Energy Efficiency

2014 Annual Report of Energy Conservation Accomplishments

Volume 1:

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- Exhibit 1: 2014 Savings & Expenditures
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PUGET SOUND ENERGY

All photos and likenesses are used with permission.

PSE Customer photo credits:

Top: PSE customers Leah and Hallie, installing an LED lamp

Middle: PSE customers The Outlet Collection, which installed several energy efficiency upgrades

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EXECUTIVE SUMMARY

Puget Sound Energy's Annual Report of 2014 Conservation Accomplishments

Puget Sound Energy's ("PSE's" or "The Company's") Energy Efficiency[1] Department presents this Annual Report of 2014 Energy Efficiency program accomplishments and activities, satisfying condition (8)(b) of Commission Order 01, Attachment A in Docket No. UE-132043, and requirements enumerated in the Commission's second supplemental order in Docket No. UE-970686.[2] The report provides details of initiatives, activities, and innovative adaptive management steps employed to exceed the goals of energy efficiency programs funded by the Electric and Gas Conservation Rider funding.

Table 1a presents 2014 Portfolio-level savings, expenditure figures, and TRC for electric and natural gas conservation programs. Electric Total Resource Cost (TRC) benefit-to-cost ratios represent inclusion of a 10 percent conservation credit. In later discussions, PSE also presents gas TRC figures that include this credit for comparison purposes.

Table 1a: Energy Efficiency 2014 Savings, Expenditures and TRC Results

2014	Savings	Expenditures	Total Resource Cost
Electric (MWh)	378,500 43.2 aMW	$99,335,000	1.68
Goal/Budget *Percent*	344,405 (39.3 aMW) *110%*	$95,821,000 *104%*	
Gas (Therm)	4,346,000	$11,888,000	1.09
Goal/Budget *Percent*	3,880,000 *112%*	$11,927,000 *100%*	

378,500 MWh divided by 8,760 hours = 43.2 aMW. Savings are stated in terms of first-year annual figures, at the customer meter, without line loses. Electric expenditures include "Other Electric" Sector costs of $830,400. Indicated gas TRC is without a conservation credit in this specific table.

[1] Prior to 2014, the Energy Efficiency department was known as Customer Solutions/Energy Efficiency or Energy Efficiency Services.

[2] Although not required in the indicated Dockets, the report includes extensive discussions of gas conservation program accomplishments. This is consistent with the nature of Commission recommendations enumerated in its Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs, Docket No. UG-121207. (¶ 48, pg. 17.)

2014 Results

In 2014, Energy Efficiency continued its long-established standard of meeting energy savings goals[3] while effectively and prudently managing costs for its customers. PSE exceeded its electric savings goal by 10 percent, achieving electric savings of 378,539 MegaWatt-hour (MWh), or 43.2 average MegaWatts (aMW), while electric expenditures finished the year only 4 percent over expected costs; $99.34 million. Gas savings surpassed savings goals for the year by 12 percent: 4.3 million therms, while gas expenditures were commensurate with planned spending, at $11.89 million.

Portfolio cost-effectiveness results finished the year with an electric Utility Cost (UC) benefit-to-cost (B/C) ratio of 2.32 and a Total Resource Cost (TRC) B/C ratio of 1.68. On the gas side, PSE finished the year with a UC of 2.19 and a TRC of 1.09. Inclusion of a 10 percent conservation credit, as was discussed during the UTC workshops on the considerations of gas cost-effectiveness calculations,[4] yield a gas TRC of 1.18.

Continued Encouragement of Customer Conservation Efforts

Building on past years' achievements, each Energy Efficiency department consistently demonstrated its commitment to exceeding customer expectations of their conservation programs throughout 2014. PSE engaged customers with new and innovative energy-efficiency marketing campaigns and outreach efforts, which allowed a direct interface with Energy Efficiency Staff. The department also created easier and more efficient rebate application processes, increased its focus on delivery channels to get close to its trade allies, provided customers with new and exciting energy-efficiency tools, and responded to customer feedback by evolving and broadening its suite of measure offerings.

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

[4] In a Docket No UG-121703 April 2013 workshop, participants discussed the merits of applying a conservation credit, similar to the 10 percent value applied for electric cost-effectiveness calculations. For consistency, PSE chose 10 percent for this representational value.

Adaptation through Total Quality Management

Energy Efficiency Program Staff continued its ongoing work to enhance processes—especially those affecting PSE customers. The men and women of Energy Efficiency, regardless of the department or functions, focused on removing barriers to effectiveness, improving productivity, maximize its measure offerings, and create experiences that enrich customers' lives. Through its commitment to TQM and adaptively managing its business, PSE continued its progression toward operational excellence in every Energy Efficiency organization. Some highlights of key improvements implemented by Energy Efficiency are:

- System enhancements in most Energy Efficiency groups, leading to greatly reduced rebate processing time in both Residential and Business Sectors, increased accuracy, and improved productivity;
- Enhanced compatibility between department systems, reducing redundancies and overlap, and increasing productivity;
- Prompt revisions to measure incentive amounts and product offerings in response to customer feedback;
- Re-organization of key groups within the department, yielding increased customer and channel focus, and providing additional opportunities for direct customer interfacing.

Notable Deliverables

Highlights of notable 2014 accomplishments, detailed in the following program-specific discussions include:

- PSE created innovative customer awareness campaigns, including Energy Upgrades, which were very well-received by customers and maximized exposures to energy-efficiency programs,
- Energy Efficiency upgraded its business lighting programs, simplifying the incentive application process for customers and contractors,
- The Resource Conservation Management organization implemented program revisions recommended by the 2012-2013 Biennial Electric Conservation Achievement Report,
- A new online customer energy tool was launched in October, providing valuable usage comparisons, ways to save, and conservation resources,
- Brought additional program management in-house with a new weatherization rebate portal.

Compliance

By the end of 2014, the Company made significant progress in meeting all 2014-2015 biennial compliance requirements. Exhibit 9: Condition Compliance Checklist provides specific condition compliance, and Chapter 16, Compliance includes additional compliance discussions. The below list outlines the primary conservation-related requirements that govern Energy Efficiency's operations:

1) RCW 19.285 and WAC 480-109,
2) The Second Supplemental Order of Docket No. UE-970686,
3) Exhibit F, the 2002 Stipulation Agreement, Docket No. UG-011571,
4) The 2010 Electric Settlement Agreement, Docket No. UE-100177, and
5) Order 01, Attachment A of Docket No. UE-132043.

Report Organization

In Chapter 2: 2014 Accomplishment Summary, Energy Efficiency provides a Portfolio-level discussion of overall 2014 accomplishments. Next, Sector-level overviews provide a brief snapshot of each Sector's performance.[5] These are Residential, Business, Regional, Portfolio Support, Research & Compliance and Other Electric Programs. Program detail discussions follow, with business-unit and program-level reviews of TQM steps implemented and accomplishments realized in 2014.

Exhibits, enumerated on page vii of this Report, are presented following the Report, and contain a significant amount of Energy Efficiency expenditure and savings detail.

[5] The order of these discussions correspond with Sector headings outlined in Exhibit 1: *Savings and Budgets.*

ENERGY EFFICIENCY 2014 ACCOMPLISHMENTS SUMMARY

The discussions in Chapter 2 provide Portfolio summaries of key performance areas for the Energy Efficiency Sectors: savings and expenditures, five-year trends, cost-effectiveness ratios, adaptive management through Total Quality Management, customer satisfaction, and savings by measure.

Savings and Expenditures

PSE maximized electric and gas conservation savings while prudently and effectively putting its customers' Conservation Rider funding to work in 2014.

Each Energy Efficiency Sector achieved strong results, exceeding its savings goal, while the majority finished the year consistent with anticipated expenditures. Both the NEEA Gas Market Transformation initiative and the Electric Vehicle Charger Incentive program were unanticipated at the time of 2014 budget development. Energy Efficiency also shifted some costs within the budget. Actual expenditures include accounting for key Customer Energy Management (CEM) re-organizations: separating the Rebate Processing Team and the Data and Systems Services group—both of which were formerly assessed across the program groups, and shifting several of the Business Rebate programs into the Dealer Channel. These revisions are discussed in more detail later in this Report.

As discussed in the program-specific chapters to follow, key drivers of Energy Efficiency's positive results include the incorporation of new technologies and measures, application of innovative customer communications and pioneering outreach efforts (such as the Small Business Blitz and the Energy Upgrade campaign), implementation of system and reporting enhancements, and the engagement and consistent management of value-chain constituents.

Tables 2a and 2b provide Sector-level views of 2014 electric and gas savings results, and electric and gas expenditures, respectively.

Table 2a: Energy Efficiency 2014 Savings Results by Sector

2014	Residential	Business	Pilots	Regional	Total
Electric (MWh)	151,300	148,800	26,800	51,700	378,600
2014 Goal	133,400	131,000	26,800	53,300	344,500
Percent	113%	114%	100%	97%	110%
Gas (Therm)	1,815,000	1,762,000	770,000	na	4,347,000
2014 Goal	1,667,000	1,443,000	770,000		3,880,000
Percent	109%	122%	100%		112%

Please note that the "Total MWh" indicated in Table 2a is a result of adding already-rounded Sector totals. This operation causes an apparent discrepancy with Table 1a, which indicates a Portfolio savings amount of 378,500 MWh. The actual 2014 electric savings is 378,539 MWh.

Table 2b: Energy Efficiency 2014 Expenditures by Sector

2014	Residential	Business	Pilots	Regional	Portfolio Support	Research & Compliance	Other Electric	Total
Electric	$51,934,000	$35,877,000	$804,500	$4,448,000	$2,841,000	$2,600,000	$830,400	$99,334,900
2014 Budget	$45,105,000	$36,638,000	$1,572,000	$5,261,000	$3,359,000	$3,486,000	$399,800	$95,820,800
Percent	115%	98%	51%	85%	85%	75%	208%	104%
Gas	$7,113,000	$3,479,000	$294,900	$152,000	$475,000	$374,600	na	$11,888,500
2014 Budget	$6,732,000	$3,925,000	$248,600	$0	$610,000	$411,300		$11,926,900
Percent	106%	89%	119%		78%	91%		100%

Overall total amounts may be different that those presented in Table 1a and Exhibit 1 due to multiple rounding.

Electric 2014-2015 Biennial Target Progress

Tables 1a in Chapter 1: Executive Summary presents the overall Portfolio electric savings (378,539 Megawatt-hours). That figure includes NEEA and Pilot savings reported.

PSE's Commission-approved 2014-2015 Biennial target of 55.5 Average Megawatts (485,770 MWh), though, is based on total Portfolio savings less NEEA + Pilots + decoupling.[6] Table 2a provides readers with the capability to disaggregate the overall savings and compute the savings that will apply to the biennial target.

Subtracting 2014 NEEA savings of 50,195 MWh and Pilot savings of 26,759 MWh from the total electric savings of 378,539 MWh equals 301,585 MWh. This total is 62 percent of the 2014-2015 total biennial target:

- 2014 EIA & decoupling savings: 375,539 – (50,195 + 26,759) = 301,585.
- 2014 savings percent of 2014-2015 EIA target: 301,585 ÷ 485,770 = 62%.

It is important to note that it isn't possible to track savings that apply to the decoupling commitment separately from those that apply to the biennial target. Once the total biennial savings are computed, PSE will perform a similar disaggregation, including accounting for the decoupling commitment of 27,920 MWh.

Five – Year Trends

As indicated in Figure 2a, electric savings have increased an overall 28 percent from 2010 to 2014. 2014 electric savings increased 5 percent from 2013. The electric expenses for the 5-year timeframe increased an overall 32 percent, with a 2014 increase of 0.3 percent from 2013 expenditures. This trend reflects the market saturation of several key measures and some increased incentive amounts, marketing and staff effort required to achieve ambitious savings goals.

Figure 2b shows that gas savings have decreased an overall 14 percent from 2010 to 2014. 2014 gas savings decreased 34 percent from 2013.[7] The gas expenses for the 5-year timeframe have declined 39 percent from 2010 to 2014, while gas expenses declined 0.3 percent from 2013 to 2014.

[6] In Docket No. UE-141357, PSE petitioned the Commission issue a Declaratory Order. Subsequently, the Commission issued a notice that it would not issue a Declaratory Order, but would review Order 01 in Docket No. UE-132043 to determine PSE's decoupling obligation. Order 03 in that Docket stipulates that PSE's 2014-2015 decoupling commitment is 27,920 MWh.

[7] An interesting consideration is that 2013 gas savings far exceeded expectations, resulting from the installation of key unplanned measures such as business aerators and sprayheads. Excluding these factors, the decrease would have been a more linear trend from 2012 to 2014.

These figures reflect the significant impact of lower gas avoided costs and consolidation over time of higher-cost measures within Energy Efficiency programs; more high-cost measure make up a larger proportion of the overall Portfolio.

Figure 2a: Energy Efficiency Electric Programs; Savings and Expenditures – Five-year Trends

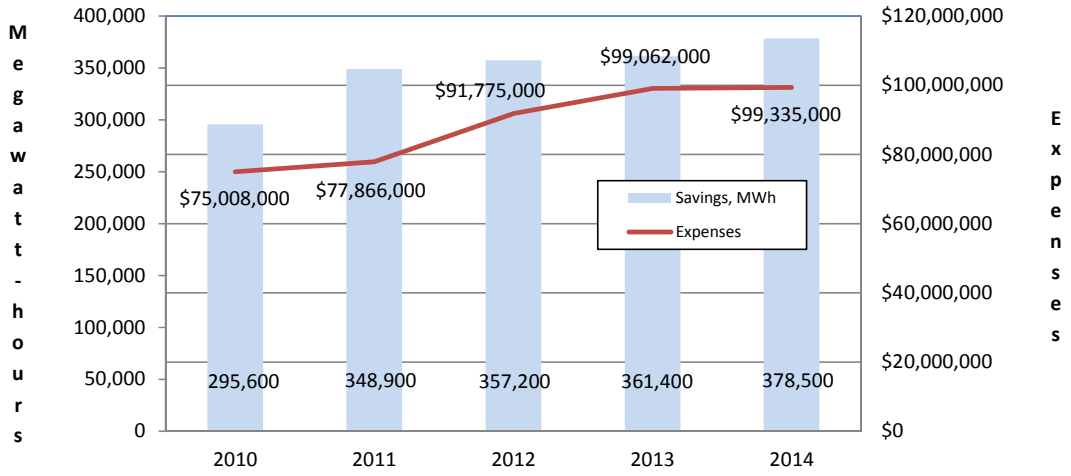
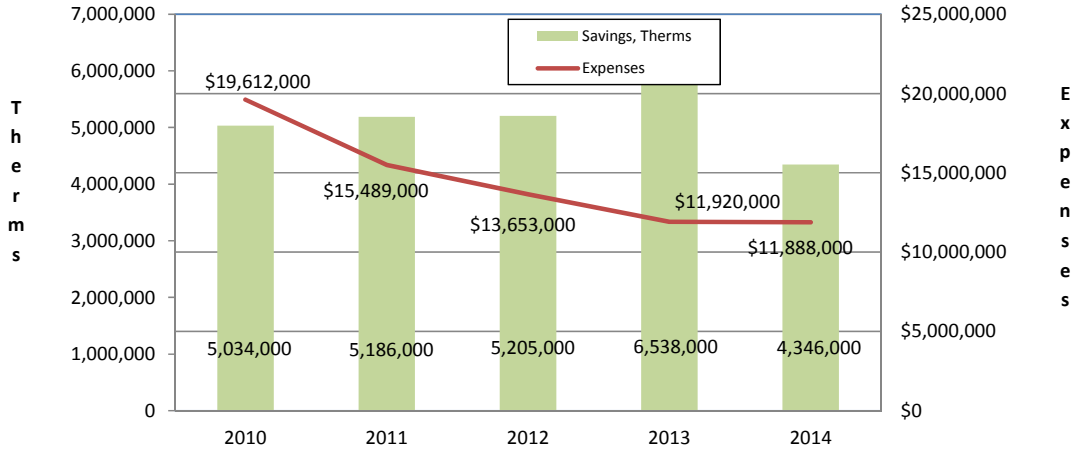


Figure 2b: Energy Efficiency Gas Programs; Savings and Expenditures – Five-year Trends



Cost-Effectiveness Ratios

Table 2c provides the Portfolio view Utility Cost and Total Resource Cost test results for 2014.

Figure 2c represents PSE's five-year Portfolio Total Resource Cost results. All electric TRC figures are indicated with a 10 percent conservation credit adder included.

Although such an adder is not a generally-accepted attribute of gas cost-effectiveness, some type of a conservation credit or risk adder has been discussed between 2012 and 2013,[8] when the UTC conducted workshops to develop their Policy on gas programs' cost-effectiveness analyses. Intended merely as a comparison to a TRC value without any conservation credit, PSE has also included this figure in past Conservation Plans and Reports.

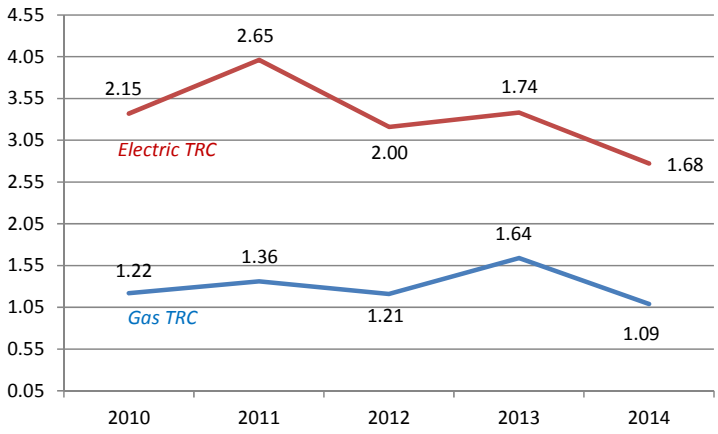
Table 2c: Overall Energy Efficiency Cost-Effectiveness Benefit/Cost Ratios

Benefit to Cost Ratios Portfolio		
	Utility Cost	Total Resource Cost
Electric	2.32	1.68
Gas	2.19	1.09

Indicated TRC for electric includes the application of a 10 percent Conservation credit value. Gas TRC excludes a conservation credit in this table. If a credit was applied, gas TRC would be 1.18.

[8] ¶ 29, page 12 of Docket No. UG-121207, Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs: *"(…) Stakeholders discussed the use of an across-the-board adder to the quantified benefits of conservation activities. (…)"*

Figure 2c: Electric and Natural Gas TRC[9] Ratios – Five-year Trends



Incentives as a Percent of Customer Energy Management Expenditures

Exhibit 1, Supplement 1: *Actual Expenditures Compared to Budgets*, provides results of incentives paid to customers in addition to detailing program-level budget groupings such as labor, employee expense, materials, etc. Certain expenditures—difficult or administratively onerous to quantify—are not specifically classified as "incentives," but clearly also carry a value to the customer, albeit not necessarily monetary. PSE denotes these expenditures as "Direct Benefit to Customer" (DBtC). This distinction represents that most customers derive many more benefits than simply remuneration.

For instance, Commercial Retrofit customers realize a benefit of engineering evaluations and verifications in addition to any custom grant received; customers derive a value from consulting with an energy advisor before investing in a new heat pump, etc. It would be impractical—and very inefficient—to attempt to track the time an energy management engineer or energy advisor spends on these tasks. It is therefore inaccurate to attempt to categorize total Portfolio expenditures as simply "administrative" and "incentives" in order to imply a measure of how effectively a program is using customer funds.

[9] The 2014 gas TRC is presented without an addition of a 10 percent conservation credit. With the credit the gas TRC B/C ratio is 1.18.

In 2014, Energy Efficiency returned 81 percent of electric expenditures to customers in the form of rebates and incentives. Similarly, the gas programs returned 78 percent of gas expenditures to customers. As represented by the total portfolio incentives paid versus the total Energy Efficiency-specific[10] expenses, these amounts are notable.

A slight reduction in BEM incentives—required to preserve some gas program offerings—had a minimal effect on the Energy Efficiency gas ratio, as compared to recent years. Taking the intangible benefits to customers into account, PSE believes that the actual Direct Benefit to Customer is greater than the simple "incentives" figure represents.

This is impressive, considering the Program Staff effort required for Conservation Plan preparation, respond to third party and evaluation data requests, and to review and validate third party reporting. PSE accomplished this sustained level of DBtC through process maximization and careful attention to continuous improvement throughout the organization, as discussed in the program-specific chapters that follow.

Measures

Figure 2d illustrates the overall Energy Efficiency electric and gas savings,[11] distributed by measure savings type. Measure types include RTF UES (Unit Energy Savings), PSE Deemed, NEEA Deemed, Calculated and Custom.[12] The savings type of "NEEA Deemed" is included as a representation of savings estimates provided by NEEA during biennial planning periods. These savings are reported only at the Portfolio level.

NEEA computes and provides the actual savings in the May-June timeframe following the year in which the savings were achieved. While this is too late to be reflected in the Annual Report of Energy Conservation Accomplishments, PSE includes a discussion about reported-versus-actual NEEA savings in its Biennial Conservation Reports, filed by June 1 each year.

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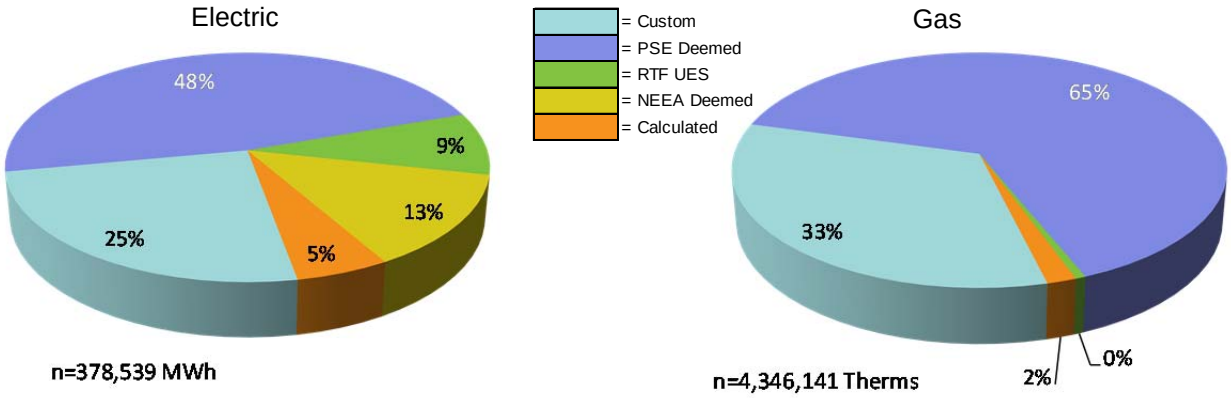
[10] The Energy Efficiency organization is comprised of Residential and Business Energy Management groups. Although they generate savings, pilots and NEEA DBtC are excluded from this assessment. Similarly, Portfolio Support, Research & Compliance, and Other Electric program expenses are excluded, as those functions do not directly generate savings or provide a direct benefit to PSE customers.

[11] Although the gas chart of savings types indicates a value of "0" for RTF UES measures, the actual figure is slightly under 5,000 therms. This value is less than 1 percent of the overall portfolio savings of over 4.3 million therms.

[12] Each of these terms is defined in the Glossary, starting on page 181.

Figure 2d: 2014 Savings Distributions by Measure Savings Type



Measure Details

A discussion of Energy Efficiency's Measure Metrics archival system is contained in Chapter 9: Measurement & Verification, starting on page 107. Exhibit 5, Supplement 1 contains prescriptive measures and certain calculated measures[13] that were available for use in 2014. Exhibit 5, Supplement 2 lists measures that were retired[14] in 2014.

Measure Counts by Program

Exhibit 1, Supplement 4: *Portfolio Measure Category Counts* provides a condensed view of measure counts; typically, only one or two key measures per program. This Supplement is intended to provide a very high-level impression of measures that were key in driving Energy Efficiency savings accomplishments. Program-specific measure tables are included in each program discussion, and provide more refined views of a program's measure installations.

[13] Only measures that were originally included in the Source of Savings database at the time of its creation, or measures that have a deemed savings value are archived. For instance, LED MR-16 lamps in the Commercial Lighting program. Their 2014 deemed value was a fixed kWh/yr. In commercial applications, though, that value is modified by the number of operating hours within a certain building. This measure is therefore classified as "calculated". Calculated measures archived in the Source of Savings database have an indicated savings value of "0" to avoid the impression that a savings value was inadvertently omitted.

[14] It is important to note that measures are never cancelled in any of the Measure Metrics archival databases. For historical reference, measures are retired when they are no longer offered, were archived with the incorrect savings value or incentive amount, put on hiatus, etc. Retired measures are noted in Exhibit 5, Supplement 2.

It is important to note that PSE provides these high-level figures to afford a sense of program scale, customer demand, key savings contributors, and interesting measure types in each program.

The tables include a limited number of measure types, and aren't intended to be comprehensive lists of all measures installed; only a representative sampling of measure types are provided. Program measure tables aren't intended to be used as audit tools or to reconcile actual tracking records.

Memberships and Sponsorships

Energy Efficiency Staff derives value for customers by engaging in memberships and sponsorships. For instance, PSE is a major sponsor of the Regional Technical Forum (RTF). Exhibit 1, Supplement 3: *Sponsorships and Memberships* lists those paid in 2014.

Compliance

Chapter 16: Compliance, contains a complete discussion of PSE regulatory compliance, beginning on page 165. This 2014 PSE Annual Report of Conservation Accomplishments is consistent with the Commission Second Supplemental Order in Docket No. UE-970686, and condition (8)(b) of Order 01 , Attachment A of Docket No UE-132043.

It is noteworthy that in the interest of brevity and to avoid repetition, PSE will use the terms "condition (N)(x)" or "Section M(z)" when referencing deliverables outlined in Exhibit F to Stipulation Agreement, Docket No. UG-011571;[15] the 2010 Electric Settlement Terms, Docket No. UE-100177;[16] and Order 01 of Docket No. UE-132043.

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

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

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

Energy Efficiency's Ongoing Customer Focus

PSE knows that its customers are the key determinant in the success of its conservation programs. Throughout 2014, the dedicated men and women in Energy Efficiency—including those in departments that support Energy Efficiency—continued their long-standing commitment to maximize customer participation in PSE energy-efficiency programs while surpassing customers' expectations at each point of customer contact. Energy Efficiency customers expect PSE to provide innovative conservation products, flexible avenues of energy efficiency messaging and outreach, easier rebate and grant processing, simple applications, and online tools that help them manage their energy use.

As noted in the program discussions throughout this Report, Program Staff focused on increasing customer participation in energy-efficiency programs through examining internal business flows and processes, as well as exploring ways to maximize the value of external, customer-facing opportunities. New and innovative program delivery provided customers with a much broader suite of energy-efficiency offerings, better suited to their tastes and expectations. Advancing Verification Team inspection techniques and CSY[17] improvements also reduced the time required to process customers' grants and rebates, and instilled greater customer confidence in Energy Efficiency.

Energy Efficiency's reorganization of its Dealer Channel program and Energy Efficiency Outreach groups provide customers with a greater variety of communication channels, and more immediate connection with the department. The modification of Business Energy Management's (BEM's) lighting programs made it substantially easier for customers to apply for and receive rebates and grants. The re-launch of PSE's energy website in the fall also provided customers a new tool with which to manage their energy use.

This emphasis on customer service is prominent in PSE's expectations of its trade allies, vendors, and contractors. PSE holds each third-party entity that represents PSE Energy Efficiency Programs when installing or servicing energy-efficiency measures to ever-increasing customer service standards. Energy Efficiency Staff regularly reviews a vendor or contractor performance to ensure that they also meet customer expectations.

[17] CSY, PSE's proprietary software, manages custom project reporting and grant payments, as well as rebates and savings reporting for prescriptive measures. The Report discusses CSY in Chapter 9: Measurement & Verification.

PSE's commitment to exceeding customer expectations also extends to a key set of customers: its Regulatory Stakeholders. This report is designed to exceed their expectations by providing critical information, based on their previous requests, comments, and ideas—expressed in data requests, Commission open meetings and communications and CRAG meetings.

Specific program discussions in this report will provide additional examples of PSE's commitment to providing an outstanding energy efficiency experience for its customers.

2014 Continuous Improvement through Total Quality Management

As has been the case for many years, the skilled professionals of Energy Efficiency consistently employ progressive management techniques that result in incremental improvements—in process efficiency, in the way that Energy Efficiency Staff interface with customers, and maximized productivity—throughout the organization. Program Staff discuss the TQM steps applied to adaptively manage throughout 2014 in each program's Continuous Improvement through Total Quality Management discussion. In each iteration of the TQM cycle, PSE makes management decisions with these considerations uppermost in mind:

- Meeting customer expectations to drive continued program participation,
- Prudently applying customer funds on cost-effective conservation,
- Maximizing Staff productivity, process efficiency and effectiveness,
- Ensuring rigorous program execution and metrics, with a high degree of savings reporting accuracy, financial prudence, compliance, and transparency.

Every organization's focus on adaptively managing its program execution resulted in numerous process improvements, reductions in duplications of efforts, increased management transparency, and optimized data and information access. PSE's focus and continuous improvement efforts yielded optimal savings results while the business was managed with due diligence.

Several highlights that are reviewed in more detail in the program discussions include:

- In response to customer and channel feedback, the Lighting To Go program deftly adjusted its rebate amount on Omnidirectional LED lamps, resulting in increased sales.
- CSY now has electronic signature capability that will save time on intercompany mailing, minimize potentially misplaced documentation, increase productivity, and get rebate payments into customers' hands faster.
- Energy Efficiency routinely monitored the performance of its suite of measures, and adjusted its offerings to market conditions throughout the year. A prime example is the addition of tubular LED (TLED) lamps. PSE was a regional leader in getting this measure to the market.

- Energy Efficiency made significant effort to raise customer awareness of its programs. This included new outreach initiatives, including an expansion of small business "blitzes," multiple promotional campaigns, including the innovative Energy Upgrade campaign, and improved retail signage.
- Energy Efficiency's reorganization: realigning its Business Rebates programs into the Dealer Channel, and creating an Energy Efficiency Outreach group, enabled its staff to get closer to customers. Moving the Rebates Processing, Verification Team and the Data and Systems Services teams also resulted in several key efficiencies being gained: system compatibility, collaboration with Program Staff, and improved data accuracy.
- The Resource Conservation Management organization implemented key recommendations made in the 2012-2013 Biennial Electric Conservation Achievement Report, including a re-design of the incentive structure, establishing a fixed energy use baseline, developing quarterly site checklists, and the creation of new energy tracking software.

PSE discusses these and other accomplishments further in the following chapters.

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RESIDENTIAL ENERGY MANAGEMENT

2014 Residential Energy Management Sector Summary

The following discussions provide a brief summary of the REM sector. Detailed program discussions are located in Chapter 4: Residential Program Details. Tables 3a and 3b provide, at a program level, REM 2014 savings and expenditure figures respectively. Details of Business Sector results are included in the Business Energy Management Details, Chapter 7.

Table 3a: 2014 Residential Electric and Gas Expenditures

2014 Expenditures				2014 Budget
Schedule	**Programs**	**Total**	**% of Budget**	
Electric	Electric			Electric
Gas	Gas			Gas
E201	Low Income	$ 2,846,848	91.9%	$ 3,098,684
E214	Single Family Existing	$ 34,745,718	110.3%	$ 31,488,589
E216	Single Family Fuel Conversion	$ 655,950	84.2%	$ 779,020
E217	Multi Family Existing	$ 13,170,704	144.0%	$ 9,143,960
E215, 218	Residential New Construction	$ 514,463	86.5%	$ 594,747
	Total Electric Programs	**$ 51,933,683**	115.1%	$ 45,105,000
G201	Low Income	$ 305,326	82.6%	$ 369,443
G214	Single Family Existing	$ 6,020,622	114.2%	$ 5,270,608
G217	Multi Family Existing	$ 527,181	69.4%	$ 759,929
G215, 218	Residential New Construction	$ 259,944	78.3%	$ 332,111
	Total Gas Programs	**$ 7,113,073**	105.7%	$ 6,732,091

Table 3b: 2014 Residential Electric and Gas Savings

2014 Savings				2014 Goal
Schedule	**Programs**	**Total**	**% of Goal**	
Electric	Electric			Electric
Gas	Gas			Gas
E201	Low Income	1,767	112.4%	1,571
E214	Single Family Existing	122,126	112.5%	108,552
E216	Single Family Fuel Conversion	1,741	92.0%	1,893
E217	Multi Family Existing	24,524	119.9%	20,446
E215, 218	Residential New Construction	1,102	119.0%	926
	Total Electric Programs	**151,259**	113.4%	133,388
G201	Low Income	24,370	89.0%	27,391
G214	Single Family Existing	1,639,779	122.1%	1,343,061
G217	Multi Family Existing	113,684	109.0%	104,272
G215, 218	Residential New Construction	36,766	19.2%	191,833
	Total Gas Programs	**1,814,599**	108.9%	1,666,557

Five-Year Trends

Figures 3a and 3b provide views of REM's 5-year electric and gas savings and expenditures.

Figure 3a: Residential Electric 5-Year Trends

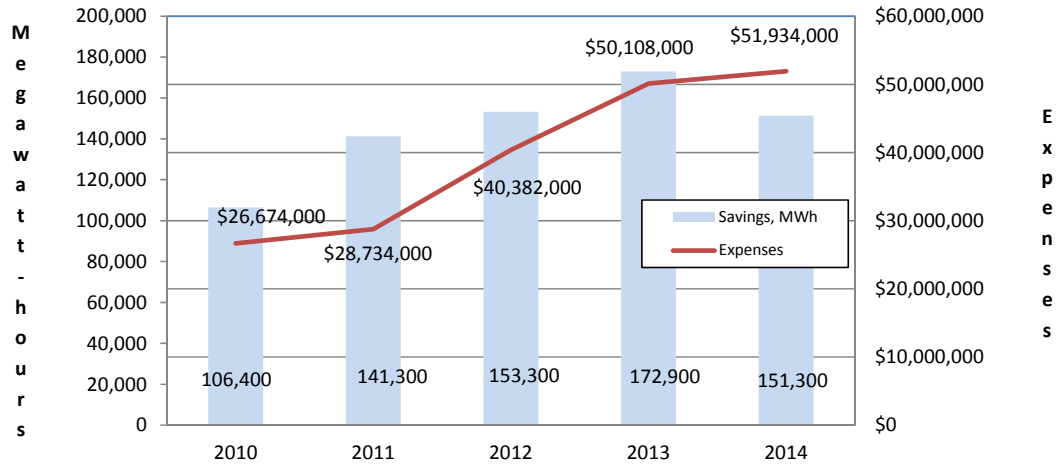
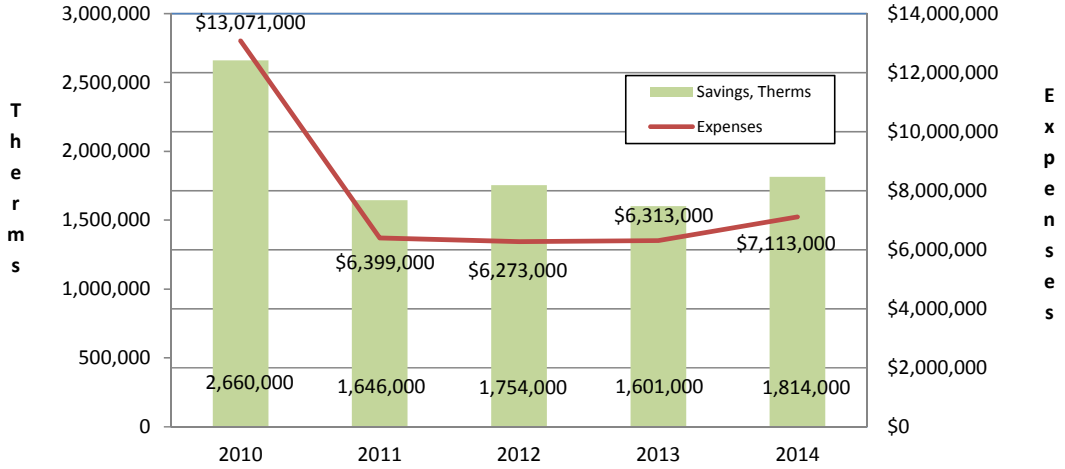


Figure 3b: Residential Gas 5-Year Trends



REM Cost Effectiveness

Table 3c represents the actual calculated Utility Cost and Total Resource Cost benefit-to-cost (B/C) tests for the Residential Sector. The complete UC and TRC tables, showing cost-effectiveness calculations by program, are presented in Exhibit 2 of this report.

Table 3c: 2014 Residential Sector Cost-Effectiveness Tests

Benefit to Cost Ratios Residential Sector		
	Utility Cost	Total Resource Cost
Electric	2.44	1.76
Gas	2.43	1.02

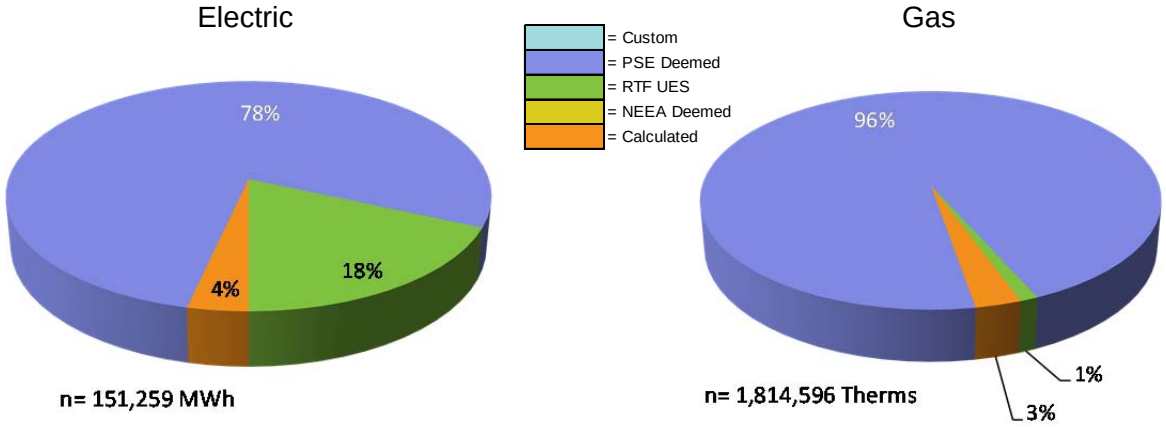
Indicated TRC for electric includes the application of a 10 percent Conservation credit value. Gas TRC excludes a conservation credit in this table. If a credit was applied, gas TRC would be 1.11.

Savings Ratios by Measure Type

Figure 3c illustrates the distribution of savings in the Residential Sector by measure type: RTF UES, PSE Deemed, or Calculated. Custom measures, requiring the analyses of an energy management engineer (EME) are used almost exclusively in the Business Sector.

In the Residential electric portfolio, a key driver in the ratio of RTF UES to PSE Deemed savings is the shift in residential lighting (the largest contributor to the Residential Sector electric savings) to LED from CFL, as the majority of LED measure values are PSE Deemed.

Figure 3c: Residential Sector Savings Distributions by Measure Type



Program Measure Tables

PSE provides measure tables in each of the program discussions in Chapter 4: Residential Program Details. As noted in Chapter 2, PSE provides these high-level figures to afford a sense of program scale, customer demand, key savings contributors, and interesting measure types in each program. The tables include a limited number of measure types, and aren't intended to be a comprehensive list of all measures installed; only a representative sampling of measure types are provided. Program measure tables aren't intended to be used as audit tools or to reconcile actual tracking records.

The following program discussions In Chapter 4 outline process and tactical improvements that enhance the customer's energy-efficiency experience and prudently utilize Conservation Rider funding, along with program results and accomplishments.

RESIDENTIAL PROGRAM DETAIL DISCUSSIONS

Single Family Existing

Schedules E/G 214

Description

The Single Family Existing group is comprised of two Channels: each of which is comprised of several programs. These programs are detailed in the following chapter.

1. Direct to Consumer Channel
2. Dealer Channel

Each of which is comprised of several programs. These programs are detailed in the following chapter.

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 that include: structures with four or less units that are attached by a contiguous roofline, manufactured or factory built homes permanently affixed to a concrete foundation, and manufactured or factory-built homes that are transportable.

Single family existing residences exclude structures that are currently under construction. Prescriptive rebates are intended to facilitate participation by customers, contractors, developers and trade allies, and provide administrative efficiencies for PSE in meeting energy efficiency goals.

It is important to note that multifamily campuses that 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.
- Light-Emitting Diode (LED) lighting including A-line, BR-30, downlight, MR-16, and candelabra.

- Consumer Electronics, including advanced power strips and those offered through PSE's partnership with NEEA.
- Appliances—including refrigerators, freezers, clothes washers, and those offered through PSE's partnership with NEEA.
- Retail, online, and engagement LEDs and showerheads.
- Refrigerator and Freezer Decommissioning – both secondary and primary units.
- Refrigerator and Clothes Washer Replacement – focus on older inefficient models to encourage early retirement.
- Weatherization, including windows, insulation air-and duct sealing.
- Space heating including hydronic systems, high efficiency furnaces, high efficiency boilers, high efficiency fireplaces, heat pumps, and system controls, such as web-enabled thermostats.
- Water heating, including tank water heaters, heat pump water heaters, and efficient showerheads.
- Home Performance activities that may include home energy assessments, audits, and all-inclusive home retrofit services.

Program Staff regularly review incentive amounts and savings values, which 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.

Program Performance

Tables 4a and 4b provide a 2014 summary of expenditures and energy savings for the Single Family Existing group, which consists of multiple single-family programs.

Table 4a: Single Family Existing 2014 Expenditures

2014 Expenditures				2014 Budget
Schedule	Programs	Total	YE % of Budget	
Electric	Electric			Electric
Gas	Gas			Gas
E214	Single Family Existing			
	Residential Lighting	$ 18,354,571		$14,840,761
	Space heat	$ 3,687,729		$4,109,360
	Water heat	$ 411,640		$357,004
	HomePrint	$ 1,741,341		$2,194,053
	Home Appliances	$ 6,527,288		$6,138,400
	Mobile Home Duct Sealing	$ 1,868,291		$1,683,057
	Web-Enabled Thermostats	$ -		$0
	Showerheads	$ 375,258		$653,030
	Weatherization + ARRA	$ 1,636,404		$1,346,334
	Home Energy Reports	$ 143,195		$166,590
Subtotals		**$ 34,745,718**	110.3%	$31,488,589
G214	Single Family Existing			
	Residential Lighting	$ -		$0
	Space heat	$ 1,548,363		$1,632,744
	Water heat	$ -		$0
	HomePrint	$ -		$0
	Home Appliances	n/a		$0
	Mobile Home Duct Sealing	$ -		$0
	Web-Enabled Thermostats	$ 37,659		$168,800
	Showerheads	$ 289,759		$242,100
	Weatherization + ARRA	$ 4,120,712		$3,178,169
	Home Energy Reports	$ 24,129		$48,795
Subtotals		**$ 6,020,622**	114.2%	$5,270,608

Table 4b: Single Family Existing 2014 Savings

2014 Savings				2014 Goal
Schedule	Programs	Total	YE % of Goal	
Electric	Electric			Electric
Gas	Gas			Gas
E214	Single Family Existing			
	Residential Lighting	78,615		66,120
	Space heat	8,811		10,132
	Water heat	568		545
	HomePrint	2,676		3,400
	Home Appliances	8,986		10,011
	Mobile Home Duct Sealing	6,541		3,592
	Web-Enabled Thermostats	0		0
	Showerheads	4,302		5,255
	Weatherization + ARRA	5,736		3,607
	Home Energy Reports	5,892		5,890
Subtotals		**122,126**	112.5%	108,552
G214	Single Family Existing			
	Residential Lighting	0		0
	Space heat	528,266		519,800
	Water heat	0		0
	HomePrint	0		0
	Home Appliances	25,048		7,998
	Mobile Home Duct Sealing	0		0
	Web-Enabled Thermostats	0		0
	Showerheads	145,777		83,803
	Weatherization + ARRA	763,940		560,960
	Home Energy Reports	176,748		170,500
Subtotals		**1,639,779**	122.1%	1,343,061

Single Family Existing 2014 Accomplishments and Activities

In 2014 the Direct to Consumer and Dealer Channels collaborated to develop and execute two unique customer engagement campaigns focused on driving customer awareness of and participation in PSE's single-family residential energy efficiency programs. The two channels also collaborated on another interesting marketing delivery.

The Channels outline those below:

The Energy Upgrades Campaign

Energy Upgrades was a sports-themed campaign that leveraged popular events, activities, and games to surprise a unique segmentation of PSE residential customers with energy efficiency. The Campaign delivered not only an awareness message about PSE's programs, but also exciting best-in-class energy-efficiency prizes that ranged from LED light bulbs to refrigerators. The Energy Outreach team was an important contributor to the success of the Campaign.

As customers were on their way to, or as they arrived at their event, they were handed a perforated upgrade ticket and were enthusiastically encouraged to participate. Every ticket was a winner and was uniquely coded. Customers could learn what they won at the PSE booth.

After booth staffers briefly celebrated their prize with each customer, the ticket was separated along the perforated edge. The half that the customer kept had information about PSE's programs and limited-time offers that PSE had arranged with campaign sponsors. The half kept by the booth staff was coded to inform PSE of the location that ticket was handed out so PSE could later determine the most successful distribution locations.

This innovative campaign launched in August 2014 and targeted 14 high-profile events throughout PSE's territory over the subsequent 3-month period. Of those 14 events, the cornerstone event was on Sunday, September 21, as PSE engaged game-day commuters traveling by ferry, bus, light-rail, and train as they made their way to the big Seahawks versus Broncos NFL football game at CenturyLink® Field in Seattle.

The campaign also consisted of marketplace geographically-targeted advertising, earned media, and social media. Table 4c provides summary campaign results.

Table 4c: Energy Upgrade Metrics

Energy Upgrade Results at a Glance	
Total Golden Upgrade tickets distributed	More than 25,000
Total redemption rate	46%
13 community events:	
Number of Golden Upgrade tickets distributed	Over 15,000
Number of people who visited the PSE booth	Almost 8,700
Ticket redemption rate	62%
Seahawks Blitz event (28 transit stops canvassed):	
Number of Golden Upgrade tickets distributed	Over 10,000
Number of people who visited the PSE booth	Almost 3,000
Ticket redemption rate	29%
Total advertising reach:	
OOH (Out-of-Home; includes ferries, billboards, transit)	In excess of 50 million
Digital	Over 7 million
Print	Almost 130,000
Radio Listener Impressions	7 million
Retail Performance:	
LED bulbs rebated at The Home Depot	Nearly 160,000
LED Sales Lift	650%
CEE Tier 3 Appliances rebated/sold month of September	Almost 1,800
Appliance Sales Lift	46%
Advanced Power Strips distributed/won	Over 1,000
Showerheads distributed/won	More than 400
HomePrint energy assessment signups	Approximately 250
Social and earned media:	
Campaign web page shared on Facebook/Twitter	Almost 750
Campaign website page views	Over 26,000
Facebook	More than 100,000
Twitter impressions	Nearly 65,000
The Voice (PSE billing insert)	More than 3 million
PSE E-blasts	Almost 625,000
Emails sent by The Seahawks	Nearly 80,000
Earned Media - Fox Morning Show, News Publications	More than 215,000

The Cross-Sell Campaign

The Direct to Consumer and Dealer Channels developed the Cross-Sell Campaign to encourage customers to participate in additional PSE energy efficiency programs, keep them engaged with PSE in a conversation about energy efficiency in their home, and to Increase their awareness of other PSE offerings.

This was accomplished through an email and direct mail campaign (Cross-sell Campaign) targeted to PSE customers who have already participated in a PSE energy efficiency program. The team developed 12 unique email and 5 direct mail campaign offers that were strategically deployed to specific customer lists, based on likely program affinity, seasonality, and communication frequency over an 8-month period. These offers ranged from special discount offers for energy efficient refrigerators to limited time specials for window upgrades. Again, PSE leveraged partner contributions and upstream incentives to provide a compelling and time-bound offer to its customers.

Overall Results

- Distributed 12 unique electronic messages for a total email distribution of 843,812:
  - 198,228 emails were opened
    - 23.5 percent open rate (OR); 12.4 percent above industry average
    - 12.8 percent click-to-open rate (CTO); 2.4 percent above industry average
- Distributed 5 direct mail communications for a total of 131,385 mailings.

Chinook Book

In another way to reach customers, PSE marketed two of its more popular programs through Chinook Book.

Chinook Book is a media company that specializes in sustainable commerce and creates incentives for people to live a more sustainable lifestyle. Chinook Book publishes a print book and mobile app in five markets: Seattle, Portland, California Bay Area, Denver, and Minneapolis. In the Puget Sound region, Chinook Book has a total audience of 35,000 print and 27,000 mobile users. The books and mobile app subscriptions are sold at natural food stores (PCC, Whole Foods, Central Coop, etc.), mainstream retailers like Costco, and through school fundraisers. Mobile app sessions average about 80,000/month, and deliver over 100,000 impressions to merchants every month.

PSE partnered with Chinook Book in early 2014 to promote; PSE's HomePrint™ program and the free WaterSense® showerhead offer on pse.com/shopPSE.

Direct to Consumer Channel

The Direct-to-Consumer Channel focuses on services targeted to a wide variety of retail and manufacturer entities, including but not limited to "big box" chains, drugstore/grocery chains, warehouse stores, online retailers, and other local and independent resellers. The Channel also manages a PSE-branded online store, ShopPSE (http://PSE.com/shippse).

The Channel manages several programs—most of which are consumer-oriented—including refrigerator decommissioning, showerheads, appliances, electronics, and of course, energy efficient lighting. This Channel also collaborates on consumer electronics and select appliances through PSE's funding relationship with NEEA. The Direct-to-Consumer Channel operates primarily within the structure of Schedule 214, Single Family Existing.

To best leverage existing market relationships and to drive a consistent customer and contractor engagement strategy, management reporting for the Lighting To Go program that resides under Schedule E 262 was moved into the Direct to Consumer Channel in Q2 of 2014. Details regarding this program and the associated accomplishments for 2014 can be found under the Business Management section detailing Schedules E 262.

Direct-to-Consumer Programs

These programs collaborate with retailers and manufacturers of energy efficient products – such as lamps, light fixtures, showerheads, electronics, and appliances such as, but not limited to, 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 Direct-to-Consumer Programs provides incentives and promotions for efficient products to PSE's residential customers through agreements with retailers and/or manufacturers

When advantageous to do so, PSE may purchase energy-efficiency products directly from manufacturers or distributors to resale to customers or provide to retailers for resale. This may occur at either traditional or online stores, including ShopPSE. PSE also provides field services to educate retail employees on its products, detail qualifying product, and ensure compliance with PSE agreements.

2014 Continuous Improvement through TQM

PSE continues to look for new and innovative ways to market its programs, touch customers, and provide them with the best possible customer experience. The following discussions demonstrate PSE's commitment to proactive and adaptive program management throughout the year.

Retail Store Awareness and Field Services

Over the last three years, PSE continually improved on its field services by using customer data and retail merchandising experts to inform PSE's retail signage and introduce state of the art backend systems in order to assure that the Channel's retail store operations are the very best in class.

Effective signage is critical on products in stores that offer instant PSE rebates, such as lighting and showerheads. Employing comprehensive customer feedback sessions, PSE produced signage based upon behavioral science from actual PSE customers and retail best practices. PSE's customer survey data is the most quantitative collection on utility signage and is well-admired in the Western Region. Using this data, PSE developed signage concepts that effectively communicates the PSE rebates and encourages its customers to choose energy efficient products.

PSE created different signage layouts and variants for study in a behavior-based propriety tool developed by an outside consultant and expert in this field. The consultant asked 450 customers to select the best options based upon the direction of, "which concept more clearly communicates that PSE is responsible for providing the rebate while being more appealing in regards to purchasing intent."

After the top concepts emerged, PSE selected a different set of 400 PSE customers to electronically rate signage elements. PSE rolled those that rated highest into a merchandising guide that represents all the signage pieces and the proper use and best practices within the retail stores in May. PSE conducted training for the field services team, and updated the training manual. The new signage was gradually placed into the stores over the following few months with all signage in place by the end of October.

In addition to this research and signage rollout, PSE also had other notables with its retail field services work.

In 2014, the Channel:

- Collaborated with the NW Retail Regional Collaborative to secure signage at Lowe's stores and provide training to Lowe's sales associates on window rebate programs across the region.
- Increased retail store participation to nearly 550 across PSE's service territory. Theses now include showroom stores, which primarily cater to residential new construction, along with Lighting To Go retailers, which are the commercial store equivalent of PSE's residential lighting program.
- PSE also provides field services for heat pump water heaters carried at retail for direct consumer purchase.

PSE introduced backend systems to save on administrative costs, while making it easier to organize and analyze operations. In 2014, PSE:

- Moved all operations to Salesforce, which is a cloud based database system, to store all field service operations, including all daily store reports, contractual pricing agreements, and signage inventory.
- Reduced field service representative daily store reporting time 50 percent by providing Apple iPads to keep all necessary documents at their fingertips.
- Eliminated all manual tracking and scanning of signed Agreements by shifting contractual signing to DocuSign,[18] an electronic signature application.

Thank You Kits

Based on the success of PSE's "Thank You" kits that PSE sent to customers at the end of 2013, PSE designed and implemented a more modest "Thank You" kit for 2014. PSE mailed the new "Thank You" kit to 14,000 eligible residential electric customers that either participated in a PSE rebate program, or whose HVAC heating and water heating, appliance, or weatherization application were denied.

The new kit contained two Philips® SlimStyle® LED A-lamp bulbs, a thank you letter, along with a brochure of all PSE energy efficiency programs, commercial and residential. By including the bulbs, PSE gave the opportunity for customers to have hands -on experience with the latest and most innovative LED technology.

[18] DocuSign is approved and is used for contracts by PSE's Purchasing department.

Pop-Up Retail Events

In an effort to reach customers in new and unusual ways, PSE conducted "Pop-Up" retail events at businesses throughout PSE's service territory. A Pop-Up retail event is a limited-time—often one day—opportunity for customers to learn about and purchase PSE qualified and rebated products. Other PSE conservation programs are often promoted as well.

Events are generally offered to businesses with more than 500 employees in the core PSE electric service territory. In 2014, in collaboration with these businesses, PSE conducted more than 65 total events and it estimates that nearly 132,000 customers learned about energy efficiency offerings.

2014 Accomplishments and Activities

The Direct to Consumer results reflect a high degree of adaptive management throughout the year.

Residential and Commercial Retail Lighting

Due in part to campaigns like Energy Upgrade and Cross-sell and the mainstream introduction of lower cost LEDs, 2014 exceeded the program's forecasts, mostly resulting from strong LED unit sales.

PSE saw a large transition in the market this year from CFLs to LEDs. In 2013, LEDs only accounted for 20 percent of the residential lighting savings for the year but in 2014 LEDs accounted for almost 50 percent of the savings. The increased adoption of LED technology is in large part due to better technology and lower prices as manufacturing processes gain efficiency.

For example, PSE's Energy Upgrade campaign provided an incredible opportunity to promote Philips® new innovative inexpensive SlimStyle® LED technology. The success of the Energy Upgrade campaign coupled with low prices on Philips SlimStyle LED technology was a large contributor to the increase in program savings and spending. At one point during the Energy Upgrade campaign, PSE's 18 The Home Depot® stores accounted for 25 percent of all Philips SlimStyle sales across the country.

Residential Appliances

In 2014, the Direct to Consumer Channel offered incentives on a variety of appliance programs for residential customers. These include:

- Refrigerator & Freezer Decommissioning,
- CEE Tier 3 Energy Star Clothes Washers,
- CEE Tier 3 Energy Star Refrigerators,
- Energy Star Freezers,
- Refrigerator & Clothes Washer Replacements.

Starting in 2014, PSE adjusted qualifying refrigerators from all Energy Star® qualified to CEE Tier 3 Energy Star® qualified refrigerators in order to meet cost effectiveness requirements. Making this adjustment, during the first part of 2014, it contributed to an increase in rebate application rejection rates of about 15 percent from 2013 rates. Later in the year, in order to reduce the number of rejections, PSE implemented process changes, rebate form changes, and created a new "Any water heat/Any dryer heat" clothes washer measure. By implementing these changes, by the end of the year, PSE nullified the increase in rejections.

In 2014 each appliance program was given a distinct marketing strategy delivered through a larger Appliance campaign. The Appliance campaign utilized the Cross-sell and Energy Upgrade campaigns to implement specific aspects of the Appliance campaign.

Early in the year, PSE teamed up with other utilities in the WRUN (Western Regional Utility Network) group to promote specific Kenmore® refrigerator models at Sears® stores. Sears gave an additional $50 rebate per refrigerator sold on top of our increased rebate of $100. PSE promoted this special offer through emails, Google search ads, Google banner ads and Facebook ads. PSE saw an increase of 208 percent CEE Tier 3 Energy Star Kenmore refrigerators sold at Sears stores during the same time frame the previous year.

Along with partnerships and promotions with large retail stores, PSE reached out to independent retailer Judd & Black in Mount Vernon to participate in an exclusive special promotion. This promotion allowed Judd & Black customers to receive a $100 rebate on qualifying refrigerators and clothes washers. In return, Judd & Black marketed the promotion to their customers through newspaper ads, radio ads and website banners. This promotion was a success as sales increased during the promotional period.

The refrigerator and clothes washer replacement program was strategically rolled out throughout PSE's service territory in 2014. Instead of inundating the program with bursts of participants, PSE designed a community-by-community marketing campaign that would steadily keep customers participating in the program. This allowed PSE to meet the demand while providing the best possible customer experience. This approach was successful and we only slightly exceeded the targets for refrigerators and were just a bit shy of meeting target for clothes washers.

The refrigerator and freezer decommissioning program had a bit of a lull in the beginning of the year but finished strong near the end of the year. In order to increase participation, PSE initiated a limited time offer with an increased rebate. In another effort to boost participation, near the end of the year PSE participated in a rebate charity promotion with Food Lifeline.

The charity promotion with Food Lifeline was kicked off in mid-October. PSE marketed to our customers that during this promotional period they had the option of donating their $25 rebate to Food Lifeline and PSE would match their rebate. PSE was the first utility to match a donation on a promotion like this. On average, utilities running similar donation promotions would only see donation rates anywhere from 1 to 10 percent. At the end of the campaign on December 15, PSE saw a donation rate of nearly 40 percent. The campaign ended with a check presentation ceremony to Food Lifeline.

Despite these successes the overall appliance savings result was 10 percent shy of meeting the forecast and spending was a little over the forecast for the year. The reasons for this are due to the reduced participation in the clothes washer program and adjustment from all Energy Star® refrigerators to only CEE Tier 3 Energy Star refrigerators. The slight overspend is due to the limited-time offers associated with the Energy Upgrades campaign and the higher overall cost to market appliance programs. Also notable for residential appliances, in June 2014, a printing expense was inadvertently coded as Materials instead of Marketing. This was later corrected with a PSE journal entry within January 2015.

Residential Showerheads

Residential electric showerhead savings were shy for the PSE forecasts for the year, but natural gas showerhead savings far exceeded the forecasts for 2014. The variance in savings is mostly explained by a discrepancy in how PSE originally set the targets for PSE's dual fuel service territory; the dual fuel electric quantity should have exactly matched the dual fuel natural gas quantity.

PSE also worked to improve our customer online experience with showerheads, which required developing gas only measures. These new measures gave PSE the opportunity to develop two online showerhead promotions, which could be offered to all PSE customers.

The first online showerhead promotion was with Overstockdeals.com and Kohler®. The second was with Uninex International® and Amazon.com®. Both promotional offers were emailed to PSE customers with special coupon codes for items on the respective websites. While neither promotion performed how PSE had hoped, PSE learned that product pricing and brand awareness play a large roll in customer purchasing decisions.

Also notable, Lowe's removed themselves from all utility non-lighting sponsored rebate programs in 2014—which included PSE's showerhead program with Lowe's. Lowe's indicated that the amount of money they were receiving from the programs were not worth the time of overseeing it.

Advanced Power Strips

An Infrared (IR) sensing advanced power strip is installed with a home entertainment system. When this device is installed, it disconnects power to connected devices after a set period with no IR signal. In 2014, PSE tested several delivery methods for this specialized product.

Methods included:

- In exchange for customer information, PSE engaged 500 customers with units through 6 tabling events at Fred Meyer locations.
- Through PSE's Pop-Up retail events, PSE engaged an additional 500 customers with units at 7 business location in exchange for customer information.
- The final delivery method tested was an online option. Customers can visit PSE.com/APS and purchase the product for $10, shipping and taxes included. PSE also receives full customer information through this method. Through the end of 2014 this delivery method distributed 57 units.

Web-Enabled Thermostats:

PSE continues to monitor the 1,000 units installed as part of PSE's 2013 pilot program. As mentioned in previous reports, PSE is testing the energy-savings and customer acceptability, with results expected in 2015.

Home Energy Reports

2014 was the sixth full year of PSE's Home Energy Report "legacy" program.[19] The program performed as planned, with very little customer attrition, with over 150,000 HER mailings in 2014.[20] Additionally, PSE launched a 105,000 household expansion pilot in March 2014 to provide additional insights into the learnings of the Home Energy Reports program. Additional information about the 2014 expansion pilot can be found in Chapter 5: Pilots.

Direct to Consumer Channel Measure Highlights

Table 4d provides an overview of Retail Channel measures reported in 2014 by measure types. It is important to recognize that these figures are rounded[21] and intended to convey the scale and scope of measure types reported in this channel, rather than to provide the precise number of measures installed.

[19] It is important to note that, consistent with a CRAG agreement established in target-setting meetings in 2013, "legacy" Home Energy Report electric savings apply towards the EIA 2014-2015 conservation target, while the expansion pilot savings (if any) are excluded from the EIA target.

[20] Table 5c in Chapter 5: Pilots provides the total mailings count for both legacy and pilot reports.

[21] It is interesting to note that the Home Energy Report program reports savings for 15,000 dual-fuel customers. However, roughly 20,000 homes receive the reports. The difference in reports sent versus reports claimed is because not all Home Energy Report recipients have a match to the control group. The control group is the group not receiving reports that is used during the yearly evaluation process to gauge savings against those that are receiving reports.

Table 4d: Overview of 2014 Direct-to-Consumer Channel Measure Activity

Category	Measure Type	Electric	Gas
Appliances			
	Clothes Washer Replacements	1,900	
	Clothes Washers	1,700	
	New Refrigerators & Freezers	3,600	
	Refrigerator Replacement	5,000	
	Refrigerator/Freezer Decommissioning	8,500	
Home Energy Reports	Number of dual-fuel customers receiving reports	15,000	
Water Heat			
	Showerheads	50,000	28,000
Lighting			
	CFL Bulbs	Over 2 million	
	CFL Fixtures	5,700	
	LED Bulbs	Over 2 million	
	LED Fixtures	Over 100,000	
	Retrofit LED Kits	86,000	

Figures are in units, unless otherwise specified in description
Figures are illustrative, and are not inclusive of all measures
Home Energy Reports are provided to dual-fuel residences.

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 and insulation, as standalone measures, or through comprehensive Home Performance activities that may include home energy assessments, audits and all-inclusive home retrofit services. 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.

To best leverage existing market relationships and to drive a consistent customer and contractor engagement strategy, the Small Business Direct Install, Commercial Kitchen & Laundry, Commercial Direct Install (not SBDI), and Commercial HVAC programs that reside under Schedules E/G 262 were moved into the Dealer Channel in Q2 of 2014.[22] Details regarding these programs and the associated accomplishments for 2014 can be found under the Business Management section detailing Schedules E/G 262.

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 and LED light bulbs, and leave-behind showerheads.

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.

[22] As noted in the Direct to Consumer Channel overview, the Lighting to Go program—while maintaining a management reporting line to Direct to Consumer—is still considered a Business Rebates program, and thus, is a part of the Business Rebates savings and expenditure reporting structure. That program's accomplishments are discussed in Chapter 7: Business Program Details.

Space and Water Heating

The program manages incentives and installations of heating and water heating systems, including but not limited to gas furnaces and boilers, heat pumps, hydronic systems, and domestic water heaters.

Manufactured Home Duct Sealing

PSE's manufactured home duct sealing program achieves measurable, cost-effective energy savings within PSE's electric service territory for existing single-family manufactured homes by supporting duct sealing upgrades, direct installation of CFLs, and leave-behind efficient shower heads, at no cost to qualifying customers.

2014 Adaptation and Continuous Improvement

In addition to the organizational change noted above, the Channel successfully managed the design, development and deployment of an internally-managed weatherization rebate portal. Consistent with adaptive management principles, this project has: improved real-time tracking of program performance metrics, enhanced visibility into quality assurance activities, improved contractor satisfaction, and has greatly reduced data errors as well as the contractor reimbursement timelines.

Accomplishments and Activities

The Dealer Channel conducted a comprehensive HomePrint™ outreach campaign focused on engaging customers in underserved communities. The Energy Outreach Team was integral in the success of this initiative. The program engaged approximately 13,500 customers through direct mail and door-to-door efforts, resulting in 654 HomePrint enrollments.

The Channel also launched a unique manufactured home floor insulation program in collaboration with the WSU Center for Economic and Environmental Partnership (CEEP) program in 2014 and implemented key process improvements through the program's initial stages. The program's early success allowed PSE to leverage additional non-Rider funds to extend the project beyond the 2014 contract period.

Dealer Channel Measure Highlights

Table 4e represents the measures, grouped by types that were reported in 2014. It is important to note that the rounded figures are intended to convey a sense of scale and scope of project activity, rather than to provide comprehensive measure count or an audit tool.

Table 4e: Overview of 2014 Dealer Channel Measure Activity

Group	Measure Type	Electric	Gas
Mobile Home Duct Sealing			
	CFL Lamps - Direct Install	3,600	
	Duct Sealing - In Park	1,000	
	Duct Sealing - Out of Park	2,300	
	LED Lamps - Direct Install	15,600	
	Showerheads - Direct Install	3,300	
HomePrint			
	CFL Lamps - Direct Install	31,000	
	LED Lamps - Direct Install	Almost 79000	
	Showerheads - Leave Behind	Nearly 900	
Space/Water Heat			
	Boilers		40
	FAF-to-Heat Pump Conversion	Approximately 450	
	Fireplace		Over 800
	Furnaces		More than 4,000
	Heat Pump Sizing & Lockout Controls	More than 600	
	Heat Pump Water Heaters	Over 500	
	Heat Pumps	3,000	
	Showerheads - Direct Install	40	
	Water Heaters	Over 150	
Weatherization			
	Air Sealing	In excess of 78,000	
	Attic Insulation (SqFt)	Over 350,000	Over 1.7 million
	Floor Insulation (SqFt)	Almost 400,000	More than 1.7 million
	Mobile Home Floor Insulation (SqFt)	Nearly 651,000	
	Prescriptive Duct Sealing	180	Over 1,700
	Wall Insulation (SqFt)	More than 45,000	Almost 490,000
	Windows (SqFt)	Over 200,000	Nearly 400,000

Figures are in units, unless otherwise designated in the description

Single Family Fuel Conversion

Schedule E216

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

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[23] and/or high-efficiency natural gas domestic water heating equipment.

2014 Accomplishments and Activities

Historically the majority of the savings for the program came from electric to gas water heater conversions. This is due to the relative ease of converting water heaters when there is already gas service to the house.

However, in 2014 the space-heat conversions—especially forced air units—outperformed forecasts and was a major contributor while water heat conversions underperformed forecasts leading to noted variances in Exhibit 1.

Table 4f illustrates a summary of measure types installed in the Single Family Fuel Conversion program during 2014. Please note that the figures are rounded and do not represent a comprehensive measure listing.

[23] 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 4f: Key Fuel Conversion Measures

Measure Categories	Electric
Space and Water Heat	Almost 70
Space Heat Only	Nearly 50
Water Heat Only	Over 150

Residential Business to Business (RB2B) Channel

The Residential Business-to-Business ("RB2B") Channel develops and implements programs for businesses that provide direct services and benefits to PSE customers, and is comprised of the Multifamily Retrofit, Low Income Weatherization, Single Family New Construction and Multifamily New Construction, and programs.

The Multifamily Retrofit program collaborates with variety of stakeholders and provides outreach services to increase customer awareness and maximize the benefits of PSE services to property owners and managers. The Low Income Weatherization program works with social service agencies to satisfy the need of our customers that meet low income guidelines. The Single Family and Multifamily New Construction staff relies heavily on their relationships with the building industry and related trade allies like NW Energy Star Homes, to ensure that measures are incorporated in the design and construction of a wide spectrum of multifamily building types.

The group provides services under Electric and Gas Schedules 215, 217, 218 and collaborates with PSE's Business Energy Management sector when multifamily projects include a combination of residential and commercial custom measures. The Low Income Weatherization program is operated under the terms of Electric and Gas Schedules 201.

Low Income Weatherization

Schedules E/G 201

Description

The Low Income Weatherization program is included in the Residential Business-to-Business Channel. This is primarily because the majority of customer-facing contact for this organization is through social service agencies throughout the PSE territory. The program discussion is presented here to maintain the numerical sequence of the Conservation Schedules, as also presented in *Exhibit 1: Savings and Budgets.*

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

Key stakeholders are low-income customers with electric and natural gas service; 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 natural gas and/or electric service from PSE to heat their homes. 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 the Electric Program Conservation Service Rider and the Natural Gas Conservation Service Rider, Company funds, or other federal or state government programs.

For those funds that must meet 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.

Adaptation through TQM

In 2014, PSE furthered its commitment to increased public awareness of our coordination with the Washington State Weatherization Program. PSE collaborated with the Department of Commerce and the Community Action Council (CAC) of Lewis, Mason, and Thurston Counties on a Washington State Weatherization Day event. To support the event, PSE developed a video showcasing a weatherization project in progress at a customer's homes and the video was played at the WA State Weatherization Day event held a week later.

Among those in attendance were the Department of Commerce, PSE, CAC, and the local media.

Also, PSE's Low Income Weatherization and Energy Assistance (EA) programs partnered with the Community Action Council Energy Assistance Program, to print and distribute reusable tote bags for its customers. The bags promoted low income program assistance. Printed on the bags is a call to action with the phone number of CAC energy assistance program along with the PSE logo. LIW staff also partnered with the Opportunity Council on program outreach efforts to increase 2014 fourth quarter program production.

To further enhance the customer experience, the Program merged the PSE Low Income Weatherization (LIW) brochure with the PSE Energy Assistance program to make it easier for its customers to understand all of PSE low income program offerings in a single brochure.

2014 Accomplishments and Activities

This year, low-income agencies continued to focus on completing projects. Electric savings exceeded goal by 12 percent and gas savings finished the year at 89 percent of goal. With the addition of Multi-family air sealing to the LIW measure portfolio, agencies were able to exceed 2014 electric targets.

Additionally, in 2014, the Program:

- Considered program impacts and provided comments and recommendations on Commission Staff's suggested WAC 480-109 rule for Low Income Programs.
- Initiated the LIW Program Evaluation in compliance with I-937 conditions. The evaluation will provide customer segmentation data to enhance program outreach, focus messaging, and increase participation in PSE's low income and other relevant energy efficiency programs
- Visited social service agency partners in the field to identify and provide solutions for program barriers and opportunities.

Table 4g provides a high-level summary of Low Income Weatherization measures installed in 2014. The figures represent unique dwelling units (homes, apartments, manufactured homes, etc.), and are rounded to indicate a general sense of program scope, rather than precise totals to be used for auditing. The list is not intended to represent a comprehensive tally of measures installed. A dwelling unit may have one or more measures installed as a part of a project.

It is important to note that the indicated number of units (which represents the measure type) doesn't always correlate to the total number of measures installed. For instance, for each "LED Lamp" indicated, there could be substantially more than one LED lamp installed.

Table 4g: Low Income Weatherization Measure Highlights

Measure Classification *(stated in number of dwelling units unless otherwise specified)*	Gas	Electric	Total
Air Sealing	60	0	60
Common Area HVAC	-	55	55
Duct Sealing	125	30	155
Ductless Heat Pump	200	-	200
Electronic Thermostat	1	-	1
EnergyStar® Whole House Ventilation	190	-	190
Furnace >90%	0	75	75
Insulation - Attic	175	60	235
Insulation - Duct	10	30	40
Insulation - Floor	280	40	320
Insulation - Wall	70	50	120
Integrated Space and Water Heat	-	5	5
Lighting - CFL Lamps	35	-	35
Lighting - CFL Fixtures	1	-	1
Lighting - LED Lamps	20	-	20
Refrigerator Replacement	40	-	40
Showerheads	20	10	30
Structure Sealing	180	40	220
Water Heater	1	-	1
Water Heater Pipe Insulation	115	15	130
Windows	20	-	20

Multifamily Existing

Schedules E/G 217

Description

The objective of the Multifamily Existing program is to increase the installation of cost effective energy efficient Measures into existing multifamily (MF) buildings with PSE natural gas and/or electric service.

The Multifamily Existing program is designed to increase the uptake and 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, trade ally contractors, and tenants to encourage program participation. 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 the units, common areas, and building envelope. Measures may include windows, insulation, and air sealing enhancements; appliance, lighting, and HVAC upgrades; O&M improvements; behavioral modification; and calculated commercial upgrades such as central boilers and solar pool heaters. This program targets installation of energy efficient measures occurring during planned retrofit and replace upon failure.

Adaptation through Total Quality Management

The program added new direct install measures throughout the year in order to comprehensively serve our customers and maximize savings opportunities when in our customers' homes. These measures include handheld thermostatic restricting showerheads and MR-16 LED lamps. To capitalize on new savings opportunities not previously offered to past participants, when conducting preapprovals of existing appliances, customers also receive thermostatic restrictor showerhead adaptors and bathroom faucet aerators.

Process improvements were made to the Multifamily Retrofit Contractor Alliance Network (CAN). Customers have been requesting contractor referrals at an unprecedented rate, but contractors have found that very few customers were actually following through on setting up bids. The multifamily team worked with the CAN team and the PSE legal department to facilitate a seamless process to allow for customer contact information to be released directly to contractors. This allows contractors to proactively contact interested customers and set up project estimates, which ultimately drives increased program participation.

The program streamlined the commercial project coordination and application process. Gas boiler projects now do not require a baseline (code efficiency) bid in order to run the analysis, so this allows for an expedited process for providing savings estimates and funding approval. Additionally, the program adopted the application process for commercial projects, in particular common area lighting, which reduces collecting redundant information. This helped simplify the process and reduce the amount of paperwork, which facilitates a smoother participation process and enhanced customer experience.

2014 Accomplishments and Activities

Overall, the program served over 520 multifamily properties, 2,925 buildings, and 31,000 units in 2014, exceeding its electric savings targets by 20 percent. This resulted in an increase in Direct Benefit to Customer spending.

On the electric side, the multifamily appliance replacement program continued to be highly successful in 2014 with clothes washer targets exceeded by nearly 1,000 units. Refrigerator replacements, however, are substantially decreasing in volume from year to year due to higher saturation rates and aggressive initial goal-setting. Coordination efforts between the two vendors on pre-qualification, scheduling, data transfer, and order fulfillment has been very smooth due to mutually beneficial process improvements. The program team has also been a participating member in the EPA Responsible Appliance Disposal (RAD) program with regard to compliance, reporting, and information sharing.

The Multifamily Contractor Alliance Network (CAN) has continued to grow, particularly due to coordination and leveraging efforts between commercial and residential networks. The program has been able to recruit contractors who are active in other CAN products to also sign the multifamily rider. We are finally at a point where there are no gaps in geographic coverage or contractor types, thus enabling field staff to consistently provide a minimum of 2 referrals for any given project.

In cooperation with Ecova, the program's vendor partner, the program designed and launched a new platform called Energy Orbit used for project management, and tracking & reporting. The software system is cloud based utilizing the SalesForce engine. The system allows for electronic approvals and real time status updates which helps expedite payment processing and streamlines customer participation. Furthermore, field staff utilizes mobile apps for audits, verifications, and direct install projects which reduces the margin for error and saves time and resources. The database architecture is designed to increase the level of granularity with regard to unit level tracking and provides detailed reporting capabilities to help inform decision-making processes.

The Multifamily Air sealing pilot concluded at the end of 2013 with favorable results and energy saving potential. The next step in development included training all active CAN multifamily weatherization contractors to be certified to offer and install air sealing measures upon launch. Properly sealing infiltration points within a building is very technical and incorporates advanced techniques, which is why contractors were required to first participate in the training. This ultimately helps maintain quality control and assurance in the installation process. PSE, in partnership with Arrow Insulation, hosted three week-long training sessions which included classroom, lab simulation, and live production. Seven contractors in total were trained throughout 2014 and are now able to offer air sealing incentives in 2015.

The gas program also exceeded savings targets by 9 percent, ending 2014 with 114,000 therms. The program re-activated several weatherization measures including windows, which helped renew interest and participation in the program. PSE continued to coordinate its direct installations of showerheads and aerators with Seattle City Light. This partnership resulted in the installation of gas-savings measures in gas-heated apartment complexes in Seattle throughout 2014. An additional benefit was the energy-efficiency leads that this activity generated for both utilities, driving increased savings achievement.

In order to increase customer engagement and tenant education efforts, the program team organized four outreach events at four different apartment and condo campuses. These events occurred during the direct installation of energy saving measures, allowing tenants the opportunity to talk to Program Staff at the sites and learn more about the products installed and ask general energy savings questions.

The program sponsored and exhibited at three key industry tradeshows and conferences including RHA TRENDS, WMFHA Business Exchange, and WMFHA Maintenance Mania. PSE remains active members of both the RHA and WMFHA which provides critical engagement opportunities with decision makers. Through participating in industry events, Program Staff are able to nurture relationships with property managers and ultimately generate more project leads. There are several repeat customers who are also members of WMFHA and RHA so it also allows Program Staff to re-engage with them and present new opportunities.

In cooperation with PSE marketing staff, the program launched a new “Strive for Five” recognition campaign. The campaign aims to provide bamboo recognition plaques to multifamily property managers who complete three or more measure categories within a property. Similar to a star rating system, there are five measure category plates in total on the plaque.

The “Strive for Five” theme provides a clear path and constant reminder to receiving all five plates. Given PSE’s long-standing relationships with multifamily property managers and the fact that a comprehensive retrofit on a complex can span multiple years, the plaques serve to further engage and encourage the customer to complete all energy efficiency measure opportunities. PSE requests that the property manager display the plaque in the rental office or other areas of high visibility, which serves as a marketing tool for prospective tenants as well as an awareness building tool for existing tenants.

Table 4h provides a general overview of measure categories reported in the Multifamily Existing program in 2014. For this discussion, these figures are rounded, and intended to provide a perspective of the scale and scope of Multifamily Existing activity, rather than a precise count of every measure installed.

Table 4h: Multifamily Existing 2014 Measures

Measure Categories	Electric	Gas
Aerator - Direct Install	1,900	1,500
Air Tightening (SqFt)	Almost 49,000	
Attic Insulation (SqFt)	Over 2 million	More than 150,000
CFL Fixtures	170	
CFL Lamps - Direct Install	Almost 15,000	
Clothes Washers - New & Replacements	More than 6,000	
Ductless Heat Pump (# of projects)	3	
Floor Insulation (SqFt)	Over 96,000	More than 72,000
Furnace		5
High-Efficiency Fireplace		4
Hot Water Pipewrap	Almost 2,800	
LED Lamps	Over 93,000	
Refrigerator Replacements	More than 2,000	
Refrigerators	30	
Showerheads	Almost 800	Almost 200
Smart Power Strips	More than 13,000	
Thermostatic Showerhead Restrictor	Almost 12,000	Close to 3,500
Wall Insulation (SqFt)		
Water Heaters (in unit)	2	
Windows (SqFt)	More than 200,000	Nearly 6,500

Figures are in units unless otherwise designated in the descriptions

Residential New Construction

Schedule E215, G215; applicable to single family construction
Schedule E218, G218; applicable to multifamily construction

Description

The following discussion applies to new residential construction, both single-and-multifamily structures. Conservation Schedule terms and conditions, as outlined in the above-noted Schedule numbers, govern the applicability, measure types, funding, analyses and general rules and provisions for each structure classification. Where there are specific requirements, service offerings, measures, incentives, marketing, or outreach applicable to the specific structure type, those are so noted in each of the following sections.

The Residential New Construction program acquires cost-effective energy savings from multifamily new construction projects that increase the installation of energy efficient Measures into new electric & gas heated buildings constructed in the PSE service territory. Due to stringent Washington State Energy Codes, PSE currently does not offer financial incentives for single-family energy-efficient upgrades. PSE continues to maintain relationships with the single family development community and will add new measures if deemed cost-effective.

In addition to newly constructed single-family structures, covered under terms of Schedule 215 (for both gas and electric service) Residential New Construction will include multifamily structures, per Washington State Energy Code 2012 Edition (effective July 1, 2013). Multifamily units are covered under terms of Schedule 218 (for both gas and electric service). 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 for multifamily new construction include owners, developers, general contractor or agents acting on behalf of a 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.

In the new construction marketplace, high-efficiency measures need to be specified and installed during design and construction. Otherwise, it may many years before energy efficient changes to the buildings take place.

For measures and incentives that apply to existing multifamily structures, please refer to the Multifamily, Existing program measures in Exhibit 4: *Measures, Incentives and Eligibility*.

Rebates and incentives are offered to eligible natural gas and electric PSE new construction developers, contractors, trade allies and customers (cumulatively, the program refers to these as "partners") who are constructing multifamily buildings. The program also works with these partners to market energy efficient equipment to their customers. Energy Efficiency encourages the purchase and installation of energy efficient products for their construction projects.

For multifamily new construction projects, financial incentives are packaged under one grant and are structured to work in accordance with current Business Energy Management programs. PSE provides a single "point of contact" to development teams for all energy efficient measures and/or upgrades. This allows PSE to maximize the energy savings opportunity in each development and reduce multi-program confusion for the customer.

The program includes prescriptive and calculated incentives. Eligible customers include developers, owners or agents receiving electricity through PSE's residential schedules 7 (including 17, 27, 37 and 47) and 7A; and commercial schedules 8, 11, 12 and 24; and/or natural gas service through PSE's residential schedule 23 and commercial schedule 31.

Structures include but are not limited to apartments, town homes, condominiums, dormitories, affordable housing, low-income housing, workforce housing, and assisted living residences with three or more attached units.

There may be a combination of residential and commercial meter mixes located within these developments. Incentives include a variety of end-use classifications, not limited to:

- Lighting: Common area,
- Appliances: Clothes washers, refrigerators,
- Ventilation; in-unit whole-home or common area,
- HVAC equipment upgrades.

For all of the conservation Measures installed, Energy Efficiency receives measure installation data directly from the developers. It is therefore possible to precisely track measure details.

Total Quality Management

Program Staff expanded the number of presentations made to its constituents which maximized the generation of energy-efficiency project leads.

2014 Accomplishments and Activities

The 2014 Multifamily New Construction program finished 2014 at 84 percent of its electric savings goal, while expenditures were 85 percent of anticipated expenditures. The program's natural gas savings were 19 percent of the year's goal, with spending 75 percent of anticipated costs.

Natural gas savings were achieved primarily through grants written in 2013 and paid in 2014 at the completion of construction and verification. There were very few grants written in 2014 due to the lower price of natural gas and some custom gas measures not being cost effective, even though project incremental costs remained fairly constant.

Electric savings benefited from the increased construction activity and from more new projects completions, located outside of natural gas-only territory.

Program staff presented at three conferences this year to inform utilities across the country about how PSE secures energy efficiency in new construction. These included:

- Getting to Outcome-Based Performance Summit, An invitation-only Summit, hosted by the National Institute of Building Sciences and New Buildings Institute, to bring together a limited number of national experts and key stakeholders to identify the challenges and develop potential solutions for implementing outcome-based energy use approaches.
- Program Staff received a North American Passive House Conference invitation to speak about PSE's New Construction program.
- North American Passive House Network - Conference & Expo, where Program Staff were invited to be a speaker at conference associated with Passive House Institute. Conference featured global projects and speakers from eight countries.

The Single Family New Construction team continues to maintain a presence with King/Snohomish and Pierce Built Green programs and holds committee member status. This allows PSE to stay current with codes and current building practices. They also support NEEA's ENERGY STAR and Next Step Homes program. The Next Step Homes is a pilot to develop deeper savings in single-family homes.

A customer/contractor video was developed to promote the Next Step Homes, with PSE sponsorship.

The team also supported the Green Canopy real estate classes. These classes trained real estate agents on the benefits of energy efficiency in newly construction homes. This allows agents to tout the benefits of energy efficient homes.

Table 4i provides a general overview of measure categories reported in the Multifamily New Construction program in 2014. 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 4i: Multifamily New Construction 2014 Measure Summary

Measure Categories		Electric	Gas
Multifamily			
	CFL Fixtures	Over 3,500	
	Clothes Washers	400	
	Dishwashers		
	Condensing Boilers (# of Projects)		2
	Condensing Water Heaters (# of Projects)		9
	Heat Recovery (SqFt)		
	LED Fixtures	More than 1,700	
	LED Lamps	Over 3,000	
	Lighing Reductions (SqFt)	Over 5 million	
	Refrigerators	Almost 800	
	Showerheads	More than 300	
	Stairwell Bi-level Lighting (# of Projects)	5	
	Windows (SqFt)		
Single Family			
	CFL Fixtures	Over 1,000	
	Clothes Washers	2	
	Duct Sealing		
	Heat Pumps (Air Source and Ductless)	20	
	LED Fixtures	Almost 1,800	
	Manufactured Homes		1
	Whole House Fan	2	

Lighting reductions are a combination of garage & corridor
Calculated measures are excluded

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PILOTS

Schedule E249

Description

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

Pilots may include tests of Measure cost and performance, customer acceptance and delivery methods. In compliance with condition (7)(d), pilots will only claim energy savings that achieve energy savings sufficient to demonstrate cost-effectiveness by passing the TRC test.

Although Pilots appears in Exhibit 1 after REM and BEM Sectors, it is presented in the report at this point because both REM and BEM share similar Pilot measures for 2014. Table 5a presents 2014 pilot program expenditures and Table 5b presents 2014 pilot program savings.

Table 5a: 2014 Residential and Business Pilot Program Expenditures

2014 Expenditures				2014 Budget
Schedule	Programs	Total	% of Budget	
Electric	Electric			Electric
E249	Residential Pilot: HER Expansion	$ 387,685	32.1%	$ 1,207,400
E249	Business Pilot: Business Energy Reports	$416,850		$ 365,059
Subtotal		$ 804,535	51.2%	$ 1,572,459
G249	Residential Pilot: HER Expansion	$ 294,914	118.6%	$ 248,630
G249	Business Pilot: Business Energy Reports	$ -		$ -
Subtotal		$ 294,914	118.6%	$ 248,630

Table 5b: 2014 Residential and Business Pilot Program Savings

2014 Savings				2014 Goal
Schedule	Programs	Total	% of Goal	
Electric	Electric			Electric
E249	Residential Pilot: HER Expansion	26,759	100.0%	26,760
E249	Business Pilot: Business Energy Reports	0		0
Subtotal		26,759	100.0%	26,760
G249	Residential Pilot: HER Expansion	769,956	100.0%	770,000
G249	Business Pilot: Business Energy Reports	0		0
Subtotal		769,956	100.0%	770,000

Residential Individual Energy Report Pilot

In March 2014, the Residential Energy Management Sector launched a pilot based on its successful Home Energy Reports. The pilot is testing an expansion of individual energy reports in three classifications:

- Non-Urban Customers,
- High Relative User, Low Frequency,
- Electric-Only.

Activities and learnings to date about both PSE's legacy and this expansion pilot are outlined below. An independent savings evaluation is currently being conducted and will be forthcoming after the publication of this report.

Home Energy Report Marketing, Opt Out and Attrition

In an effort to find new ways to market PSE's energy-efficiency programs, on a regular cadence, PSE deployed marketing modules as part of the Home Energy Report program. These marketing modules were included within the report itself and included PSE programs such as, but not limited to; appliance rebates, refrigerator recycling and PSE's HomePrint™ program. In 2014, 83 percent of the expansion group report sends[24] had a marketing message; 48 percent of the legacy group reports contained a marketing message.

[24] Also "deliveries" or "mailings".

The total reach of these marketing modules by segment[25] are presented in Table 5c.

Table 5c: 2014 Energy Report Sends by Segment

Segment	Sends
Legacy	155,604
Non-Urban	172,752
Relative High User	108,349
Electric Only	156,417

Opt Out vs Attrition

All three segments of the expansion group saw some attrition due to customer account numbers becoming inactive, or because of a customer move or cancellation of service for one reason or another. When compared to PSE's overall customer turnover and inactive rates, the expansion group saw attrition at roughly half the rate of PSEs larger residential customer base. Opt-out rates were very low, with less than 1 percent of customers requesting removal from the program; exceeding expectations when compared to the legacy group when launched in 2008. Table 5d compares the opt-out and attrition rate for the expansion pilot population.

Table 5d: 2014 Energy Report Sends by Segment

	Non-Urban	Relative High User	Electric Only	Total
Original population (selected 2/28/14)	42,000	31,500	31,500	105,000
Attrition because of accounts going inactive	4,563	4,690	3,424	12,677
Opt outs	261	186	407	854
Remaining active accounts	37,176	26,624	27,669	91,469

At the end of 2013, PSE received and paid an invoice for the 2014 individual energy reports pilot. This resulted in an apparent reduction of the actual expenditures for the 2014 program and affected the cost-effectiveness ratios for both 2013 and 2014.

[25] "Legacy" Home Energy Reports are those that have been in place since 2008, and are included here for comparison purposes.

Small to Midsize Business Pilot Purpose

The small to midsize business (SMB) efficiency pilot seeks to evaluate the effectiveness of engaging a select group of business customers through direct-mailed energy reports, e-mail messaging, and a web portal to provide energy usage comparisons, segment-specific energy insights and targeted calls to action for SMBs to save money and improve energy efficiency.

SMB Program Description

The SMB pilot program may include the following elements:

- Direct-mailed Business Energy Reports which may include:
    - *Personalized introduction* announcing report's purpose to the SMB owner,
    - *Business comparison* enabling customers to understand what "normal" energy usage is for their given business type,
    - *Usage analysis* exhibiting use and expenses over time,
    - *Energy best practices* to encourage immediate energy-saving behavior,
    - *Targeted program marketing* of applicable energy efficiency programs,
    - *Case studies* of simple investments taken by similar businesses,
    - *Collateral materials* such as stickers, checklists, etc. to encourage efficient behaviors.
- Customer e-mail messaging via either an opt-in or opt-out approach to provide seasonal energy efficiency tips, provide electronic copies of direct-mailed reports, etc.
- Customer web portal which may provide:
    - *Usage & cost analysis* enabling SBMs to understand patterns in energy consumption and costs,
    - *Utility program promotion* to create awareness of available rebates and efficiency programs,
    - *Efficiency tips* tailored to SMB customers,
    - *Savings plan* implementation tools,
    - *Efficiency collateral* that can be downloaded and printed such as stickers, checklists, etc. to encourage efficient behaviors.

Primary Targets

This pilot targeted approximately 10,000 SMBs throughout PSE's service territory. Pilot participants will receive 10 direct-mailed reports over a period of 18 months. The energy usage of the participant group will be compared to control data and evaluated after conclusion of the 18 month period.

2014 Accomplishments and Activities

PSE and OPower, the chosen vendor for the Business Energy Report program, successfully launched the SMB program in 2014. The program achieved several key milestones in 2014, which included:

- Customers received access to a "Business Energy Report" tab in PSE's web portal on November 14, 2014.
- Introductory postcards were mailed to customers on November 26, 2014.
- The welcome letter and first report package was mailed on December 4, 2014.

The overall integration of PSE's data with the OPower system took longer than expected due to unforeseen obstacles. Consequently, more labor was required to successfully launch the pilot, which led an increase in spending compared to the 2014 budget.

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BUSINESS ENERGY MANAGEMENT

2014 Business Energy Management Sector Summary

The following discussions provide a brief summary of the BEM sector. Detailed program discussions are provided in Chapter 6: BEM Program Details. Tables 6a and 6b provide, at a program level, BEM savings and expenditure figures.

Table 6a: Business Sector 2014 Expenditures

2014 Expenditures				2014 Budget
Schedule	**Programs**	**Total**	**% of Budget**	
Electric	Electric			Electric
Gas	Gas			Gas
E250	C/I Retrofit	$ 17,201,563	82.5%	$ 20,842,366
E251	C/I New Construction	$ 1,456,770	93.6%	$ 1,556,056
E253	Resource Conservation Manager - RCM	$ 1,570,077	106.2%	$ 1,478,661
E255	Small Business Lighting Rebate	$ 1,024,042	168.7%	$ 607,015
E258	Large Power User - Self Directed 449 + non-449	$ 6,747,496	127.5%	$ 5,290,686
E261	Energy Efficiency Technology Evaluation	$ 5,042	2.4%	$ 210,110
E262	Commercial Rebates	$ 7,872,398	118.3%	$ 6,653,602
	Total Electric Programs	**$ 35,877,388**	97.9%	$ 36,638,496
G250	C/I Retrofit	$ 1,979,333	81.5%	$ 2,427,580
G251	C/I New Construction	$ 201,621	120.7%	$ 167,036
G253	RCM	$ 556,956	96.7%	$ 576,060
E261	Energy Efficiency Technology Evaluation	$ -	0.0%	$ 20,000
G262	Commercial Rebates	$ 741,036	100.9%	$ 734,434
	Total Gas Programs	**$ 3,478,945**	88.6%	$ 3,925,110

Table 6b: Business Sector 2014 Savings

2014 Savings				2014 Goal
Schedule	**Programs**	**Total**	**% of Goal**	
Electric	Electric			Electric
Gas	Gas			Gas
E250	C/I Retrofit	65,986	92.2%	71,560
E251	C/I New Construction	4,287	169.8%	2,525
E253	Resource Conservation Manager - RCM	14,081	115.9%	12,150
E255	Small Business Lighting Rebate	3,945	197.3%	2,000
E258	Large Power User - Self Directed 449 + non-449	22,665	147.7%	15,350
E261	Energy Efficiency Technology Evaluation	n/a		500
E262	Commercial Rebates	37,865	140.9%	26,877
	Total Electric Programs	**148,830**	113.6%	130,962
G250	C/I Retrofit	507,288	133.8%	379,000
G251	C/I New Construction	44,440	302.3%	14,700
G253	RCM	893,389	319.1%	280,000
E261	Energy Efficiency Technology Evaluation	n/a		n/a
G262	Commercial Rebates	316,469	41.1%	769,600
0	0	0		0
	Total Gas Programs	**1,761,586**	122.1%	**1,443,300**

Five-Year Trends

Figures 6a and 6b provide views of REM's 5-year electric and gas savings and expenditures.

Figure 6a: Business Sector 5-Year Trends: Electric

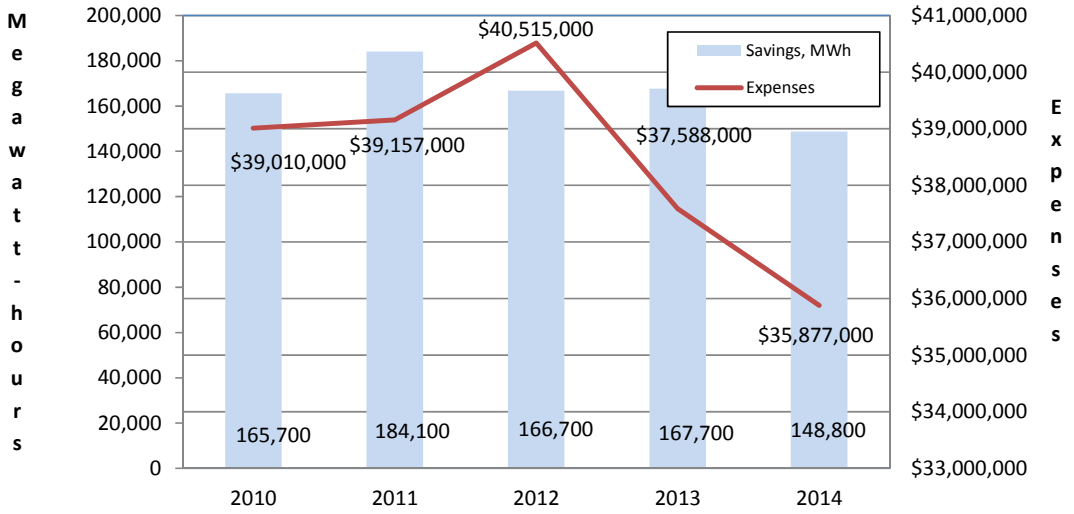
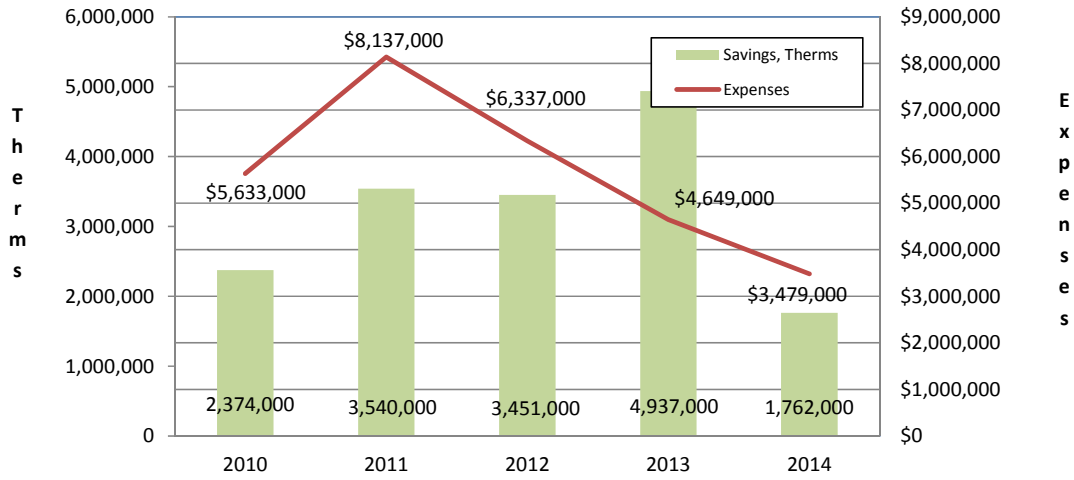


Figure 6b: Business Sector 5-Year Trends: Gas



BEM Cost Effectiveness

Table 6c represents the Utility Cost and Total Resource Cost benefit-to-cost ratios for the Business Sector. A complete listing of cost-effectiveness ratios by program is presented in Exhibit 2: *Program Cost Effectiveness*.

Table 6c: Business Sector Cost-Effectiveness Tests

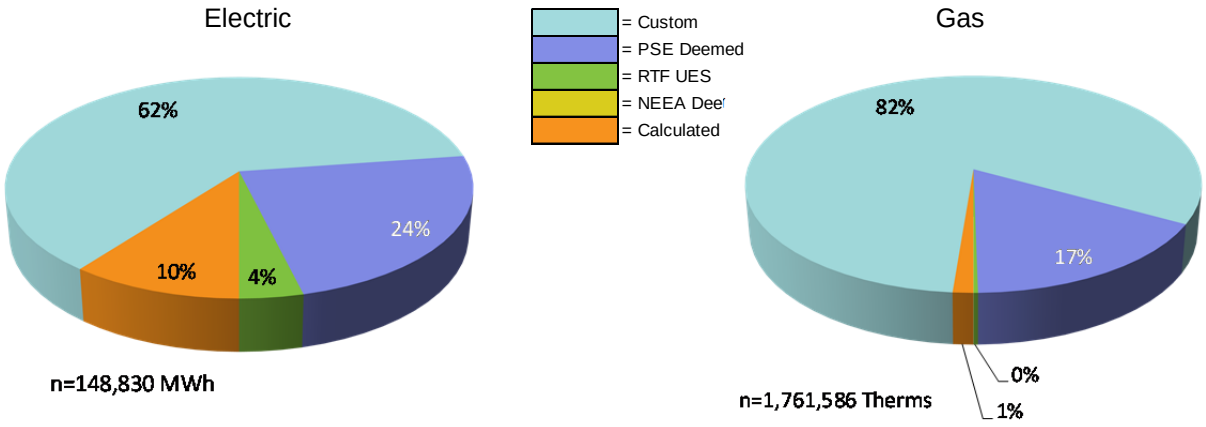
Benefit to Cost Ratios Business Sector	Utility Cost	Total Resource Cost
Electric	2.53	1.65
Gas	2.24	1.41

Indicated TRC for electric includes the application of a 10 percent Conservation credit value. Gas TRC excludes a conservation credit in this table. If a credit was applied, gas TRC would be 1.55.

Savings Ratios by Measure Type

Figure 6c illustrates the distribution of savings in the Business Sector by measure type: Custom, Calculated, PSE Deemed or RTF UES.[26] The majority of Business savings are derived from custom measures.[27]

Figure 6c: Business Sector Savings Distributions by Measure Type



[26] Although a "0" amount is indicated in the gas chart in Figure 6c, there is actually an RTF UES savings of over 4,000 therms. This, however, is less than 1 percent of the 1.8 million Business Sector therms saved.

[27] In contrast to prescriptive measures, custom measures are determined on a project-by-project basis and are calculated and verified in a multi-step process by BEM energy management engineers.

Program Measure Tables

PSE provides measure tables in each of the program discussions in Chapter 6: Business Program Details. As noted in Chapter 2, PSE provides these high-level figures to afford a sense of program scale, customer demand, key savings contributors, and interesting measure types in each program. The tables include a limited number of measure types, and aren't intended to be a comprehensive list of all measures installed; only a representative sampling of measure types are provided. Program measure tables aren't intended to be used as audit tools or to reconcile actual tracking records.

Additional program-specific details are discussed in the following chapter.

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BUSINESS PROGRAM DETAIL DISCUSSIONS

Commercial/Industrial Retrofit

Schedules E/G 250

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, verify existing equipment and system operations, and makes recommendations to customers. PSE also reviews third-party savings estimates and analyses, and when required performs in-house analyses to validate energy savings. PSE works with financial decision makers at the customer's facility to ensure the customer is aware of cost-savings opportunities, including review of energy saving projections that can help obtain favorable financing rates.

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

Upon the customer's decision to proceed with a project, PSE issues a standardized Conservation Grant Agreement and Grant Attachment that establishes terms and conditions for participation in PSE's Custom Grant Program and also explains how the measure will be verified. 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.

Contracted Programs

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. Measure-specific incentives are provided through these contracted programs:

Industrial System Optimization Program (ISOP)

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

Data Center Energy Efficiency Program (DCEEP)

The program focuses on various types of efficiency improvements in customer data centers; such as server virtualization, hot/cold aisle isolation, airflow upgrades, and cooling system upgrades. The program provides site assessments to identify cost effective energy savings opportunities and offers implementation assistance.

Energy Smart Grocer (ESG) Program

The program provides audits, technical assistance and measure-specific financial incentives to grocers who wish to purchase and install energy efficient lighting, refrigeration, HVAC systems and gas efficiency measures. The program is eligible for both Retrofit and New Construction incentives.

2014 Continuous Improvement through TQM

There were numerous in-house process improvements to the CSY project tracking and savings reporting database, which continued to improve operational efficiency, reporting accuracy and customer satisfaction.

Some of these collective enhancements to the CSY tool include:

- The ability to generate Customer Reports. These reports produce opportunities for customer recognition via PSE's social media tools and are shared with internal staff. Other teams such as Business Services and Community Relations also benefit from receiving these reports, which are an important tool for improving communications of customer participation in PSE's Energy Efficiency Programs.
- The ability to go completely digital with grants and payment packages. Grant projects are now generated and reviewed without creation of a paper copy. Projects can now be created, reviewed, and approved more quickly which increases overall departmental efficiency.
- Improved efficiency and accuracy by automating the customer payments to include specific project details.

The **Comprehensive Building Tune-Up Program (CBTU)** Program forms were created and updated to reflect the changes that were implemented late 2013. These forms provide customers and trade allies with a clearer understanding of the program process and timelines. The PSE internal process was also updated, which included a revision to the calculation spreadsheet to make it easier for the staff to use. The program also added three new commissioning agents to the approved providers list. These adjustments will support the growth and continuation of the CBTU program.

The **Business Lighting** program official launched in 2014 and consolidated four 2013 lighting programs. This included the retirement and closeout of both the E255 Small Business Lighting rebate program and the E262 Commercial Lighting Rebate program. The new program features one application that applies to all commercial rate schedules. The program also evolved in 2014 when the application was updated to include street lighting projects based on customer feedback.

2014 Accomplishments and Activities

Electric

The C/I Retrofit program exceeded its 2014 electric target, while finishing the year slightly under budget expectations. This was primarily due to the strong customer participation in the Business Lighting Program, which delivers more cost-effective savings than other measures. The Business Lighting Program achieved 105 percent of target savings at 81 percent of target budget.

Lighting efficiency projects continue to remain the major contributor to program savings with HVAC measures making up the second largest category of savings.

Outside services represented a smaller piece of the budget than expected. This was primarily due to the decreased participation in the Data Center Energy Efficiency Program (DCEEP) and the implementation of more cost-effective measures through the Industrial System Optimization Program (ISOP).

Other noteworthy completed work included LED Street Lighting upgrades. New incentives were utilized for customer and company-owned street and area lighting that were popular with economic stimulus and Office of Superintendent of Public Instruction (OSPI) projects. LED Street Lighting delivered approximately 10 percent of the lighting program target savings. The **Enhanced Lighting Program** continued to perform well, delivering 27 percent of the lighting program target savings.

Non-lighting custom grants finished the year slightly below target. This was due to several late-year projects that were projected to close in 2014 that were delayed. Consequently, program spending was also below budget.

OSPI continued to play a small role in the overall program results delivering slightly over 3 percent savings to the program target.

The **Data Center Energy Efficiency Program (DCEEP)** finished 2014 with lower than forecast savings and expenditures as a result of completing fewer projects than anticipated. The biggest obstacles in completing projects were working within the customers' timeframes and ensuring the customers' understanding and knowledge operating their new systems. Examples include waiting for customers to install blanking plates in their server racks and making sure they were comfortable with any revisions made to HVAC system set points. The lower savings coincided with lower overall cost, and the total cost/kWh for the program was in line with expectations.

Industrial Systems Optimization Program (ISOP) completed 2014 under planned costs and achieved the program's energy savings target. A total of 20 customers completed the program, reported energy savings and received incentives. On projects completed in 2014, the customer's simple payback, after incentive, was less than two months, indicating the high cost-effectiveness of this program. 2014 included significant progress in obtaining more detailed customer-supplied documentation to support claimed energy savings.

Energy Smart Grocer (ESG) continued to pursue cost effective electric savings in the grocery and convenience store sectors in 2014. The program continued to see increased interest in new construction energy efficiency measures, implemented under the Schedule 251 C/I New Construction program.

Gas

The gas C/I retrofit program notably exceeded the 2014 target due in large part to the completion of a large legacy project contracted in previous years. C/I Retrofit Gas direct benefit to customer spending reflected the savings and exceeded planned costs as incentives were paid out upon the completion of the legacy project.

Changes to gas avoided costs had a considerable impact on the quantity and type of new projects that qualified for grant funding in 2014. As a result, the pipeline of gas retrofit projects in progress and labor has diminished considerably. No stimulus-funded projects were completed in 2014.

The **Energy Smart Grocer** program continued to offer natural gas measures in 2014. The primary gas measure was the installation of glass doors to open refrigerated cases. This measure saves both electricity and natural gas by reducing refrigeration system load and cold air spillage into the heated store space. This in turn reduces HVAC natural gas consumption.

2014 Project and Measure Type Summary

Table 7a on the following page shows a representative number of projects[28] completed and the number of electric and gas measures installed; this is not a comprehensive list of all measures installed. It is important to note that indicated measures may include substantially more than a single unit. Figures greater than 10 are rounded, and are presented to provide a sense of scale and scope of program activities, rather than a precise count of all measures installed.

[28] It is important to note that listed "O&M" or "Operations & Maintenance" projects do not indicate that these were funded by PSE O&M. Rather, these are projects that address and improve the customer's operations and maintenance functions within the project's structure(s).

Table 7a: Commercial/Industrial Retrofit Projects and Measures[29]

PROGRAM TYPE	Project Count Per Program			
	Electric	Gas	Both Electric & Gas	All Projects Combined
Commercial & Industrial Retrofit	240	40	20	**300**
Industrial	30	0	0	**30**
Business Enhanced Lighting	70	0	0	**70**
Business Standard Lighting	280	0	0	**280**
Data Center Energy Efficiency	1	0	0	**1**
Energy Smart Grocer Program	110	4	1	**115**
Industrial System Optimization Program	20	0	0	**20**
Simplified Building Tune-Up	6	0	0	**6**
Total Project Count	**Over 750**	**44**	**21**	**Over 800**
MEASURE CATEGORY	**Project Count Per Measure**			
	Electric Measures	Gas Measures	Total Measure Count	Total Projects per Measure
Building Shell	2	4	6	**6**
Core Services	0	3	3	**3**
Enhanced Lighting	60	0	60	**25**
Heat Recovery	1	1	2	**2**
HVAC - Commercial and Industrial	60	40	100	**86**
Lighting - Commercial	130	0	130	**128**
Lighting, Prescriptive	50	0	50	**40**
Motors - Commercial	10	0	10	**11**
Operations & Maintenance	3	1	4	**3**
Process, Commercial	8	15	23	**25**
Refrigeration - Commercial	8	0	8	**8**
Water Heating - Commercial	0	2	2	**2**
Data Center	1	0	0	**1**
HVAC - Commercial and Industrial	1	0	1	**1**
Lighting - Commercial	7	0	7	**7**
Process, Commercial	25	0	25	**23**
Lighting - Commercial	75	0	75	**73**
Lighting - Prescriptive	115	0	115	**51**
Lighting - Commercial	280	0	280	**281**
Lighting - Prescriptive	100	0	100	**57**
Data Center	1	0	0	**1**
HVAC - Commercial and Industrial	1	1	2	**2**
Lighting - Commercial	110	0	110	**87**
Refrigeration - Commercial	60	5	65	**52**
Industrial System Optimization	25	0	0	**20**
SBTU Operations & Maintenance	6	0	6	**6**
Total Measure Count	**1,139**	**72**	**1,184**	**1,001**

Custom Grant projects often consist of more than a single measure

Highlighted rows correspond to both Program Type and Measure Category sub-tables.

[29] Please see the discussion on measure table data elements in the BEM Sector Overview chapter, page 63.

Commercial/Industrial New Construction

Schedules E/G 251

Description

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

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

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

The third path includes Prescriptive Basis incentives for Measures that are eligible for rebates under Schedule E262/G262, the Business Rebates Program. The incentive amount for a Measure is the same as that which is available under Schedule E262/G262, but energy savings may be calculated based on actual Site-Specific conditions and Code Baseline adjustments, if necessary.

New Construction Commissioning focuses on the post-occupancy phase of a new building, with the intent to lead owners and facility operators beyond Code required commissioning to expand their capability to operate the building efficiently by providing training, documentation of efficient operation (charts, performance targets, operating criteria, flags of inefficient operation, etc.), review and recommendations based on seasonal performance and strategies.

In addition to these paths for New Construction efficiency incentives, PSE makes Energy Smart Grocer program offerings available to new construction projects in the grocery sector. This service provides expert technical assistance and Measure-specific financial incentives to grocers who wish to purchase and install energy efficient lighting, refrigeration and HVAC systems that exceed Code minimum efficiency requirements or industry standard practice where Code requirements do not exist.

PSE provides a complete listing of available incentives in Exhibit 4: *Energy Efficiency's List of Measures, Incentives & Eligibility*.

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

2014 Adaptation and Continuous Improvement

A key improvement to the program in 2014 was the revamping of PSE's Post-Occupancy Commissioning documents and requirements to be clearer to the commissioning agents, more organized, and more easily accessed. A PSE engineer met with many local commissioning firms to solicit input and feedback on the program, on the proposed new documentation and forms, and to market the program at the same time. In addition, effort was made to better align the program requirements and documents with our internal Comprehensive Building Tune Up (CBTU) Program Manager. The results of this collaboration, both internally and externally, generated program documents and requirements that promote better alignment and ease of use.

Leveraging PSE's energy modeling consultant, several projects were evaluated or analyzed, and modified as needed, to quantify energy savings using whole-building energy models. This reliance has helped reduce back-and-forth exchanges between PSE and the design team, and minimizing design team hours charged to the customer to participate in the program. This is enabling the New Construction Team to ensure that it has reasonable code baseline systems in the model as well as the ability to provide clean feedback to the energy modeler about what the team changed and why, which is a good learning opportunity for the energy modeler.

2014 Accomplishments and Activities

While the program exceeded its savings targets for the year, new discussions began with the Integrated Design Lab (iDL) to focus on proactive networking with market actors to ensure market awareness of the program to better fill the pipeline for this program, in addition to supporting custom projects on a technical front. The 2012-2013 Program Evaluation recommended several market actors (such as local developers, lenders, etc.) to ensure these groups understand how PSE's New Construction Program fits into their new building process. The iDL submitted a draft proposal that is being refined to meet those objectives recommended by the evaluation. The iDL is best suited for outreach efforts because of their numerous local connections to the building industry. The strategy will begin execution in 2015.

Electric

The electric program ended 2014 above target, and below anticipated spending, largely due to an agricultural lighting project that delivered substantial energy savings.

Gas

The gas program ended above target and budget, primarily driven by the completion of a large lab building that was originally planned for a late 2013 completion. This pushed the savings up substantially compared to target. It also resulted in a higher amount of overall amount of program incentives paid for the year, as this single project accounted for approximately 33 percent of the total program expenditures.

2014 Project and Measure Type Summary

Table 7b shows a representative number of projects completed and the number of electric and gas measures installed. It is important to note that indicated measures may include substantially more than a single unit. The table is intended to provide a sense of the program's scale, and is not a comprehensive list. Figures greater than 10 are rounded.

Table 7b: Commercial/Industrial New Construction Projects and Measures[30]

PROGRAM TYPE	Project Count Per Program			
	Electric	Gas	Both Electric & Gas	All Projects Combined
251 Commercial New Construction	30	3	15	**Over 40**
MEASURE CATEGORY	**Project Count Per Measure**			
	Electric Measures	Gas Measures	Total Measure Count	Total Projects per Measure
HVAC - Commercial and Industrial	2	3	5	**5**
Lighting - Commercial	20	0	20	**20**
Lighting, Prescriptive	6	0	6	**6**
Operations and Maintenance	10	9	19	**9**
Process, Commercial	2	0	2	**2**
Refrigeration - Commercial	1	0	1	**1**
Water Heating - Commercial	0	1	1	**1**
Whole Building	7	6	13	**7**
Total Measure Count	**Almost 50**	**Nearly 20**	**Almost 70**	**More than 50**

Custom Grant projects often consist of more than a single measure

[30] Please see the measure table description in the BEM Sector Overview, page 66.

Resource Conservation Management

Schedules E/G 253

Description

PSE offers Resource Conservation Management 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. At a minimum, the customer needs to qualify for 0.25 FTEs to participate in the program on their own.

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. The start-up deliverables include 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 energy savings associated with RCM practices and “target grants” for meeting or exceeding pre-established energy-reduction targets.

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.

PSE'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.

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” incentive intended to share the cost of program start-up that is paid upon satisfactory completion of deliverables.
- Performance grants for customers who achieve energy savings after completing their deliverables.
- Target grants for customers who achieve a pre-established targeted amount of energy savings after completing their deliverables.

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.

PSE continues to explore ways to make the RCM program cost-effective for smaller customers. Currently we have another offering for smaller organizations called the Strategic Resource Management (SRM) program which is addressed in a separate section.

2014 Continuous Improvement through TQM

In 2014, the RCM program underwent a significant redesign in response to the findings of the third party evaluation in 2013.

1. The ***incentive structure*** has been redesigned to a pay for performance structure. Customers will receive $0.02/kWh and $0.15/therm up to a target savings amount. If the customer reaches the target amount, they will receive a Target Incentive. Any savings beyond the target amount will be incentivized at $0.035/kWh and $0.25/Therm.

Savings achieved through efficiency projects receiving other PSE incentives will count towards the target amount but will not receive the per kWh/therm incentive. Also changed is the savings calculation. These modifications to the incentive structure reward the customer for ALL savings rather than a specific target amount that only includes RCM-specific savings. The new incentive structure also encourages customers to maximize their savings to receive a larger incentive.

2. Rather than use a rolling baseline energy use, each site participating in the RCM program will have a ***fixed baseline energy use***. Each year savings will be calculated using this fixed baseline with previously claimed savings removed. The use of a fixed baseline rewards customers for persistence of savings. With a rolling baseline it is possible for a customer's site to have fluctuating usage, but still be rewarded for energy savings. The fixed baseline removes this possibility, rewarding the customer only for savings that reduce energy use below the fixed baseline. The fixed baseline also opens up an avenue for customers to receive incentives for "reclaimed savings". The measure life for savings claimed through the RCM program is just three years. If a customer continues to see a reduction in energy use beyond those three years due to their O&M and behavioral efforts, PSE can claim those savings and reward the customer again.

3. The RCM program is now requiring ***Site Quarterly Checklists*** for sites in each customer's portfolio. This change is in response to the difficulty noted by the third party review when verifying savings based on annual reports provided by RCMs. The annual report leaves the responsibility for tracking RCM activities throughout the year on the shoulders of the RCM. Any deficiencies in tracking are not visible until the annual report is received, at which point it can be difficult to account for changes in energy use across the portfolio. The Site Quarterly Checklist provides a format for the RCMs to track changes that may impact energy use at each site every three months. RCM program managers can provide feedback more frequently and will have better documentation for the annual savings analysis.

4. To implement the changes detailed above a new Scope of Work was created for all RCM grants. As customers reach the end of their RCM year, they are transitioned from the old grant structure to the updated grant structure. The changeover of all RCM customers to the new grant structure began in 2014 and will continue into 2015.

5. In addition to updating the incentive structure, the grant structure, and the required documentation, PSE is developing new ***energy tracking software*** for use by customers participating in the RCM program. The software, originally intended to roll out in 2014, will be completed first quarter of 2015 and roll out to customers through the rest of the year. This software will enhance the ability of customers to track energy usage of their portfolio and will standardize our energy savings calculations while making them more robust using multivariate regression analysis on daily energy usage data.

2014 Accomplishments and Activities

Overall

In 2014, the RCM program exceeded its annual gas and electric savings targets, implemented its new incentive and grant structure which received high praise from program participants, and brought new customers on-board, all while integrating three new staff members to the team. New staff members include a program manager, supervising energy management engineer, and a senior energy management engineer.

The RCM program continued to support training opportunities for customers and program staff. In 2014, there were 10 training opportunities for RCMs on a variety of topics, including social marketing, submetering, and greenhouse gas emission reporting. In addition, three PSE team members participated in the Building Operator Certification program (BOC).

Electric

The RCM program exceeded forecasted savings and spending this year.

Savings: There were a couple of factors contributing to the RCM program achieving 116 percent of expected savings. In 2014, the RCM program benefited from some customer savings that were achieved in 2013, but processed in the beginning of 2014. There were also several customers who achieved greater savings than expected. The nature of the RCM program is such that savings are difficult to predict as they rely on behavioral-based improvements.

Spending: The RCM program spent 118 percent of planned expense amount. While some of the extra spending was due to increased incentives to customers in accordance with their increased savings, the majority of the extra spending was associated with the development of the new software tool.

This tool, which will significantly enhance the customer experience, will be complete in the first quarter of 2015.

Gas

The RCM program significantly exceeded forecasted gas savings and was on target for expected gas expenditures in 2014.

Savings: Many of the program's active RCM customers exceeded their expected gas savings in 2014. Customers found significant opportunities for improvement, as well as seeing savings achieved by capital projects that went beyond those claimed by PSE's other programs. This led to a savings 319 percent of expected.

Spending: The RCM program was on target for gas expenditures. The direct benefits to customers and the software development costs effectively used the planned amount.

Strategic Resource Management (SRM) Description

Similar to the RCM program, PSE offers Strategic Resource Management (SRM) 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 SRM program targets mid-size 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 SRM services.

Customers qualify for the SRM program based on their annual PSE energy purchases. The minimum customer baseline to participate in the program is 1,000,000 kWh for electric service from PSE.

An SRM customer employs, contracts, or designates existing staff to implement SRM responsibilities, including accounting for resource consumption, assessing facilities, recommending actions, monitoring progress, calculating savings and communicating program information to organization stakeholders. The assigned person will be the designated the green champion and will serve as the main point of contact for the program.

The SRM program will then match a pre-approved contractor with the green champion. The contractor will spend time with the customer at the start of the agreement to benchmark facilities, host an energy management workshop, implement a resource management plan, perform building walkthroughs, create portfolio action plans, and identify behavior, operation and maintenance (O&M), and capital projects. The contractor will then schedule meetings to confirm progress and will spend additional time with the green champion as the program progresses.

PSE will establish performance targets for the program based on the customer's consumption. Typically, targets will be set for a 5 percent reduction each year.

After each milestone, the contractor will bill PSE for 70 percent of the pre-determined expenses and the customer for 30 percent of the expenses. PSE will provide an incentive to the customer based on energy saving performance, up to the 30 percent of contractor expenses. For savings greater than the target, PSE will provide an additional performance incentive to the contractor.

The SRM agreement is valid for one year. A customer can participate in the program for multiple years as long as they continue to meet or exceed the performance targets. For each year, PSE anticipates a 5 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.

Total Quality Management

2014 was the first year of implementation for the SRM program. As such, it was a year of initial contact and preparation of materials.

SRM 2014 Accomplishments and Activities

In 2014, SRM began working with six customers. This is below the expected amount due to a slower than expected start-up and staffing changes on the part of the contractor and PSE.

Electric

Savings: There were no savings expected from this program in 2014.

Spending: There was no spending on the SRM program in 2014. Invoicing for work done by the contractor in 2014 will be included in the 2015 invoicing.

Gas

There were no planned savings or expenditures for any gas SRM activity.

2014 Results by Customer Sector

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

Table 7c: Number of RCM Customers and Facility Area by Sector[31]

PROGRAM TYPE	Project Count Per Program			
	Electric	Gas	Both Electric & Gas	All Projects Combined
Resource Conservation Management	20	7	31	**58**
CUSTOMER SECTOR	**Project Count Per Measure**			
	Customer Count	**Electric Measures**	**Gas Measures**	**Measure Count per Sector**
School Districts	17	20	18	**38**
Government	12	16	14	**30**
Higher Education	3	4	2	**6**
Property Management	2	3	1	**4**
Hospitals	1	2	0	**2**
Retail/Other	2	3	3	**6**
Non Profit	1	3	0	**3**
Total Measure Count	**38**	**51**	**38**	**89**

Custom Grant projects often consist of more than a single measure

[31] Please see the measure table description in the BEM Sector Overview, page 63.

Small Business Lighting

Schedule E255

2014: Closing out the Program

The Small Business Lighting program ended at the end of 2013 and was replaced by the Business Lighting Program at the beginning of 2014. There were many customer rebate applications pending at the end of 2013, and PSE fulfilled its commitment to honor those qualifying applicants. In the first half of 2014, PSE paid over $800,000 in incentives to customers. A small portion of labor expenses were incurred to process those rebates, in addition to ensuring a smooth transition to PSE's new lighting programs. Table 7d provides an overview of the final total 2013 Small Business Lighting rebate projects processed.

Table 7d: Final Small Business Lighting Projects

PROGRAM TYPE	Project Count
	Electric
255 Small Business Calculated Rebates	215

Large Power User/Self Directed

Schedule E258

Description

This program solicits electric energy efficiency upgrades through a Request for Proposal (RFP) process. C/I customers receiving electric service under Schedule 40, 46, 49, 448, 449, 458, or 459 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.

PSE implements the Large Power User Self-Directed program in cycles, with the current program cycle spanning January 1, 2015 to December 31, 2018. Customers had until March 31, 2017 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. The competitive phase RFP will be issued May 15, 2017, with the submittal deadline being July 17, 2017. Received proposals will be ranked based on cost-effectiveness and other criteria specified in the RFP. Competitive funding will be awarded, in order of project ranking, until all funds are allocated to projects.

2014 Adaptation through Total Quality Management

Given the design of the 258 program, there were no TQM activities performed in 2014. All TQM activities will be incorporated into the RFP for 2015.

2014 Accomplishments and Activities

The Large Power User, Self-Directed program entered the final year of the 2010-2014 program cycle in 2014. Thus, the focus of the participating customers and PSE staff in 2014 was to wrap up and close out all projects that had received Large Power User grants, in order to ensure the customers did not miss out on using their remaining allocations, and/or the available competitive phase money. This push to finish projects was successful, with all projects closing by the December cut-off date.

Projects totaling 22.6 million kWh/yr in energy savings were closed in 2014, which represents an additional 48 percent in energy savings over the originally forecast savings estimate, as several projects' closing dates slid from 2013 to 2014. Likewise, the incentives paid out were over the forecast by 31 percent. A total of $6.3 million in incentives were disbursed to customers who closed projects in 2014.

The program's reported 2014 expenditures were over the forecast values due to the aforementioned additional incentives paid as well as program administration and market transformation true-up journal entries that occurred in March.

2014 Project and Measure Type Summary

There were more than 30 projects completed in 2014. Table 7e on the following page shows a representative number of projects[32] and measures installed to provide a sense of program scale. A project may include substantially more than one measure.

[32] It is important to note that listed "O&M" or "Operations & Maintenance" projects do not indicate that these were funded by PSE O&M. Rather, these are projects that address and improve the customer's operations and maintenance functions within the project's structure(s).

Table 7e: Large Power/Self-Directed Number of Measures[33]

PROGRAM TYPE	Project Count Per Program	
	Electric Only	
High Voltage Sch 40, 46, 49	Almost 20	
High Voltage Sch 449	15	
Total Project Count	**Nearly 35**	
MEASURE CATEGORY	**Project Count Per Measure**	
	Electric Measures	**Total Projects per Measure**
Building Shell - Commercial	2	**1**
HVAC - Commercial and Industrial	4	**3**
Lighting - Commercial	3	**3**
Motors - Commercial	4	**3**
O and M	2	**2**
Process, Commercial	6	**6**
HVAC - Commercial and Industrial	1	**1**
Lighting - Commercial	5	**5**
Motors - Commercial	2	**2**
O and M	2	**1**
Process, Commercial	6	**6**
Total Measure Count	**Almost 40**	**More than 30**

Highlighted rows correspond to both Program Type and Measure Category sub-tables.

[33] Please see the measure table description in the BEM Sector Overview, page 63.

Energy Efficient Technology Evaluation

Schedules E/G 261

Description

The purpose of Energy Efficiency Technology Evaluation is to identify new technologies or products that can leverage or further become future PSE program offerings. Ideally, PSE 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.

Recent advancement in computing world, with Big Data push and remote capability drew PSE interest to evaluate how to use advancement in analytics can be used to drive customer identify and guide decisions to implement energy efficiency measures. Large portfolio of commercial buildings can be virtually analyzed using software tools that allow customers to visualize comprehensive energy use and guide customer decisions on implementing energy efficiency improvements without leaving their office.

PSE Energy Management Information System program is investigating a third party Analytic software tools that can be used to engage customer to drive program participation and energy saving. The software will identify prime candidates while eliminating cost by reducing labor-intensive process of walk through assessment and analysis. Analysis is done using the building interval energy data and publicly available building data. Additionally, the program will also investigate best practices for customer engagement that may increase PSE customer program participation.

Adaptation through Total Quality Management

2014 was the first year of the program. As such, it was a year of initial contract and preparation of materials.

2014 Accomplishments and Activities

In late 2014, PSE signed a contract with a third-party technology provider, Retrofficiency, in order to target 300 buildings through a remote energy audit. This contract was signed later than expected, which explains the lower than expected savings and budget. PSE is expected to start engaging customer by Q3-2015.

Commercial Rebates

Schedules E/G 262

Description

In its continuing focus on providing customers a positive conservation experience, Energy Efficiency re-organized its Business Rebates teams in early 2014. As many of the program offerings are fulfilled through contractors, retailers and resellers, Energy Efficiency moved the organization into the Dealer Channel. This resulted in more focused customer communications and drove process efficiencies. Although several Energy Efficiency systems revised the tracking of savings and expenses in June 2014, there were no incremental budget impacts, and savings forecasts remained intact. The Dealer Channel manages the new Business Rebates organization in these groups:

- Commercial Kitchen & Laundry
- Commercial Direct Install (not SBDI)
- Commercial HVAC
- Small Business Direct Install

Although they are tracked separately,[34] the programs continue to roll up to an overall "Business Rebates" reference in the Portfolio View of Exhibit 1.

As noted on page 14 in Chapter 2 and page 39 in Chapter 4, Energy Efficiency reorganized the Business Rebates programs in mid-2014. The resulting focus best leverages existing market relationships and drives a consistent customer and contractor engagement strategy. The re-organization included the Lighting To Go, Small Business Direct Install, Commercial Kitchen & Laundry, Commercial Direct Install (not SBDI), and Commercial HVAC programs that reside under Schedules E/G 262. The re-organization did not result in an incremental anticipated spend, nor did it affect the programs' collective savings goals.

[34] All programs that are classified as "Business Rebates" or are grouped into Schedule 262 are reported in a single area within Exhibit 1 and Exhibit 1, Supplement 1: 2014 Actuals versus Budgets. These include the above-noted programs that align with the Dealer Channel, in addition to Lighting To Go and Business Lighting Express, which align with the Direct to Consumer Channel and the Business Lighting Team, respectively.

Through these programs, 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.

PSE manages the following measure categories in-house by PSE Staff:

- Commercial HVAC (retrofit, and demand control ventilation),
- Commercial Clothes Washers,
- Commercial Laundry Water Heating,
- Commercial Kitchen Equipment,
- Business Lighting (Express) Rebates (lamps, exit signs and controls).
- Lighting To Go (Business Lighting Markdown) (LED lamps, TLEDs)

PSE contracts with industry experts to develop and implement cost-effective measures tailored to the unique needs of target markets. PSE offers the following measure categories through contracted programs:

- Premium HVAC Services,
- Direct Install Pre-rinse spray head valves, showerheads and aerators,
- Small Business Direct Install Measures.

PSE Program Staff monitors program performance, results, and trends. Programs are 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 Manger of Business Energy Management as necessary on an ongoing and adaptive basis. Incentive Measures, marketing and the fulfillment process may be modified, as needed, to respond to developments in technology, market conditions, customer acceptance and/or changes in supplier/contractor delivery and pricing.

2014 Continuous Improvement through TQM

In addition to focusing on program delivery to customers and continuing to build trade ally relations, the Business Rebate team supported the integration and expansion of Measurement and Verification (M&V) processes by incorporating additional rebate measures into PSE's Verification Team inspection portfolio.

To provide timely feedback to program managers and resolution of issues identified by enhanced verification and inspection processes, the team added a staff member to the Business Rebate team to coordinate communication of Verification Team inspection results and follow-up with customers and contractors for all Business Rebate programs.

Rebate processing procedures were streamlined throughout 2014, which reduced time required for reimbursement payments, which in turn further increased vendor participation in marketing the program to PSE customers.

The rebate processing of the Lighting To Go (Business Markdown) program is handled by a third-party company who implements the processing of rebates and incentives. That company's team is tasked with rebate processing, payment reimbursement, and account administration and reporting, with oversight by the Lighting To Go program staff.

2014 Accomplishments and Activities

Similar to the Residential Sector's Single Family Existing Schedule (E/G 2014), the Business Rebates organization is comprised of several separate programs. Therefore, PSE presents a savings and expenditure breakout (Tables 7f and 7g, respectively) of the overall Schedule 262 programs to facilitate the appropriate level of reporting transparency.

Table 7f: Business Rebate Programs, 2014 Expenditures

2014 Expenditures				2014 Budget
Schedule	Programs	Total	YE % of Budget	
Electric	Electric			Electric
Gas	Gas			Gas
E262	Business Rebates			
	Lighting to Go (AKA Business Lighting Markdowns)	$ 984,299		
	Commercial Kitchen & Laundry	$ 98,891		
	Commercial Direct Install (NON-SBDI)	$ 36,972		
	Commercial HVAC	$ 859,125		
	Business Lighting Express	$ 432,417		
	Small Business Direct Install	$ 2,881,068		
	Legacy (Jan - May)	$ 2,579,626		
Subtotals		**$ 7,872,398**	**118.3%**	**$6,653,602**
G262	Business Rebates			
	Commercial Kitchen & Laundry	$ 149,522		
	Commercial Direct Install (NON-SBDI)	$ 231,260		
	Commercial HVAC	$ 40,885		
	Small Business Direct Install	$ 27,172		
	Legacy (Jan - May)	$ 292,197		
Subtotals		**$ 741,036**	**100.9%**	**$734,434**

Table 7g: Business Rebate Programs, 2014 Savings

2014 Savings				2014 Goal
Schedule	Programs	Total	YE % of Goal	
Electric	Electric			Electric
Gas	Gas			Gas
E262	Business Rebates			
	Lighting to Go (AKA Business Lighting Markdowns)	19,914		
	Commercial Kitchen & Laundry	357		
	Commercial Direct Install (NON-SBDI)	454		
	Commercial HVAC	1,939		
	Business Lighting Express	5,621		
	Small Business Direct Install	8,759		
	Legacy (Jan - May)	820		
Subtotals		**37,865**	**140.9%**	**26,877**
G262	Business Rebates			
	Commercial Kitchen & Laundry	128,342		
	Commercial Direct Install (NON-SBDI)	182,564		
	Commercial HVAC	4,267		
	Small Business Direct Install	1,296		
	Legacy (Jan - May)			
Subtotals		**316,469**	**41.1%**	**769,600**

Based on the success realized in the previous year, the Small Business Direct Install (SBDI) program conducted four community blitz campaigns in 2014, engaging small business customers in Kent, Cle Elum, Bellingham and Lacey through door-to-door efforts. The Energy Outreach Staff were key contributors to the effort's success. During the blitz activities, a total of 230 small businesses received on-site energy efficiency assessments, direct installation of efficiency measures, and in some cases additional retrofit installations requiring electrical permits,[35] all at no expense to the businesses.

The Business Rebate Program continued offering its successful prescriptive rebates in lighting, kitchen, hospitality and other programs and contracting the delivery of specialty programs such as Premium HVAC Service, low-flow pre-rinse spray head/aerator installations and green motor re-winds.

The Business Rebate portfolio for both gas and electric exceeded projected savings targets for the year. The electric savings accomplishments were mainly due to the success of its lighting programs and Small Business Direct Install Program.

[35] It should be noted that generally all work requiring modification of wiring requires an electrical permit, as established by the authority having jurisdiction (AHJ), which may vary throughout PSE's service territory.

Gas programs exceeded savings targets largely due to the direct install aerator and spray head program.

Overall spending for electric programs exceeded the planned amounts, while gas spending was less than expected in the plan, as explained in the respective discussions that follow.

In 2014 the Business Rebates team supported an impact and process evaluation covering the entire suite of measures, requiring responses to numerous data requests and lending of assistance in coordinating on-site inspections of measures and interviews with customers and trade allies. Draft results of the evaluation were available by year-end, but additional work was requested of the evaluation consultant to better inform program enhancements, which resulted in delay of final completion until 2015.

Electric

Lighting To Go

In an effort to actively manage costs and changing market conditions, PSE's Lighting To Go program adjusted the omnidirectional lamp incentive from $10 to $5. This measure is the largest cost and savings driver of the program. Prior to implementing the omnidirectional reduction, PSE conducted a survey to gather feedback from Lighting To Go distributors. In addition to collecting their thoughts on an omnidirectional incentive reduction, PSE also asked what was missing in the program; overwhelmingly the response was tubular LEDs (TLEDs). To address this feedback, PSE creatively partnered with lighting manufacturers to implement a combined manufacturer discount, and PSE started issuing rebates on prescriptive TLED offerings.

Also launched within 2014, PSE worked with its internal marketing team to create Lighting To Go collateral. This increased customer awareness of the Lighting To Go program, while keeping vendors and shared customers excited and engaged. The collateral included a new tri-fold brochure, TLED promotional flyer, and window cling for vendors to proudly display. PSE introduced professional field services to the program after seeing their success with the residential lighting program. The team introduced Point-of-Purchase (POP) signage placement and program training and education.

The Business Lighting (Express) Rebates program was a revised version of the Commercial Lighting Rebates program from 2013. The key difference is that of establishing a $3,000 rebate cap per project. Projects that exceed the cap are considered E250 Business Lighting Incentive (Standard) projects, and are processed as custom grants.

This major change made forecasting the number of projects more difficult and by the end of the year the program savings was 72 percent of target and 56 percent of anticipated spending.

As indicated previously, overall spending for Business Rebates electric programs exceed expectations as a result of customer incentive payments accompanying a high uptake of Lighting Markdown incentives for energy-efficient LED lighting. Costs trended lower than budgeted in the categories of labor and accompanying overhead, as well as outside services. Vacancies and leaves during 2014 significantly reduced labor expenses. Outside services costs were less than those anticipated due to delays in development and deployment of database enhancements, therefore reducing IT consultant charges.

Gas

The third party direct installation program for Pre-Rinse Spray Valve and Low-Flow Aerator measures was the main driver of success in exceeding gas targets for the year. The program added more installers, which enabled the achievement of greater gas savings than expected.

Overall spending for the Business Rebates gas programs was below anticipated spending levels. This was due to the low cost of direct-installed measures and lower in-house labor and overhead costs than planned due to vacancies in staffing.

Outside services costs exceeded planned spending from consulting services acquired during 2014 to assist Business Rebates staff with development of Verification Team processes and training materials, as well as updating deemed unit energy savings for gas efficiency measures planned for implementation in the 2015 Annual Conservation Plan.

Table 7h shows the number of measures and projects, by category, installed in 2014. It is interesting to note that in this organization, more than one measure type may be installed in a single project. Additionally, some measures within this organization are calculated on a per-ton, by building type, (in the case of HVAC Retrofit, many variables factor into each measure) or by individual unit (such as the familiar “per lamp” for most lighting measures). Table 7h is clearly illustrative of PSE’s intent to provide a sense of program scale—rather than a comprehensive listing of all measures installed.

Table 7h: Number of Business Rebate Measures Installed by Type[36]

Business Rebates				
Projects may include one or many of the indicated measure type. A single project may also include dissimilar measure types, including some electric and some gas measures. Measures noted in different classifications or programs may also be installed in the same project.				
Program	**Electric**		**Gas**	
	Measures	**Projects**	**Measures**	**Projects**
Business Lighting Markdowns ("Lighting to Go")				
LED Lamps - Various	More than 130,000	Over 1,000		
Hard-wired Recessed Retrofit Kit	Almost 4,000	More than 100		
T-LED (Tubular)	Over 2,000	roughly 10		
Commercial Lighting Rebates				
LED, Various	Over 20,000	More than 150		
Lighting Controls	Almost 400	Nearly 10		
Business Express Lighting				
LED, Various	Over 17,000	Nearly 480		
T12 to T8 conversions	In excess of 5,000	More than 40		
Lighting Controls	Almost 200	Less than 5		
Commercial Direct Install (Non-SBDI)				
Commercial Showerheads	More than 650	Almost 10	Close to 6,500	Over 20
Aerators	Nearly 400	Over 10	More than 3,500	Over 20
Commercial HVAC				
Occupancy Controls - Hospitality	More than 3,700	Close to 60	-	-
Package Terminal Heat Pumps - Hospitality	In excess of 900	Almost 40	-	-
High Efficiency HVAC Retrofit (calculated)	Over 700	More than 80	-	-
Premium HVAC Service	Roughly 150	Over 40	-	-
Commercial Kitchen & Laundry				
Ice Makers	More than 20	Close to 20	-	-
Ovens	Almost 20	Nearly 20	More than 70	Roughly 50
Fryers	-	-	Almost 60	Over 15
Dishwashers	More than 30	Over 30	Close to 40	More than 35
Small Business Direct Install				
LED Lamps - Various	Almost 30,500	Nearly 2,000	-	-
T12 to T8 Conversions	More than 8,000	Over 700	-	-
Aerators	Almost 400	In excess of 150	-	-
Occupancy Sensors - Various	Over 350	More than 100	-	-

It is important to remember that the majority of custom projects are managed in the CI Retrofit organization and usually consist of more than a single measure.

[36] Please see the measure table description in the BEM Sector Overview, page 63.

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REGIONAL EFFICIENCY PROGRAMS AND RELATIONSHIPS

Northwest Energy Efficiency Alliance

(PSE uses the NEEA trademark with permission.)

Schedule E254

Description

The Northwest Energy Efficiency Alliance (NEEA) is a non-profit organization working to maximize Energy Efficiency to meet the future energy needs of the Northwest. NEEA is supported by, and works in collaboration with, the Bonneville Power Administration, Puget Sound Energy and more than 100 Northwest utilities on behalf of 12 million electric customers.

PSE and its customers 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.

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.

Exhibit 10 of this Report summarizes NEEA's 2014 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.

2014 Accomplishments and Activities

Table 8a and 8b provide views of NEEA and Production and Distribution expenditures and savings, respectively.

Table 8a: NEEA and Production & Distribution 2014 Expenditures

2014 Expenditures				2014 Budget
Schedule	Programs	Total	% of Budget	
Electric	Electric			Electric
E254	Northwest Energy Efficiency Alliance	$ 4,447,503	84.5%	$ 5,260,640
E292	Production & Distribution Facilities	$0		$ -
Subtotal		$ 4,447,503	84.5%	$ 5,260,640
	NEEA Gas Market Transformation	$ 151,968		$ -
Subtotal		$ 151,968		$ -

Table 8b: NEEA and Production & Distribution 2014 Savings

2014 Savings				2014 Goal
Schedule	Programs	Total	% of Goal	
Electric	Electric			Electric
E254	Northwest Energy Efficiency Alliance	50,195	258.7%	19,400
E292	Production & Distribution Facilities	1,496	18.5%	8,100
Subtotal		51,691	188.0%	27,500
	NEEA Gas Market Transformation	0		0
Subtotal		0		0

Exhibit 10 of this report summarizes 2014 activities and outcomes and regional initiatives in the areas of emerging technologies, residential, industrial, commercial, codes and standards, partner services and evaluation by the Northwest Energy Efficiency Alliance in PSE's service area. It is important to recognize that NEEA compiles final electric savings figures for several months after the conclusion of a program year. Thus, 2014 savings results attributable to NEEA efforts are unavailable from NEEA until late May or early June 2015.

PSE would like to extend its sincere appreciate to NEEA for the considerable effort required to assemble the contents of Exhibit 10.

NEEA's Gas Market Transformation Collaborative

2014 also saw the creation of the NEEA Gas Market Transformation Collaborative, in which PSE is a major funder. This initiative is the first regional natural gas effort in the nation.

Working in concert with Energy Trust of Oregon, Avista Utilities, NW Natural, and Cascade Natural Gas Corporation, NEEA will coordinate the evaluation, testing, manufacturing, marketing, and installation of five new energy-efficient gas measures, commencing in 2015.

The measures included in the 5-year plan are:

- Gas-fired heat pump water heaters,
- Efficient fireplaces,
- Rooftop HVAC
- Gas dryers, and
- Water/space heat combination systems.

It is expected that over the long-term, the suite of measures will become cost-effective.

One of the five measures, gas-fired heat pump water heaters, started as a pilot program in the fall of 2014, with the first test units to be installed in three customer's homes[37] in the first quarter of 2015. Baseline testing was completed by the end of December 2014, and with test unit installations underway, NEEA will obtain critical cold-weather performance data.

In the fall of 2014, the NEEA board approved the Collaborative's 2015-2019 business plan, in which PSE committed to fund 41 percent of the $18.3 million budget. The first-year funding amount of $738,000[38] was included in PSE's 2015 Annual Conservation Plan. As of the time of this Report's publication, a final funding agreement between the Collaborative members and NEEA is imminent.

[37] One unit will be installed in Spokane WA, one in Portland OR, and one in Redmond WA.

[38] At the time of the ACP filing, a key natural gas utility hadn't enrolled in the Collaborative. Subsequent to the filing, that utility joined the Collaborative, which resulted in an approximate $90,000 reduction in PSE's actual first-year contribution.

Production and Distribution Efficiency

Schedule E292

Description

The purpose of the Production and Distribution Efficiency program is to evaluate and implement energy conservation measures that prove cost-effective, reliable and feasible within PSE's own generation and distribution facilities.

Within generation facilities, conservation measures reduce ancillary loads at the site and exclude efficiency improvements made to the generating equipment itself. The measures are focused on equipment powered by the grid when the site is not generating. These measures may include, but are not limited to, lighting upgrades, variable speed drives and compressor upgrades.

For distribution efficiency, PSE implements improvements at PSE's electric substations. These improvements can involve reducing the energy use within the substation itself and the distribution of energy from it. They can range from on-site measures like lighting and heat pumps to system measures like phase balancing and conservation voltage regulation (CVR), which is also referred to as voltage optimization (VO).

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

Total Quality Management

Program Staff Improved processes by realigning roles and responsibilities of different PSE departments that support the program.

2014 Accomplishments

Even without conservation funding available, the Production and Distribution Efficiency program was able to successfully complete projects and claim savings in 2014.

These projects occurred at both production and distribution facilities requiring effective communication and coordination between Energy Efficiency staff and other PSE departments.

For the distribution component of this program, CVR was the measure implemented and represented the majority of the savings claimed this year. To enhance the savings and follow the RTF M&V protocol for VO, phase balancing for two substations were completed in 2014.

AMI (Automated Meter Infrastructure) meters were installed at the end-of-line (EOL) for the two substations to allow for pre and post CVR EOL voltage monitoring. The last of three substations scheduled for completion in 2013 and one of six substations scheduled for 2014 went live with CVR in 2014 and the verified energy savings were reported.

For the generation sites, a concerted effort was made to assess facilities for cost effective energy efficiency projects to be implemented in 2015. This effort resulted in ten site visits with 12 potential energy efficiency projects being identified. All but three of the potential energy efficient opportunities were lighting upgrades. There continues to be an effort to build relationships and educate PSE's non-Energy Efficiency Staff on reporting requirements necessary to quantify and claim energy savings for PSE's conservation efforts at these sites.

With no Conservation Rider (Schedule 120) funding, the largest contributor to the program's savings, CVR, was reduced in scope from six substations to five and only one was completed in time to claim savings for 2014. While savings at generation sites helped offset some of this reduction, it was the main reason the savings were less than expected in 2014. Table 8c provides an overview of measures installed in Generation/Distribution projects.

Table 8c: Number of Generation/Distribution Measures Installed by Type[39]

PROGRAM TYPE	Project Count Per Program	
	Electric Only	
Generation--Transmission & Distribution	2	
MEASURE CATEGORY	Project Count Per Measure	
	Electric Measures	Total Projects per Measure
T & D Facilities	2	2

[39] Please see the measure table description in the BEM Sector Overview, page 63.

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MEASUREMENT & VERIFICATION

The Energy Efficiency department provides a discussion of Measurement & Verification (M&V) at this point in the report as M&V relates directly to the savings programs reviewed in the previous chapters, and it is important that readers understand the rigor with which PSE manages its key conservation metrics; savings and financial accuracy. Energy Efficiency and its supporting organizations devote staffing, processes, training, and systems with an eye toward consistently improving efficiencies, productivity and transparency, while ensuring the highest degree of savings and financial accuracy.

In addition to Measurement & Verification functions and activities that REM and BEM Staff perform, other supporting organizations are also are responsible for executing elements of these functions: Program Evaluation, Rebate Processing, Data and Systems Services, and the Verification Team.[40] The Report discusses Rebate Processing activities in Chapter 11: Portfolio Support, and Verification Team activities and accomplishments in Chapter 13: Research & Compliance. Data and Systems Services activities are discussed in the following section.

The remaining departments; Energy Advisors, Energy Efficient Communities, Strategic Planning, Marketing Research, etc., also contribute in varying degrees to Energy Efficiency's M&V efforts.

Accounting, Tracking and Reporting

Energy Efficiency's Measurement and Verification processes, most of which are long-standing embedded elements of its programs, are consistent with and exceed the requirements outlined in condition (6)(f):

> "Puget Sound Energy must spend a reasonable amount of its conservation budget on EM&V, including a reasonable proportion on independent, third-party EM&V. Puget Sound Energy must perform EM&V annually on a four-year schedule of selected programs such that, over the EM&V cycle, all major programs are covered. (…)"

[40] Another organization, the Budget & Administration Team, also contributes a significant level of Measurement and Verification. The Budget & Administration Team's costs assess to the overall Energy Efficiency organization.

The following discussions highlight key areas of measurement and verification resources, tools, and processes implemented by Energy Efficiency Staff to accurately measure and track electric and gas measure savings, along with their corresponding expenditures. Their efforts ensure the highest level of accuracy and transparency of PSE's conservation expenditures and savings reported.

Systems illustrated in Figure 9a, are enterprise-level and proprietary systems, including tracking databases that the Energy Efficiency department developed. Where applicable, many conservation programs track the number of rebates processed, measures installed, grants paid, contracts or Memos Of Understanding (MOUs) executed, and invoices paid using tools built specifically for those programs.

The following discussions are intended to provide general overviews, rather than comprehensive process reviews.

Conservation Savings

A key outcome of the measurement & verification function is the accurate representation of measures installed, and accounting for conservation savings as they are determined by:

- Prescriptively setting the savings value,
- Determining savings values using standard engineering calculations applied for a class of measures,
- Formally evaluating the actual savings realization rates or,
- Measuring savings at the customer meter or equipment locations (primarily associated with custom grants).

Measure Savings Values

Exhibit 5, Supplement 1 of this report lists the savings values for all prescriptive, (RTF Unit Energy Savings [UES] and PSE Deemed) and selected calculated measures by program (most often associated with a Schedule number) and fuel type. Prescriptive measure values fall into two categories; RTF UES and PSE Deemed. As applied by Energy Efficiency, both are consistent with conditions (6)(b) and (6)(c):

> (b) Except as provided in Paragraph (6)(c) below, Puget Sound Energy must use the Council's Regional Technical Forum's ("RTF's") "unit energy savings" ("UES") and approved methods and protocols for electricity measures, and distribution efficiency. As of the date of this Agreement, the RTF maintains a Web site at http://www.nwcouncil.org/energy/rtf/.

> (c) If Puget Sound Energy uses savings estimates, methods or protocols that differ from those established by the RTF, such estimates, methods or protocols must be based on generally accepted impact evaluation data and/or other reliable and relevant source data that has verified savings levels, and be presented to the CRAG for comment.

All prescriptive measure source of savings documentation is archived and is available for query in the Source of Savings database, which comprises one element of Energy Efficiency's Measure Metrics system. Calculated measures are similar, in that their savings value can be determined on a per-unit basis. The step that differentiates them from Deemed (or UES) values is that there are one or more additional calculations that must be completed before an accurate representation of their savings value can be determined. These calculations, based on engineering analyses, samples, and industry standards, can range from hours of operation, tonnage (in the case of an HVAC measure), building type (for instance, school, retail, restaurant), etc.

When an impact evaluation is performed and a measure savings value is verified, Program Staff will apply pertinent revisions in the following year, consistent with Energy Efficiency's *Measure Revision Guidelines*.

Conservation measures installed as a part of Commercial/Industrial custom grants are unique, in that every grant project is evaluated by a PSE Energy Management Engineer (EME). EMEs use data loggers, meter data, engineering computations and other measuring tools to evaluate predicted savings. These calculations are subsequently verified for confirmation of savings by a senior EME prior to grant payment.

Savings Tracking

After confirming a prescriptive measure's savings value is confirmed, and the measure has received approval by the director of Energy Efficiency, the measure value and source of savings data is archived in the Measure Metrics databases.[41] Program Staff then follow a rigorous process to report their measures' monthly installations. Program data is systematically uploaded to the EES Tracking and Forecasting Database. The system then checks the entries; ensuring that an indicated measure count wasn't inadvertently entered in the previous month, etc.

[41] Primary Measure Metrics databases are CSY, EES Tracking and Forecasting System, and the Source of Savings database.

To ensure the accurate savings reporting,[42] Program Staff confirm the monthly savings and expenditure figures in the Database. After this check, the data is locked for entry, and is available for external reporting (discussed in the Savings Reporting section). Calculated and custom measure data is aggregated within the applicable program and logged into the database as a single number.

Savings Adjustments

Although Energy Efficiency's programs maintain robust processes and systems that undergo continuous improvements to ensure accurate savings and financial tracking, there are infrequent instances when an adjustment is necessary. Exhibit 1, Supplement 2: *Savings Adjustments,* lists and describes each electric and gas savings adjustment, along with its respective adjustment value, and an aggregate total of all adjustments that were performed throughout 2014. Adjustments apply to all measure types. The savings adjustment process is included in the Energy Efficiency document *Guidelines for Ensuring the Accuracy of Electric and Gas Savings Claims*.

A key principal of proper savings accounting is that savings are not adjusted retroactively in a past month. Therefore, all adjustments, once approved, are made in the current reporting month, even if making the adjustment results in a negative value in the current month. There may be multiple adjustments for a single program or multiple programs in a single month. Adjustments may apply to either electric or gas values and may be positive (indicating that the originally-reported value was understated) or negative (indicating that the originally-reported value was overstated).

Savings adjustments are approved by a senior manager only after the applicable program manager has addressed five questions:

- What is the reporting discrepancy?
- How was the discrepancy discovered?
- What was the effect of the discrepancy?
- How is it corrected?
- How will Program Staff ensure that the discrepancy is not repeated?

Once approved, an adjustment entry is made to all applicable tracking and reporting systems.

[42] Measure data originates from a variety of sources, including contracted vendors, third-party administrators, Low-Income Agencies, direct install reports, rebate applications, etc.

Savings Reporting

After the Summary Tracking Master (noted in Figure 9a on page 120) is populated with the monthly savings and financial information, it is forwarded to Program Staff for a last double-check and vetting.

The aggregated monthly data is then compiled, and results in the Energy Efficiency Exhibit 1: *Savings and Expenditures*, which also populates the various savings and financial tables within this Report.

Since 2008, PSE has implemented several processes and guidelines to ensure that the accuracy of its savings reporting—both electric and gas—maintain the highest standards. The most significant of these outlines the methods of vetting, justifying, counting and reporting measure savings: *Guidelines for Ensuring the Accuracy of Electric and Gas Savings Claims*.

This comprehensive document ensures consistency across programs and Sectors, outlines rounding rules for savings values and measure counts, discusses applicable reporting periods, and how retired measures are tracked, reported and archived.

Energy Efficiency maintains key recording systems, such as the EES[43] Tracking Database, the Source of Savings database, and the EES Summary Tracking Master that are routinely reviewed, upgraded, and double-checked by Program Staff and the Data and Systems Services Team to validate their accuracy.

Conservation Expenditures

All Energy Efficiency Staff are responsible for ensuring the accuracy of invoices and financial charges to their programs. These can include charges from other PSE departments: marketing department labor charges for Direct-to-Consumer Channel collateral development, for instance. Program Staff are required to reconcile their program's SAP[44] records on a monthly basis to ensure accuracy.

[43] Although the correct organization name is "Energy Efficiency," many systems, files, and network drives were built with the name "EES," which stands for "Energy Efficiency Services." Updating the names would result in broken links and invalid URLs. It is common to find the references interchanged.

[44] SAP is discussed in more detail on page 118.

Energy Efficiency Staff are required to attend introductory accounting training. Additionally, staff members who specifically approve invoices are required to attend additional training and sign an annual due diligence affirmation, consistent with PSE Corporate Policy.

Expense accounting in SAP is used as the basis for PSE's annual Schedule 120 filing, PSE's funding mechanism for conservation programs. PSE hosts UTC Staff and welcomes CRAG member attendance each April to review Energy Efficiency expenses in preparation for its annual Schedule 120 Commission open meeting.

As noted in the Conservation Savings discussion in the previous section, Energy Efficiency intends that the below-referenced process discussions only provide an overview, rather than a comprehensive process review. The financial accounting applies equally to expenses incurred as a part of executing conservation programs (labor, incentives, employee expense, etc.), as well as paying third-party evaluators, vendors, printers, etc.

Expense Tracking

SAP accumulates charges and credits them to Energy Efficiency order numbers.[45] Within each order number, there are cost elements (sometimes referred to as an account number), that are used to log the specific type of account to which the expense is recognized.[46] SAP provides functionality that allows authorized users to "drill down' into expenses; accessing specific invoices, charges from supporting departments, etc.

Financial Adjustments

Similar to measure savings adjustments, expenses that have already been logged into SAP erroneously must be adjusted to reflect the correct accounting.[47] The process used to effect those infrequent adjustments is similar to that discussed in the measure savings adjustment section above.

[45] The order numbers used by Energy Efficiency programs are listed in the "Sector Views" of the 2014-2015 Biennial Conservation Plan's Exhibit 1: *2014 Budgets and Savings* workbook. Order numbers are used to account for program costs in SAP.

[46] Cost elements can include, but are not limited to categories such as labor, overhead, outside services, employee expenses, etc.

[47] An example may be where a natural gas rebate was entered into CSY as an electric rebate. In this case, a savings adjustment (reclassify therm savings as kWh savings) and a financial adjustment are required.

Moving expenses from an incorrect account to the correct account is accomplished by the use of a journal entry. This process is strictly controlled by the Company, and has rigid segregation of duties requirements. For instance, in the two-step JE process, a staff member who "parks" a journal entry may not also "post" it in SAP.

Expenditure Reporting

Each month, SAP records for all Energy Efficiency order numbers are downloaded and entered into the EES Summary Master Tracking workbook. The EES Tracking and Forecasting Database also archives expense data, using a feed from SAP.[48] The two systems are intentionally separate to ensure segregation of duties, thus providing an additional point of reconciliation.

Savings Adjustments

Through the continuous improvement efforts and focus of the Data and Systems Services Team, Program Staff, and the Budget & Administration Team, the number of savings adjustments declined from the 2013 total of 28. In 2014, there were 20 savings adjustments in total; 14 electric, 6 gas. Many were the result of vendor or contractor training issues, and were addressed as a part of adjustment reporting process. This is a positive trend since PSE started tracking savings adjustments, and reflect customer-facing process and rebate application refinements, with continued emphasis on thorough data review prior to reporting. The overall savings reported in Exhibit 1 reflect those adjustments.

[48] These systems are illustrated in Figure 9a on page 120.

Data and Systems Services

Data and Systems Services (formerly the "Systems Channel") plays an important support role for all of Energy Efficiency. Although the team reports to the Program Support (formerly the "Program Development & Support" group), a discussion of the key Data and Systems Services functions: Measurement & Verification, along with the team's 2014 accomplishments is appropriate in this chapter.

This group provides the department with the right tools, resources, and people to assist in pro-actively managing their respective businesses, allowing Program Staff to make management decisions that optimize their business. Customer fulfillment, program analysis, and savings reporting and analysis are some of the critical services this team provides.

2014 Accomplishments and Activities

The Data and Systems Services team implemented a completely update to its EES Tracking and Forecasting System in 2014. The enhancements to this system included a completely new user-interface, improved forecasting reporting, and a more robust review and approval process for program managers.

The team also helped transition the processing of Single Family Weatherization rebate processing from a third-party vendor managed process to a new, web-based portal used by PSE rebate processing staff. This new online system simplified contractor submittal, provides robust tracking, and has streamlined the review and payment process.

During the second half of 2014, the team was heavily involved in the RFP process to select a new DSM system to help manage PSE's energy efficiency portfolio. A new DSM system will help consolidate many of separate systems that PSE uses today to manage its business.

Program Verification Activities

Energy Efficiency discusses specific descriptions and accomplishments of the Verification Team in Chapter 13: Research & Compliance, page 155. The discussion here provides general highlights of additional verification activities that Energy Efficiency Staff regularly perform. Apart from Verification Team activities, Energy Efficiency verifies electric and gas conservation savings and expenditures using a wide range of processes, tools, systems, and reports.

Data sources include but aren't limited to vendors, contractors, customer rebate and grant applications, telephone surveys, and reseller invoices. Energy Efficiency also verifies that the savings values indicated by evaluation studies, engineering analyses, or the RTF are correctly applied, that the savings values are properly archived, that all tracking systems are accurately counting the number of measures installed, are applying the correct savings values, and—when a correction is required—it is recorded using generally-accepted accounting procedures.

The range of verification activities are executed by several groups within Energy Efficiency, including Program Staff, who review and verify measure installations, grant status, and sales reports[49] for measure type and measure count accuracy. Data and Systems Services Staff, rebate analysts, Budget & Administration Staff, and third-party reviewers also perform critical verification tasks.

Some of the activities are unique to one particular team or function, for instance, the Verification Team. Some departments, though, perform more than one verification activity throughout the course of managing energy rebates and grants.

Measure Verification

Two of the most critical verification elements necessary to ensure savings accuracy are the verification of measure installation and the verification of the savings associated with those measures.

[49] It is difficult to verify the installation of consumer lamps sold through retailers, for instance.

Measure Count Verification

All measure counts processed by Data and Systems Services and by the Rebates Processing Team.[50] These are reconciled against CSY and the EES Tracking and Forecasting Database through a careful review of monthly reporting data prior to its monthly reporting.

Measure Savings Verification

A key reference in the assurance of measure savings verification is PSE's reliance on the information archived in the Measure Metrics system, including the Source of Savings database, the EES Tracking & Forecasting Database and CSY. The savings information archived in the Source of Savings database is routinely compared against the savings data residing in the EES Tracking & Forecasting Database, which is used to accumulate and record year-to-date aggregate savings. Similarly, those Deemed and Calculated savings values that are archived in these databases are also be compared to measure savings values in CSY to verify accurate reporting of savings values. When necessary, PSE follows a rigorous savings adjustment process if it is discovered that certain savings values disagree.

Rebate Processing

Rebate application processing and analysis is another key verification component. A complete discussion of their activities and accomplishments is contained in Chapter 11: Portfolio Support Details, page 135.

Business Sector Custom Projects

The full range of verification activities is conducted when an energy management engineer (EME) manages a custom grant; either in the Commercial/Industrial (C/I) Retrofit, C/I New Construction, Resource Conservation Management, or Large Power/Self-Directed programs. Similarly, a large number of Business Lighting Rebate projects are selected for engineer review, and a calculated number of projects and commercial rebates are inspected onsite by the Verification Team.

[50] The Rebates Processing Team became a separately-designated team in mid-2014. While the team has existed in its current form for several years, the team's expenses were assessed across the programs. Readers will note a new, separate line in the Portfolio Support section of Exhibit 1. Although separately designated, their noted expenses (which are not reported until 2015) are not incremental.

Exhibit 1, Supplement 1: *2014 Actuals versus Budgets* provides a view, by program, of incentives paid for custom grants and Business Rebate measures.

All Business incentives were processed through the CSY system.

Energy Efficiency Tracking and Reporting

As briefly referenced in the previous discussions, Energy Efficiency employs a combination of proprietary and enterprise software applications and tools to accumulate, validate, report, and where necessary, adjust financial and energy savings figures with a high degree of integrity and accuracy. Figure 9a is a graphical representation of high-level Energy Efficiency system relationships.

SAP (originally named "Systeme, Anwendungen, Produkte", German for "Systems Applications and Products") is an enterprise system and is used throughout PSE. SAP provides all financial information, including vendor contracts, material orders,[51] staff pay and expense reporting, and overhead allocations.

CSY tracks projects—custom, calculated, and those using prescriptive measures—with the associated customer incentives paid and the electric and/or therm savings. Access to CSY is limited to authorized staff only, and the type of access is also limited according to PSE strict segregation of duties rules.

The EES[52] Tracking & Forecasting Database tracks measures installed and expenses incurred, primarily for Residential programs. It also, though, accumulates BEM savings and financial information, used for internal forecasting and monitoring, along with expenditure data from supporting functions.

CMS (Customer Management System) is a proprietary system used to inform PSE customers as to the status of a rebate application, energy-efficiency measure installation history (as determined by rebates paid) and other useful, customer-centric information. CMS interfaces with the EES Tracking & Forecasting Database, CSY, and SAP.

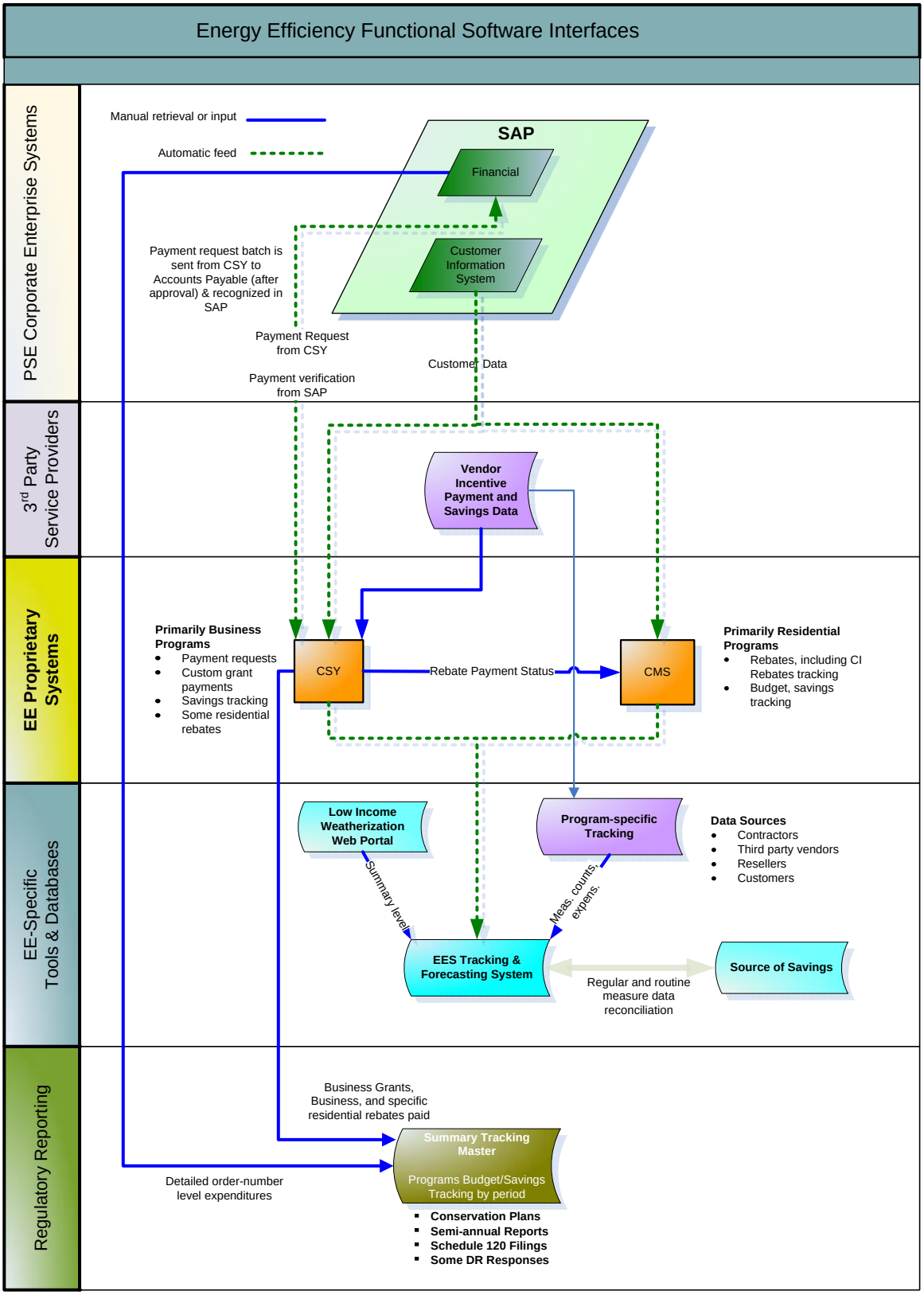
[51] Material orders sometimes include lamps used in Energy Efficiency events, carbon monoxide detectors used in weatherization projects, etc.

[52] Prior to 2012, the Energy Efficiency department was named Energy Efficiency Services. In some databases, this name carried throughout system updates, avoiding complicated table/query/report revisions and re-programming.

The Source of Savings database serves both a Measurement and Verification role in Energy Efficiency and is a key database in Energy Efficiency's Measure Metrics archival system. It is important to note that the Source of Savings database does not track savings throughout the year; it only serves as a repository of savings values and their justification documentation.

Measure tables included in Exhibit 5, Supplement 1 and Supplement 2 are generated from the Source of Savings database. The database archives all prescriptive and some selected calculated rebate measures; those that have deemed savings values, in addition to other factors that make them "calculated". For instance, hours of operation, tonnage (some HVAC systems), system controls, business type (retail, school, office), etc.

Figure 9a: Energy Efficiency Management Tracking and Reporting Interface



EFFICIENCY PORTFOLIO SUPPORT

Overview

The organizations that comprise the Portfolio Support group play a critical role in Energy Efficiency's success of consistently achieving conservation targets within expected cost parameters. Much of what Residential Energy Management and Business Energy Management (who make up key elements of the Energy Efficiency department) implements and offers to customers depends on the work performed by these teams.

The teams' activities do not directly result in electric or natural gas savings, although the Portfolio Support activities expenses are spread over the portfolio for purposes of calculating cost effectiveness. The groups collaborate with Program Staff to ensure that they engage and represent all customer classes, that 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 the communities that PSE serves, and with its trade allies, the teams' contributions cannot be overstated.

Functional Group Performance

Table 10a provides a 2014 year-to-date summary of expenditures for the Portfolio Support organizations.

Table 10a: Portfolio Support, 2014 Expenditures

2014 Expenditures				2014 Budget
Schedule	**Programs**	**Total**	**% of Budget**	
Electric	Electric			Electric
Gas	Gas			Gas
	Customer Engagement and Education	**$ 1,019,594**	***65.7%***	**$ 1,552,503**
	Energy Advisors	*$ 596,628*	*54.5%*	*$ 1,094,604*
	Events	*$ 330,277*	*96.2%*	*$ 343,308*
	Brochures	*$ 10,926*	*20.1%*	*$ 54,250*
	Education	*$ 81,762*	*135.5%*	*$ 60,341*
	Web Experience	**$ 882,264**	***92.3%***	**$ 955,427**
	Customer Online Experience	*$ 558,402*		*$ 584,205*
	MyData (Formerly Automated Benchmarking System)	*$ 65,971*		*$ 81,449*
	Market Integration	*$ 257,891*	*89.0%*	*$ 289,773*
	Rebate Processing *(formerly assessed costs--will be active 1/2015)*	$ -	*(Not budgeted in original 2014 Exhibit 1)*	
	Data and Systems Services *(formerly assessed costs--added 5/2014)*	$ 554,907	*(Not budgeted in original 2014 Exhibit 1)*	
	Energy Efficient Communities	$ 328,297	41.2%	$ 796,492
	Trade Ally Support	$ 56,347	104.0%	$ 54,183
	Total Electric	**$ 2,841,408**	**84.6%**	**$ 3,358,605**
	Customer Engagement and Education	**$ 150,876**	**63.7%**	**$ 236,922**
	Energy Advisors	*$ 68,805*	*41.9%*	*$ 164,165*
	Events	*$ 64,140*		*$ 54,783*
	Brochures	*$ 1,226*	*15.0%*	*$ 8,169*
	Education	*$ 16,705*	*170.4%*	*$ 9,805*
	Web Experience	**$ 152,756**	**92.3%**	**$ 165,501**
	Customer Online Experience	*$ 80,845*		*$ 87,295*
	MyData (Formerly Automated Benchmarking System)	*$ 21,002*		*$ 43,299*
	Market Integration	*$ 50,909*	*145.8%*	*$ 34,907*
	Rebate Processing *(formerly assessed costs--will be active 1/2015)*	$ -	*(Not budgeted in original 2014 Exhibit 1)*	
	Data and Systems Services *(formerly assessed costs--added 5/2014)*	$ 79,730	*(Not budgeted in original 2014 Exhibit 1)*	
	Energy Efficient Communities	$ 79,302	40.5%	$ 195,613
	Trade Ally Support	$ 12,324	103.1%	$ 11,952
	Total Gas	**$ 474,988**	**77.9%**	**$ 609,988**

PORTFOLIO SUPPORT DETAIL DISCUSSIONS

Customer Engagement and Education

This Energy Efficiency Sector performs functions and activities that are customer-facing; via telephone, PSE's web portal, literature, or various forms of media. For a large part, the organizations and the staff initiatives discussed in the following sections are the first exposure that customers have to PSE's energy-efficiency programs.

Energy Advisors

The Energy Advisor Department is a unique, customer solution operation within Energy Efficiency. The energy advisors are often the first contact that a customer has with PSE's Energy Efficiency department, and to customers, the energy advisors *are* PSE.

An energy advisor's focus is to ensure that both residential and business customers have a positive impression of PSE and its energy-efficiency suite of services, and feel that all of their energy-efficiency questions are addressed by a trusted source.

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

There are slight differences in how energy advisors process residential- versus business-customer inquiries. Energy advisors field questions and help customers with commercial inquiries specific to Small Business Lighting, the Pre-Rinse Spray Head Program, the Vending Miser Program, and Commercial Rebate Programs. Special Energy Advisor assignments also include billing history requests.

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.

2014 Adaptation and Continuous Improvement

To keep up with customers' growing expectations and the complexity of inquiries, the energy advisors are encouraged to broaden and expand their knowledge base and skills. Most of the energy advisors are Building Performance Institute (BPI) certified home energy auditors. The energy advisors learn critical skills for energy auditing, weatherization, insulation, heating and air conditioning, home construction, home inspection, air quality abatement, as well as energy efficient design and engineering.

The Regional energy advisors continue to increase PSE employee awareness of energy efficiency across the company with cross-departmental training and presentations. Currently there are four regional energy advisors located in the Freeland, Bellingham, Tacoma, and Olympia business offices to increase visibility and offer an on-site contact for Energy Efficiency. An energy advisor is also working closely with Business Services to provide PSE's Business and Commercial customers with Energy Efficiency offerings. The energy advisor also provides billing and energy analysis, and cross-departmental training and energy-efficiency related process improvement opportunities with the Business Services Department. The Energy Advisor department finished the year substantially below its anticipated spend as a result of being understaffed for much of the year by up to five positions at one time.

Table 11a presents highlights of key energy advisor metrics.

Table 11a: Key Energy Advisor Metrics

Energy Advisors	
Metric	**Number**
Phone calls	Over 75,000
Events staffed	60
Email responses	Almost 6,000

The metrics noted in Table 11a denote:

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

Events

The Energy Efficiency department participates in community, local, and regional events annually to promote our residential and commercial programs to customers. These events include home shows, trade shows, seminars, corporate events and community fairs. The event audience consists of general public, businesses, builder/contractors, multifamily property owners, city leaders and students/teachers. PSE business objectives include; energy-efficiency program leads, customer awareness of PSE's programs and services, education, establishing partnerships with other utilities and communities, among others. This provides unique opportunities for Energy Efficiency staff to interact directly with customers and discuss a variety of products, programs and services that the department offers. Energy Efficiency Staff can also match customer interests and needs with Energy Efficiency programs.

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

The team organizes events using an event management data system to improve communication and customer experience. The Events strategy team—including representatives from marketing, outreach and programs—assesses event requests, and reviews event opportunities in advance, with a focus on tactical planning for and vetting events.

2014 Adaptation through TQM

Throughout 2014, the Events Team:

- Improved its event management data system structure through launching the SharePoint event calendar. This resulted in an improved event request process for easier access to request event collateral, staffing support and online event resources; energy efficiency brochures and energy efficiency PowerPoint presentations.
- Collaborated with the Energy Efficiency program teams and the Marketing team to redesign the event banners used at various events to ensure there is companywide consistent messaging while at the various events to maximize efficiency and have a positive impact on energy savings.
- Launched an RFP to provide door to door outreach and event staffing for its residential and small commercial energy efficiency programs. PSE utilizes an effective method of outreach through which staff go door to door through a targeted neighborhood to speak with customers. The purpose of this outreach is to achieve on-the-spot customer sign ups for participation in PSE programs (that is, HomePrint™ home energy assessment), increased customer awareness of PSE's programs, and greater customer appreciation for the personalized service and for PSE's commitment to energy efficiency. Such outreach may also seek to drive customers to additional special events and on-line opportunities.
- Identified ways to engage customer in conversation to continue a relationship with PSE by enhancing the customer experience while at an event. This type of customer engagement draws customers to the event booths, provides customers a longer term relationship with PSE's programs, and builds awareness of energy efficiency messaging.

2014 Accomplishments

In 2014 the Events team added value to the event deployment functions by coordinating events including over 170 trade shows, community gatherings, and retail functions. The Events team worked in partnership with the Energy Efficient Communities Team[53] by supporting community events.

[53] The Energy Efficient Communities organization is discussed later in this chapter.

Highlights of Residential Events

The Events team supported the Multifamily Retrofit program in hosting a booth at the annual Washington Multifamily Housing Association reverse tradeshow that serves as a "speed dating" platform. It allowed supplier partners, such as PSE, to sit down with multiple Property Management member companies for five minutes to discuss their services. It allowed PSE to have face time with key decision makers from each firm and served as a catalyst for energy efficiency project lead generation.

The Multifamily Retrofit program attended the TRENDS event, which is the largest rental housing ownership/management conference and trade show on the West Coast with over 1,600 attendees. TRENDS is a keystone event for the Multifamily Retrofit program that always generates a significant number of leads and the opportunity to debut new program offerings in the coming year.

In 2014, the Events team partnered with the Community & Customer Engagement Department (CCE) and EE in the South King area to have a presence at a substantial number of community events. Through this internal partnership we were able to reach out to over 330,000 people to share the message of Energy Efficiency programs.

At the Federal Way City Hall employee engagement event, the team heard positive feedback from customers who had the HomePrint™ Assessment completed on their home. This event provided a great opportunity to sign additional customers up for the HomePrint Assessment Program.

The Bellevue Arts & Crafts Fair event included a "Do-it-yourself" lampshade construction to engage customers in the concept of efficient lighting as visually appealing as well money-saving. Customers who participated received a PSE branded reusable bag, a free Phillips® SlimStyle® lamp, and information about the PSE Phillips SlimStyle LED DIY Lampshade contest.

PSE participated in the South Sound Procurement Expo, hosted by the Thurston County Chamber of Commerce at St. Martin University in Lacey. With over 1,000 attendees, PSE staff to help support this event included Business Account Manager, Energy Management Engineer and Energy Advisor who were able to share information regarding PSE's products and services, customer programs, rebates, and safety.

Highlights of Business Events

The Major Accounts Customer Meeting provided an opportunity for the Business Energy Management staff to work together and address questions from large commercial customers about the different Business Energy Management programs in which they would be eligible to participate. It is always beneficial when PSE can meet the customer one-on-one to explain our programs.

The NW Trade Ally Meeting provided an opportunity to discuss the business lighting programs with business customers and interact with contractors who share PSE programs with potential customers.

BOMA Engineer Skill Hours provided a great opportunity to interface one-on-one with facility managers of our business customers to let them know about our programs. Based on the topic of each class, we were able to target our program staff to match the specific interests of those attending.

Table 11b provides a summary of 2014 events in which PSE presented energy-efficiency information.

Table 11b: Total Events

2014 Energy Efficiency Events	
Type	**Count**
Residential Energy Management	84
Business Energy Management	14
Residential Business to Business	4
Efficient Community	76
TOTAL	**178**

Energy Efficiency Brochures

PSE provides brochures 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.

The brochures provided as part of this program are general energy efficiency in nature, whereas program-specific (for example, residential heat pumps or mobile home duct sealing), are budgeted within those specific programs. These brochures are available to customers in paper form and online at the PSE website. Where required by tariff, brochures are included as bill inserts. Table 11c provides a view of 2014 brochure distribution.

Table 11c: Brochure Distribution

Brochures	
Brochures Mailed	**over 8,000**
Brochures Downloaded from PSE.com	**2,400**
Brochures Distributed at Events	**more than 100,000**

Top 10 Items

Item	Qty
Think PSE - Combo	11900
HomePrint Assessment Handout	9,600
Contractor Alliance Network Consumer Guide	5,900
Energy Saving Tips - Apartments & Condos	5,700
Lighting To Go Brochure	4,700
Lighting To Go Flyers	4,600
Energy Saving Tips- Single Family Homes	4,100
MF Retrofit Post-Entry Leave Behinds	4,000
Insert for Energy Cost Guide	3,900
MF Retrofit Brochure	2,500
Appliance Replacement Handout	2,400

Energy Education

Schedules E/G 202

Description

The Energy Efficiency Education program provides opportunities to broaden knowledge of energy efficiency and renewable energy, and increase participation in efficiency programs. PSE's energy education provides a forum for positive customer and community interaction and involvement that will inform, inspire, and empower with the understanding that individual choices do make a difference.

Energy Education provides information to leaders and educators who can share the knowledge with a broader audience, which also ties directly to the company's existing energy efficiency opportunities, active resource conservation efforts, and commitment to the community. The programs focus on strengthening community actions by developing and preserving local relationships with customers and other education and community-based organizations.

2014 Accomplishments and Activities

Independent Colleges of Washington (ICW) Efficiency Education is an energy-efficiency initiative that manages research projects related to energy efficiency and conservation. PSE has provided annual energy-efficiency grants to this college association for a number of years. Through an RFP process, provided to Washington college students and administered through ICW, projects are selected for a utility grant consideration.

In 2014, PSE presented an energy-efficiency grant of $10,000 to a student research team from a PSE-territory college. The students conducted energy efficiency research to better understand if normative information may indeed influence the behavior of those within the community. By testing simple informational tools (for example, 20 percent of this hall's residents conserve energy), the students can determine which type of information tends to work best to encourage conservation behaviors.

Customer Online Experience

The Customer Online Experience group is designed to improve customer awareness of energy-efficient home and business solutions and inform customers about energy-efficient products and services they can apply to their properties. Customer Online Experience is made up of Web Experience and Market Integration, which are detailed in the following paragraphs.

Description

Web Experience and Market Integration are designed to significantly improve Energy Efficiency's ability to communicate the "how and why" of energy efficiency, using new technologies and engaging interactive content.

Web Experience consists of the initiative to make PSE's energy efficiency web tools effective in delivering electricity and gas savings. Research has shown that PSE customers are more web-savvy than average and have high expectations when doing business on the web.

Web Experience: Investment in New Online Tools

In 2014, Web Experience financed an update to the myPSE account Energy Center tools for residential and small business customers.

Launched in October, these newly-enhanced tools help customers understand the specifics behind their energy usage, show neighbor comparisons (residential customers),[54] notify customers of higher than usual usage, and provide new ways to encourage efficient behaviors, by suggesting personalized tips, tools, ideas and checklists, based on a customer's automated energy usage profile and self-assessment information.

Web Experience also supports interactive content development and social media promotion, e-newsletters and the fees for other miscellaneous software applications, such as online form, database and web hosting services and image licensing to support energy efficiency marketing programs.

[54] Specific customer details; addresses, names, account information, etc. are rigorously protected. Instead, only general, non-specific comparisons will be provided.

Market Integration

Market Integration consists of salary costs of employees working on energy-efficiency marketing and promotional support activities. This is to make marketing efforts more transparent: tasks include the enhancement of online energy-efficiency tools and features, as well as traditional marketing executions that center on promotional channels used across all programs, such as events, collateral and websites.

Customer Engagement and Impact

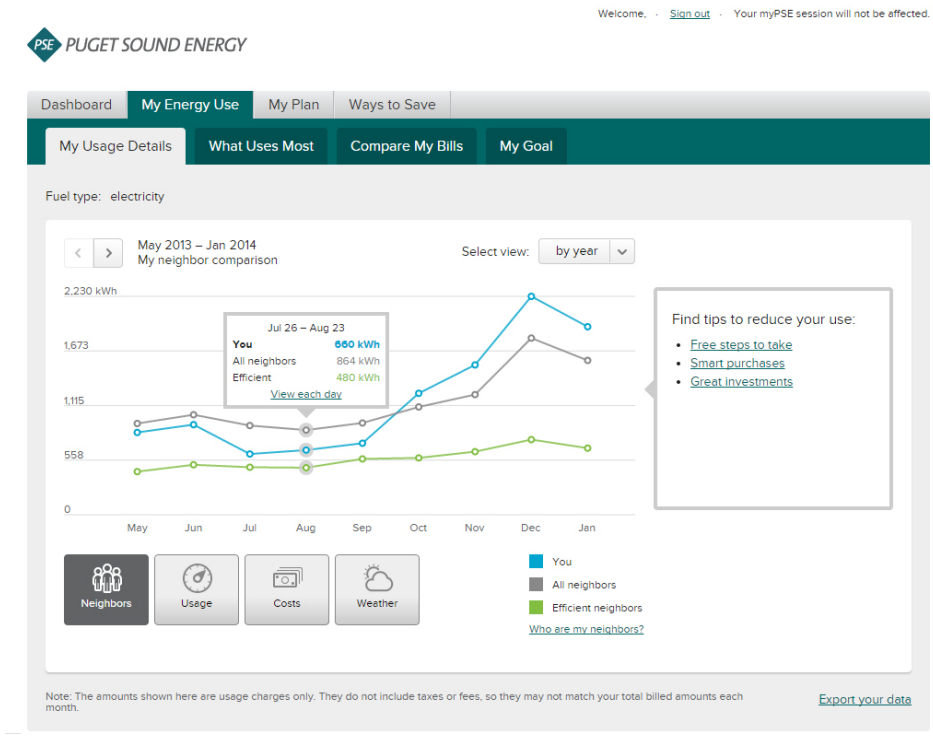
Since the pse.com re-launch in 2011, the "Savings & Energy Center" has seen a significant uptick in page traffic and overall engagement with customers. Table 11d provides several highlights of PSE's 2014 online metrics.

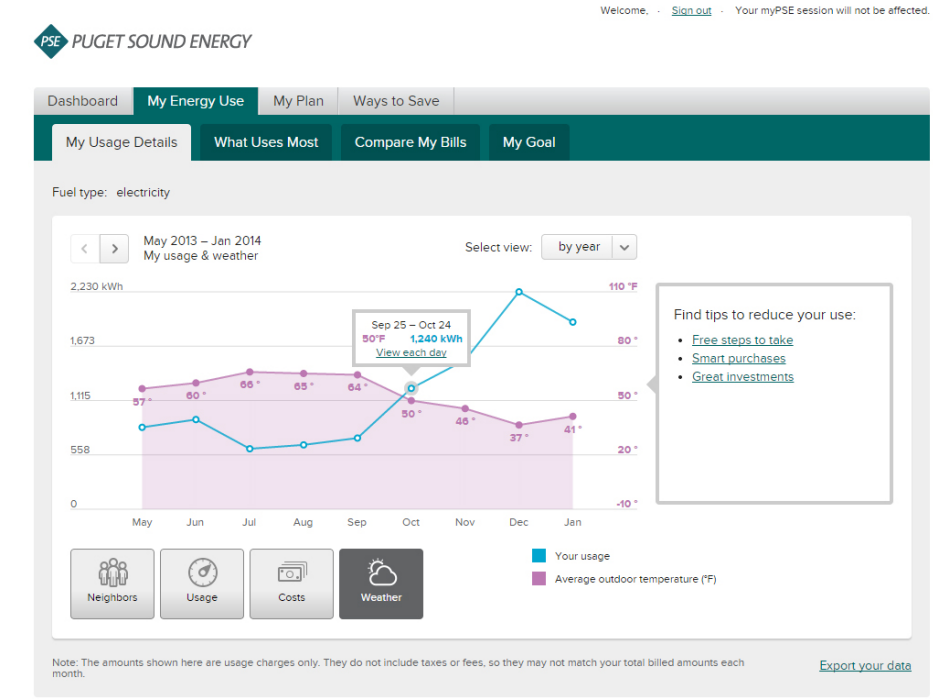
Table 11d: Energy Efficiency On-Line Metrics

2014 Web Experience Online Metrics
The Savings & Energy Center received more than 2,016,152 page views, an increase of more than 23% over the year prior.
There were more than 380,000 page views of the myPSE account Energy Center tools.
There were more than 362,000 views of the residential Rebates & Offers page, an increase of almost 8% over the same period in 2013.
The business Rebates & Incentives page received more than 18,000 page views.
There were almost 31,000 views of the Ask an Energy Advisor inquiry form page, an increase of 12% over the year prior.
There were nearly 41,000 views of the Contractor Referral Service referral page, an increase of more than 9% over the year prior.
More than 2.24 million energy-efficiency email news blasts were delivered to more than 271,000 opt-in subscribers.

Figure 11a presents a screen image of PSE's new myPSE Account Energy Center Tools web page.

Figure 11a: Screen Images of Updated myPSE Account Energy Center Tools





MyData

Launched in the spring of 2014, this new web service, called *MyData*, provides building owners an easy to use, self-service portal that will allow them to set up automated monthly reporting of their building's energy usage. This data can be used to:

- Track energy usage for a portfolio of buildings,
- Track the results of energy efficiency projects,
- Develop Energy Star ratings, and
- Comply with city of Seattle reporting requirements.

More than 50 percent of the whole-building energy usage requests PSE receives come from building owners (or their contractors) that are tracking their energy usage or are tracking the results of energy efficiency projects outside the city of Seattle.

For those building owners reporting to EPA's Energy Star Portfolio Manager, MyData can also automatically send their usage data directly to Portfolio Manager on a monthly basis.

The MyData team worked with building owners, EPA, and city of Seattle to improve the way the webservice works both before and after launching the program. These partnerships have been instrumental in developing a webservice that is now nationally recognized and promoted.

Rebate Processing

As noted in Chapter 9: Measurement & Verification, the Rebates Processing Team perform a critical verification step in Energy Efficiency. While a selected sample of applications are directed for onsite inspection by the Verification Team, all must go through several verification steps prior to payment authorization. Key attributes include:

- Is the applicant a PSE customer?
- Is this the correct fuel type?
- Is the customer receiving service under the applicable Rate and Conservation Schedule?
- Did the customer submit a valid receipt (rather than one that's been used before)?
- Is the equipment eligible?
- Etc.

Table 11e provides a summary of rebates processed by Energy Efficiency Rebate Processing staff. The totals are not inclusive of all rebates, instant point of purchase markdowns, etc. paid within the REM sector. As with program measure counts, the totals are rounded and are intended only to provide a sense of the scale of activity within the Rebates Processing group.

Table 11e: 2014 In-House Residential Rebates Paid

PSE Rebate Processing 2014		
	Count of Projects	**Incentives Paid**
Fuel Conversion Rebate	More than 250	$ 457,000
Space Heat E	Over 4,000	$ 3,280,000
Water Heat E	Almost 750	$ 300,000
Space Heat G	In excess of 5,000	$ 1,270,000
Windows E	More than 1,300	$ 810,000
Windows G	Over 2,000	$ 1,460,000
Weatherization E	Almost 450	$ 229,000
Weatherization G	More than 2,000	$ 1,180,000
HomePrint Assessement - E	In excess of 6,000	$ 1,480,000
HomePrint Assessement - G	Almost 700	$ 69,000
Total Rebates	**More than 23,000**	**More than $10.5 million**
E=electric, G=gas		

2014 Continuous Improvements and Accomplishments

In 2014, the Rebate Processing and Verification teams underwent an organization restructure, combining the two departments.[55] As a result of the reorganization and new management of the team, Rebates and Verification[56] focused on improvement opportunities that included streamlining processes and procedures, enhancing data and systems, and ensuring appropriate documentation management. Highlights of key 2014 accomplishments include:

Electronic Rebate Signature

The organization was a key contributor to establishing an electronic signature process for manager approval of rebate and grant payments. Authorized manager can now approve payments online, potentially savings days waiting for a manager's availability to sign in-person.

This was a significant achievement, as there will be no more rubber stamping and physical signatures. The payment processing will save up to two days, as paperwork will not need to be sent inter-office mail to Accounts Payable, and preventing paperwork from potentially getting lost in transport. Accounts Payable will get notification immediately following manager approval in CSY. Document management is enhanced, as documents will be scanned and stored electronically in CSY.

System Enhancements

The team improved customer communication by programming system enhancements for detailed rebate status. Energy Advisors will be able to inform the customer where exactly the rebate is in process and provide the customer a better understanding of when and where they will receive their rebate check. System enhancements included the addition of status categories: Application Received, Qualified/Rejected, Released for Payment, and Paid (with check # for reference).

[55] Prior to the restructuring, the Rebate Analysts were a part of the Systems Channel.

[56] The Verification Team is discussed in detail in Chapter 13: Research & Compliance Detail.

Commercial Grant Processing

PSE's Accounts Payable department will now send commercial grant payments directly to customers. Through collaboration with other functional areas and Accounts Payable, process improvements, and minor system enhancements, a "Payee" field has been added in CSY. This improvement eliminated the additional step of requiring Accounts Payable to forward completed checks to Rebate Processing, which were then manually mailed to customers. This significant improvement will decrease the time it takes for a customer to receive their check.

Energy Efficient Communities

Description

Puget Sound Energy's Energy Efficient Communities (EEC) program works to generate participation in PSE's Energy Efficiency programs through direct-to-customer outreach and partnerships. The team works to discover locally appropriate ways of engaging with customers by leveraging PSE's resources, community knowledge, and partner support.

The EEC team works closely with the Energy Efficiency programs to determine whether a broader partnership with a community organization or a more targeted, direct-to-customer approach is needed. As an outreach team for both residential and commercial programs, the EEC team also works on cross-program promotion, where appropriate.

As part of the Energy Efficiency re-organization, noted in various discussions throughout this Report, the EEC Team became part of the Energy Efficiency Outreach group. This new organization also includes the Events and Energy Education team.

2014 Continuous Improvement and Adaptation

Significant program enhancements included honing our approach to community "blitzes"[57] and direct-to-customer outreach, described in the following discussion.

2014 Accomplishments and Activities

In 2014, the EEC team conducted outreach to contractors, community groups, local nonprofit organizations, government entities, PSE employees and direct to customers on behalf of the various residential and commercial programs. The team also worked with other PSE departments to leverage corporate initiatives to promote energy efficiency programs, as appropriate. This provides increased exposure to programs and improved customer service.

[57] Community Blitzes are also mentioned in the Small Business Direct Install (SBDI) program discussion in the BEM Program Details chapter on page 96.

In partnership with the various programs, the EEC team members promoted the Upgrades Campaign, the Appliance Replacement and Decommissioning programs, the Small Business Direct Install program, Data Centers, HomePrint™, Commercial Grants and Weatherization among others. Specifically, outreach includes working with community partners, municipalities and other local contacts to help deliver these programs. For example, the EEC team helped promote the Data Centers program by creating a list of local contacts and directly reaching out to potential customers to talk about the benefits of the program. For the SBDI program, the EEC team partners with cities and business organizations (chambers, downtown associations, rotaries, etc.) to help spread the word about the program and engage the business community.

These partnership efforts are also noted in the program discussions in Chapter 4: Residential Program Details and Chapter 7: Business Program Details.

The EEC Team accomplished outreach for these programs through a combination of:

- Hosting information at the regional offices,
- Presentations to community groups,
- Staffing at community events,
- Direct outreach to community groups to promote the programs,
- Door-to-door to customers' homes and businesses,
- And other methods.

The Small Business Direct Install program direct-to-customer outreach included small community "blitzes," where the EEC team worked closely with the program service provider to coordinate a focused outreach initiative in communities with small-to-medium commercial districts. These "blitzes" focused on getting maximum possible engagement with the program through various outreach tactics and partnerships with community organizations, like Chambers and Downtown Associations, as well as city governments and business leaders to promote the program to their stakeholders.

The HomePrint direct-to-customer outreach included a multiple-city effort to create a "buzz" in the community about the program by a combination of sending direct mail, going door-to-door to customer homes and signing them up to participate, and setting up A-boards in neighborhoods to provide broader visibility. By contacting customers multiple times in various formats, they are more apt to get their questions answered and then sign up to participate.

Part of the EEC Team work is to educate PSE employees on the energy efficiency programs available so they are able to better serve customers who could potentially be interested in participating in one of the programs. They achieved this through delivering short presentations to various employee groups, where energy efficiency program information is provided and question-and-answer sessions allow for employees to truly understand which programs in which they and the customers they work with can participate.

The EEC team underspent in multiple budget areas as the team was learning how to work with a larger budget than previous years. Many of the marketing and material expenses were covered by program teams instead of the EEC team and many outreach materials were repurposed over the activities, resulting in decreased need to recreate. Some of the year was spent adjusting to the new outreach organization noted on page 138, and planning outreach initiatives that will be implemented in 2015.

In August, one of the Efficiency Outreach Coordinators left the company, leaving a vacancy that has not been filled. In addition, another team member left the company in November and that position has not been filled yet. Both of these positions will be filled in early 2015. In addition, one staff member was on out on leave for three months. Therefore, the labor, overhead and associated employee expenses ended the year being below anticipated spending levels.

Trade Ally Support

Description

Trade Ally Support manages PSE membership costs in Energy Efficiency (EE) trade associations. These organizations stand apart from other trade association memberships in that they provide comparatively broad-based EE research, training and/or implementation support services.

Trade Ally Support organizations provide education, information and related services for:

- The adoption or expansion of energy-efficiency products, services, and practices; and
- Conducting research toward the development of new, or improved validation or delivery of existing conservation measures, programs and services.

The Trade Ally Support line item budgets and tracks only annual membership dues PSE pays to broad-based industry trade and research organizations who perform and support ongoing development and implementation of Residential and Business Energy Management programs. PSE participates in and utilizes the services of many such organizations to support delivery, management, and promotion of energy efficiency services. Utility, customer, and service provider benefits primarily include education and information exchange on end-use technologies, energy legislation, customer engagement, efficiency services, and related EE industry trends. Other Trade Ally expenses not related to dues, for example conference attendance, are budgeted and tracked with the pertinent efficiency program(s) receiving the benefit.

Memberships

As discussed in Chapter 9: Measurement & Verification, PSE applies a great deal of rigor to ensure that Conservation Rider customer funds are used appropriately to add value to Energy Efficiency conservation offerings when considering memberships.

Memberships paid from the Trade Ally Support account in 2014 focused mainly on local or regional conservation efforts. During this period, these memberships included:[58]

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

Small increases in 2014 dues led to actual costs 3 percent greater than planned spending.

[58] These are included in Exhibit 1, Supplement 3 of this report, which provides a high-level view of 2014 expenditures for memberships and sponsorships.

EFFICIENCY RESEARCH & COMPLIANCE

Overview

Functions of this group include:

- Conservation Supply Curves,
- Strategic Planning,
- Market Research,
- Program Evaluations,
- Verification Team,
- Program Support.

In addition to playing a critical role in Energy Efficiency's overall measurement and verification functions, the work of these teams assists Energy Efficiency Program Staff in designing innovative conservation offerings, evaluating processes and savings calculations, verifying cost-effectiveness, and building the Company's biennial IRP. They ensure that there is a regular schedule of program performance review, consistent with applicable conditions. It is notable that the Program Support organization's name evolved in 2014 from Program Development & Support to its current name. Table 12a provides a 2014 summary of expenditures for the Research & Compliance group.

Table 12a: Research & Compliance 2014 Expenditures

2014 Expenditures				2014 Budget
Schedule	Programs	Total	% of Budget	
Electric	Electric			Electric
Gas	Gas			Gas
	Conservation Supply Curves	$ 419,210	105.8%	$ 396,319
	Strategic Planning	$ 209,362	74.0%	$ 283,007
	Market Research	$ 124,635	53.3%	$ 233,917
	Program Evaluation	$ 1,107,531	83.9%	$ 1,320,727
	Verification Team	$ 451,303	68.7%	$ 657,008
	BECAR	$ 17,761	10.1%	$ 175,000
	Program Support	$ 270,451	64.5%	$ 419,597
	Total Electric	**$ 2,600,253**	**74.6%**	**$ 3,485,575**
	Conservation Supply Curves	$ 62,776	106.0%	$ 59,221
	Strategic Planning	$ 29,195	69.0%	$ 42,285
	Market Research	$ 25,030	70.1%	$ 35,730
	Verification Team	$ 68,780	70.6%	$ 97,408
	Program Support	$ 36,007	85.1%	$ 42,301
	Program Evaluation	$ 152,787	113.7%	$ 134,378
	Total Gas	**$ 374,576**	91.1%	$ 411,323

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EFFICIENCY RESEARCH & COMPLIANCE DETAIL DISCUSSIONS

Conservation Supply Curves and Strategic Planning

Description

The purpose of the Conservation Supply Curve 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 its 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).

In 2014, the Company engaged the Cadmus Group to complete an assessment of the long-term technical and achievable market potential for energy savings from energy efficiency and other demand-side resources, covering the 20-year period 2016-2035. This assessment will be an input into the Company's own resource portfolio analysis that will determine the amount of economic conservation potential, as part of the 2015 Integrated Resource Plan. The budget includes costs to complete the conservation potential assessment and incorporate the results of that assessment in the resource portfolio analysis. This analysis will be a key component for establishing program savings targets for 2016-2017.

The Strategic Planning function conducts a variety of research studies and analyses to support regulatory compliance proceedings and other strategic initiatives.

The Strategic Planning function is responsible for providing support and guidance to a variety of regulatory and other strategic initiatives. Responsibilities include regulatory compliance filings, federal and state legislative review, policy analysis, or other strategic efforts related to energy efficiency. The Strategic Planning function also includes support for the regional Commercial Building Stock Assessment study. Part of the budget in 2014 was used to fund oversampling of buildings in PSE's service area as a supplement to the regional Commercial Building Stock Assessment study sponsored by NEEA.

2014 Accomplishments and Activities

The group continued its support of the 2015 IRP's conservation supply curve assessment in 2014.

The Strategic Planning area continued to provide IRP and program planning support, regulatory filings and legislative review, as well as high level oversight of the evaluation function.

The group's labor expenses were less than planned, and its outside services expenditures were slightly lower than anticipated.

Market Research

Description

Market Research conducts a variety of research studies and analyses to support program design, marketing strategies, and development of effective program promotion and customer communications for energy efficiency.

The focus of the Market Research function is on acquiring information about customers that is relevant for the development of energy-efficiency 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, Market 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. Market Research is also called upon for analysis of localized characteristics, attitudes, behavior, and energy usage trends, necessitating more geographically targeted research. Market 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 Market 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 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, such as message testing, target markets, and campaign effectiveness studies. Other research efforts will be focused on tracking customer satisfaction with information services, such as the Energy Advisors. 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.

2014 Accomplishments and Activities

In 2014, PSE Energy Efficiency Market Research examined three broad areas: customer satisfaction with PSE energy efficiency products and services, marketing effectiveness of energy efficiency products & services, and Customer satisfaction with PSE energy efficiency program contractors, Studies completed included:

- Ongoing follow-up surveys measuring customer satisfaction after engaging in energy efficiency rebate offers or calling an energy advisor.
- Survey of customers who purchased discounted LED bulbs at retail locations to measure satisfaction, drivers behind their purchase, where they were installed and satisfaction with the program and PSE overall.
- Follow-up survey of customers making an energy efficiency product purchase at ShopPSE website to measure satisfaction with the products and the purchase experience.
- Survey of Energy Efficiency program participants who received an efficient showerhead as part of the program. Satisfaction by showerhead model received, where installed and reasons for not installing were measured.
- Customers who received an appliance rebate in the form of a Visa pre-paid card were surveyed to measure satisfaction with that payment method and the rebate process overall.
- Ongoing follow-up surveys measuring satisfaction after participating in an energy efficiency rebate program. Includes questions about Energy Advisors and the Contractor Alliance Network, if applicable.

- Survey of participants of Manufactured Home Duct Sealing program to gauge overall satisfaction as well as satisfaction with support and installer, how they heard about the program and reasons for participating.
- Targeted geographic areas for door to door green communities' campaigns and areas of high customer propensity for participation in appliance rebate programs.

Program Evaluation

Description

This organization is a key element of PSE's overall Evaluation, Measurement & Verification (EM&V) initiative.

PSE Evaluation Staff are committed to the evaluation of energy savings and the continual improvement of energy-efficiency service delivery to customers. PSE program implementation teams work together with the Evaluation Team to inform the development of evaluation scopes of work. The Evaluation Team then develops and maintains a strategic evaluation plan, in accordance with the guiding Evaluation Framework, ensuring that all programs receive review on a four-year cyclic basis. PSE also considers the level of energy savings, significant program changes and whether a program is new or never been evaluated before in prioritizing programs for evaluation. Adjustments to the evaluation plan may be made during the biennium, with CRAG review and advice.

For additional information on planned evaluation activity, please refer to the Evaluation Plan (Exhibit 6 of the 2014-2015 Biennial Conservation Plan).

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 results are implemented in the program. When an evaluation study is completed, findings are reviewed along with key recommendations. 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 Source of Savings database.

PSE frequently shares the results of its evaluations with the RTF to ensure continuous improvement of measure energy savings values that are widely used in the region. In addition, PSE monitors the Regional Technical Forum (RTF), NEEA, and the Northwest Research Group (NWRG), as well as directly reaching out to neighboring utilities, for opportunities to collaborate on common evaluation needs.

Planning began in 2014 for significant work in 2015 on the Biennial Electric Conservation Achievement Report (BECAR), an independent third party review of PSE's 2014-2015 electric portfolio, which must be completed by mid-2016 in compliance with conditions approved by the UTC in Docket No. UE-132043.

Evaluation Studies

The Evaluation Team finalized plans for Residential programs to be evaluated in 2015. These include:

- Single Family Lighting
- HomePrint™
- Web-enabled thermostats
- Showerheads
- Home Energy Reports
- Multifamily Existing
- Multifamily Air Seal
- Fuel Conversion

Commercial/Industrial Programs to be evaluated in 2015 include:

- Commercial/Industrial Retrofit
- Large Power User, Self-Directed
- Pilot: Small Business Behavior
- Technical Evaluation: Remote Energy Audit

Cost-Effectiveness

Cost-effectiveness modeling and calculations are also conducted within the Evaluation Team. PSE's program-level detailed view of electric and gas cost-effectiveness results for 2014 is attached to this report as Exhibit 2.

Continuous Improvement through TQM

In keeping with recommendations from the 2012-2013 Biennial Electricity Conservation Achievement Review, in 2014 Evaluation staff improved the efficiency and value of program evaluation by actively engaging program staff throughout the evaluation process to ensure that evaluation findings were well founded and actionable.

To prevent program rejection of evaluation findings on methodological grounds, in the program planning phase of an evaluation there is program acceptance of the PSE impact evaluation methodology and techniques to be applied. Further, any methodology that is applied is consistent with accepted evaluation practices.

2014 Evaluation Accomplishments and Activities

Evaluation staff completed the following studies for the Residential and Business Sectors:

- Small Business Lighting and Commercial Rebates
- Home Energy Reports (HER) Program

The Multifamily Retrofit impact evaluation study, originally scheduled for 2014 is now set for 2015. This revision caused a slight variance in the Evaluation budget expectation-vs-actual amount.

With UTC Staff, the Evaluation Staff managed the 2012-2013 Biennial Electricity Conservation Achievement Review. A portion of the BECAR expenditures, originally anticipated for 2013, were rolled over to 2014.

At the regional level, Evaluation staff also actively served on technical and policy committees of the Regional Technical Forum.

Verification Team

Energy Efficiency's Verification Team serves as another key element of its EM&V efforts. The Verification Team provides PSE program staff with an overarching process to improve the quality of program implementation and validate energy savings with a high degree of rigor by incorporating higher levels of measurement and verification activities.

Composition

The Verification Team consists of three Quality Assurance Specialists and one Business Analyst. The QA Specialists are responsible for conducting on-site inspections and related activities to verify installation of Energy Efficiency measures for rebated equipment. This team confirms installed measure quantities, model numbers, site qualifications, equipment settings, and other related installation parameters through review of primary documentation, phone surveys, and onsite inspections.

Energy Efficiency measures include those installed and reported by trade allies, PSE contractors, and other third parties. The team welcomed a new QA Specialist in mid-2014, replacing a member that had left the company. The team's Business Analyst is responsible for data and systems, forecasting and working closely with Energy Efficiency Program Staff on a regular basis. The Business Analyst is also responsible for preparing the reporting, tracking, and communicating program findings and other related information from the field verifications to the Program Staff.

Objective

The team strives to positively contribute to program quality implementation and validate energy savings by combining detailed and documented statistical methods of analysis and sampling[59] with individualized field inspection protocols and documentation requirements tailored to each specific program.

[59] Sampling methods for randomly identifying measures or projects for verification, and a sampling tool to determine sample size for verification of each program was developed in collaboration with DNV KEMA and deployed throughout 2014.

Additionally, the Verification Team assists with other quality assurance interests in residential and business efficiency programs; including non-random visits and reviewing retail stores' advertisements and inventory in the stores. Non-random visits, typically performed at the request of program managers for case-specific interests, are considered quality assurance reviews, and may also result in documented findings for program management follow-up.

The Verification Team meets with the program teams on a quarterly basis to present reports on summary of verifications, findings, and program updates.

2014 Continuous Improvement through TQM

In 2014 the Verification Team implemented several system and process enhancements, leading to further efficiencies and team effectiveness. Highlights of key accomplishments are discussed below.

Data & Systems

- Identified tracking and reporting elements in the Verification Database that will integrate with EES Tracking & Forecasting System. This will streamline verification scheduling and result in a central management reference.
- Improved verification field forms to better align with program requirements and assist communication between program and verification teams.
- Developed protocols and agreements between the Verification team and Program Staff. These documented agreements will clearly identify improved procedures and processes for communicating findings, determine monthly verification targets and forecasting, and the method for customer and contractor feedback.

Verification Scope

In 2014, the Verification Team inspected a wide range of both Residential and Business measure installations, including retail applications, business lighting and multifamily projects, some including a substantial number of measures. This is especially significant, considering the organizational modifications discussed in the following section.

2014 Accomplishments & Activities

In early 2014, the Verification Team was restructured as a part of the Customer Energy Management reorganization, combining the Verification Team with Rebates Processing. Additionally, the group faced the challenge of resource shortages mid-way through the year. These personnel adjustments provided the team the opportunity to observe, collaborate with Program Staff, and take a fresh look at process improvement opportunities for 2015.

In 2014 the Verification Team completed over 2,400 on-site field verifications, including random verifications. Additional verifications were performed in the way of phone samples, program manager requests (considered QA reviews), and some intermittent oversampling.

Table 13a represents on-site project inspections completed by the Verification Team through 2014. It is important to note that verification by a home, project, business or dwelling can involve a significant number of individual measures.

Please note that PSE rounds the indicated figures to provide a sense of scale and scope, and are not intended to be used for audit purposes.

Table 13a: Verifications by Program

Program	Total Number Verified
Heat Pumps, Various	220
Heat Pump - Lockout Control	90
Heat Pump Water Heater	90
Residential Appliances, Various	360
Water Heaters, Various	150
Single Family Weatherization	10
Gas Fireplace	80
Forced Air Furnace to Heat Pump Conversion	80
HomePrint Phone Survey	40
Duct Sealing- Manufactured Home	10
Integrated Space & Water Heat	60
Single Family Weatherization- Windows	130
Low Income Weatherization	30
Gas Boiler	30
Gas Furnace	90
Multifamily Retrofit	30
Multifamily New Construction	2
Business Lighting Program	70
HomePrint Assessment	20
Fuel Conversions, Various	60
Commercial CFL Mark Down Program ("Lighting to Go")	160
Business Lighting Express	110
Commercial Cooking Equipment	60
Commercial Laundry, Various	5
Premium HVAC Service	10
High Efficiency Heat Pump & Air Conditioner	60
Retail Stores	450
Pre Rinse LFSH Spray Head- Electric	5
Smart Water Heater	5
Hospitality Rebates	30
Total	**2500**

Program Development & Support

Description

In a 2014 reorganization, the Programs Development organization added Energy Efficiency data management, tracking and reporting functions provided by Data and Systems Services[60] staff, along with their ongoing research, planning, and development work. As reflected in the 2015 Annual Conservation Plan, the newly-combined group is now called Programs Support, as their functions support management planning and implementation needs of Residential and Business Energy Management customer programs. The group's budget line was also moved from the Research & Compliance section of the 2015 Exhibit 1 to the Portfolio Support section.

Data and Systems Services labor and other costs began tracking to designated accounting (order) numbers near mid-2014, and are budgeted separately for the first time in the 2015 ACP. Previously, Data and Systems Services costs were included in Residential Energy Management budgets. It is important to note that their noted 2014 expenditures[61] were not incremental.

Programs Development costs are also predominantly labor and include training, planning, and development contract costs. 2014 electric and gas actual costs near $300,000 were less than targeted in Exhibit 1 budgets (near $460,000) due largely to staff labor costs being directed to other O&M and Energy Efficiency program-specific orders in early 2014. Also in early 2014 PSE elected to not fill an Intern position, and in the third quarter a senior analyst position was vacant for approximately two months.

2014 Accomplishments and Activities

Data and Systems Services staff roles included planning, development, support, and enhancement of EE systems and tools; management of reporting, forecasting, and business performance metrics; conducting analytics by understanding and presenting program data as meaningful knowledge and insights.

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[60] A discussion of Data and Systems Services can be found in Chapter 9: Measurement and Verification, page 114.

[61] Data and Systems Services expenditures can be found under Rebate Processing in the Portfolio Support section of Exhibit 1.

Program Development staff roles included internal and external research, planning and development; biennial and strategic program planning support; participation in regional organizations including NEEA and RTF; assessment, development and implementation of Measurement & Verification protocols and methodologies; developing and managing IRP and related Demand-Side Resources (DSR) bidding activities; and best practices and continuous improvement.

In addition to mainstream Energy Management work, new customer load control development interests—previously reflected in Commercial/Industrial Load Control (Schedule E 271)—were avidly pursued in 2014. A market study assessing potential Ancillary Services for automated dispatchable customer load control is targeted for completion in early 2015. Ancillary Services, described in FERC Order 745, may offer broader and less-invasive customer participation potential than historic curtailment demand response programs focused only on system peak load management. Results from the assessment study may be included in the 2015 IRP. Any subsequent pilot or program proposals will depend on assessment study results, stakeholder interests, business case, and related approvals.

OTHER ELECTRIC PROGRAMS OVERVIEW

There are four electric Energy Efficiency programs for which conservation savings are not claimed: Net Metering, Energy Renewable Energy Education and the Electric Vehicle Charger Incentive programs. 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).[62] Only Other Electric Programs are excluded from Energy Efficiency's cost-effectiveness calculations.

Sector Performance

Table 14a provides a 2014 summary of expenditures and energy savings for Other Electric Programs.

Table 14a: Other Electric Program 2014 Expenditures

		2014 Expenditures		2014 Budget
Schedule	Electric			Electric
E150	Net Metering	$ 632,391	158.2%	$ 399,763
E248	Renewable Energy Education	$ 2,794		$ -
E195	Electric Vehicle Charger Incentive	$ 195,200		
	Total Electric	**$ 830,385**	207.7%	$ 399,763

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

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OTHER ELECTRIC PROGRAM DETAIL DISCUSSIONS

Net Metering

Schedule E150

Description

PSE's Net Energy Metering (NEM) program provides interconnection services for qualifying customer-generators in accordance with State legislation enacted into law in February 11, 1999 and amended June 8, 2000 (see RCW 80.60).

PSE provides interconnection services to qualifying Customer-generators who operate fuel cells, hydroelectric, solar, wind, or biogas generators of no more than 100 kW. Service under this schedule may be limited to a total of 22.4 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 through 49 of Electric Tariff G.

At the time a customer enrolls in the Net Energy Metering program, they are also provided the necessary information to receive annual benefits from the Production Metering, or Renewable Energy Advantage Program (REAP) , which is the state's performance based incentive described in Schedule 151.

While the schedule applies to customers who operate fuel cells or hydroelectric, solar or wind generators of no more than 100 kW, in 2014, 98 percent of net metering systems are solar PV with a median size of 5.2 kW.

No direct customer incentives are provided by PSE as a part of these programs. As described in the following section, the Conservation Rider only funds administrative expenses, as provided by the indicated requirements.

Energy produced by customer-generator systems directly reduces energy used in the home or business from the grid. When energy generated exceeds home or business electrical loads, the excess energy flowing to PSE is separately metered and credited to the customer at the retail rate.

The Net Metering Program's year runs May 1 to April 30. Any excess credit each month is rolled forward to the following month. When the new program year ends on April 30, the credit is reset to zero.

Net Energy Metering Expenses

The 2002 Stipulation Agreement, Section H.25 provides the authority for PSE to charge reasonable Net Metering administrative costs to its Conservation Rider:

> "Tariff-rider funds shall only be used on programs and their associated administrative costs that result in energy savings through Energy Efficiency investments or fuel switching. This may include reasonable administration costs for PSE's net metering program."

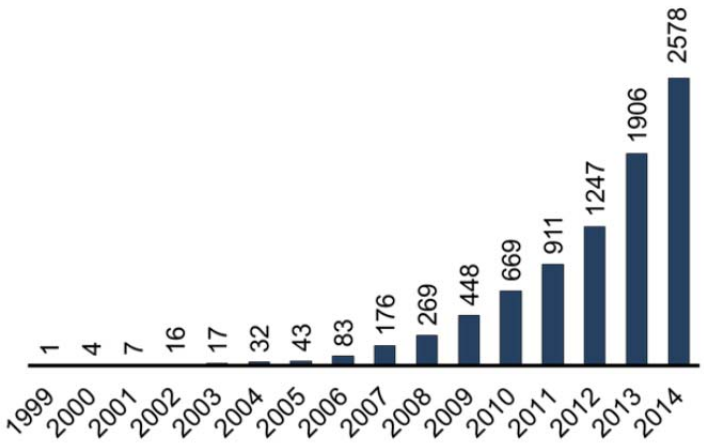
Further, in January 1999 the UTC issued an accounting order under docket No. UE-990016 which requires the collection of unbilled distribution costs from all customers through Schedule 120.

2014 Accomplishments and Activities

A key accomplishment focused on process improvement was the introduction of Schedule 150-EZ. This is the application form and it has been reduced from 10 pages to 3. The streamlined application is appropriate for a vast majority of the proposed distributed generation systems.

Figure 15a provides a look at the historical growth of the program.

Figure 15a: Net Energy Metering Customer-Generators, 1999-2014



Production Metering

Schedule 151

Schedule 151 is the venue through which PSE administers the state-authorized production payment to qualifying customer-generators. The program is also known as the renewable energy system cost recovery program in WAC 458-20. In the most recent program year, from July 1 2013 to June 30 2014, the payments totaled over $3.13 million. It is important to note that the indicated payments were not funded by the Conservation Rider.

Electric Vehicle Charger Incentive

Schedule E195

Description

PSE's Electric Vehicle Charger Incentive program ("EVCI") is a pilot program to study charging use in PSE's electric service territory. The program collects data on charging behavior and patterns for PSE electric customer charging their electric vehicles at home, and compares this information against PSE's other load shapes and resources. Customers driving electric vehicles are provided a $500 incentive towards the purchase of a Level 2 charger for their home as an incentive to participate in the program and use Level 2 charging, which is more energy efficient than Level 1 charging.

There are currently approximately 7,000 electric vehicles registered to PSE's electric service territory, most of which have been registered in the past two years. Some customers are known to be using Level 1 charging, which is a wall outlet, while others are using Level 2 charging at home, which uses specific charging equipment that can use between 3 and 19 kW of power. There is currently no method to monitor where these vehicles charge nor the shape of the load they add to the system, including any impact on peak loads.

EVCI monitors the electric use of customers with electric vehicles to determine the amount of load and load shape that electric vehicles place on PSE's system, compare these loads to PSE's other loads and resources, and identify impacts to peak load on the system. Data collection will occur using multiple sources including PSE's existing meter system, both with and without hourly energy monitoring, and pilot installations of "smart chargers". Customers are incented to participate in the program and to use Level 2 charging, which is more efficient than Level 1 charging.

2014 Accomplishments and Activities

In 2014, the UTC approved the program and it was launched in the latter half of the year. Specific tasks were:

- Development of program rules and design,
- Set up of rebate receipt and processing systems,
- Collection of initial interval metering data from customers to inform broader data collection design,
- Program launch and marketing on PSE's website,
- Outreach to channels for likely vehicle or charger purchase, including auto manufacturers, auto dealers, charging station manufacturers, and charging station installers,
- Evaluation of means to reach EV drivers not participating in the program.

Each of the last four tasks is ongoing in 2015, with further data collection and analysis to be added to the program.

2014 COMPLIANCE

By the end of 2014, PSE made good progress in meeting its regulatory requirements, including laws, rules, Commission Orders, CRAG requests, and conditions. This chapter presents an overview of PSE's compliance with conservation-specific requirement deliverables provided in 2014.

RCWs and WACs

In 2014, PSE complied with RCWs and WACs applicable to conservation: RCW 19.285 and WAC 480-109. In compliance with RCW 19.285.070(1), and WAC 480-109-040(1), the Company filed its mid-term Biennial Conservation Report with the Department of Commerce and the UTC on June 1, 2014. The report is available on the PSE website at:

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

Commission Orders

By the end of 2014, Energy Efficiency completed almost half of the conditions enumerated in Order 01, Attachment A of Docket No UE-132043. This total includes 19 Sections or conditions that Energy Efficiency considers "standard business practice."

These include those that are outlined in the 2002 Stipulation Agreement, Exhibit F of Docket Nos. UG-011571, Sections A through J and L of the 2010 Electric Conservation Settlement Terms, Docket No. UE-100177 that are still in effect, and the subsequent 2013-2014 Commission Order 01, Attachment A in Docket No. UE-132043. The conditions listed in Order 01 only update the conditions listed in Section K of the 2010 Settlement.

PSE rigorously tracks each regulatory deliverable and reports on its compliance progress to its Stakeholders regularly. Additional discussions that highlight Energy Efficiency's interactions with our Regulatory Stakeholders can be found in Chapter 17: Stakeholder Relations, beginning on page 171.

These include conditions such as describing the need for line extension policies, or requiring PSE to continue to honor Commitments 22 and 23 from U-072375,[63] describe the makeup of the Conservation Resource Advisory Group (CRAG), etc. They describe no set deliverable date, or have no specific CRAG role. Energy Efficiency routinely reviews these to ensure that there are no updates or revisions. Where there are none, the conditions are notated as "completed".

This 2014 Energy Efficiency Report of Conservation Accomplishments is consistent with the Commission's Second Supplemental Order, Docket No. UE-970686, and condition (8)(b) of Order 01, Docket No. UE-132043.

In the attached Exhibit 9: *Condition Compliance Checklist*, these are noted in the "Deliverable Provided Date" column as "ongoing," or "No specific deliverable—ongoing business practice." Readers may quickly reference he status of any deliverable via these *icons*:

Figure 16a, extracted from Exhibit 9: *Condition Compliance*, provides an overview of the cumulative progress of PSE's achievement of regulatory requirements.

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

Figure 16a: 2014 Condition Compliance Progress

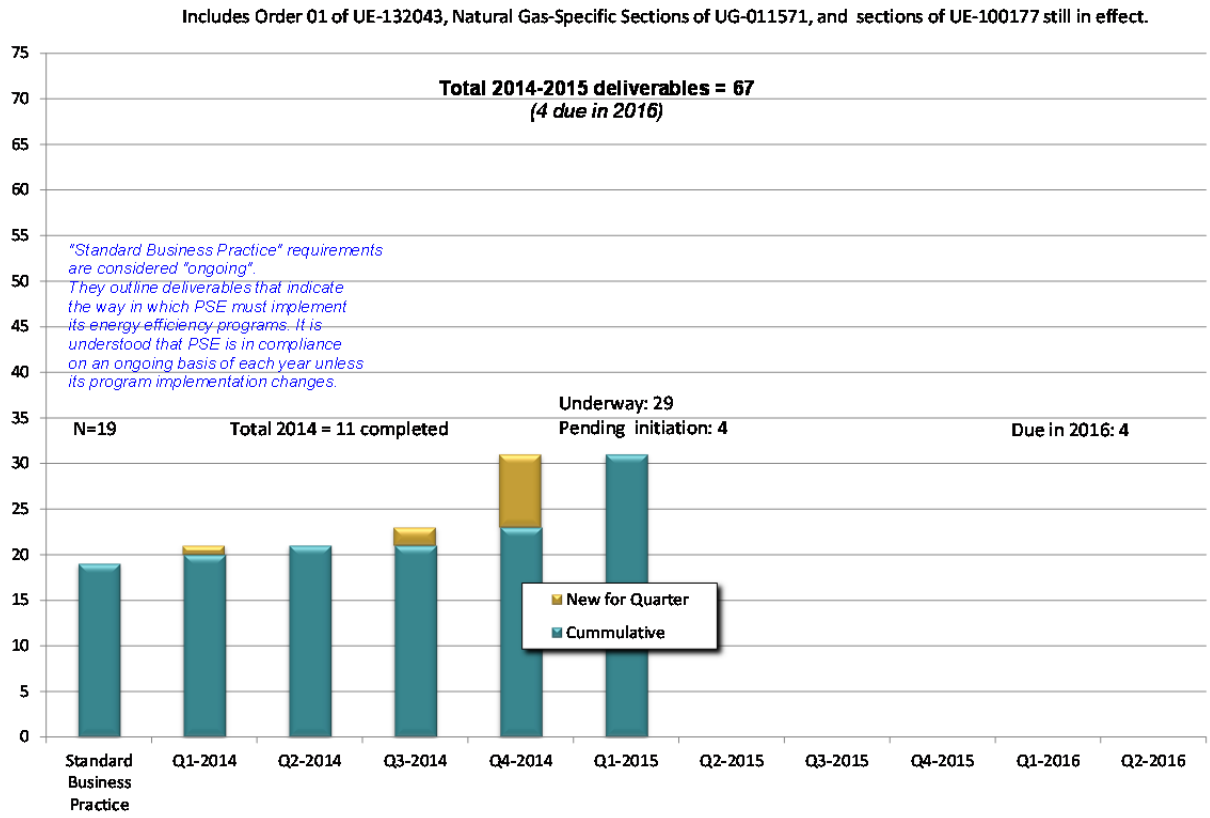


Exhibit 9

Exhibit 9 of this report provides detailed information on PSE's deliverable compliance for the complete 2014-2015 biennium. The Exhibit is a "living" document; it is updated throughout its applicable biennium. The Exhibit lists all deliverables; actionable and otherwise, in the 2014-2015 Order 01, along with those Sections still in effect from the 2010 Electric Settlement Agreement. In keeping with its continuous improvement/TQM principles, PSE incorporated the gas-specific requirements enumerated in the 2001 Rate Case Stipulation Agreement, Exhibit F, energy efficiency-specific requirements listed in the 2008 Merger Agreement, and recommendations made in the UTC Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs.[64]

[64] Docket No UG-121207.

This significant enhancement provides Stakeholders a way to view the status of all conservation-specific deliverables in a single document.

Several key deliverables that were satisfied in 2014 are highlighted in Table 16a.

In addition to specifically-enumerated requirements, PSE also complied with Commission and CRAG requests throughout the year. For instance, PSE was a key participant in the WAC 480-109 rulemaking process. And, consistent with the Commission recommendations in its Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs, Docket No. UG-121207, PSE was the first IOU to post its gas UES values on the Conduit website.

Table 16a: Highlights of Key 2014 Requirement Compliance

Section	Requirement, UG-011571	Status
M.44	Completed — The Company shall provide biennial notification in a Conservation Report Card to its customers (...) related to its annual savings targets. (...)	✓
Section	**Requirement, UE-100177**	
F(11)	Completed for 2014 — Annual and biennial budgets built from the bottom through the development of a mix of programs [...]	✓
G(14)	Completed for 2014 — PSE will continue to honor Commitments 22 and 23 from U-072375 with regard to the future funding levels for low-income energy conservation programs [...]	✓
I(18)	Completed — The Company shall provide biennial notification in a Conservation report Card to its customers (...) related to its biennial savings targets under the Energy Independence Act. (...)	✓
Condition	**Requirement, UE-132043**	
(3)(a)(vi)(1)	Completed for 2014 — Review appropriate planning for the marketing of conservation programs. (One review completed in 2014.)	✓
(3)(b)	Completed for 2014 — The CRAG shall meet face-to-face at least semi-annually to hear updates, review program modifications, or consider need for revisions. In addition, the CRAG shall meet at least two additional times per year... [...]	✓
(4)(b)	Completed for 2014 — PSE must provide its proposed budget in a detailed format with a summary page indicating the proposed budget and savings levels for each electric conservation program, [...]	✓
(8)(a)	Completed — (PSE must file) By December 1 of each even-numbered year, the following year's Annual Conservation Plan (ACP). (...)	✓
Section	**Requirement, UE- 121697, UG-121705**	
F, ¶178	Completed for 2014 — (...) The settlement included an additional $500,000 for low income energy efficiency. (...)	✓
F, ¶178	Completed for 2014 — (...) In addition, PSE's investors offered to provide $100,000 per year for low-income energy efficiency funding. (...)	✓
Section	**Requirement, UG-121207**	
¶48	Completed for 2014 — We ask that Commission staff, utilities and stakeholder standard the format of biennial and annual conservation plans and the schedule of when the utilities file these plans with the Commission.	✓

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

With the exception of this sentence, this page was intentionally left blank.

2014 STAKEHOLDER RELATIONS

Puget Sound Energy, along with its primary constituents, the Commission Staff and the Conservation Resource Advisory Group (CRAG) sustained the momentum that this Collaborative established in 2010. In keeping with our emphasis on meeting customer expectations, PSE implemented a number of process improvements to increase the clarity of information provided to Staff and the CRAG.

Throughout 2014 PSE reduced redundancies and optimized the value of each interaction; this included tailoring PSE's required filing documentation to the needs of its constituents. PSE received feedback, both directly and through casual reference, that its efforts were recognized and appreciated. Similarly, PSE recognizes that UTC Staff and the CRAG expended significant effort to understand, become involved with, and help resolve several strategic and policy issues in 2014.

Washington Utilities and Transportation Commission

Energy Efficiency values its working relationship with Commission Staff and appreciates their level of thoroughness, thoughtfulness, and adaptability. PSE was able to complete several initiatives as a result of the cooperation between its Energy Efficiency Staff and Commission Staff. The following discussion outlines the key conservation-related UTC filings that PSE made in 2014. In the list, PSE presents the date and description of each filing the UTC Docket Number for straightforward reference.

Energy Efficiency-Specific Filings

February 15, 2014: 2013 Annual Report of Conservation Accomplishments UE-111881

On February 15, 2014, PSE filed its annual review of 2012 conservation savings and expenditure results, consistent with the Commission Second Supplemental Order No. 1 in Docket No. UE-970686 and condition (8)(g). This report represented the evolution and continuous improvement in providing Energy Efficiency program accomplishments, activities, and value-add information for PSE's Stakeholders.

March 1, 2014: Schedule 120, Electric Conservation Service Rider UE-111881

Consistent with condition (8)(h) applied, requiring PSE to file its electric cost recovery Schedule on March 1, with an effective date of May 1.

June 1, 2014: 2012-2013 Biennial Conservation Achievement Report UE-111881

Consistent with RCW 19.285.070, WAC 480-109-040, PSE filed its 2012-2013 BCR with the UTC and Department of Commerce.

June 6, 2014: Petition to Rescind Second Supplemental Order UE-970686

In conjunction with the removal of a requirement to produce a Semi-Annual Conservation Report from the 2014-2015 conditions, PSE filed a petition to amend the Commission's Second Supplemental Order in Docket No UE-970686. The Commission granted the request on July 25 in Order 03 in the same Docket.

November 1, 2014: 2015 Annual Conservation Plan UE-132043 & UG-123044

PSE filed the 2015 Annual Conservation Plan (ACP). The plan includes an electric conservation savings target of 277,605 Megawatt-hours, or 31.7 average MegaWatts, with planned electric expenditures of $99.41 million. The 2015 gas savings goal is 3.1 million Therms, with planned gas expenditures of $13.32 million. This filing satisfied condition (8)(a).

Additional Filings

In addition to these condition-specific requirements, PSE made several other noteworthy filings that impacted Energy Efficiency and the Conservation Rider in 2014.

March, 2014: Petition for an Accounting Order related to the Electric Vehicle Charger Incentive UE-140626

This petition requested approval to recover EV Charger Incentive costs through the Conservation Rider. The Commission issued Order 01, granting the waiver and approving the accounting petition.

May 2014: Exhibit 4: Energy Efficiency List of Measures UE-132043

This filing represented updates to PSE's suite of measure offerings, consistent with total quality management principles and conditions requiring the notification and review of measure incentives. The CRAG received a mark-up copy of Exhibit 4 one week prior to the filing.

May, 2014: Petition an Extension of IRP Filing UE-141170 and UG-141169

In order to more accurately reflect anticipated load for the next 20 years, PSE requested the Commission to move the filing of the IRP from May to September 2015 for the 2015 IRP and to permanently modify the IRP filing deadline to July 15, starting in 2017. The Commission issued Order 01, granting the request. This revision should not negatively affect PSE's 2016-2017 Biennial Conservation Plan savings targets.

May and October, 2014: WAC 480-109 Rulemaking UE-131723

PSE was an active participant in the WAC 480-109 rulemaking process, filing two sets of comments in CR-101 and CR-102 and submitting several informal comments via email to specific Commission Staff requests.

June 27, 2014: Petition to Rule on Decoupling Timeframe UE-141357

PSE requested the Commission to rule on effective timeframe of PSE's 2012-2013 conservation decoupling adder. The Commission declined to act on the petition, and initiated a review of Order 01 in Docket No. UE-132043. The Commission issued Order 03 in Docket No UE-132043, indicating that Commission Staff will not dispute PSE's 2012-2013 conservation decoupling achievement and specifying the electric savings value required to meet the decoupling commitment for 2014-2015.

Tariff Schedule Revisions

As part of its on-going continuous improvement practices, all Conservation Schedules receive routine review and updating. The only Energy Efficiency Schedule revision in 2014 was:

Schedule 120

- Adjusted Conservation Rider rates that became effective May 1, 2014.

Conservation Resource Advisory Group

PSE acknowledges and is very appreciative for the amount of work and committed engagement demonstrated by the Conservation Resource Advisory Group (CRAG) throughout 2014. Through PSE's collaborative process, it achieved significant milestones during the past year, as discussed throughout the Report and the following sections.

Background

PSE formed the Conservation Resource Advisory Group (CRAG) in response to Section D of Exhibit F in the 2001 General Rate Case Stipulation Agreement, Docket No UE-011570 and UG-011571. It consists of up to 15 Stakeholders and represents a wide variety of interests, including consumers, industry, and regional concerns. It also includes members of Commission Staff. The CRAG works closely with Energy Efficiency on a variety of conservation initiatives, most notably conservation tariff filings, savings goal setting and long-term conservation strategies.

CRAG Vision

Throughout 2014, the CRAG consistently demonstrated qualities of the CRAG vision, established in May 2010:

> Members actively participate in CRAG processes and advise on PSE decisions so that ratepayer funds are being used to achieve all cost-effective energy conservation in the most prudent, beneficial manner.

PSE and the CRAG review the Vision Statement at the first CRAG meeting of the year to ensure its applicability and value. PSE also provides laminated copies of the Statement for each CRAG meeting. PSE and CRAG members conducted all CRAG interactions with the utmost respect for potentially alternative views, all participants were fully engaged, with the clear vision of customer benefit and continuous improvement uppermost in mind.

2014 Adaptation through TQM

Constantly building on efficiencies that PSE implemented in 2010, PSE executed a number of new steps to maximize transparency and improve efficiencies for CRAG members including:

- PSE converted the Energy Efficiency Regulatory Timeline into a table, facilitating the "checklist" concept.
- PSE continued its initiative to conserve resources and minimize printing and mailing costs by reducing the size and redundancy of the ACP documentation to CRAG members. For instance, filing documents are now offered to CRAG members on USB flash drives for their convenience and reduced archive volume.

CRAG Activities

In 2014, PSE welcomed two new CRAG members. PSE always provides new members with a CRAG Reference Manual, containing a substantial number of useful references, such as PSE conservation Schedule numbers, Conservation Plan and Annual Report highlights, and Energy Efficiency and CRAG contact information. Apart from CRAG meetings and various sub-committee meetings, PSE provided filings background and workpapers, data, opinions, references, comments, etc., and data request responses to CRAG members throughout the year. Ad-hoc CRAG meetings included:

- April 29: PSE hosted a conference call to discuss SBW's key findings in the 2012-2013 Biennial Electric Conservation Achievement Report (BECAR).
- November 25: PSE hosted a conference call to review SBW's draft 2014-2015 BECAR workplan.

Publication Updates

PSE provides the CRAG with several document drafts prior to filings. For instance, the List of Measures, Incentives & Eligibility (Exhibit 4) and the draft 2015 Annual Conservation Plan, as required by condition (8)(a).

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.

PSE updates these documents on the PSE.com website following the UTC filing.

CRAG Meetings

In 2014, PSE met the requirements of condition (3)(b) by convening four CRAG meetings during the year. PSE places emphasis on ensuring that it maintains an accurate meeting record, where agreements, action items, and issue resolutions can be referenced in several related documents. PSE also provides a very long lead time for meeting schedules to avoid potential scheduling conflicts. Every CRAG meeting includes several standing agenda items, including:

- Activities that have occurred since the previous meeting,
- CRAG meeting action item status,
- Attendees participating via conference call are emailed the meeting materials prior to the meeting call to order.

PSE also follows each meeting by publication and distribution of meeting summary notes, which outline meeting topics, agreements, and resulting action items.

As 2014 was a mid-cycle year, the 2014 meetings focused primarily program updates, 2014-2015 reviews and evaluations, and on 2015 ACP filing readiness. The following discussions provide highlights of the 2014 CRAG Meetings. PSE provides detailed meeting summaries to CRAG members following the meeting conclusion.

March 6 Meeting Highlights:

This meeting was the only off-site meeting of year. After reviewing the recently-filed 2013 Annual Report of Conservation Accomplishments and the Schedule 120 filing, PSE solicited additional meeting topics that members would like to include in future meetings. Members discussed the idea of funding the “level 2” Electric Vehicle Charger Incentive through the Conservation Rider, reviewed the High Voltage/Self-Directed funding allocations, and discussed plans for the 2014-2015 Biennial Electric Conservation Achievement Report.

The group agreed that the upcoming review should be facilitated through an RFP process, and discussed the potential scale and scope of the Review. At the time of this meeting, the final 2012-2013 Review results were incomplete. Other discussion topics included an overview of MyData (formerly Automated Benchmarking System), rescission of the semi-annual reporting requirement, determining the scope of the upcoming decoupling evaluation, and progress on the Commission’s policy statement on gas cost-effectiveness recommendations.

PSE indicated that two of the policy recommendations; inclusion of consistently-formatted gas conservation plans and posting of its gas UES values on the Conduit® website, were already completed. The group had significant discussion on the topics of discount rates, IRP bundles, and

Key Outcomes

1) The CRAG provided input on additional program and policy topics that should be covered in CRAG meetings in 2014.
2) CRAG members were encouraged to accompany UTC Staff on their Schedule 120 financial review in April.
3) PSE should file a petition to the UTC to rescind the semi-annual reporting requirement.
4) A link to the Conduit website location of PSE's gas UES values will be forwarded to the CRAG.
5) A self-selecting sub-committee will help develop an RFP for the decoupling evaluation.

June 5 Meeting Highlights:

PSE provided an overview of its just-filed 2012-2013 Biennial Conservation Review report, discussed the recent re-organization of the Energy Efficiency department to maximize its focus on customer interactions, reviewed a status of the production facility efficiency assessment, and honored a retiring CRAG member. There was also a discussion on the topic of whether or not PSE met its 2012-2013 decoupling commitment of 5 percent and the status of the associated request for a Commission Declaratory Order.

After hearing several program and marketing updates, there was a discussion of PSE's Products and Services organization, with a presentation on this group aligns with Energy Efficiency. The discussion included a thorough review of customer survey results, potential initial product offerings and how those would augment, rather than replace, current market actors. The members also discussed the status of PSE's petition to rescind the semi-annual reporting requirement, where CRAG members indicated their support of the initiative.

Key Outcomes

1) Interested CRAG members were added to the IRPAG sub-group, the Technical Assessment Group (TAG).
2) PSE requested CRAG members to comment on conditions as they are affected by the EIA rulemaking.
3) PSE obtained the anti-competitive information from the Attorney General's office.

August 7 Meeting Highlights:

The attendees learned that the Commission scheduled a discussion of PSE's 2012-2013 decoupling achievement at their September open meeting in the 2014-2015 BCP Docket (UE-132043). There was also a mention that moving the IRP filing date from May 2015 to September 2015 would be discussed in an August open meeting. The member reviewed the mid-year savings and expenditures figures, NEEA baseline savings adjustments related to the Conservation Potential Assessment (CPA), and an update on the new NEEA Gas Market Transformation initiative. In the long term, the suite of measures comprising the initiative are expected to be cost-effective.

The group heard an update on the Elective Vehicle Charger Incentive, received a status update on the BECAR RFP and decoupling RFP responses, and learned that the Energy Efficiency department will now report to the new Vice President of PSE's Customer Solutions organization.

Key Outcomes

1) PSE provided the CRAG with additional details and cost-effectiveness estimates of the NEEA gas market Transformation Initiative and applicable Tariff and condition language.
2) The CRAG agreed that SBW should be selected for PSE's 2014-2015 BECAR.
3) PSE will provide updates on the DSM software initiative costs as they become available.

October 9 Meeting Highlights:

The members received an in-depth review of Energy Efficiency's outreach initiatives, including small business direct install blitzes, the Energy Upgrade effort, and the HomePrint™ door-to-door campaign. The CRAG also learned that Web Energy Tools are again available for customers on PSE.com.

The primary focus of this meeting was an overview of the 2015 Annual Conservation Plan.

PSE outlined some key differences between the originally-indicated 2015 savings and planned spending values versus the updated 2015 values. As a result of the Energy Efficiency re-organization, discussed in the June 5 CRAG meeting, two new lines will appear in Exhibit 1: *Savings and Budgets*. These lines do not represent, though, incremental planned spending. During the discussion, Sector managers shared some of the significant savings challenges that they faced in planning for 2015 goals, especially with regard to adjusted RTF UES values.

PSE then provided status updates on the DSM software upgrade initiative, the NEEA Gas Market Transformation initiative, and the BECAR and decoupling evaluation development. PSE also reviewed the EIA rulemaking timeline and process.

Key Outcomes

1) PSE adjusted the presentation of the 2015 overall savings figure, so that the total, non-NEEA savings and pilots were indicated separately.
2) PSE provided the CRAG with an expenditure breakdown for the Energy Upgrade campaign.
3) PSE scheduled a CRAG conference call for November to discuss the SBW 2014-2015 BECAR workplan.

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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[65] have the below noted meanings. Definitions or glossaries contained in other Energy Efficiency documents, policies or guidelines referring to specific processes or unique functions shall have the meanings noted in those documents, policies or guidelines.

Definitions

A-line	A bulb with a rounded cover that has the same basic appearance as a standard incandescent bulb. A-line bulbs are a good option if you have a light fixture that doesn't conceal the bulb or a lamp with a shade that attaches directly to the bulb. A-Line bulbs disperse light at a wide angle and are ideal for fixtures used to spread light throughout the room. LED A-line bulbs are a good choice for: • Room area lighting • Reading lamps • Hallways The "A" itself stands for arbitrary.
Calculated Savings	This savings type is different than deemed or UES 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 Energy Efficiency 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.

[65] Some acronyms, such as "ECM" have a different connotation outside the purview of PSE or conservation activities. For instance, beyond Energy Efficiency, "ECM" may mean "Electric Conservation Measure". In context of PSE conservation programs, though, it means "Electronically Commutated Motor".

Definitions, continued

Conditions	Also "2010 Electric conservation Settlement Agreement Terms conditions", "Energy Independence Act conditions" or "Order 01, Docket No. UE-111881 conditions". Specific deliverables and stipulations by which the Company must operate or produce through the course of operating and managing Energy Efficiency programs during a specified biennium. In addition to compliance requirements outlined in Sections A through J and L, of the 2010 Settlement Agreement, the conditions are listed under Section K of the Agreed Conditions for Approval of Puget Sound Energy, Inc.'s 2010-2011 Biennial Electric Conservation Targets Under RCW 19.285 Docket No. 100177, and paragraphs 30 through 41 of Order 01. There are also additional sections that regulate the Company's Energy Efficiency operations.
Custom Savings	This savings type applies to conservation projects where a PSE EME performs specific evaluation and review of a unique customer site to determine savings values—therms or kWh—that apply only for that site. For this type of measure, there is insufficient information, the occurrence is too infrequent or it cannot be specifically defined to justify development of a Calculated or Deemed protocol.
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 hypothetical deemed value of 23 kWh per year.) This classification applies to both RTF and PSE deemed.
Direct Benefit to Customer (DBtC)	Rebates, grants, credits or services that are of value to customers. Services can include, but aren't limited to, credits on a monthly bill, upstream incentive provided to channel partners or trade allies—either within PSE's service territory or regionally—and free energy efficient devices available by mail.
Direct-Install Measure	A conservation measure that is installed by a PSE representative; either a PSE Staff member, a PSE contractor or PSE contractor—rather than a PSE customer—into a qualifying structure.
Electric Savings	Savings are defined and reported as those recognized in the first year of a measure's total expected life. PSE reports the total savings for the year that the measure was implemented, regardless of when it is installed. Savings are counted at the customer meter, not the busbar.
Energy Efficiency	A department of Puget Sound Energy that implements energy conservation programs. Formerly referred to as Energy Efficiency Services or Customer Solutions.
Hydronic	A system of heating using fluid (usually water) as the conductive material to transfer heat to the desired area. This type of system is usually applied in a radiant floor system.

Definitions, continued

IntoLight	A division within PSE that manages all street lighting projects in the PSE territory.
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.[66] 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 condition (6)(c). This term is used in the Savings Type field in Appendix B, List of Measures.
RTF Deemed	Former reference to the RTF's UES (Unit Energy Savings). Relative to PSE savings types (Custom, Calculated, PSE Deemed or RTF Deemed), supported by RTF analyses, in compliance with Settlement Agreement condition (6)(b). This term is used in the Savings Type field in Exhibit 5, Supplements 1 and 2.
System	In this document, System may have the following meanings: 1) Any software program—supported by PSE's IT department or otherwise—or physical apparatus used to record, track, compile, report, archive, audit energy savings claims or financial data. 2) Electrical, and/or gas equipment that is either attached together or works in concert to provide space conditioning, plumbing functions or other end-uses associated with structures, such as HVAC systems, pumping systems, etc.

[66] Schedule 83, section 4, Definitions, #m. Schedule 183, section 4, #l.

Acronyms

The below-listed acronyms are found throughout program discussions in this report. Where possible, PSE has defined these acronyms within the discussion. As a courtesy, PSE also provides them in the below list for easy reference.

ACEEE	American Council for an Energy-Efficient Economy
AEE	Association of Energy Engineers
AESP	Association of Energy Service Professionals
AIA	American Institute of Architects
AMI	Automated Meter Infrastructure
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.
ARRA	American Recovery and Reinvestment Act
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BOMA	Building Owners and Managers Association
BPA	Bonneville Power Administration
CEE	Consortium for Energy Efficiency
CEEP	Commercial Energy Efficiency Program
CMS	Customer Management System. A PSE proprietary software application that tracks customer activities, inventory and rebate processing.
CPA	Conservation Potential Assessment
CRAG	Conservation Resource Advisory Group
CVR	Conservation Voltage Regulation
DSM	Demand-Side Management. Typically used as an acronym for energy conservation.
EC Motor (ECM)	Electronically Commutated Motor
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

Acronyms, continued

HID	High Intensity Discharge (lamp type)
HVAC	Heating, Ventilation and Air Conditioning
IOU	Independently Owned Utility
IR	InfraRed. A technology typically used in remote-control devices.
kWh	Kilowatt Hour. 1,000 watt-hours = 1 kWh, which is equivalent to 10 100-watt incandescent lamps being turned on for one hour.
LED	Light Emitting Diode (lamp type)
LEED	Leadership in Energy and Environmental Design
MOU	Memo Of Understanding. MOUs outline deliverables and agreements apart from contracts, but are treated with the same degree of rigor.
MWh	Megawatt-hour. 1,000 kWh = 1 MWh
NEEA	Northwest Energy Efficiency Alliance
NEEC	Northwest Energy Efficiency Council
NPCC	Northwest Power and Conservation Council (also, "Council")
NWEEA	
O&M	Operations & Maintenance
PTCS	Performance Tested Comfort Systems
PV	PhotoVoltaic. Primarily applies to solar renewable energy generation systems. PV converts solar energy into Direct Current (DC) electricity.
RCW	Revised Code of Washington
RTF	Regional Technical Forum, an advisory committee and a part of the Northwest Power and Conservation Council. The RTF develops standardized protocols for verifying and evaluating conservation.
SAP	Systems, Applications, Products in data Products. A very large, enterprise-wide financial, HR, workflow-tracking accounting system.
SPIF	Also "SPIFF" or "SPIV". A slang term associated with sales incentives, sometimes considered a "Sales Performance Incentive Fund"; any of the acronyms refer to a small bonus or award, usually paid to a sales staff, in recognition of achieve a certain sales goal.
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).[67]

[67] Schedule 83, section 4, Definitions, #z. Schedule 183, section 4, #x.

Acronyms, continued

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.[68]
VO	Voltage Optimization
WAC	Washington Administrative Code
WAMOA	Washington Association of Maintenance and Operations Administrators
WRUN	Western Regional Utility Network
WSEC	Washington State Energy Code
WUTC	Washington Utilities and Transportation Commission. Also referred to as UTC.

[68] Schedule 83, section 4, Definitions, #bb. Schedule 183, section 4, #z.

CONCLUSION

This concludes the Energy Efficiency 2014 Annual Report of Energy Conservation Accomplishments.

Please refer to the Report's Exhibits and Supplements for additional Energy Efficiency details:

Exhibits Included in the 2014 Report of Conservation Accomplishments

Exhibit 1: 2014 Conservation Targets and Budgets versus Actual Achievements and Spending
Exhibit 2: Program Cost Effectiveness
Exhibit 9: Condition Compliance Checklist
Exhibit 10: Northwest Energy Efficiency Alliance 2014 report of accomplishments

Supplements

Exhibit 1 *(Table of savings and expenditures)*
- Supplement 1: Expenditures by Cost Element Group
- Supplement 2: 2014 Savings adjustments
- Supplement 3: 2014 Sponsorships and Memberships
- Supplement 4: Portfolio Measure Category Counts

Exhibit 5 *(Prescriptive & selected calculated measures)*
- Supplement 1: PSE Prescriptive and Selected Calculated Measures Offered during 2014
- Supplement 2: 2014 PSE Prescriptive Measure Revisions

Exhibit 6 *(The Evaluation Plan is excluded from this report)*
- Supplement 1: Evaluation studies with their associated Evaluation Report Responses (ERRs) performed in 2014

Energy Efficiency looks forward to a productive and successful 2015.

Respectfully submitted,

The Men and Women of Energy Efficiency