related items. This is being done to increase the transparency of the work being done on marketing-related items. These include the enhancement of the energy-efficiency web capability and the "Re-Energize" promotional effort.

Mainstreaming Green

Mainstreaming Green 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. This is especially effective as we progress toward anticipated higher future savings targets and shift towards customer preference to communicate and do business with us via new media. Continuous improvement of these tools is necessary as technology, interactive tools and customer expectations evolve.

Online Tools Investment

In 2011, Mainstreaming Green financed the development of the PSE.com Savings & Energy center, as well as a suite of new online features, tools and applications for Customers to learn about the rebates available to them and learn easy ways to save energy. Features launched in 2011 include:

- PSE.com Savings & Energy Center, supporting navigation and audience-specific subsites featuring updated content
- "Re-Energize" energy-efficiency rebates.
- Fillable online sign-up and info request forms
- Searchable retailer, dealer, contractor and product maps, by zip, city and location
- Interactive rebate finder, featuring dynamic rebate and promotion information for homeowners, single-family home builders and multifamily property owners
- Home and business energy use calculators
- Energy-efficiency video gallery
- Energy-efficiency events calendar
- Embedded Facebook and other popular social media.

To accompany the new features and tools released in 2011, the remainder of the 2011 Mainstreaming Green budget financed the technical architecture and requirements gathering for the second phase of online tools and capabilities, which are scheduled to be completed in

2012 - 2013. This next phase of the web enhancement plan under Mainstreaming Green is designed to provide additional tools for PSE's residential and business customer base, community partners and trade allies to be able take even better control of their energy use—with personalized energy management tools, targeted merchandising, self-service rebate and application transactional capabilities. The updated features within the energy-efficiency section of the website will also help EES to capitalize on advanced online marketing opportunities. Future capabilities will include:

- Personalized energy usage dashboards to help customers better manage home and business usage and demand
- Personalized promotion center, which includes rebates, coupons and offers and targeted content based on a Customer's profile
- Sophisticated web use tracking and analytics analysis
- Additional multimedia content; improved content voice and tone

Dynamically generated content features will also allow EES to measure, track and quantify customer browsing preferences in order to provide targeted, relevant information about energy efficiency and customer renewables, using a variety of analytical tools. Figure 10a provides views of two EES websites on PSE.com. Figure 10b illustrates two EES interactive pages on the PSE.com website.

Figure 10a: PSE.com Savings and Energy Center, and Interactive Maps

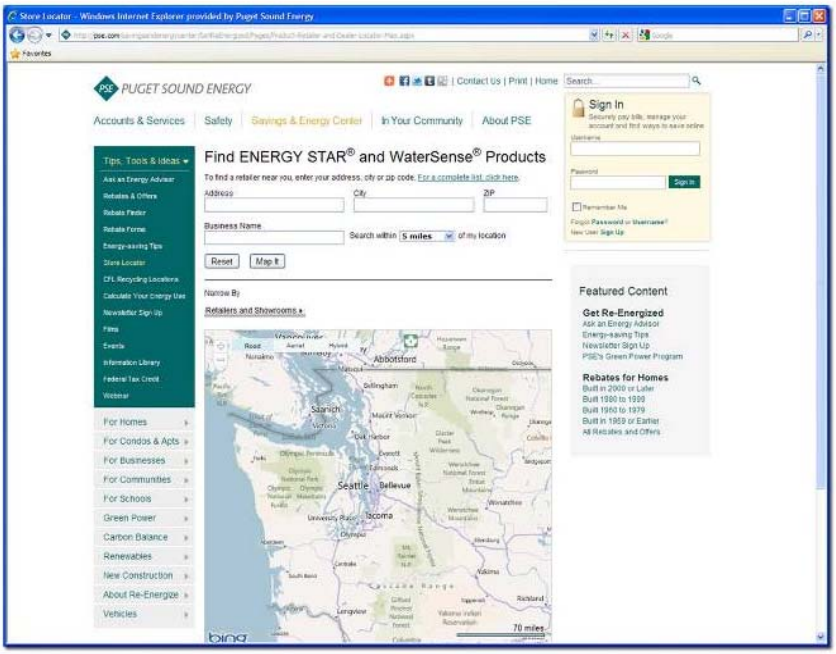
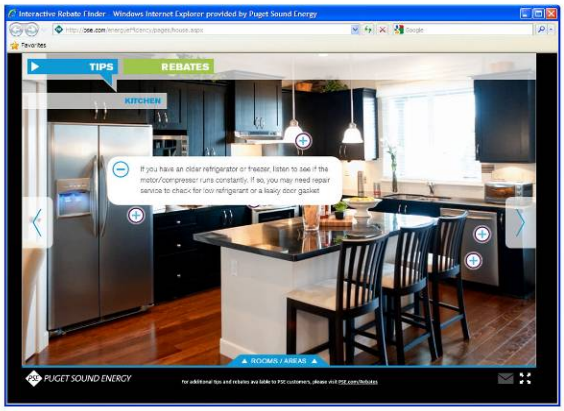
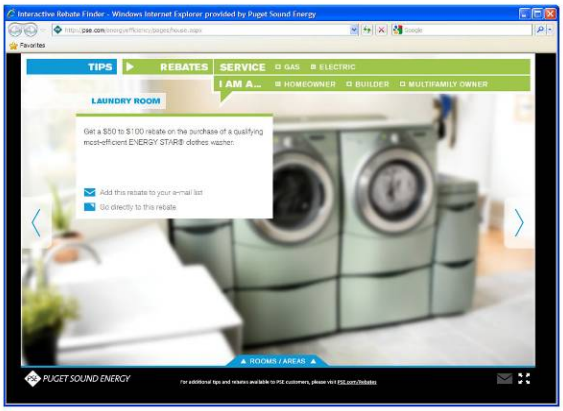


Figure 10a: PSE.com Savings and Energy Center, and Interactive Maps

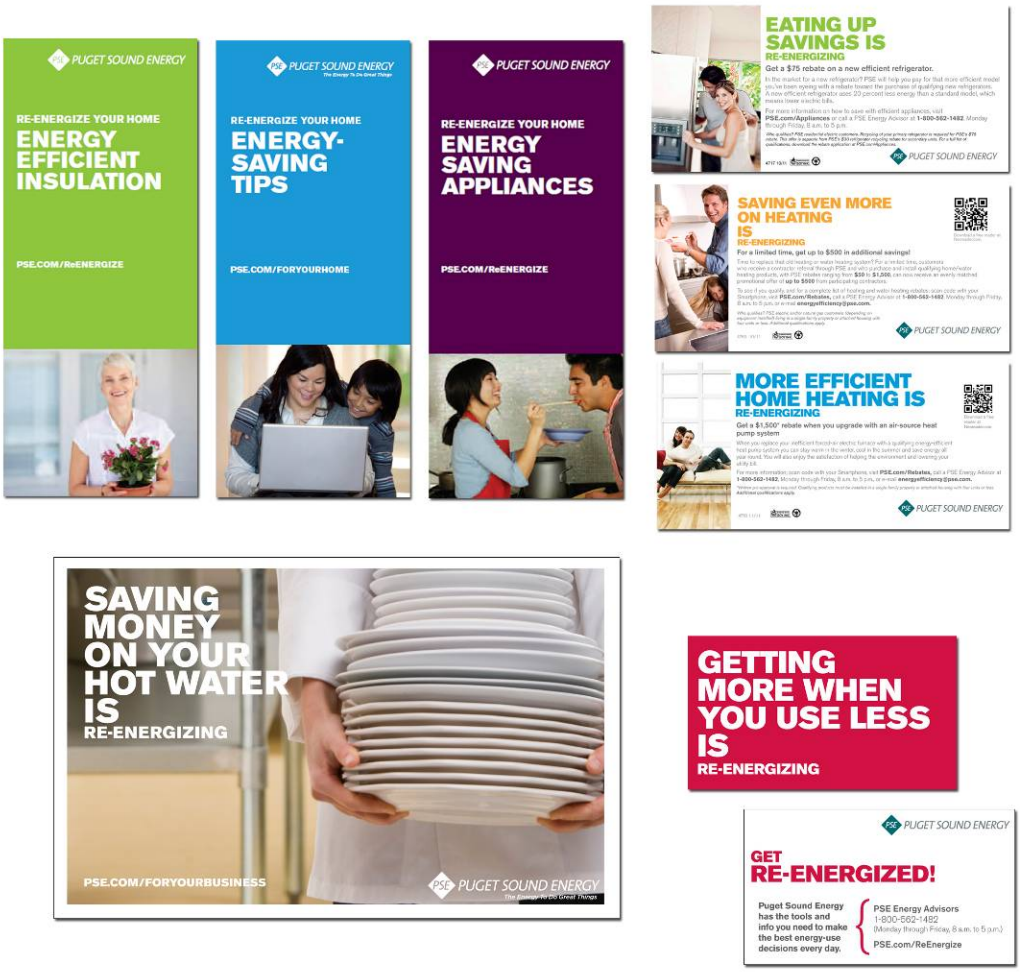




"Re-Energize" Graphic Standards and Collateral Conversions

The "Re-Energize" graphic standards are designed to unify PSE's energy-efficiency messages, so that all programs can leverage the promotion of one other. This results in more impactful marketing and more responsive customers, who may be familiar with similarly-branded programs within the EES suite of programs and offerings. EES has fully implemented the "Re-Energize" graphic standards in program-specific and general consumer outreach channels, and since the standards have been developed and implemented, no significant investment will be required in the immediate future.

Figure 10c: "Re-Energize"-branded Collateral Examples



Program Performance

Table 10c provides a 2011 summary of expenditures for the Mainstreaming Green and Market Integration activities. The programs both completed 2011 at approx. 60% percent of budget performance, respectively, which is indicative of our stewardship of ratepayer funds.

Table 10c: Mainstreaming Green and Market Integration 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Residential Sector						
	Mainstreaming Green	$ 37,809	$255,555	$293,364	57.4%	$ 511,000
	Mainstreaming Green	$ 18,743	$110,104	$128,847	58.8%	$ 219,000
Business Sector						
	EES Market Integration	$ 92,497	$80,696	$173,193	65.2%	$ 265,625
	EES Market Integration	$ 40,890	$28,121	$69,011	60.6%	$ 113,825

2011 Accomplishments and Activities:

Mainstreaming Green & Market Integration:

In spring 2011, phase one of the PSE.com website was launched, featuring the "Re-Energize" branded Savings & Energy Center. The updated website boasts an improved user experience, with more intuitive navigation and new online tools, including the interactive rebate finder, CFL recycling and retailer locator maps and integrated social media tools and multimedia channels. The site was developed as the foundation for making more sophisticated energy management and self-service tools available to customers online, in support of the EES business drivers and customer research. It will also help EES to capitalize on advanced online marketing opportunities, using a uniquely customized and personalized merchandising approach.

Phase two website planning and architecture was completed in fall 2011.

Program and general consumer information and customer-facing outreach materials were converted under the Re-Energize graphic standards throughout the year.

Energy Efficient Communities

No Associated Conservation Schedule

Description

Puget Sound Energy's Energy Efficient Communities (EEC) program works to generate participation in PSE's energy efficiency programs by linking up local governments with EES programs to increase efficiency in their facilities, their residents' homes and their businesses. The program partners with cities, counties and other community entities to discover locally-appropriate ways of engaging the communities by leveraging PSE's resources, community knowledge and partner support.

With communities taking responsibility for their energy usage and carbon emissions, they are looking to partner with PSE expertise. There has been great emphasis on energy efficiency in the American Recovery and Reinvestment Act of 2009 with local governments receiving funds for said purpose. Since then, is the EE Communities team has worked with these communities to help them utilize their Federal stimulus dollars to work in tandem with PSE's programs. The Recovery Act has increased interest in and awareness of the Energy Efficiency Services programs as well as increased communication with the EE Communities team. Many communities are looking to build on the successful partnerships through the Recovery Act to continue to work on EES Programs.

The program staff consists of a market manager, three coordinators, and an implementer, who interface with communities and customers throughout the entire PSE service territory. Approximately 66 percent of their budget is charged to the Rider/Tracker.

Program Performance

Table 10d provides a 2011 summary of expenditures for the Energy Efficient Communities program.

Table 10d: Energy Efficient Communities 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Energy Efficient Green Communities		$ 69,297	$105,350	$174,647	71.7%	$ 243,545
Energy Efficient Green Communities		$ 30,943	$38,500	$69,443	75.5%	$ 91,955

2011 Accomplishments and Activities:

In 2011, the Energy Efficient Communities group worked with local customers, municipalities and non-governmental organizations to link them up to Energy Efficiency's Commercial and Residential programs. The team was mainly focused on 1) a small business outreach research project, 2) coordination with ARRA funding recipients and 3) presentations, outreach and events to directly promote EES programs. One more Program Coordinator was added to provide increased program outreach to the Kitsap, Vashon and East Jefferson service areas.

Small Business Outreach (SBO) Initiative

Two program coordinators have been working with the Business Energy Management team to deliver small business walk-throughs to Schedule 24 customers. The walk-throughs include some direct installs and providing customers with EES program information. This initiative was designed to gather information about what energy efficiency potential existed and what small business customers are looking for from EES. The information and experience gathered was used to design the new Small Business Direct Install program[55], launching in 2012.

Table 10e represents the results of the Small Business Walk-through initiative. It is important to note that the indicated electric and gas savings are only claimed as a part of the Small Business Lighting team in the Business Energy Management Sector. Table 10f indicates the total number of rebates and associated savings that resulted from the walk-throughs.

Table 10e: 2011 EE Coordinator Activity

Small Business Outreach Statistics							
		DIRECT INSTALLS		SAVINGS			
	Walk throughs	Lamps	Aerators	kWh	Therms	My PSE Sign ups	Surveys
TOTALS	**152**	**924**	**449**	**923,113**	**13,500**	**112**	**137**

[55] It is important to note that, although the Energy Efficient Communities team were key contributors to this program, it is actually managed by the Business Energy Management Sector.

Table 10f: 2011 Small Business Rebates Processed as a Result of Walk-Throughs

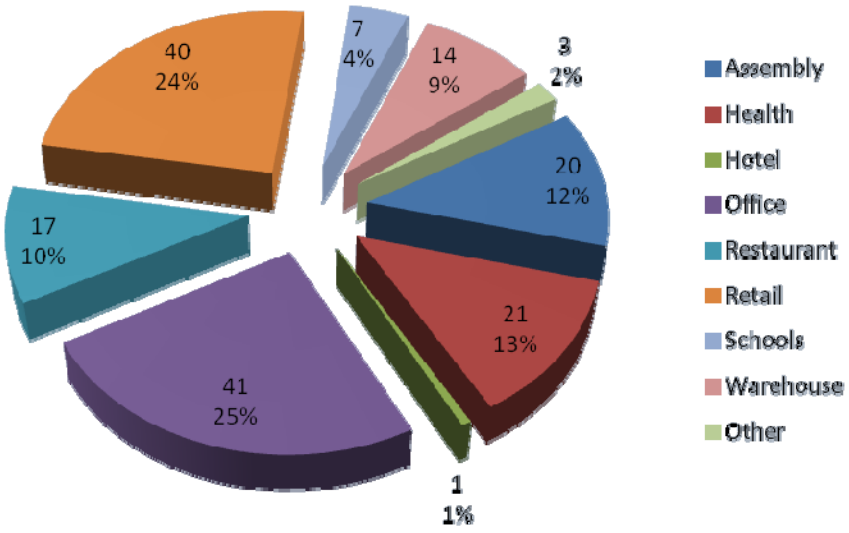
Rebates Resulting from Walk-Throughs			
Number of businesses	Number of measures	$ paid	kWh Savings
42	**172**	**$131,085**	**611,606**

Additionally, the entire team participated in a “Small Business Blitz” for the City of Edgewood in Pierce County. This partnership enabled the City to utilize their awarded federal stimulus funding incentives that had been allocated by the city for small businesses.

The City was in danger of having to return this funding if it went unused. The EE Communities team assisted in reaching out to business customer to make them aware of this opportunity. It also allowed PSE to earn energy savings through directly-installed measures and engagement in the Small Business Lighting program.

This initiative will serve as a template for future partnerships throughout the service territory. Figure 10d is a breakdown of the types of businesses visited by all Energy Efficient Communities program coordinators throughout the PSE service territory.

Figure 10d: Business Types Visited



Finalize ARRA partnerships

The EE Communities team has been active in connecting the municipalities and non-governmental organizations who have received American Recovery and Reinvestment Act (ARRA) funding with EES programs. Examples include involvement in coordinating the Home Energy Report program with nine cities, collaborating with the RePower Kitsap energy efficiency initiative, and linkage with the Washington State University Energy Extension's Community Energy Efficiency Pilot Program (CEEP) grant recipients. The team hosted two webinars for the CEEP partners to help them understand the company's Utility Cost Effectiveness Guidelines, I-937 Requirements and PSE's Integrated Resource Plan. 2011 was a year to wrap up many of the partnerships as the programs come to a close in 2012.

Table 10g presents the EES program impacts that the WSU-funded Community Energy Efficiency Programs obtained:

Table 10g: 2011 Community Activity

Community Energy Efficiency Pilot Program						
CEEP Participants	Home Prints	Other Residential Assessments	PSE Rebates Generated	Commercial Assessments	Joint Small Business walk throughs	Associated Commercial Rebates
Sustainable Connections	n/a	n/a	n/a	110	12	27
Opportunity Council	112	650	80	n/a	n/a	
SustainableWorks	n/a	496	84	n/a	n/a	
Thurston Energy	354	605	155	n/a	79	224
Totals	**466**	**1,751**	**319**	**110**	**91**	**251**

Rock the Bulb: The ReEnergize Tour Campaign Outreach

The EE Communities team engaged in 146 community organizations and municipalities to promote the Rock the Bulb events and volunteer opportunities to their stakeholders. The team utilized the organizations' communication avenues, such as bill inserts in city mailings, slides on public television, information on web sites, posters in city halls and more.

Many PSE employees were also engaged in the campaign, led by the EE Communities team.

- Customer Service Representatives at local offices in Rock the Bulb communities handed out engagement bulbs and flyers to promote the events to residential electric customers. Posters and flyers were also placed within the local offices. The local EE Communities staff ensured the cashiers were trained on the events to answer questions.

- Major Accounts and Community Relations Managers were provided information on the campaign to give to their stakeholders in the communities with Rock the Bulb events. Many large businesses, counties, cities and others offered booth opportunities in their lobbies at employee lunch time, handed out engagement bulbs to each employee, hung posters in their lobbies and added event information to their newsletters and intranet pages.

To promote the events and to engage employees on EES, the EE Communities team led a group of EES staff that presented six "The Re-Energize Road Show: Rock the Bulb and Energy Efficiency Services" in six PSE offices. The presentations provided general EES program information, followed by a Rock the Bulb overview.

Holiday Campaign Outreach

The EE Communities team reached out to 127 organizations as part of the Holiday Outreach campaign to promote refrigerator decommissioning, replacement refrigerators, the fall pledge, and engagement bulb and showerhead distribution.

A key component of the campaign was to engage with the local customer service offices to train the customer service representatives on the program, and provide them with a supply of engagement materials to promote the campaign. The EE Communities team led the interaction with the local offices that then completed the results listed in table 10h.

Table 10h: 2011 Year-End Activity

2011 Fall and Holiday Push Wrap Up							
			Savings		***Savings***		
City	No. Staff	CFLs	kWh Savings	Showerheads	kWh Savings	Therms	Refrigerator Decommissioning Sign-ups *(no savings value indicated)*
Ellensburg	2	816	19,584	450	88,200		14
Olympia	5	7,344	176,256	3,900	249,600	15,600	148
Oak Harbor	2	1,344	32,256	650	127,400		52
Bellingham	3	3,888	93,312	1,450	284,200		11
S. Whidbey	2	960	23,040	450	88,200		4
Vashon	1	960	23,040	650	127,400		0
TOTALS	**15**	**15,312**	**367,488**	**7,550**	**965,000**	**15,600**	**229**

It is important to note that all measure units, and electric and gas savings noted in Energy Efficient Communities discussions are only counted within the applicable Residential Energy Management or Business Energy Management Sectors. Savings are not claimed by the Energy Efficient Communities team.

Conservation Market Research and Conservation Supply Curves

No Associated Conservation Schedule

Description

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.

Conservation Supply Curves

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).

Program Performance

Table 10i provides a 2011 summary of expenditures for the Market Research and Supply Curves activities.

Table 10i: Market Research and Supply Curves 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Residential Sector						
	Strategic Planning & Market Research	$ 276,032	$315,542	$591,574	62.6%	$ 945,016
	Strategic Planning & Market Research	$ 74,420	$75,795	$150,215	63.6%	$ 236,254
Business Sector						
	Conservation Supply Curves	$ 105,414	$92,221	$197,635	62.7%	$ 315,064
	Conservation Supply Curves	$ 28,803	$27,086	$55,889	71.0%	$ 78,766

2011 Accomplishments and Activities:

Conservation Market Research

Two broad baseline market research studies were completed in 2011. The Residential Characteristics Study gathered basic end use appliance and building characteristics data from approximately 5,900 customers that is representative at the county level, using a mail/online survey. This study is being complimented by PSE's participation in the region-wide Residential Building Stock Assessment being conducted by NEEA, which will use on-site visits to collect detailed end use information, including approximately 300 homes in PSE's service area. All customer surveys and site visits were completed in 2011. The NEEA study will be completed in 2012. The second major study was the Residential Incentives and Information Study, which examined impacts of incentive levels and information on consumer interest in purchasing energy-efficient equipment. The Residential Incentives and information Study consisted of an online survey of a sample of 1,000 homeowners, representative of PSE's overall service area.

In addition to these major studies, PSE conducted other strategic research activities as well. A market potential analysis for targeted energy efficiency efforts on selected capacity-constrained electric distribution circuits was completed in 2011. The Company is also participating in planning a new regional Commercial Building Stock Assessment study in conjunction with NEEA and regional utilities.

The Company also completed a number of tactical research studies which are targeted at specific applications. This research utilized off-the-shelf online survey tools and smaller samples to provide fast customer feedback on overall program/promotion experience as well as on specific program/promotion components. PSE also made increased use of GIS-based analytical tools to identify geographically targeted energy efficiency market opportunities. Tactical studies completed in 2011 include:

- Manufactured Home Weatherization customer survey
- Heat Pump Water Heater customer survey
- LED Pilot customer survey
- Rock the Bulb Campaign Effectiveness customer survey
- Energy Advisor Customer Satisfaction Monitor
- Refrigerator Replacement program market study
- Rural customer market assessment for targeted events
- HVAC contractor survey
- Single Family New Construction building contractor survey

Conservation Supply Curves

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.

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.

Program Performance

Table 10j provides a 2011 summary of expenditures for the Program Support activity.

Table 10j: Program Support 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Program Support		$ 144,611	$69,598	$214,209	51.3%	$ 417,257
Program Support		$ 8,449	$0	$8,449	9.6%	$ 88,073

2011 Accomplishments and Activities:

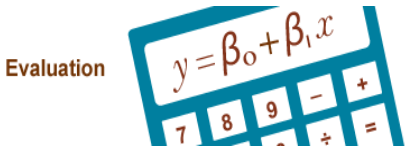
2011 accomplishments included extensive support and facilitation work for planning and developing the 2012-13 Biennial Conservation Plan. This included work among Residential and Business Energy Management, Marketing, Communities, Development, Evaluation and administrative staff to assure a fully populated and coordinated plan.

Other Program Support tasks completed in 2011 include:

- Development and management of the RFP and contract for Review of Measurement and Verification (M&V) Practices and Cost Study, performed by KEMA;
- Developmental support for the Residential and Business Energy Management programs' Verification team;
- Development and management of Business and Residential Energy Management program RFPs for new and continuing energy efficiency programs;
- Development of a strategic plan and RFP for a Demand Response Program consistent with the 2012-13 IRP and modeled after the commercial Load Control Pilot completed in April 2011; and
- Development and implementation support for the EES Division Safety Plan.

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 EES as described in the EM&V Framework[56]. 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[57], programs to be evaluated in 2012 will include Low Income, Commercial New Construction, Single Family Existing and new Pilot programs or measures. PSE program implementation teams work together with the Evaluation team to inform the development of evaluation scopes of work. The Evaluation Team also will develop and 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. 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.

[56] Exhibit 8 of PSE's 2012-2013 Biennial Conservation Plan (BCP).
[57] Exhibit 6 of the BCP.

Program Performance

Table 10k provides a 2011 summary of expenditures for the New Program Development and Evaluation activities.

Table 10k: New Program Development and Evaluation 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
Gas	Gas	Dollars				Gas
Program Evaluation		$ 646,068	$900,311	$1,546,379	97.8%	$ 1,581,303
Program Evaluation		$ 195,431	$256,434	$451,865	113.7%	$ 397,475
Verification Team		$ -	$79,894	$79,894		$ -
Verification Team		$ -	$15,345	$15,345		$ -

2011 Accomplishments and Activities:

Several studies were completed in 2011. The studies include an Evaluation of PSE's Quality Assured Duct Sealing Program (sometimes colloquially referred to as "Duct Ninja"), an Evaluation of the Multi Family Existing Program, a Review of PSE's Policies and Approaches to Energy Efficiency Program Incentives, an Effective Evaluation Research Report and a PC Power Management Impact Study. In addition, field work and analysis was completed for the evaluation of C&I Retrofit Programs, the Residential Demand Response Pilot Evaluation and the EES Review of M&V Practices in December 2011. ERRs are not yet completed for the latter three, and they are not included with this report, but will be available for review in the 1st quarter of 2011. Three of the studies listed in Table 10l below, highlighted in yellow, fulfill condition agreements.

Table 10l: Evaluation Projects Completed in 2011

Measure Category	Evaluation Study or Activity Title	Study Author	Evaluation Study Date	ERR Title	Status
Multiple	C&R Retrofit Evaluation	Navigant			ERR in progerss
Load Control	Residential DR Pilot Evaluation	Navigant			ERR in progerss
Multiple	Eenergy Efficiency Services Review of M&V Practices	KEMA	12/19/11		ERR in progerss
Quality Assured Duct Sealing	Duct Ninja Evaluation	Navigant	07/25/11	Duct Ninja Evaluation_ERR_20110725	Program revisions will be implmented January, 2012
Multiple	Energy Effiiciency Program Incentives: A Review of Policies and Approaches	EMI	05/31/11	PSE Comments on EE Program Incentives Study	PSE's incentive setting process is in alignment with the Agreed Conditions for Approval, section K. (7) (c)
Weatherization	PSE MF Wx Evaluation - Final Report	SBW Consulting	05/11/11	Evaluation Report Response_MFWX	There were unresolved questions regarding the prototype home used in the analysis. Program staff will be using RTF values going forward.
Multiple	Effective Evaluation Organization	Research Into Action	02/28/11	ERR - Effective Evaluation Organization 03112011	Various actions articulated in ERR
Desk Top Computers	PC Power Management Impact Study	The Cadmus Group	02/04/11	PC Power Management ERR Final	Adjusted savings to RTF value of 115 kWh per desktop computer on May 4, 2010. Operational revisions to program expected April 11. 2011.

OTHER ELECTRIC PROGRAMS

Overview

There are four electric EES 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 11 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 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.

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).[58] 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.

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 11a provides a 2011 summary of expenditures and energy savings for Other Electric Programs.

Table 11a: Other Electric Program 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
E150	Net Metering	$ 118,443	$110,903	$229,346	82.6%	$ 277,687
E248	Renewable Energy Education	$ 86,023	$181,729	$267,752	76.8%	$ 348,659
E249A	C/I Load Control Pilot - Elec	$ 214,254	$57,988	$272,242	101.4%	$ 268,419
E249A	Residential Demand Response Pilot	$ 221,418	$426,932	$648,350	104.4%	$ 621,008
	Total Electric	**$ 640,138**	$777,552	**$1,417,690**	93.5%	$ 1,515,773

Figure 11a represents proportions of EES Other Electric programs' spending.

[58] Larger systems fall under the considerations of PSE's Schedule 91, Cogeneration and Small Power Production.

Figure 11a: Other Electric Programs expenses as percents of totals

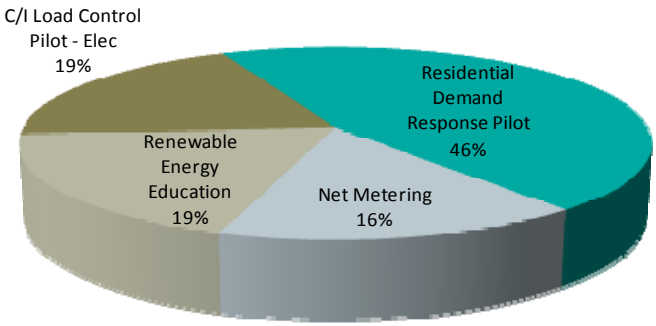


Table 11b represents a cost element group view of actual 2011 expenditures, compared with 2011 budgets.

Table 11b: Other Electric Programs by Cost Element Group, 2011 ACP view

Schedule	Program Name		Labor	Marketing Labor	Overhead	Marketing	Employee Expense	Outside Services	Materials	Miscellaneous	Direct Benefit to Customer	Total Program Budget
	Net Metering Budget		$ 160,851	$ -	$ 101,336	$ -	$ 4,000	$ 7,000	$ -	$ 4,500	$ -	$ 277,687
		Actual	*$ 108,690*	*$ -*	*$ 64,731*	*$ 59*	*$ 6,673*	*$ 630*	*$ 1,975*	*$ 46,587*	*$ -*	*$ 229,346*
	Small-Scale Renewables Budget		$ 122,490	$ -	$ 77,169	$ -	$ 4,000	$ -	$ 20,000	$ -	$ 125,000	$ 348,659
		Actual	*$ 94,558*	*$ -*	*$ 56,263*	*$ 1,529*	*$ 5,586*	*$ 56,659*	*$ 167*	*$ 2,811*	*$ 50,180*	*$ 267,752*
	C/I Load Control Pilot Budget		$ 51,975	$ -	$ 32,744	$ -	$ 4,700	$ 80,000	$ 1,000	$ 3,000	$ 95,000	$ 268,419
		Actual	*$ 57,938*	*$ -*	*$ 34,183*	*$ 176*	*$ 4,836*	*$ 101,870*	*$ 47*	*$ 133*	*$ 73,059*	*$ 272,242*
	Residential Demand Response Pilot Budget		$ 40,250	$ -	$ 25,358	$ 8,000	$ 5,600	$ 513,000	$ 1,500	$ 1,800	$ 25,500	$ 621,008
		Actual	*$ 63,517*	*$ -*	*$ 37,475*	*$ 914*	*$ 2,835*	*$ 516,715*	*$ 1,241*	*$ 153*	*$ 25,500*	*$ 648,350*
	Other Electric Budget Totals		$ 375,566	$ -	$ 236,607	$ 8,000	$ 18,300	$ 600,000	$ 22,500	$ 9,300	$ 245,500	$ 1,515,773
		Actual	*$ 324,703*	*$ -*	*$ 192,652*	*$ 2,678*	*$ 19,929*	*$ 675,874*	*$ 3,430*	*$ 49,684*	*$ 148,739*	*$ 1,417,689*

OTHER ELECTRIC PROGRAMS

Net Metering

Schedule E150

Description

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[59], 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.[60] Service under this schedule is limited to a total of 11.2 MW of cumulative nameplate generating capacity. Customer generation can be used to offset part or all of the customer-generator's electricity use under Schedules 7, 24, 25 or 29 of Electric Tariff G.

The median net metered customer system is 3.8 kilowatts (kW). This size system generates, on average, 2,500 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 75 kW.

Program Performance

PSE added 266 net meter customers in 2011, bringing the total to over 1,000. Table 11c provides a 2011 summary of expenditures for the Net Metering program.

Table 11c: Net Metering Program 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
E150	Net Metering	$ 118,443	$110,903	$229,346	82.6%	$ 277,687

[59] 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.

[60] Revisions to Schedule 150, including increasing the maximum generator capacity to 100kW became effective June 12, 2006.

2011 Program Revisions

Significant changes were made to the application in 2011, making it much easier for the customer while providing the information that the company needs to ensure safety and reliability. These changes were approved by the WUTC in March, 2011. The application form is available on PSE's website:

http://pse.com/aboutpse/Rates/Documents/elec_sch_150_attach_a.pdf

Process Improvements

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.

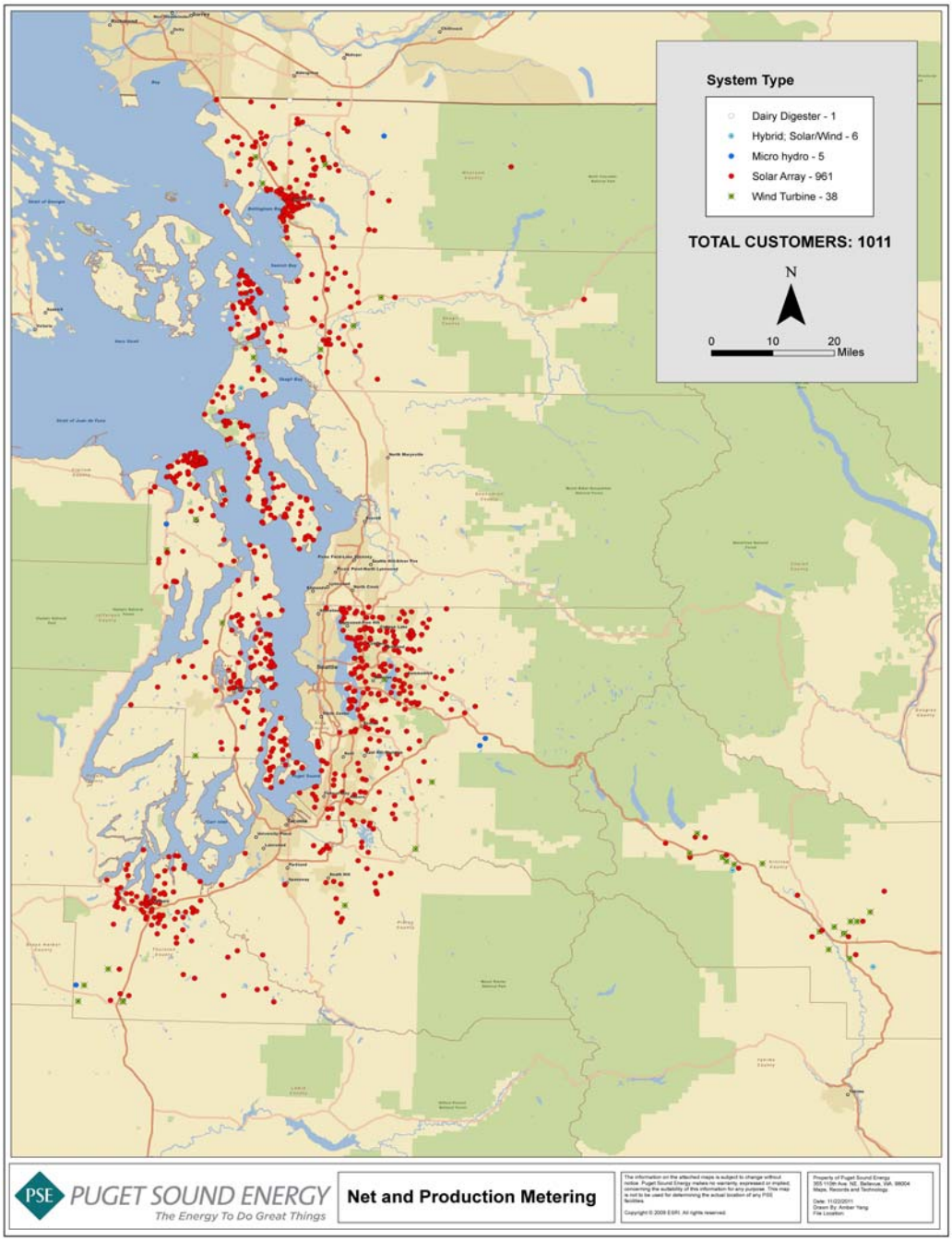
Production Metering

Schedule 151

Schedule 151 is the venue through which PSE administers the state-authorized production payment. 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 2010 to June 30 2011, the payments totaled $ 525,000, which is significantly greater than the previous year's payment total of $270,000.

Figure 11b is an illustration of net metered locations within the PSE service territory as of December 31, 2011.

Figure 11b: Map of Net Metered Customers



2011 Accomplishments and Activities:

PSE added 266 new net metered customers in 2011, a 35 percent increase. This brings the total net metered customer up to 1,011, with total generation capacity of over 5 MW.

Small-Scale Renewables (Renewable Energy Education)

Schedule E248

Description

Small Scale Renewables, Schedule 248, was added to Schedule 120 funding when the Residential Exchange Credit was cancelled by the Ninth Circuit Court in May, 2007.

This program provided a solar rebate equal to the cost of the required production meter under terms of PSE's Production Metering schedule. Second, PSE offered a grant program for small scale renewable energy education demonstration projects which are tied in with both a curriculum and energy efficiency services.

Program Performance

Table 11d provides a 2011 summary of expenditures for the Small Scale Renewables program.

Table 11d: Small Scale Renewables 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
E248	Renewable Energy Education	$ 86,023	$181,729	$267,752	76.8%	$ 348,659

2011 Program Revisions & Process Improvements

PSE re-named the program at the end of 2010 to *Renewable Energy Education*. PSE took greater involvement in managing and implementing demonstration projects at schools. Historically, PSE let its partner, Bonneville Environmental Foundation (BEF), be responsible for selecting the systems, installers and the final product. The program was modified to achieve more educational experiences by providing a limited number of schools with teacher training, science kits and curriculum only (no permanent photovoltaic hardware).

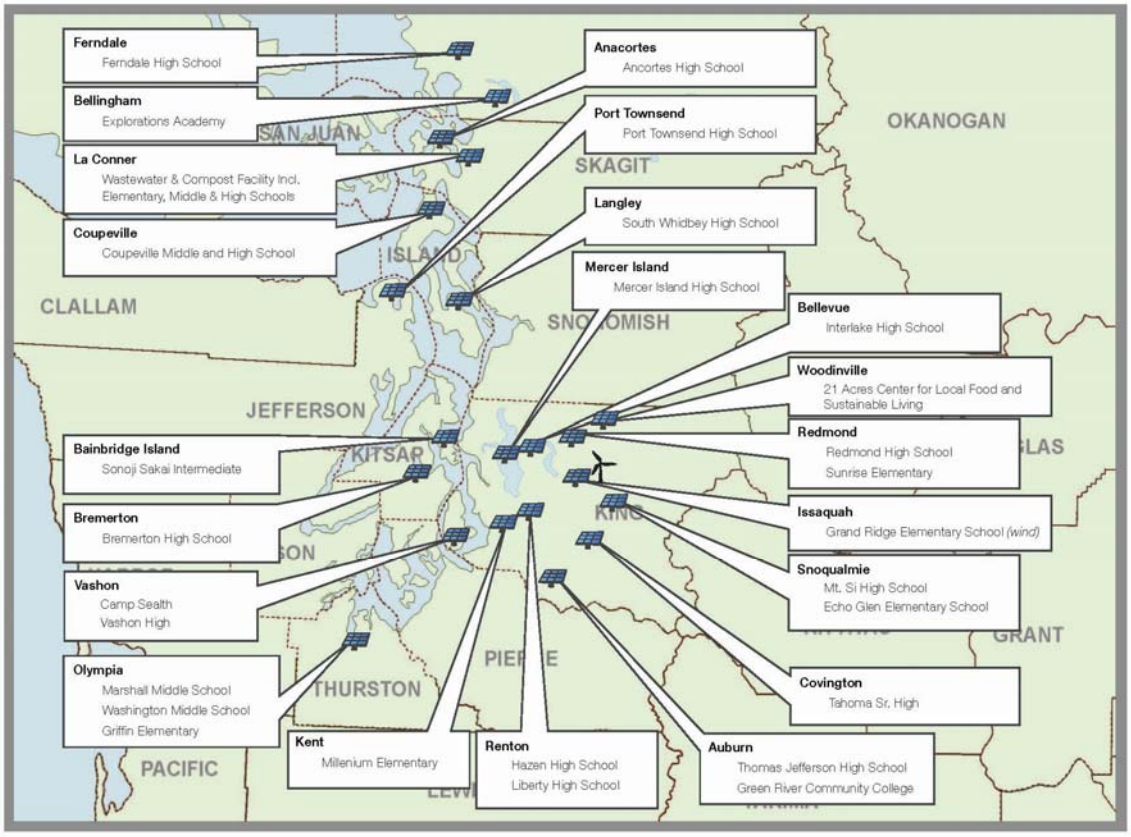
PSE terminated the meter rebates for 2011 as it was not evident that they were making an impact. This was the result of two primary influences: (1) the price of PV solar systems has been dropping dramatically, and (2) PSE implemented a meter solution at approximately half the cost of the original production meters.

In 2011 the program maximized available funds by taking on a project management role and leveraging in-kind contributions from schools. PSE improved its grant contracting process through collaborative efforts with the PSE Purchasing department.

2011 Accomplishments and Activities:

In 2011, PSE funded hardware and/or curriculum at eight educational institutions. From 2007 through 2011, PSE has supported 31 renewable energy systems that located at schools and other public places where they can be used to educate on the costs and benefits of renewable energy. Figure 11c illustrates the renewable demonstration projects installed by the end of 2011.

Figure 11c: Renewable Energy Education Demonstration Sites



Demand Response Pilots

Schedule E249A

Description

PSE's 2011 Integrated Resource Plans (IRP) presented achievable estimated demand response capacity potential for residential, commercial and industrial customer sectors. Pilots under this schedule are being undertaken to strengthen the Company's capability to responsively and effectively offer cost-effective demand response options to all customer classes in the future. At the outset, some members of the CRAG expressed a preference for demand response pilots involving "direct load control" by the Company, as opposed to pilots which involve pricing signals to elicit demand response from consumers.

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

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

Program Performance

Table 11e provides a 2011 summary of expenditures for the Demand Response Pilots program.

Table 11e: Demand Response Pilots 2011 Expenditures

2011 Expenditures		2011 Semi-annual View				2011 Budget
Schedule	Programs	Q1 & Q2	Q3 & Q4	Total	YE % of Budget	
Electric	Electric	Dollars				Electric
E249A	C/I Load Control Pilot - Elec	$ 214,254	$57,988	$272,242	101.4%	$ 268,419
E249A	Residential Demand Response Pilot	$ 221,418	$426,932	$648,350	104.4%	$ 621,008

2011 Accomplishments and Activities:

Tables 11f (by business type) and 11g (by residential load type) indicate the types of Demand Response pilot participants by business and load type, organized by city. It is noteworthy that the grand total of residential participants in Table 10f is not an aggregate of the "End Point" totals, as there is considerable overlap of participants.

Table 11f: Commercial/Industrial Load Control Pilot Participants, 2011

Customer	Type	Nominated Winter kW	Nominated Summer kW	City
1	Hospitality	150	250	SeaTac
2	Education	75	100	Auburn
3	Manufacturing - Food	250	250	Kent
4	Manufacturing - Metal Products	200	300	Kent
5	Office Building - Large	200	300	Bellevue
6	Education	300	300	Kirkland
7	Manufacturing - Aggregate Products	150	150	Snoqualmie
8	Manufacturing - Aggregate Products	300	300	DuPont
9	Education - Large campus	100	300	Auburn
10	Large Office Building	225	75	Bellevue
11	Education - Large Campus	300	300	Lacey
12	Manufacturing - Chemicals	25	40	Anacortes
13	Education - Large Campus	250	300	Des Moines
14	Manufacturing - Medical Technology	100	175	Redmond
15	Manufacturing - Extruded Building Products	300	300	Kent
16	Education - Large campus	125	300	Bothell
17	Office Building - Large	250	250	Bellevue
18	Office Building	200	250	Bellevue
19	Office Building	150	60	Bellevue
20	Office Building - Large	250	250	Bellevue
21	Office Building	60	60	Eastgate
22	Office Building	35	35	Bellevue
23	Office Building - Government	15	35	Auburn
24	Manufacturing - Food	150	150	Bellevue
25	Education - Large Campus	300	300	Bellingham
		4615 kW	5130 kW	
	Total Nominations - MW	**4.6**	**5.1**	

Table 11g: Residential Demand Response Pilot Participants, 2011

Control Device Type[61]	End Point	Avg. Calculated Winter[a] kW Potential (Morning)	Avg. Calculated Summer[b] kW Potential (Afternoon)	Avg. Number of End Uses Controlled Winter/Summer
Load Switch	Hot Water Heaters	215	33	272/133
Load Switch	Baseboard / Wall Fan Heaters	7	N/A	40/0
Load Switch	Electric Forced Air Furnace	57	N/A	30/0
Load Switch	Air Conditioner	N/A	0	0
Thermostat	Heat Pump (controlled in heating and cooling modes)	404	59	140/157
	Total Load Potential - MW	**0.68**	**0.09**	

Total number of enrolled homes: 528

2011 Accomplishment and Activities

Commercial/Industrial Load Control Pilot

The pilot was conducted for nearly three years and now provides a valuable platform for further demand response planning for the commercial-industrial sector. The enrollment target for the pilot was achieved with a mix of 25 commercial and industrial facility types participating. A total of ten winter, and nine summer curtailment events were conducted. The formal pilot impact and process evaluation of the pilot was conducted by Navigant Consulting, Inc.

Impact evaluation findings determined that for all Winter curtailment events conducted during the pilot, an average kW curtailment realization rate of 83 percent of participants' nominated load reductions was achieved. Average realization rate across all summer events included in the evaluation period totaled 148 percent.

[61] Load switches and thermostats installed for the pilot have 2-way wireless communication with the load management platform software via an internet gateway via residential broadband service.

Performance differences were noted by business type and loads controlled. Schools achieved the highest realization rates on winter mornings and during summer curtailments. Manufacturing facilities achieved the highest winter curtailment performance among enrolled facilities. Space heating curtailments offer lower performance during winter events than is the case for air-conditioning during summer curtailments.

Key process evaluation findings determined a high-degree of participating customer satisfaction was realized and most participants expressed interest for enrolling in a long term demand response program, if offered by PSE in the future.

Residential Demand Response Pilot

The residential DR program enrollment is 528 single family electric service customers on Bainbridge Island. The Bainbridge location offered advantages for conducting this pilot.

Enrollments were grouped on distribution circuits served by two of the island's three substations. The substations were constructed decades ago and the island population served by PSE has nearly doubled from 12,000 in 1989. Both substations experience periodic cold weather electric loads exceeding nameplate capacity of their equipment.

The character of the island's single family housing stock (predominately electrically heated) offers a concentrated population of single family homes with greater than average electric usage. This provides greater load curtailment potential for each enabled site than housing types with lower electric space and water heat demand. Local interest and response from the community in alternatives to expansion of the existing transmission and distribution capacity, conservation advocacy groups, and local government officials measurably aided the recruiting process.

The fact that a high percentage of Bainbridge homes have broadband cable subscriptions enabled two-way communication via the internet with the control devices in participating homes. Enrollment response to the pilot offer topped eight percent of potentially qualified homes, a response figure deemed highly credible in comparison to other residential direct load control programs. Participants receive an annual $50.00 participation payment during the two year term of the pilot.

The pilot has been operated with support of two national firms. The hosted load management software services, reporting and hardware (load switches, thermostats and internet gateways) are provided by one vendor. Customer enrollment processing, field installation of equipment and are managed by the other firm.

A total of nine pilot curtailment events were called during the 2010-11 (November through February) winter season. No events were called during the summer of 2011 because the ambient temperatures did not exceed the threshold of 85 degrees Fahrenheit. The impact and process evaluation being conducted by Navigant Consulting is presently underway and the final report is expected to be available in February 2012.

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2011 STAKEHOLDER RELATIONSHIPS

Throughout 2011, PSE worked hard to continue the momentum established in 2010, and enhance its relationship with its primary constituents, WUTC Staff and the Conservation Resource Advisory Group (CRAG). Steps were taken to increase the clarity of information provided to Staff and the CRAG, reduce redundancies, and maximize the value of each interaction.

Throughout the year, PSE received feedback, both directly and implied, 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 facing the division at the beginning of 2011.

PSE is very appreciative of these efforts on the part of Staff and the CRAG.

Washington Utilities and Transportation Commission

PSE Filings

2011 saw very few WUTC filings.

February 15, 2011 2010 Annual Report of Conservation Accomplishments

On February 15, 2011, PSE filed its annual review of 2010 conservation savings and expenditure results through June, consistent with the Commission Second Supplemental Order #1 in Docket No. UE-970686. This report represented a significant step in providing a much higher level of program details and EES transparency for its stakeholders.

March 1, 2011 Schedule 120, Electric Conservation Service Rider

2011 was the first year in which condition K(8)(d) applied, requiring PSE to file its electric cost recovery Schedule on March 1, with an effective date of May 1. Although not affected by the 2010 Electric Conservation Settlement, PSE included its gas cost recovery Schedule in the March 1 filing, with an effective date of April 1. Commission Staff petitioned for, and was granted an effective date delay of one month, so as to make the effective date of the gas Tracker concurrent with the electric Rider.

August 15, 2011 2011 Semi-Annual Report of Conservation Accomplishments

On August 15, 2011, 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.

The Biennial Conservation Plan (BCP) was developed in collaboration with the CRAG over a four-month process, beginning with PSE presenting the draft electric and gas conservation targets in July, 2011.

Each month following until its filing in late October, the CRAG received another draft of a key BCP element.

PSE scheduled CRAG meetings in such a way that members were able to see and hear EES staff ideas and plans for the 2012-2013 biennium prior to the presentation of the draft. Throughout the process, PSE provided members with updates and revisions as they occurred until the final draft was filed.

The entire BCP consisted of over 660 pages of useful information (as noted by one stakeholder during the December 15 WUTC open meeting the document is "all meat" and very well organized"). In its printed form, the contents fill a 6-inch binder and weighs over 9.5 pounds.

August 16, 2011 Schedule 258, Large Power Users – Self Directed

Working in collaboration with the CRAG going back to 2010, and through the first half of 2011, PSE filed a revised Schedule 258 on August 16, 2011. The revised Schedule was approved by the Commission on September 16. Under terms of condition K(3)(c), PSE advised the CRAG concurrent with the filing date. The program revisions brought PSE into complete compliance with sections F(12), F(13), (addressing Schedule 449 customers), H(16), (use the peak credit method) and conditions (by reference) K(11)(c). A detailed discussion of the program's revisions is located in the Business Energy Management program section, page 145.

October 28, 2011 2012-2013 Biennial Conservation Plan

PSE filed its first Biennial Conservation Plan, consistent with RCW 19.285, WAC 480-109, and condition K(8)(f). The plan includes an electric conservation savings target of 76.0 average MegaWatts, with planned expenditures of $193 million. The 2012-2013 gas savings target is nine million therms, with planned expenditures of $33.3 million.

Tariff Revisions

As a part of the 2012-2013 Biennial Conservation Plan, filed on October 28, 2011, several conservation Schedules modifications were made. All were effective January 1, 2012. All tariff Schedule modifications were reviewed with the CRAG on October 1, 2011, consistent with condition K(8)(f).

Cancelled Tariff Schedules

- E/G 200 (REM), E/G 260 (BEM): Information Services
  - Individual components are now represented in Portfolio Support and Research & Compliance.

- E/G 270: Local Infrastructure & Market Transformation
  - This program is not geared for customers. Program title being revised to Trade Ally Support, which is a more accurate representation of its activities.

- E257: LED Traffic Signals
  - Very low volume over the last two years and program achieve greater administrative efficiencies when managed within the Business Rebates program. This service is added as a suite of measures to Schedule 262.

New Tariff Schedules

- E 271: Demand Response program
  - Schedule 249A will remain active until all remaining expenses are paid. (Modifications will be made to show that no new pilots will be accepted.) New demand response programs will most likely fall into the "270s" range.

- E 292: Generation, Transmission & Distribution Efficiencies
  - This new Schedule will be referenced in several areas of Schedule 83.

Tariff Schedule Revisions

In its continuous improvement efforts, PSE made some level of revision to several conservation Schedules; most to clarify terminology, correct grammar, or provide updated references. As the controlling conservation Schedules, 83 (Electric) and 183 (Gas) receive routine evaluation and updating. In addition to revising the budget figures noted in Section 10 of the Schedule, several references to the new Generation and Distribution Schedule, 292, were added. Highlights of other EES Schedule revisions include:

Residential Sector

- E 216: Fuel Conversion

- Removed sentence regarding varying customer eligibility by structure & added sentence excluding structures in Multifamily campuses.

- E/G 217: Multifamily Existing, E/G 218: MF New Construction
  - Added "campus" definition to Availability section, added language to Funding section to account for custom grants
  - G 203: Low Income Weatherization
    - Section 3 was adjusted to match the funding language in Schedule 201

- No adjustments to 201: LIW, 214: SFE, 215: SFNC

Business Sector

- E 250, E 251, E 262: Retro, New, Rebates

  Adjusted Funding sections to be consistent with Schedule 258 requirements. (Gas Schedules not affected)

- E/G 250, E/G 262: Retro, Rebates

  Added language to indicate that consultants or contractors may perform measure installation.

- E 253, G208: RCM

  Added language to Services Section to indicate that partial funding of an RCM position is subject to the customer completing specific deliverables.

- E 255: Small Bus. Lighting

  Added language to Funding Section to indicate that funding is subject to CE standard.

- E/G 261: E. E. Technical Evaluation

  Added language to Funding Section to indicate that program is not subject to achieve savings sufficient to meet CE standards.

WUTC Deliverables

Exhibit Revisions

In 2011, PSE, consistent with condition K(5), began the process of filing revisions[62] of its Program Details (Exhibit 3), and the List of Measures, Incentives & Eligibility (Exhibit 4) with the WUTC on a quarterly basis.

PSE established a 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 twice in 2011, while Exhibit 4 was updated three times[63].

[62] As new measures are offered, delivery methods or incentives are revised, program details change, etc.
[63] The CRAG was notified in the October 20 CRAG meeting that a fourth quarter update of Exhibit 4 was not submitted for filing in 2011, since it would have overlapped, and possibly conflicted with the 2012 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 throughout 2011. Through our collaborative process, PSE and the CRAG achieved significant milestones during the past year.

Established in May, 2010, the CRAG vision statement provided a framework for all CRAG interactions throughout 2011.

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.

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 15 stakeholders and represents a wide variety of interests, including consumers, industry, regional concerns and includes members of the Washington Utilities and Transportation Commission Staff. The CRAG works closely with EES on a variety of conservation initiatives, most notably conservation tariff filings, savings goal setting and long-term conservation strategies.

CRAG Vision

Throughout 2011, 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 fully engaged, and with ratepayer benefit uppermost in mind.

2011 Continuous Improvement

Building on efficiencies that PSE implemented in 2010, PSE implemented a number of new steps to improve efficiencies for CRAG members including:

- Development and publication of a CRAG compliance calendar.
- Quarterly updates of the Condition Compliance Checklist (discussed in detail in the Compliance section).
- Publication of the CRAG meeting action item list at each meeting.
- Use of GoToMeeting® to more easily facilitate remote meeting participation.
- A measure summary table that accompanies each Exhibit 4[64] update filing, which indicates the revision impacts, and reasons for the revision.

[64] The EES List of Measures, Incentives & Eligibility.

CRAG Activities

Apart from CRAG meetings and sub-committee meetings, PSE and the CRAG typically participate in other value-add activities. The number were curtailed in 2011, a result of biennial planning and other high-priority issues. Highlights include:

March 24 Measure Metrics overview, and general EES overview.
April 7 Expenditure review and targeted audit prior to Schedule 120 approval.

Publication Updates

As noted in the WUTC Deliverables discussion above, PSE provides the CRAG with several documents prior to filing Program Details or List of Measures, Incentives & Eligibility revisions with the WUTC.

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. In 2011, PSE added a new level of revision detail.

Accompanying the mark-up and clean copies of the documents, a spreadsheet[65] 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 2011, PSE exceeded the requirements of condition K(3)(b), by convening seven CRAG meetings throughout the year. In the second half of the year, the July, August, September and October meetings were all focused on developmental milestones for the 2012-2013 Biennial Conservation Plan. Each of these acted as the foundation for the following; after the draft two-year conservation target was presented, the following meeting presented the draft budget details that PSE regarded as necessary to meet the target, etc.

[65] This reference only applies to the List of Measures, Incentives & Eligibility, Exhibit 4.

The overriding goal of these meetings was to ensure that all major CRAG issues were discussed prior to PSE filing its 2012-2013 Biennial Conservation Plan. PSE satisfied this objective, by .obtaining consensus from the majority of CRAG members that all major issued had been addressed, and that there were no major outstanding questions during the October 20 CRAG meeting.

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 email 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.

January 27 meeting summary:

The first CRAG meeting of the year featured the introduction of a new 2011 CRAG calendar. An MS Excel spreadsheet, this new tool provided a color-coded view for all members that will help in 2011 planning and activities. After reviewing 2010 initial results, and 2011 deliverables challenges, the primary focus of the meeting was to review as many issues as possible relative to Schedule 258; the Large Power User, Self-Directed program.

Key Outcomes

- The CRAG will be kept abreast of developments in the Third Party electric savings review.
- The (2010 Electric Settlement Agreement) conditions need to be prioritized, as so many affect or require CRAG participation.
- A sub-group of Schedule 258 experts agreed to meet at the WUTC office in Olympia on February 10 to further discuss Schedule 258 issues.

March 31 meeting summary:

Our second meeting of the year continued the momentum established in January, with active participation all around. PSE introduced a condition compliance tool, which presented members with compliance criteria, and the current compliance status[66]. With the exception of three initiative updates, the remainder of the day was devoted to furthering the discussion of Schedule 258, Large Power Users, Self-Directed program issues. Various alternative proposal scenarios were discussed, with PSE committing to bring two to the CRAG at the following meeting. PSE captured and responded to 15 Schedule 258-specific questions during the course of the meeting.

[66] This report is attached to the 2011 Annual Report as Exhibit 9: Condition Compliance Checklist.

Key Outcomes

- Accounting treatment ideas were proposed for the Schedule 120 reporting of Schedule 258 funding.
- Two ideas; one relative to adding an extra year to the program cycle, and another that promulgated the idea of maintaining a steady rate seemed to have some amount of traction at the conclusion of the meeting.
- There was also some discussion relative to the inclusion of two new cost effectiveness tests and how they may apply to either the portfolio, sector, or program view.
- PSE would draft Schedule 258 proposals for CRAG consideration.

May 19 meeting summary:

This meeting began the process of developing the 2012-2013 Biennial Conservation Plan, leading off with a discussion of the PSE 2011 IRP and the resulting ten-year achievable potential and resulting two-year conservation target. This CRAG meeting was also attended by two guests who are Schedule 258 customers. They provided the members with background and discussion on the program's benefits to large customers and some proposed alternatives to program adjustments. PSE presented two program revision proposals to the CRAG. Four other ongoing initiative were also discussed.

Key Outcomes

- The Schedule 258 customers were able to address several CRAG questions.
- PSE will draft a revised Schedule 258 program description, based on the proposal this is most likely to be submitted.
- There is a need to structure non-savings programs and function budgets so as to be clearer.
- PSE would provide a description of the differences of information-oriented versus those services and functions that are considered to be a part of the 10-percent allowance.

July 21 meeting summary:

This CRAG meeting began the 2012-2013 Biennial Conservation Plan development process in earnest, with PSE presenting detailed discussions on its draft ten-year conservation potential, and two-year conservation target figures. The attendees had their last discussion on Schedule 258, the Large Power User, Self-Directed program. PSE also provided the CRAG its first view of the proposed 2012-2013 Exhibit 1 Portfolio view. The status of PSE's EM&V Framework was also reviewed.

The group discussed the content and tenor of the meeting and there was general agreement that, since our "level-setting" meeting in May 2010, each meeting was an improvement on the last. For the most part, attendees indicated that the meetings are well-structured, productive, informative and clear. Most appreciate the candor in an environment conducive to working together.

Key Outcomes

- This meeting served as PSE's compliance with the first deliverable of condition K(8)(f).
- PSE will file a revised Schedule 258 with the WUTC, requesting an effective date of September 16.
- Key stakeholders will check with their experts relative to accounting and ratemaking rule.
- Members will review the EM&V Framework draft and provide feedback.

August 25 meeting summary:

The focus of this meeting was an in-depth review of Residential Energy Management (REM) and Business Energy Management (BEM) plans to achieve the draft two-year conservation targets, presented at the July 21 CRAG meeting, along with their corresponding budgetary impact. Non-savings programs and functions also presented their draft budgets for the members. This meeting also presented CRAG members with an impression of the greatly improved Exhibit 1 navigation tools, allowing readers to review over 80 MS Excel budget tables without paging through considerable quantities of spreadsheets.

Key Outcomes

- Exhibit 1 (EES budget details) and Exhibit 3 (EES Program Details) were presented to the CRAG on September 1, satisfying the second deliverable of condition K(8)(f).
- PSE began using GoToMeeting® to facilitate easier remote meeting participation.

September 29 meeting summary:

Satisfying the third deliverable of condition K(8)(f), PSE presented a detailed discussion of its pending tariff Schedule cancellations, revisions, and proposed new Schedules[67]. PSE also provided a detailed discussion of avoided cost calculation methods, and cost-effectiveness calculation methodology. Members also participated in a discussion around the initial interim third-party electric savings review, presented by the contracted lead analyst.

Key Outcomes

- Members agreed to provide their questions about any aspect of the 2012-2013 Biennial Conservation Plan prior to the November 1 filing.
- PSE provided updates and revised documents related to its draft presentations of 2012-2013 budgets and program details.
- The attendees provided initial support of NEEA savings claim calculations.
- The topic of Home Energy Reports (also referred to as OPower) was teed up for resolution at the next CRAG meeting.
- Two new Schedules; Transmission and Distribution (292), and C/I Demand Response (271) will be filed.
- Various understandings relative to cost-effectiveness tests and their applicability to portfolio/sector/program savings were achieved, as was agreement to examine these further in upcoming discussions.
- The third-party evaluator will propose various scenarios for the second phase of the study.

October 20 meeting summary:

The focus of our last meeting of the year focused on the 2012-2013 Biennial Conservation Plan (BCP) filing, which was, at the time of the meeting, eight days away. PSE presented an overview of the entire BCP[68], including a year-end view of the Condition Compliance Checklist, which indicated that 54 of 55 conditions would be completed by the end of 2011. The members also unanimously approved of PSE taking conservation savings for the Home Energy Reports program.

[67] All tariff Schedule revisions, and new Schedules were provided to the CRAG on October 3, 2011. To provide additional value, PSE provided the entire tariff Schedule, rather than only the revised tariff sheet, as is filed with the WUTC. Condition (K(8)(f) indicated that the draft tariff revisions were due on October 1, which was a Saturday. During the September 29 CRAG meeting, attending member indicated their agreement that October 3 was an acceptable delivery date.

[68] Up until this point, CRAG members had only reviewed drafts of three elements of the BCP; budgets, tariff revisions and program details. In addition to these, there were nine other components making up the entire BCP.

Approval was conditional[69] and included 2011 savings.

Key Outcomes

- Home Energy Report savings claims were unanimously approved.
    - Unanimous approval was also granted for 2011 savings claims.
- Attendees agreed that it would be appropriate to increase the budget allocation for the third-party electric savings review project.
- A proposed 2012 CRAG meeting schedule was presented for review and comment.
- CRAG members will receive a binder that includes all BCP documents.
- A CD, containing electronic versions of the files that make up the BCP will be included with each CRAG binder.

[69] Approval conditions were:

- Including the quartiling elements in the protocols
- 2012-2013 savings and survey focus on the calendar year
- PSE will seek to understand the actions of participants and non-participants

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GLOSSARY OF COMMONLY USED TERMS

Unless otherwise noted in a specific Conservation Schedule, the following commonly-used terms, used throughout and applicable only to this document[70] have the below noted meanings. Definitions or glossaries contained in other EES documents, policies or guidelines referring to specific processes or unique functions shall have the meanings noted in those documents, policies or guidelines.

Definitions

Calculated Savings	This savings type is different than deemed values (described below). This term indicates that there is a pre-approved, stipulated input savings value (or cost) per measure. This value (or cost) is then multiplied by site-specific input values to arrive at the overall savings value (or cost). This term is used in the Savings Type field in Appendix B, List of Measures.
Channel	Within an EES Residential or Business sector, an organization that is established to focus on the value chain—consisting of manufacturer distributor, dealer, contractor to the end-use customer—with the most similar market, delivery methods and ultimate purchasers or product users.
Conditions	Also "2010 Electric conservation Settlement Agreement Terms conditions" or "Energy Independence Act conditions". Specific deliverables and stipulations by which the Company must operate or produce through the course of operating and managing energy efficiency programs. In addition to compliance requirements outlined in Sections A through J and L, the conditions are listed under Section K of the Agreed Conditions for Approval of Puget Sound Energy, Inc's 2010-2011 Biennial Electric Conservation Targets Under RCW 19.285 Docket No. 100177. There are additional sections that regulate the Company's energy efficiency operations.
Custom Savings	This savings type applies to conservation projects where a PSE EME performs specific evaluation and review of a unique customer site to determine savings values—therms or kWh—that apply only for that site. For this type of measure, there is insufficient information, the occurrence is too infrequent or it cannot be specifically defined to justify development of a Calculated or Deemed protocol.
Deemed Measure	As in a measure's deemed value; A savings (or cost) value that applies to a unit of specific measure, regardless of where or how the measure is installed. Measures for which it is possible to "deem" per unit energy savings, cost and load shape based on program evaluation data and engineering estimates. (For instance, one residential interior CFL lamp has a deemed value of 24 kWh per year.) This classification applies to both RTF and PSE deemed.

[70] 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

Direct Benefit to Customer (DBtC)	Rebates, grants, credits or services that are of value to customers. Services can include, but aren't limited to, credits on a monthly bill, upstream incentive provided to channel partners or trade allies—either within our service territory or regionally—and free energy efficient devices available by mail.
Direct Install Measure	A conservation measure that is installed by a PSE representative—rather than a PSE customer—into a qualifying structure.
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.[71] 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.
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	Relative to PSE savings types (Custom, Calculated, PSE Deemed or RTF Deemed), supported by RTF analyses, in compliance with Settlement Agreement condition K(6)(b). This term is used in the Savings Type field in Appendix B, List of Measures.

[71] Schedule 83, section 4, Definitions, #m. Schedule 183, section 4, #l.

Definitions, continued

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
ARRA	American Recovery and Reinvestment Act
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.
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.
EME	Energy Management Engineer
EM&V	Evaluation, Measurement and Verification
ERR	Evaluation Report Response. A form used to complete an evaluation study's resultant actions.
GPM	Gallons Per Minute
HID	High Intensity Discharge (lamp type)
HVAC	Heating, Ventilation and Air Conditioning
kWh	Kilowatt Hour. 1,000 watt-hours = 1 kWh, which is equivalent to 10 100-watt incandescent lamps being turned on for one hour.
LED	Light Emitting Diode (lamp type)
MEF	Manufacturer's Energy Factor (applies primarily to appliances)
MWh	Megawatt-hour. 1,000 kWh = 1 MWh
NEEA	Northwest Energy Efficiency Alliance
NEMA	National Electrical Manufacturers Association
O&M	Operations & Maintenance
RCW	Revised Code of Washington.

Acronyms, continued

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).[72]
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.[73]
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

[72] Schedule 83, section 4, Definitions, #z. Schedule 183, section 4, #x.
[73] Schedule 83, section 4, Definitions, #bb. Schedule 183, section 4, #z.

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CONCLUSION

This concludes the Energy Efficiency Services 2011 Annual Report of Energy Conservation Accomplishments.

Please refer to the Report's Exhibits and Supplemental reports for additional EES details:

Exhibits Included in the 2011 Report of Conservation Accomplishments

Exhibit 1: 2011 Conservation Targets and Budgets versus Actual Achievements and Spending

Exhibit 2: Program Cost Effectiveness

Exhibit 9: Condition Compliance Checklist

Supplements

Exhibit 1 *(Table of savings and expenditures)*

- Supplement 1: Expenditures by Cost Element Group (2011 ACP view)
- Supplement 2: 2011 Savings adjustments
- Supplement 3: 2011 Sponsorships and Memberships
- Supplement 4: Portfolio Measure Category Counts

Exhibit 2 *(Cost effectiveness tables)*

- Supplement 1: Electric and Gas Avoided Costs, and Cost-Effectiveness methodologies

Exhibit 4 *(The EES List of Measures, Incentives and Eligibility is excluded from this report)*

- Supplement 1: EES Prescriptive Measures Offered during 2011
- Supplement 2: 2011 EES 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 2011

EES looks forward to providing our 2010-2011 Biennial Report on June 1, 2012.

Respectfully submitted,

The men and women of Energy Efficiency Services