Puget Sound Energy

2014-2015

Biennial Conservation Report

Electric Programs

PSE PUGET SOUND ENERGY

Table of Contents

Figures

Tables

Attachments

1) Exhibit 1: *2014-2015 Electric Savings and Expenses.*
2) Exhibit 2: *2014-2015 Electric Cost-Effectiveness Results.*
3) Exhibit 6, Supplement 1: *2015 Home Energy Report Evaluation Summary.*
4) Exhibit 9: *2014-2015 PSE Condition Compliance Checklist*.[1]
5) Attachment 1: SBW Consulting, Inc.'s ("SBW" or "SBW's") final Biennial Electric Conservation Achievement Review ("BECAR") report, "*Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report*".
6) Attachment 2: The WA Department of Commerce EIA report, in its approved and final format.

[1] The Condition Compliance Checklist is referred to as Exhibit 9 in all PSE reporting and planning packages.

I. Executive Summary

Puget Sound Energy ("PSE" or "the Company") is pleased to present this 2014-2015 electric Biennial Conservation Report ("Report") to the Washington Utilities and Transportation Commission ("UTC" or "Commission"). PSE requests that the Commission issue an Order, determining that PSE met its Commission-approved biennial Energy Independence Act ("EIA") Target of 485,770 Megawatt-hours ("MWhs"), as discussed in this Report.

A. PSE Exceeded its 2014-2015 Biennial Electric Savings Target

Table I-1 shows that programs comprising the PSE electric conservation Portfolio achieved 663,123[2] MWhs of first-year electric conservation, as reported at the customer meter during the 2014-2015 period. Only a portion of the overall Portfolio is applicable to the biennial EIA Target. In order to compare those savings to the EIA Target, it is necessary to exclude two programs from the total Portfolio achievement: NEEA savings of 91,630 MWh and Individual Energy Report Pilot savings of 18,897 MWh.[3] This is consistent with savings target composition agreements that PSE made with its Conservation Resource Advisory Group ("CRAG") in the biennial target development process of 2013. The Commission approved these considerations in Order 01 of Docket No. UE-132043.

Table I-1: Portfolio 2014-2015 Electric Conservation Results

2014-2015 Electric Portfolio Key Metrics			
Conservation Savings			
Description	MWh Target	MWh Actual	Percent
Total Portfolio Savings	621,100	663,123	107%
		Portfolio UC: 2.30, TRC: 1.63	
Subtract savings excluded from EIA target:			
NEEA		-91,630	
Individual Energy Reports Pilots		-18,897	
Biennial EIA Target	485,770	552,596	114%
Conservation Expenditures			
	Budget	Actual	Percent
	$187,645,460	$190,097,618	101%

[2] This total includes all savings adjustments, discussed in section C.1.

[3] As discussed further in Chapter 2, although they are funded by the Conservation Rider, NEEA and Individual Energy Report Pilot savings are excluded from the EIA Target.

The resultant PSE total savings were 552,596 MWh or 114 percent of the Commission-approved 485,770 MWh EIA Target.[4] This accomplishment represents PSE's total obligation, relative to attaining all available conservation that is cost-effective, reliable, and feasible, for the biennium, and results in an excess of electric conservation ranging from 38,906 MWh to 177,353 MWh, depending on the calculation methodology employed, as discussed in Chapter 2, section II.B.1.

As indicated in Table I-1, the 2014-2015 Portfolio electric conservation-specific expenditures were 101 percent of anticipated spending: $190.1 million versus a budget of $187.65 million.[5] The Portfolio-level biennial electric Utility Cost ("UC") Test benefit-to-cost ratio was 2.29, and the Total Resource Cost ("TRC") Test benefit-to-cost ratio was 1.62.

Within the Report are details and references substantiating the Company's electric conservation achievements, including:

- Verified biennial electric savings,
- Electric savings tracking, accounting and verification,
- Regulatory requirement compliance,
- PSE Regulatory Stakeholder engagement.

B. Developing the Biennial Target and Budgets

Consistent with WAC 480-109-100(1) and the process deliverables outlined in condition (8)(f),[6] PSE began developing its 2014-2015 conservation Target in January 2013. PSE engaged in close consultation with the CRAG beginning mid-way through the year, and agreed on key decisions for the program elements that would eventually result in the overall Portfolio conservation composition. Those considerations included the treatment of the Northwest Energy Efficiency Alliance ("NEEA") savings, savings reported for existing behavioral programs, pilot behavioral programs, and PSE's decoupling commitment. PSE also ensured that it fully appraised the CRAG throughout the budget development process, providing ample time and resources to review program assumptions.

[4] Order 01, Docket No. UE-132043, December 19, 2013.

[5] Exhibit 1: *2014-2015 Electric Savings and Expenses* also notes $2.44 million in Other Electric Programs spending (lines ***bx*** through ***cb***). This amount, attributable to Net Metering administrative expenses and Electric Vehicle Incentives, is excluded from cost-effectiveness tests. PSE notes it on Exhibit 1 to indicate that these are Conservation Rider expenses.

[6] Order 01, Docket No. UE-111881.

After PSE filed its 2014-2015 BCP on November 1, 2013, the Commission approved PSE's 2014-2015 conservation Target ("EIA Target") of 485,770 MWh in Order 01 of Docket No. UE-132043 on December 19, 2013.

PSE updated elements of its BCP in the November 26, 2014 filing of its 2015 Annual Conservation Plan ("ACP"). The ACP reflected Energy Efficiency's commitment to adaptive management, detailing new and updated measures with their associated savings adjustments, updated program budgets and savings goals, enhanced marketing and outreach initiatives, and optimized organizational structures. As it did throughout the BCP development, PSE collaborated on the ACP development with the CRAG during the latter half of 2014.

C. Achieving the Biennial Savings and Managing Costs

Throughout the biennium, PSE consistently demonstrated its commitment to Total Quality Management ("TQM") principles in developing the biennial Target and adaptively managing a wide range of circumstances and conditions to ultimately exceed that Target. PSE's Energy Efficiency department proactively adjusted to marketplace and economic fluctuations, technological advancements, frequent measure UES reductions, and customer demand to maximize its electric conservation achievement.

Program staff prudently and responsibly managed customer funding by conducting monthly expense reviews, rigorously overseeing contractual obligations, and ensuring accurate financial forecasting.

The 2014 and 2015 PSE Reports of Energy Conservation Accomplishments ("Annual Reports"), filed in Docket Nos. UE-132043 and UE-970686,[7] provide extensive discussions of these efforts.

D. Savings Verification

In order to ensure the accuracy of its savings and financial reporting, Energy Efficiency consistently pursued continuous improvement in all organizations. Teams focused on streamlining data collection, proactive monthly review of vendor measure counts, reconciling measure databases, and monthly savings forecasting. When adjustments were required, program staff completed adjustment requests consistent with Energy Efficiency's *Guidelines for Ensuring Accuracy of Electric and Gas Savings Reporting.*

[7] Only the 2014 Annual Report was filed into Docket No. UE-970686. On July 25, 2014, the Commission terminated the requirement to file semi-annual reports into that Docket in Order 03 of that Docket.

1) 2014-2015 Evaluations and Reviews

In addition to operating internal business process controls, PSE managed several independent program impact evaluations, including annual Home Energy Report ("HER") true-ups of deemed savings. As required in WAC 480-109-120(3)(b)(v), PSE included the evaluation reports as Exhibit 6, Supplement 1 in its 2014 and 2015 Annual Reports.

Also consistent with condition (6)(g), PSE engaged SBW Consulting, Inc. ("SBW"), in partnership with Commission staff, to conduct the 2014-2015 independent third party Biennial Electric Conservation Achievement Review ("BECAR"). PSE includes the completed review in this Report as Attachment 1: SBW Consulting, Inc.'s "*Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report"*.

Key observations in the BECAR[8] include:

a. The BECAR review team has verified that the electric savings shown in the 2014 ACR[9] and 2015 ACR accurately reflect the savings listed in the PSE tracking databases.
b. With the exception of certain residential insulation and windows UES values, for which PSE subsequently corrected their 2015 reported saving claim, PSE selected the correct RTF deemed value and entered it properly into the tracking database.
c. PSE addressed and/or took action in response to all recommendations in the 2012-2013 BECAR.

2) Savings Adjustments

PSE will make five adjustments to savings reported in its 2014 and 2015 Annual Reports, illustrated in Table I-2.

The first adjustment results from NEEA's confirmed 2014-2015 savings applicable to PSE as compared to planned NEEA deemed savings. The second and third savings adjustments apply the results of the Home Energy Reports ("HER") and Individual Energy Report Pilot 2014 and 2015 evaluations performed by DNV-GL.

[8] Extracted and paraphrased from the draft final "*Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report"*, Executive Summary.

[9] "ACR" is SBW's acronym for PSE's Annual Reports of Energy Conservation Accomplishments.

The fourth adjustment results from an inconsistency noted by SBW Consulting, Inc. ("SBW") in 2015 program data reported by PSE. The final adjustment stems from an agreement PSE made with the CRAG to remove savings attributed to solar PV generation at two Resource Conservation Management ("RCM") customer sites in 2015 (also discussed in the 2014-2015 BECAR).

The two BECAR adjustments will apply to 2015-specific figures, as they apply to savings originally reported in 2015. The NEEA and HER adjustments apply to savings reported for the entire biennium, however. In Table I-2, "BIENNIAL TOTAL" represents the effect of the five adjustments on the total 2014-2015 Portfolio-level electric savings.

PSE discusses NEEA savings results, HER evaluation results, and the electric savings verified in the BECAR in Chapter 2, and provides the impact on total biennial savings in Table II-7: Verified 2014-2015 Savings with Adjustments. Exhibit 1: *2014-2015 Electric Savings and Expenses* reflects the incorporation of these 2015 adjustments.

Table I-2: 2014-2015 Electric Savings Adjustments

Source	Program	Adjustment, MWh	Originally-Reported MWh	Final MWh	Adjustment % of Portfolio Savings
Applicable to 2014-2015 Savings					
NEEA	Confirmed NEEA savings for PSE Territory	+19,097	72,533	91,630	2.880%
DNV-GL Evaluation	Home Energy Reports	-1,053	5,892	4,839	-0.159%
DNV-GL Evaluation	Energy Report Pilots	-16,082	34,979	18,897	-2.425%
Applicable to 2015-Specific Savings					
BECAR	Single Family Weatherization	+90	7,989	8,079	0.014%
BECAR (Via CRAG)	Resource Conservation Management Solar PV	-30	12,823	12,793	-0.005%
TOTAL		**2,022**	**661,101**	**663,123**	**0.305%**

a. NEEA's Confirmed 2015-2015 Savings

PSE included NEEA's plan of 72,533 MWh in its 2014-2015 BCP savings Portfolio, and the Commission agreed with the CRAG's recommendation to exclude NEEA savings from PSE's EIA Target. PSE reported the annualized portions of this deemed figure in its 2014 and 2015 Annual Reports. Stakeholders had the understanding that NEEA's confirmed savings would be available subsequent to PSE conservation reporting, and the savings figures would be trued up in this Report.

On May 5, 2016, PSE received NEEA's official final 2014-2015 electric savings calculations, which indicated an overall achievement attributable to the PSE service territory of 91,630 MWh: a difference of +19,097 MWh, or 26 percent above NEEA's original plan.

E. Adaptation through Total Quality Management

PSE adaptively managed its entire Portfolio of customer offerings by consistently applying TQM principles. Energy Efficiency added new measures, adjusted incentives according to key market drivers, improved internal and customer-facing operational efficiencies, streamlined rebate and grant application processes, provided customers with actionable information, and maximized customer outreach.

PSE provided extensive discussions on the steps that it took to adaptively manage its Energy Efficiency programs in its 2014 and 2015 Annual Reports, and highlights several of those key TQM accomplishments in Chapter 2, Table II-9 and Table II-10**.**

F. Compliance

This Report complies with RCW 19.285.070(2), and all sections of WAC 480-109-120(4).

PSE also demonstrated compliance with all regulatory requirements outlined in:

- Sections A through J and L of the 2010 Electric Settlement Agreement, Docket No. UE-100177, and
- The conditions in Attachment A of Order 01, Docket No. UE-132043.

PSE presents its 2014-2015 condition compliance status in Exhibit 9: *Condition Compliance Checklist.*

In many cases, PSE exceeded regulatory requirements by providing information transparently and in advance of requests, by adding valuable supporting data, and by adding—and in some cases, customizing—Exhibits in its conservation publications.

G. Stakeholder Engagement

PSE engaged its Regulatory Stakeholders: the CRAG and members of Commission staff, in a pro-active and transparent manner, and regularly kept them abreast of its electric conservation progress and adaptive management steps throughout the biennium.

PSE adaptively managed its reporting and correspondence to exceed Stakeholder needs, along with providing a best-in-practice level of budget and planning documentation. PSE earned compliments from some CRAG members on the amount, detail, and quality of the energy-efficiency information that PSE provides.

In all cases, the CRAG received copies of reports, plans, Exhibit updates, and tariff revisions prior to their filing. PSE closely engaged the CRAG in the biennial and annual planning process, and in some cases, provided CRAG members with up to 120 days to review and comment on plan details. PSE provided prompt and thorough responses to all Commission staff and other Stakeholder queries on annual plans and accomplishment reports.

H. Supporting Documentation

PSE presents all program result details for the 2014-2015 biennium in its Annual Reports, with copies provided to the CRAG, and subject to Commission staff review and follow-up. The 2014-2015 BCP and 2015 ACP, developed with comprehensive CRAG engagement and subject to a 60-day UTC review, is also filed in Docket No. UE-132043.

In addition to already-filed detailed information, readers may also refer to this Report's Exhibits 1: *2014-2015 Electric Savings and Expenses*, Exhibit 2: *2014-2015 Electric Cost-Effectiveness Results*, Exhibit 6, Supplement 1: DNV-GL's 2015 Home Energy Reports Evaluation Summary,[10] and Exhibit 9: *Condition Compliance Checklist* for additional 2014-2015 biennial details.[11]

[10] At the time of the required 2014-2015 BCR filing deadline, the complete evaluation isn't available from DNV-GL.

[11] Readers will recognize these as standard PSE Exhibits, which are provided as part of its biennial planning and annual reporting documents.

For this Report, PSE includes two documents that do not align with its standard "Exhibit" nomenclature, primarily due to their specific nature and timing:

- Attachment 1: SBW Consulting, Inc.'s *"Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report"*, and
- Attachment 2: The Department of Commerce's Microsoft® Excel™ workbook that addresses conservation[12] "*PSE_EIA-2016-ReportWorkbook.xlsx".* PSE provided this document with the WA Department of Commerce concurrent with this Report.

[12] A significant portion of the workbook addresses renewables, which PSE reports to the WA Department of Commerce in a separate presentation on June 1, 2016.

II. 2014-2015 Electric Conservation Results

The 2014-2015 biennial electric Portfolio consisted of two sub-categories, described in Section A below: (1) Total Portfolio, and (2) Program Savings, less (Northwest Energy Efficiency Alliance ["NEEA"] + Individual Energy Report ["IER"] Pilots). PSE's electric Portfolio finished the biennium with achieved savings of 663,123 MWh. Subtracting (NEEA savings of 91,630 MWh + IER savings of 18,897 MWh) equals a PSE-specific savings of 552,596 MWh, which surpassed the EIA Target by 14 percent, or 66,826 MWh. This PSE-specific value signifies sufficient savings to meet the IEA Target and the decoupling commitment of 27,920 MWh.

The achieved savings represent PSE's total obligation indicated in RCW 19.285.040(1), relative to achieving all available conservation that is cost-effective, reliable, and feasible for the biennium. Accordingly, PSE requests that the Commission issue an Order, determining that PSE met its Commission-approved biennial Energy Independence Act ("EIA") Target of 485,770 Megawatt-hours ("MWhs").

While surpassing aggressive savings goals, PSE consistently demonstrated a high degree of stewardship in managing customer funds, with 2014-2015 electric conservation-specific[13] Portfolio expenditures of $190.1 million, which is 1 percent higher than the budget of $187.65 million. PSE also achieved an electric Utility Cost ("UC") Test benefit-to-cost ratio of 2.29, and a Total Resource Cost ("TRC") Test benefit-to-cost ratio of 1.62 at the Portfolio level. PSE provides program-level details of 2014-2015 savings, along with their commensurate expenditures, in this Report as Exhibit 1: *2014-2015 Electric Savings and Expenses*. Exhibit 2: *2014-2015 Electric Cost-Effectiveness Results* provides a program-level view of the UC and TRC elements.

A. The 2014-2015 Electric Conservation Target

Consistent with RCW 19.285 and the rules enumerated in WAC 480-109-100,[14] PSE began the 2014-2015 planning process early in 2013. Energy Efficiency engaged its Conservation Resource Advisory Group ("CRAG") early in the biennial planning process to establish the 2014-2015 individual savings goals from the bottom-up.

[13] Exhibit 1: *2014-2015 Electric Savings and Expenses* also notes $2.44 million in Other Electric Programs spending (lines ***bx*** through ***cb***). This amount, attributable to Net Metering administrative expenses and Electric Vehicle Incentives, is excluded from cost-effectiveness tests. PSE notes it on Exhibit 1 to indicate that these are Conservation Rider expenses.

[14] Although WAC 480-109 had not been revised at the time the Commission issued Order 01, PSE and its Regulatory Stakeholders followed processes and considered program design elements that would eventually make their way into the revised WAC.

Throughout 2013, The Energy Efficiency department coordinated with the PSE Resource Planning organization as the Conservation Potential Assessment ("CPA") was developed, and the resulting guidance from the 2013 Integrated Resource Plan ("IRP") informed Energy Efficiency's baseline two-year conservation goal. PSE provides additional Conservation Potential and Target development details in the 2014-2015 BCP's Exhibit i: *Ten-Year Potential and Two-Year Target*.

In compliance with condition (8)(f),[15] PSE provided the CRAG with drafts of its 2014-2015 program savings & budgets, program details, and tariff revisions over the course of three months prior to the BCP filing.

The Commission reviewed and considered the Company's ten-year achievable conservation potential and two-year biennial Target, filed on November 1, 2013 in Docket No. UE-132043. The Commission approved the Company's biennial acquisition Target of 485,770 MWh in Order 01 on December 19, 2013 with conditions.

PSE also refreshed its savings—taking into account new measures, new delivery methods, updated UES values—and updated spending projections in its 2015 Annual Conservation Plan ("ACP"), filed on November 26, 2014 in Docket No UE-132043.

In Chapter 1, Table I-1 provides a summary Portfolio view of the 2014-2015 electric conservation goals/overall budgets, and savings results/overall expenditures. In this section, PSE will discuss the sub-totals comprising the Portfolio in more detail.

1) Developing the Portfolio

Regulatory Stakeholders will recognize elements of Table II-1 from Exhibit 1 of PSE's 2014-2015 Biennial Conservation Plan: "Building the Electric Target" page. This table is helpful in establishing a frame of reference for results reporting.

[15] Docket No. UE-111881 applied to the development of the 2014-2015 BCP. Docket No. UE-132043 was created when the 2014-2015 BCP was filed.

PSE presents the table here in a landscape orientation to enhance its legibility.

Table II-1: 2014-2015 Electric Portfolio: Sub-Total Targets versus Actuals

2014-2015 Electric Portfolio Savings							
	Description	MWh Target	aMW Target	MWh Actual	Percent	Comment	Calculation
a	Total Biennial Potential	551,880	63.0	639,387		IRP guidance (no behavior savings)	Goal: Figure 5, 2014-2015 BCP Exhibit I Actual: aggregated across all savings programs.
b	Plus legacy HER	6,420	0.7	4,839		Deemed value, true-up in ex-post evaluation	line *l* of 2014-2015 BCP Exhibit 1
c	Total "base" savings	558,300	63.7	644,226			Actual: Line d + e
d	Less NEEA	72,530	-8.3	91,630		NEEA's adjusted TRS	Goal: line ab of 2014-2015 BCP Exhibit 1 Actual: line af of BCR Exhibit 1
e	Total Biennial EIA Target	485,770	55.5	552,596	114%	**Penalty: $50/MWh shortfall**	Goal: line bi of 2014-2015 BCP Exhibit 1 Actual: line bi + (bq + br) of BCR Exhibit 1
f	Decoupling Commitment (5% add)	27,920	3.2	✓		Met decoupling commitment.	Actual: Included in overall Portfolio BCR Exhibit 1
g	Total Savings Subject to Penalty	513,690	58.6	552,596	108%	**Penalty: $50/MWh shortfall**	Goal: e + f *(EIA target + D.C.)* Actual: Line bt of BCR Exhibit 1
h	Individual Energy Reports (IER)	35,330	4.0	18,897		New Residential + Small Business	Goal: line aa of 2014-20151 BCP Exhibit 1 Actual: Line as of BCR Exhibit 1
i	2014-2015 Portfolio Total	621,120	70.9	663,123	107%	**Biennial budget is built to achieve this**	Goal: line bd of 2014-2015 BCP Exhibit 1 Actual: line bl of BCR Exhibit 1

"BCP": Biennial Conservation Plan.
"BCR": Biennial Conservation Report.

PSE will reference this table to present its 2014-2015 Portfolio electric conservation achievement—noted in two additional, highlighted columns labeled **MWh Actual** and **Percent**.

In 2013, PSE and the CRAG discussed key issues that influenced elements of the Portfolio savings goal over the course of three CRAG meetings, and agreed that:

a. "Legacy" Home Energy Report ("HER") savings goal of 6,420 MWh (those associated with the HER program that has been in place since 2011) are added to the two-year conservation potential derived from the 2013 IRP. These two values comprise the "Base" savings benchmark, noted as line ***c*** of Table II-1, and result in the MWh Target "base" savings of 558,300 MWh.

b. The NEEA savings goal of 72,530 MWh is excluded from the EIA Target. To derive the noted savings value, the original NEEA 2014-2015 electric savings projections were adjusted from their original figures to account for PSE's service territory and measure UES consistency.

   To calculate the EIA Target, NEEA savings were subtracted from the "base" savings of 558,300 MWh noted in line **c** in Table II-1. This results in the key savings value, "Total Biennial EIA Target", line **e**: 485,700 MWh.

c. The next key savings value is the decoupling commitment of 27,920 MWh. Adding this value to the EIA Target results in a "Total savings subject to penalty" target amount of 513,690 MWh: line **g** of Table II-1.

d. The expected savings of 35,330 MWh from Individual Energy Report pilots, (line ***h*** in Table II-1)—an expansion of the HER program—would be excluded from the EIA Target. The CRAG agreed that these pilots had an unreliable expected savings persistence, and should therefore be excluded from the EIA Target.

   PSE notes these values in the **MWh Target** column in Table II-1. Readers may think of the final Portfolio-level savings target figures as a top down-derived value in this column.[16]

2) Disaggregating the Achieved Savings

Table II-1 disaggregates the 2014-2015 overall Portfolio electric savings results in the **MWh Actual** column to compare actual savings achieved to the sub-total goals, following steps similar to those used to build the targets.

[16] "Top-down" is only used in this discussion to describe the orientation of Table II-1, establishing the premise that PSE started the EIA Target-setting process using its 2013 IRP guidance, and making adjustments from there. In development and execution, all Energy Efficiency programs—consistent with regulatory requirements—built their 2014-2015 portfolios from the bottom-up.

In the introduction to Chapter 2, PSE discusses key savings sub-totals that comprise the overall electric Portfolio goal. To determine achievement of the two key values on which PSE may face potential fines for savings shortfalls, PSE performs these two calculations:

a. The actual savings achieved by NEEA (91,630 MWh, line **d**)[17] and the Individual Energy Report Pilots (18,897 MWh, line **h**) are subtracted from the Portfolio Total of 663,123 MWh (line **i**). Resulting savings of 552,596 MWh are compared to the amounts that have the potential of being subject to penalties (the EIA Target + decoupling), noted in line **g**: 513,690 MWh.

b. The decoupling amount of 27,920 MWh (line **f**) is part of the 66,826 MWh over-achievement—computed by subtracting the EIA Target value from the results in step a. It isn't possible to disaggregate the decoupling actual MWhs noted from the overall savings achieved; this figure is merely subtracted from the sub-total in line **g**.

The results of calculations a and b indicate that PSE avoided potential penalties of $50/MWh by meeting its EIA Target and decoupling commitments.

PSE provides program-level savings figures that comprise these totals in its 2014 and 2015 Annual Reports that are PSE's official records of conservation. Exhibit 1: *2014-2015 Electric Savings and Expenses* provides a two-year view of program-level savings and expenditures. Exhibit 1 sums the 2014 and 2015 results, and accounts for savings adjustments discussed in Section D.4. Exhibit 2: *2014-2015 Electric Cost-Effectiveness Results* provides a two-year view of program-level cost-effectiveness calculations.

a. Decoupling Commitment

In Order 03 of Docket No UE-132043, the Commission set a decoupling conservation commitment of 27,920 MWh.[18] It is important to note that the decoupling value is based on the higher total "base" savings (line ***c*** in Table II-1) of 558,300 MWh, rather than the Commission-approved EIA Target of 485,770. PSE suggested this approach to the CRAG during the target development discussion in the second half of 2013. The CRAG agreed that the higher figure reflects the spirit of the commitment, and PSE's intention to demonstrate the effort to acquire the additional savings.

[17] Due to its location within the table, NEEA savings are not sequentially represented in the **MWh Actual** column.

[18] In Docket Nos. UE-121697 and UG-121705, Amended Petition for Decoupling Mechanisms, Section G.31, PSE indicated it would agree to achieve electric conservation 5 percent above the biennial targets set by the Commission.

As discussed in Section A.2. part b, the total achieved electric savings attributable to the agreed-to PSE-specific programs met PSE's 2014-2015 decoupling conservation commitment.

B. Treatment of Excess Savings

RCW 19.285.040(1)(c)(i) and WAC 480-109-100(3)(c) indicate that utilities may use excess conservation achieved in one biennium to meet up to 25 percent of either of the two subsequent biennia:

RCW 19.285.040(1)(c)(i)

> (c)(i) Except as provided in (c)(ii) and (iii)[19] of this subsection, beginning on January 1, 2014, cost-effective conservation achieved by a qualifying utility in excess of its biennial acquisition target may be used to help meet the immediately subsequent two biennial acquisition targets, such that no more than twenty percent of any biennial target may be met with excess conservation savings.

WAC 480-109-100(3)(c)

> **Excess conservation.** No more than twenty-five percent of any biennial target may be met with excess conservation savings allowed by this subsection. Excess conservation may only be used to mitigate shortfalls in the immediately subsequent two biennia and may not be used to adjust a utility's ten-year conservation potential or biennial target. The presence of excess conservation does not relieve a utility of its obligation to pursue the level of conservation in its biennial Target.
>
> > (i) Cost-effective conservation achieved in excess of a biennial conservation target may be used to meet up to twenty percent of each of the immediately subsequent two biennial targets.

It is clear that, consistent with WAC 480-109-100(3)(c), and following applicable savings target sub-total calculations discussed in the previous section, PSE achieved excess electric conservation, which may be applied to potential biennial electric savings target shortfall reported in either of the next two biennia.

Neither the RCW nor the WAC define excess conservation and what types of electric conservation comprise excess.

[19] Subparts (c)(ii) and (c)(iii) discuss single large facility conservation savings contributions to potential excess, and utilities with an industrial facility located in counties with a specific population for a specific period of time.

The specifics of PSE's electric Portfolio savings necessitate consideration of the components of excess savings as related to the EIA Target and decoupling commitment.

1) Components of Excess Conservation

As discussed in Section A.1.a. – d., there are certain programs that are excluded from the EIA Target, which the RCW and WAC did not contemplate. Similarly, PSE's decoupling filing was in its early stages during the WAC revision process. It is therefore possible to consider three different representations of excess electric conservation results (all figures indicate MWh).

a. Total Portfolio achievement minus the EIA Target:

   663,123 – 485,770 = 177,353 excess.

   As this calculation does not consider the impact of programs excluded from the EIA Target, PSE does not support this methodology of determining excess savings. PSE will also suggest to the WA Department of Commerce that it adjust its EIA form to allow applicable exclusions from the overall savings achievement for future reporting.

b. Total Portfolio minus program exclusions (NEEA + IER pilots) achievement minus the EIA Target:

   (663,123 – (91,630 + 18,897)) – 485,770 = 66,826 excess.

   Although this alternative accounting doesn't discount the decoupling savings from the overall Portfolio achievement before calculating the excess savings, this methodology meets a broad interpretation of excess savings.

   However, PSE does not support using this calculation methodology, as it incorrectly implies that the decoupling savings are a distinct entity that can be tracked and accounted for separately.

c. Part b's achievement total minus the EIA Target plus PSE's decoupling commitment:

   552,596 – (485,770 + 27,920) = 38,906 excess.

PSE recommends that the Commission adopt the excess savings calculation methodology outlined in item c, and allow PSE to apply this excess to either a potential future EIA Target or decoupling commitment shortfall in a future qualifying biennium. This methodology discounts the 2014-2015 excess conservation figure through the application of savings apportioned to the decoupling commitment. It is thus reasonable to expect that excess savings should be available for future, comparable commitments as well.

C. Sector-Level Biennial Totals

PSE presents a Sector-level view of its 2014-2015 electric savings in Table II-2.[20]

Indicated savings reflect aggregated totals and adjustments made to savings resulting from NEEA's final savings review, Home Energy Reports evaluations, and the 2014-2015 BECAR.

Table II-2: 2014-2015 Sector-Level Electric Savings

2014-2015 Electric Savings			
	Electric		
	Actuals	Goals (MWh)	Percent
Residential	286,061	263,930	108%
Business	265,040	243,130	109%
Pilots	18,897	35,330	53%
Regional	93,125	78,730	118%
Total	**663,123**	**621,120**	**107%**

Slight variations between tables are the result of applied rounding functions.

[20] Please note that "Regional" savings includes NEEA savings of 91,630 MWh plus Generation, Transmission and Distribution savings of 1,496 MWh.

PSE presents 2014-2015 Sector-level total expenditures compared to budgets in Table II-3.

Table II-3: 2014-2015 Sector-Level Electric Expenditures

2014-2015 Electric Expenditures			
	Electric		
	Actuals	Budgets	Percent
Residential	$99,895,000	*$91,719,000*	109%
Business	$67,039,000	*$68,415,000*	98%
Pilots	$1,627,000	*$2,870,000*	57%
Regional	$7,138,000	*$10,521,000*	68%
Portfolio Support	$9,004,000	*$7,606,000*	118%
Research & Compliance	$5,395,000	*$6,515,000*	83%
Totals	**$190,098,000**	***$187,646,000***	**101%**

Slight variations between tables are the result of applied rounding functions.

D. Conservation Savings Verification

It is essential that readers understand that savings and financial reporting accuracy is of significant importance to PSE, and it is a charge that Energy Efficiency staff execute on a daily basis. The results of their efforts have been validated by independent sources and recognized by CRAG members for the past three biennia. PSE relies on conservation savings to reduce customer resource needs. Absent regulatory requirements, Energy Efficiency staff would continue to exercise the same degree of rigor, oversight, and Total Quality Management ("TQM") that it does today.

Throughout the just-completed biennium, PSE executed a wide range of strategies and tactics that ensured the veracity of its conservation savings and financial reporting while exceeding most examination criteria—both internal and external.

1) Internal Reviews

PSE could not have achieved these results without Energy Efficiency staff's commitment to satisfying customer expectations, adaptively managing it programs using TQM principles, focusing on innovation, and continuously improving processes to optimize efficiency and effectiveness.

PSE's Energy Efficiency department, consisting of Residential and Business Energy Management ("REM" and "BEM"), and New Program Development & Verification organizations, employs rigorous and tested data assimilation and verification processes to ensure that monthly savings and financial data meet Energy Efficiency's exacting standards.

Similarly, those organizations that provide an ancillary, supporting role also adhere to strict expenditure and reporting guidelines. A summary of several internal reviews processes that Energy Efficiency staff regularly employ include, but are not limited to:

- Department processes are consistently monitored, reviewed and updated throughout the year as needed—including Measure Revision (semi-annually), Savings Reporting (annually), Database Usage (annually), and Measure Creation Guidelines (annually)—that are Supplements to Exhibit 8: *EM&V Framework*.
- A documented savings and expenditure adjustment process that recognizes that it isn't possible to report savings on the magnitude of Energy Efficiency's scope without counting or multiplication errors occurring: either by customers, contractors, or program staff. PSE publishes every savings adjustment in its Annual Reports as Exhibit 1, Supplement 2.

  PSE strives to prevent savings or expenditure accounting errors by reviewing monthly invoices, with market-or department managers validating expenses, monthly reviews of SAP program details, and SoX-level[21] reviews of major custom grant projects. Expenditure and savings forecasts are reviewed monthly, with senior management examining monthly actual savings and expense tracking.

  Customers, contractors, and vendors are also valuable sources of data validation: customers and contractors are quick to call if they receive a rebate amount that is less than expected (they also notify PSE if they are over-paid), and vendors are encouraged to self-report accounting errors.
- QC Review by senior engineering staff of Custom Grant analyses and PSE deemed Unit Energy Savings ("UES") business cases, and 100 percent pre- and post-installation verification on all custom retrofit grants.

[21] SoX is the acronym that PSE uses for the Sarbanes-Oxley Act of 2002.

- Systematic data processing controls, with built-in rules designed to capture discrepancies.

  One of the key rules is a reporting cross-check, where program data that is collected throughout the month is compared with archived values stored in the EES Tracking Database, and against data already reported and logged. If the comparison reveals an error, program staff and Data and Systems Support staff complete the savings adjustment request form,[22] consisting of the questions:

  1. What is the reporting discrepancy?
  2. How was the discrepancy discovered?
  3. What was the effect of the discrepancy?
  4. How is it corrected?
  5. How will program staff ensure that the discrepancy is not repeated?

- Verification Team on-site inspection of a wide range of residential and commercial measures prior to incentive payment.
- A robust evaluation process that includes an Evaluation Report Response follow-up by program staff, executed by senior Evaluation staff, as well as capable independent third-party professionals.
- A Measure Metrics archival system that links Energy Efficiency's tracking and reporting databases and archives measures' sources of savings.
- Key databases are routinely compared and reconciled each year—often more frequently.
- Recurrent subject matter expert training, including field experience, contractor interfacing, and customer engagement.
- REM and BEM staff review[23] all rebate eligibility criteria on each rebate application—including:
  - Is the applicant a PSE Customer?
  - Is the Schedule applicable for the rebate type?
  - Is the rebate applicable to the customer's fuel type (are they an electric customer, but applying for a gas rebate)?
  - Is the equipment on the application eligible?

[22] This process is discussed in more detail on page 133 of the 2015 Annual Report.

[23] Although this process may seem entirely expenditure-focused, the point is included due to the key savings reporting relationship: savings are not reported until a rebate or grant is paid.

2) Final Northwest Energy Efficiency Alliance Savings

When PSE created its 2014-2015 Biennial Conservation Plan in September 2013, NEEA provided an updated estimate of its corresponding electric savings for PSE. PSE and NEEA collaborated to further hone that estimate, taking into account the then-developing 7th Power Plan, updated RTF UES values, and measure savings that were forecast to be unique to the Puget Sound area. The CRAG and the Commission agreed that the resulting NEEA savings goal—72,533 MWh—should be excluded from PSE's EIA target.

The CRAG understands that NEEA savings values are calculated and vetted in the second quarter of each year, subsequent to PSE's filing of its Annual Reports. Therefore, PSE included the annualized portion of NEEA's deemed savings figures in its reported 2014 and 2015 electric savings totals, noting that the actual NEEA savings values would be reconciled and reported in PSE's Biennial Conservation Report.

On May 5, 2016, NEEA confirmed its final official results for electric savings calculated for PSE. As indicated in Table II-4, NEEA's results exceeded its plan by 26 percent: 91,630 MWh versus a plan of 72,533 MWh, or a difference of +19,097 MWh. It is noteworthy that NEEA reports savings at the average megawatt ("aMW") level, while PSE reports conservation savings at the MWh level, and only converts the Portfolio to aMW.

Applying the standard conversion of (8,760 hours * # aMW = MWh), the goal of 8.28 aMW = 72,533, and the actual savings of 10.46 aMW = 91,630 MWh.

Table II-4: 2014-2015 Final NEEA Electric Savings

Northwest Energy Efficiency Alliance			
2014-2015 Electric Savings Results (aMW)			
Savings Applied to PSE service Territory	Actuals	Goals	Percent
Residential	5.56	5.82	96%
Industrial	0.07	0.24	29%
Commercial	4.81	2.20	219%
Agricultural	0.01	0.01	92%
Total	**10.46**	**8.28**	**126%**

3) External Reviews

PSE engaged several outside entities over the course of the 2014-2015 biennium to provide independent opinions and review of its electric conservation programs, including evaluation and engineering consultants,[24] and third-party reviewers. Applicable evaluations and reviews resulted in measure savings adjustments going forward, in keeping with PSE's *Measure Revision Guidelines*. Five resulted in retroactive savings adjustments, as discussed in the following sections.

PSE did not adjust the 2014-reported or the 2015-reported electric savings in either Annual Report as the Home Energy Reports ex-post evaluations and final NEEA savings achievement were unavailable at the time of Annual Report filings. As it did in the 2012-2013 Biennial Conservation Report, PSE trues up the Home Energy Report and NEEA savings at the June 1, 2016 filing timeframe. PSE presents the electric conservation results of independent reviews and evaluations in Table II-7.

PSE also collaborated with the CRAG and Commission staff on savings and financial forecasts, annual Schedule 120 reviews, and conservation planning. This working relationship enabled the Company to adaptively and effectively manage its conservation programs.

a. 2015 Annual Conservation Plan Budget Adjustment

On April 9, 2015, after consultation with the CRAG, PSE filed a supplemental 2015 ACP Exhibit 1: *Savings and Budgets* when it was discovered that the budgeted amount for Rebate Processing did not reconcile with the portfolio budget filed with the Commission on November 26, 2014.

This caused the overall 2015 electric budget amounts to be under-represented by approximately $80,000. It is important to note that this inconsistency was discovered within existing PSE processes, and was proactively reported to the CRAG. The correction had no bearing on actual 2015 expenditures.

b. 2014-2015 Biennial Electric Conservation Achievement Review

In August, 2014, PSE and Commission staff selected SBW Consulting, Inc. ("SBW") to perform the 2014-2015 Biennial Electric Conservation Achievement Review ("BECAR"). The final BECAR is included in this Report as Attachment 1: *Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report*.

[24] Some of whom assisted in the development of several measure business cases.

Commission staff and PSE staff managed SBW's charter, scope of work, work plan, and review progress throughout the biennium and into the first half of 2016.

The review was less labor-intensive for Energy Efficiency staff than in past biennia; much less program staff time was spent analyzing and researching SBW data requests. This may be attributed to SBW's BECAR experience with Energy Efficiency programs, better data organizations, and more direct lines of communications between SBW and subject matter experts. In addition to the reduced scope and enhanced preparation noted in SBW's 2014-2015 BECAR, Energy Efficiency's Data and Systems Support group—who compiled, organized, formatted, and reported the 2014 and 2015 data—were key contributors to the review's efficiency. SBW's secure file transfer site also made the uploading of electronic files simple.

The direct cost to PSE ratepayers was also lower than previous biennial reviews: approximately $80,000 for this biennial review.[25]

PSE is pleased that SBW concluded that:

> "Based on our verification of the PSE tracking data, review of the 2014 and 2015 ACRs,[26] and PSE's March updates to the savings claim, we recommend adoption of the 2014-2015 the portfolio savings claim presented in this report."[27]

Additional SBW observations include:

- "PSE staff provided timely and conscientious assistance throughout the process of cross-referencing between the SoS *[ed.: Source of Savings]* database extract and the savings tracking extracts."[28]
- "RTF Deemed UES values are correctly applied. We found no discrepancies."[29]
- "PSE followed its published protocol for the timing of deemed savings revisions."[30]
- "[…] In reviewing the eight *[evaluation]* reports, the BECAR review team found them to be generally of high quality, continuing an arc of improvement that we have seen over several review rounds. For this, PSE is to be commended."[31]

[25] Invoiced cost only. This amount does not include PSE staff labor costs.

[26] "ACR" is SBW's acronym for PSE's Annual Reports of Energy Conservation Accomplishments.

[27] Draft of final "Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report," Section 2.2.3, Recommendations, page 27.

[28] Ibid, Section 2.2.1, Methodology, page 16.

[29] Ibid, Section 2.3.2, Findings, page 31.

[30] Ibid.

During its review of 2015 measure data, SBW discovered that in some records, two Single Family Weatherization measures (both insulation) reflected 2014 savings values in some instances, and in others, 2015 values.

PSE program staff performed a thorough analysis of not only the indicated measures, but of all measures reported in the Single Family Weatherization program, including attic, wall and floor insulation, windows, and air sealing. Following established Energy Efficiency adjustment protocol, program staff provided a savings adjustment request for +89,989 kilowatt-hours ("kWh") (or +90 MWh), which was approved by Energy Efficiency management and forwarded to SBW—along with comprehensive substantiating data—for inclusion in the BECAR verified savings.

PSE requested SBW to make an additional savings adjustment of -29,900 kWh (-30 MWh) following a discussion with the CRAG in March 2016 on RCM savings that account for solar PV installed at two customers' sites subsequent to setting their baseline usage values. During that discussion, PSE committed to removing savings that accounted for the impact of solar PV in those cases.

PSE applied the specific correction values presented to SBW to its 2015 tracking tables and incorporated those values into the overall 2014-2015 electric Exhibit 1 results. The adjustments are illustrated in Table II-5 and are detailed in Attachment 1.

The total of all 2015 savings adjustments are noted on lines ***f, i, l***, and ***o*** of Table II-7.

Table II-5: SBW 2015 Recommended Savings Corrections

Measure	Originally Reported 2015 Value (MWh)	Corrected 2015 Value (MWh)	Total Savings Impact (MWh)
Single Family Weatherization *(aggregate of several measures)*	7,989	8,079	+90
Solar RCM *(Two customers)*	12,823	12,793	-30
TOTAL ELECTRIC SAVINGS ADJUSTMENT			+60

[31] Draft of final "Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report," Section 2.4.2.3, Impact Evaluations, pages 36-37.

Finally, PSE agrees with SBW's recommendation that a UES value review should be conducted earlier in the biennium,[32] so that if any retroactive savings revisions are necessary, Energy Efficiency can make program changes to account for potential shortfalls earlier in the biennial cycle. PSE is working with the CRAG to put this idea into effect in 2016 through its 2016-2017 BECAR RFP process.

c. *DNV • GL Home Energy Reports Evaluations*

REM's Home Energy Reports ("HER") program is evaluated each year for verified savings from the previous program year. As it relates directly to 2014-2015 results, and due to the short measure life of this program, it is necessary to apply the result of that evaluation to the year in which the savings occurred on a retroactive basis, rather than on a going-forward basis, as is standard practice for evaluations. This is consistent with PSE's agreement with the CRAG.

2014 electric HER reported a placeholder savings value based upon the previous year's evaluation and the trends from the program's historical data. This was a total savings of "current" and "suspended" households of 5,891,520 kWh or 5,892 MWh. The actual verified 2014 savings was 5,692,367 kWh (5,692 MWh). This results in a total savings adjustment of -199,153 kWh, (-199 MWh) for 2014. PSE included the 2014 DNV-GL (formerly KEMA) evaluation of HER in Exhibit 6, Supplement 1 of the 2015 Annual Report of Energy Conservation Accomplishments.

The 2015 electric HER also reported a placeholder savings value, consistent with PSE's practice of reporting only forecasted year-over-year incremental savings growth for the second year of the two-year measure life.

As there was not an incremental count from the 2014 evaluation, PSE reported no HER savings for 2015. The DNV-GL verified savings were lower than the deemed value, however, resulting in a 2015 HER savings adjustment of -853,774 kWh, or -854 MWh; not only were there no incremental savings, there was actually a reduction in savings. The resulting 2014-2015 total HER electric savings adjustment is -1,053 MWh.

[32] Draft of "Puget Sound Energy 2014-15 Biennial Electric Conservation Achievement Review (BECAR) Final Report", Section 2.3.3, Recommendations, page 30.

The Home Energy Report-specific final savings values are presented in Table II-6. PSE's final, verified and adjusted 2014-2015 electric conservation results incorporate these values, and are provided in Table II-7.

Table II-6: DNV - GL 2014-2015 Recommended Home Energy Report Ex-Post Savings True-up

2014		
As Reported in Energy Efficiency Annual Report	**As Reported in DNV-GL Evaluation**	**Difference, kWh** *(Converted to MWh)*
Total HER Reported	Total HER Verified	
5,891,520	5,692,367	-199,153
		(199)
2015		
As Reported in Energy Efficiency Annual Report	**As Reported in DNV-GL Evaluation**	**Difference, kWh** *(Converted to MWh)* *(Represents incremental difference from 2014 to 2015.)*
Total HER Reported	Total HER Verified	
(2)	4,838,591	-853,776
		(854)
Difference		
		(MWh) Total 2014-2015 HER Adjustment to Overall Portfolio
		-1,053

4) Savings Review Results: Verified 2014-2015 Electric Savings

Electric savings, along with associated adjustments, included in Table II-7, represent PSE's final, verified 2014-2015 totals.

Table II-7: Verified 2014-2015 Savings with Adjustments

Reference		Source	Megawatt-hours	Discussion
a		2014 Annual Report	378,539	From 2014 Annual Report Exhibit 1
b		2015 Annual Report	282,562	From 2015 Annual Report Exhibit 1
c		**Subtotal**	**661,101**	**= a + b**
d	Adjustments to Reported Savings		72,533	2014-2015 Deemed value, as proposed in 2013
e			91,630	2014-2015 verified value
f		NEEA 2014-2015 Savings Adjustment	+19,097	= e - d
g			+90	Single Family Weatherization 2015 reporting anomaly, discovered by SBW
h			-30	Solar RCM reporting, reported to CRAG by PSE.
i		SBW REM Recommended Corrections	+60	= g + h
j		Legacy Home Energy Reports	-199	2014 Home Energy Reports
k			-854	2015 Home Energy Reports
l		DNV • GL ex-post Home Energy Reports True-up	-1,053	= j + k
m		Individual Energy Reports Pilots	-20,616	2014 IER True-up
n			4,533	2015 IER True-up
o		DNV • GL ex-post Evaluation Total	-16,082	= m + n
p		**Total Electric Savings Adjustments**	**2,022**	**= f + i + l + o**
q		**Final, Verified Electric Conservation, MWh**	**663,123**	**= c + p**
		Less:		
r		NEEA	-91,630	Line ***ag*** of BCR Exhibit 1
s		Energy Report Pilots	-18,897	Line ***af*** of BCR Exhibit 1
t		**Final Electric Savings Applicable to Penalties**	**552,597**	**= q + (r + s)**
u		2014-2015 EIA Target	485,770	From "Building the Electric Target"
v		**Difference**	**+ 66,827**	**= t - u**
w		Percent Exceeded EIA Target	14%	= t ÷ u

"BCP" = Biennial Conservation Plan
"BCR" = Biennial Conservation Report

Figures noted in the "Reference" column will provide readers with a consistent nomenclature for questions or citation. Line ***c*** indicates the as-reported cumulative 2014 + 2015 electric savings.[33] Line ***p*** provides the total of the 2014-2015 NEEA savings final savings + SBW BECAR + DNV-GL Home Energy Reports evaluations adjustments (Labeled "Adjustments to Reported Savings"). Line ***q*** sums the as-reported savings + the savings adjustments. Line ***t*** sums those savings that are excluded from the EIA Target (NEEA + IER pilots) and subtracts them from the sub-total in line ***q***. Line ***v*** indicates the difference, in megawatt-hours, of the achieved electric savings versus the EIA Target.

E. Cost-Effectiveness

PSE combined the overall 2014 and 2015 electric Portfolio cost-effectiveness results indicated in Exhibit 2 of each year's Annual Report, taking into account the above-noted savings adjustments, to develop a biennial view of program cost-effectiveness.

The Sector-level results are indicated in Table II-8.

Table II-8: 2014-2015 Electric Cost-Effectiveness by Sector

2014-2015 Electric Benefit to Cost Ratios by Sectors		
	Utility Cost Test	**Total Resource Cost Test**
Residential	2.42	1.63
Business	2.41	1.64
Pilots	1.71	1.88
Regional	4.07	3.91
TOTAL PORTFOLIO	**2.29**	**1.62**

Source: Exhibit 2: 2014-2015 Electric Cost-Effectiveness

Indicated TRC includes the application of a 10 percent Conservation credit value.

[33] Apparent differences between tables in the two-year electric savings totals stems from rounding functions applied to earlier summary tables.

F. Adapting the Portfolio through the Application of Total Quality Management Principles

As discussed throughout the 2014 and 2015 PSE Annual Reports, PSE consistently applied TQM principles in every aspect of managing its suite of electric Energy Efficiency programs. While not a comprehensive listing of every TQM application Energy Efficiency staff employed to exceed the electric savings target while prudently managing customer Rider funds, Table II-9 provides some of the more significant highlights of Energy Efficiency's adaptation steps discussed in the 2014 Annual Report.

Many other instances are noted in various chapters of the Annual Report.

Table II-9: Highlights of 2014 Energy Efficiency TQM Adaptive Management Initiatives

2014	Detailed in: *Annual Report Year/Chapter Reference*
PSE was a leader in the marketplace in being one of the first to offer incentives on a revolutionary product, TLEDs.	*Chapter 2*
By creating electronic signature authority, rebate processing time was substantially reduced.	*Chapter 2*
PSE led an effort to significantly increase retailer participation in energy-efficiency programs.	*Chapter 4*
More than one Energy Efficiency program added IR sensing power strips to their suite of measures.	*Chapter 4*
The Lighting to Go program adjusted measure incentive amounts to increase the throughput of LED lamps to contractors.	*Chapter 7*
The Energy Efficient Communities team created small business “blitzes” to increase awareness of Energy Efficiency programs to a market segment that had little exposure to Energy Efficiency offerings.	*Chapter 7*
The Commercial/Industrial lighting program incentive structure was significantly simplified; four separate programs were consolidated into one, leading to easier and more streamlined application processing.	*Chapter 7*
The Commercial/Industrial Retrofit program implemented LED street lighting rebates.	*Chapter 7*
The Business Rebates group re-organized into the Residential Energy Management organization to better align with and provide enhanced support to its channel constituents.	*Chapter 7*
The Rebates Processing team implemented an electronic signature process, which eliminated the need for hard-copy, inter-office mailings, improving rebate turnaround by up to two days, and preventing lost paperwork.	*Chapter 11*

Table II-10 provides some of the more significant highlights of Energy Efficiency's adaptation steps discussed in the 2015 Annual Report. Many other instances are noted in various chapters of that Report.

Table II-10: Highlights of 2015 Energy Efficiency TQM Adaptive Management Initiatives

2015	Detailed in: *Annual Report Year/Chapter Reference*
As indicated in a survey of customers participating in the Energy Upgrade campaign, customer awareness of Energy Efficiency programs increased 4 percent over 2014.	*Chapter 2*
PSE re-engaged a major retailer to resume offering a key energy-efficient showerhead in a very short timeframe.	*Chapter 4*
Energy Efficiency's awareness and marketing efforts, including Cross-Sell, "Strive for Five" plaques in multifamily buildings, customer presentations, retailer training, and community "blitzes" all contributed to maximized savings achievement.	*Chapters 4 and 9*
Several RCM process improvements led to more accurate and simplified customer reporting with substantiated savings.	*Chapter 6*
PSE created a simplified project application form for Large Power/Self-Directed customers, providing a significantly streamlined process.	*Chapter 6*
The Rebates Processing team increased rebate applications processed by over 4,000, worth $2 million more than 2014.	*Chapter 10*
The Energy Efficient Communities team expanded its outreach to municipalities, small business customers, and regional PSE offices.	*Chapter 10*
The Verification Team inspected almost 2,000 customer installations with only 3 QA verification inspectors.	*Chapter 11*

Supporting functions, including but not limited to Data and Systems Support, Budget-Evaluation-Administration-Regulatory, and the Events and Energy Efficient Communities teams, also made significant operational improvements throughout the biennium.

III. Regulatory Compliance

PSE submits this biennial report of its 2014-2015 electric conservation to the UTC, consistent with RCW 19.285.070, which states:

> (1) On or before June 1, 2012, and annually thereafter, each qualifying utility shall report to the department on its progress in the preceding year in meeting the targets established in RCW 19.285.040, including expected electricity savings from the biennial conservation target, expenditures on conservation, actual electricity savings results, the utility's annual load for the prior two years, the amount of megawatt-hours needed to meet the annual renewable energy target, the amount of megawatt-hours of each type of eligible renewable resource acquired, the type and amount of renewable energy credits acquired, and the percent of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of renewable energy credits. For each year that a qualifying utility elects to demonstrate alternative compliance under RCW 19.285.040(2) (d) or (i) or 19.285.050(1), it must include in its annual report relevant data to demonstrate that it met the criteria in that section. A qualifying utility may submit its report to the department in conjunction with its annual obligations in chapter 19.29A RCW.
>
> (2) A qualifying utility that is an investor-owned utility shall also report all information required in subsection (1) of this section to the commission, and all other qualifying utilities shall also make all information required in subsection (1) of this section available to the auditor.
>
> (3) A qualifying utility shall also make reports required in this section available to its customers.

The report is also consistent with WAC 480-109-120(4), stipulating the Report's contents, and condition (8)(e),[34] which indicates that the report must be filed with the UTC. PSE will post a copy of the report on the PSE.com website within 30 days of the Commission's Report acknowledgement.

Concurrent with this Report, PSE is providing the Washington State Department of Commerce with a copy of the Department's 2016 EIA Report Microsoft® Excel™ workbook. A copy of the conservation portion of that workbook is included with the Report as Attachment 2.

A. RCW 19.285.040(1)

The Report and its Exhibits clearly demonstrate that PSE is in full compliance with RCW 19.285.040 (1):

> Each qualifying utility shall pursue all available conservation that is cost-effective, reliable, and feasible.
>
> (continued)

[34] Attachment A in Order 01, Docket No. UE-132043.

(a) By January 1, 2010, using methodologies consistent with those used by the Pacific Northwest electric power and conservation planning council in its most recently published regional power plan, each qualifying utility shall identify its achievable cost-effective conservation potential through 2019. At least every two years thereafter, the qualifying utility shall review and update this assessment for the subsequent ten-year period.

(b) Beginning January 2010, each qualifying utility shall establish and make publicly available a biennial acquisition target for cost-effective conservation consistent with its identification of achievable opportunities in (a) of this subsection, and meet that target during the subsequent two-year period. At a minimum, each biennial target must be no lower than the qualifying utility's pro rata share for that two-year period of its cost-effective conservation potential for the subsequent ten-year period.

As part of its Biennial Conservation Plan, PSE filed its 2014-2015 electric conservation Target (also, "EIA Target") with the UTC on November 1, 2013 in Docket No. UE-132043. The Commission approved the EIA Target of 485,770 MWh on December 19 with conditions, thus signifying that the savings value represented PSE's total obligation to pursue all available conservation that is available, cost-effective, reliable, and feasible for 2014-2015. In Order 03 of that same Docket, the Commission approved PSE's 2014-2015 decoupling commitment of 27,920 MWh.

An overview discussion of the development of the two-year Target, including the determination of PSE's pro-rata share, is available in *Exhibit i: Ten-Year Potential and Two-Year Target* of the 2014-2015 BCP. Details of the biennial acquisition target methodology are available in PSE's 2013 IRP.[35]

PSE also demonstrated compliance with part (c) of RCW 19.285.040 (1):

(c) In meeting its conservation targets, a qualifying utility may count high-efficiency cogeneration owned and used by a retail electric customer to meet its own needs. High-efficiency cogeneration is the sequential production of electricity and useful thermal energy from a common fuel source, where, under normal operating conditions, the facility has a useful thermal energy output of no less than thirty-three percent of the total energy output. The reduction in load due to high-efficiency cogeneration shall be:

(i) Calculated as the ratio of the fuel chargeable to power heat rate of the cogeneration facility compared to the heat rate on a new and clean basis of a best-commercially available technology combined-cycle natural gas-fired combustion turbine; and

(ii) counted towards meeting the biennial conservation target in the same manner as other conservation savings.

[35] Docket No. UE-120767.

During the 2014-2015 biennial conservation period, PSE engaged in dialogue with multiple customers and consultants regarding potential combined heat and power projects that met the RCW criteria, but no projects were pursued beyond initial feasibility studies since they were not financially viable.

PSE sought to apply energy efficiency incentives to these projects to improve their financial attractiveness, but still no customers moved forward with projects. In fact, PSE launched a webpage that provides more information regarding the incentives and technology:

http://www.pse.com/savingsandenergycenter/ForBusinesses/Pages/Combined-Heat-and-Power.aspx

Additionally, PSE complied with section (d) of RCW 19.285.040 (1):

> (d) The commission may determine if a conservation program implemented by an investor-owned utility is cost-effective based on the commission's policies and practice.

PSE demonstrated rigor and consistency with the NW Power and Conservation Council ("the Council") methodology in its calculations of all 2014-2015 electric cost-effectiveness results as reported and filed in Exhibit 2: *Cost Effectiveness Results* in each Annual Report, and was consistent with all regulatory requirements.

B. WAC 480-109

This report complies with WAC 480-109-120(4), which requires utilities to report by June 1 of each even-numbered year on its progress in meeting the electric conservation Target. Consistent with subpart (a), the Report contains the conservation Target, the expected and actual electricity savings from conservation, and expenditures made to acquire conservation.

PSE provides references to the applicable locations within this report that comply with WAC 480-109-120(4)(b) in Table III-1 .

Table III-1: 2014-2015 Report References to Applicable WAC 480-109-120(4) Requirements

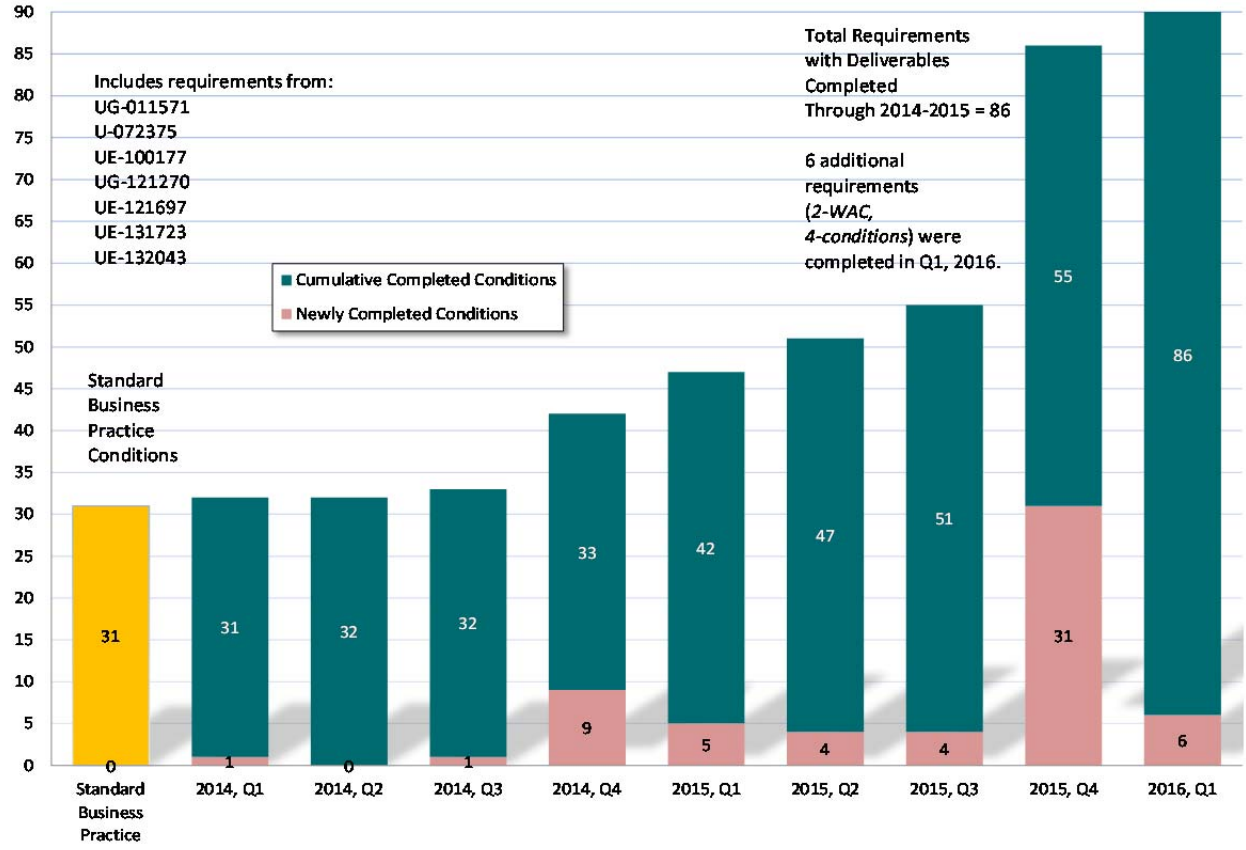
WAC 480-109 Compliance	
Section 120(4)(b) Requirement The biennial conservation report must include:	Chapter & Part of BCR
(i) The biennial conservation target	Chapter 1, Part I.A provides the electric savings target and budget in Table I-1.
(ii) Planned and claimed electricity savings from conservation	Chapter 1, Part I.A. provides the electric savings target and budget in Table I-1.
(iii) Budgeted and actual expenditures made to acquire conservation	Chapter 1, Part I.A provides the electric budget and expenditures in Table I-1.
(iv) The portfolio-level cost-effectiveness of the actual electricity savings from conservation	Exhibit 2: 2014-2015 Electric Cost-Effectiveness provides cumulative two-year Portfolio results.
(v) An independent third-party evaluation of portfolio-level biennial conservation savings achievement	Attachment 1 provides SBW's Biennial Electric Conservation Achievement Review.
(vi) A summary of the steps take to adaptively manage conservation programs throughout the preceding two years	Chapter 2, Part F, Tables II-9 and II-10 provide summaries and Annual Report references of TQM steps executed.
(vii) Any other information needed to justify the conservation savings achievement	Chapter 2, Part D provides background on PSE's savings validation efforts. Chapter 3 provides summary discussions of regulatory compliance and Chapter 4 provides background on Stakeholder Engagement.

PSE will post the Report contemporaneously on PSE.com, as required by WAC 480-109-120(6).

C. Orders and Conditions

Figure III-1 presents PSE's compliance with all Order deliverables throughout the 2014-2015 biennium, and indicates that PSE complied with all regulatory requirements. It is noteworthy that eight conditions overlapped the biennium into 2016, six of which[36] are completed as of the filing of this Report and its supporting documents.

Figure III-1: Completion Status of all 2014-2015 Requirements



It is important to recognize that PSE manages electric conservation deliverables from four separate Commission Orders:

1) The 2008 Merger Agreement, Docket No. U-072375, commitments number 22 and 23, regarding the funding of low-income programs,

[36] The two remaining requirements are pending Commission approval of this 2014-2015 Biennial Conservation Report.

2) The 2010 Electric Settlement Agreement, Sections A through J and L, Docket No. UE-100177,

3) The amended decoupling petition in Docket No. UE-121697, relative to achieving 5 percent above the Commission-approved Target,

4) Conditions in Attachment A of Order 01 of Docket No. UE-132043.

Relative to the RCW 19.285.040(1) stipulation that the available, reliable and feasible conservation must be cost-effective, PSE fully complied with condition (10)(a), that indicates that the Total Resource Cost (TRC) is the Commission's primary cost-effectiveness test:

> The Commission uses the TRC, as modified by the Council, as its primary cost-effectiveness test. PSE's portfolio must pass the TRC test. In general, each program shall be designed to be cost-effective as measured by this test. PSE must demonstrate that the cost-effectiveness tests presented in support of its programs and portfolio are in compliance with the cost-effectiveness definition (RCW 80.52.030(7)) and system cost definition (RCW 80.52.030(8)) and incorporate, quantifiable non-energy benefits, the 10 percent conservation benefit and a risk adder consistent with the Council's approach.
>
> An outline of the major elements of the Council's methodology for determining achievable conservation potential, including the Total Resource Cost test, is available on the Council's website at(:)
>
> http://www.nwcouncil.org/energy/powerplan/6/supplycurves/I937/CouncilMethodology_outline%20_2_.pdf.

Further, with reference to condition (10)(a), PSE's application of cost-effectiveness is consistent with the definitions enumerated in RCW 80.52.030(7) and (8):

> (7) "Cost-effective" means that a project or resource is forecast:
> (a) To be reliable and available within the time it is needed; and
> (b) To meet or reduce the electric power demand of the intended consumers at an estimated incremental system cost no greater than that of the least-cost similarly reliable and available alternative project or resource, or any combination thereof.
>
> (8) "System cost" means an estimate of all direct costs of a project or resource over its effective life, including, if applicable, the costs of distribution to the consumer, and, among other factors, waste disposal costs, end-of-cycle costs, and fuel costs (including projected increases), and such quantifiable environmental costs and benefits as are directly attributable to the project or resource.

IV. Stakeholder Engagement

In addition to Integrated Resource Plan Advisory Group ("IRPAG") and CRAG involvement in the IRP development throughout 2013, PSE maintained a close association with the CRAG throughout 2014 and 2015. CRAG meetings that focused on 2014-2015 planning began with the June 6, 2013 meeting. Savings goals were the primary topic of the July 18, 2013 meeting. In the August 22 CRAG meeting, PSE shared its draft budget and program details, and the draft tariff revisions were presented in the October 1 meeting. PSE also partnered with CRAG members throughout the last half of 2013 to collaboratively design the set of biennial conditions listed in Attachment A of Order 01 in Docket No. UE-132043. This work led to the Commission approving the Ten-Year Achievable Conservation Potential and Two-year Conservation Target on December 19, 2013 in the same Docket.

Consistent with regulatory requirements and TQM principles, PSE provided numerous opportunities for the CRAG to review the progress of program development and implementation, its suite of customer offerings, preview measure and savings plans and measure revisions, and BECAR drafts throughout the biennium. PSE presented a major update to its programs, measure offerings, and budgets in the 2015 ACP to the CRAG for review and comment prior to its filing.

PSE consistently demonstrated its adaptive management in sharing details of new and modified programs, updated Exhibits, marketing initiatives, current and forecast expenditures, and reviews of measure revisions. These efforts have been acknowledged by certain CRAG members.

Relative specifically to measure offerings and their savings values, PSE also provided several updates to its Exhibit 4: *Energy Efficiency Measures, Incentives & Eligibility* to the CRAG. To make document review more effective, PSE provided CRAG members with a mark-up Exhibit 4, that made comparing existing versus updated values more straightforward, in addition to the "clean" version of Exhibit 4. In its 2014 and 2015 Annual Reports and the 2014-2015 planning documents,[37] PSE included a comprehensive list of prescriptive and selected calculated measures that were available for or planned for program use during the reporting period. Each CRAG member received their own copy of these documents prior to or concurrent with its filing.[38]

[37] The 2014-2015 Biennial Conservation Plan and the 2015 Annual Conservation Plan.

[38] As the biennium progressed, documentation evolved from paper copies to DVDs, USB flash drives, and currently, providing conservation documents on PSE's secure file transfer site. These efforts have increased efficiency and reduced costs to customers.

Throughout the biennium, PSE met with the CRAG eight times to provide program updates, discuss program implementation strategies, and long-term conservation goals. CRAG members received each meeting's presentation slides, along with meeting summary notes that capture agreements, decisions, and action items.

PSE also provided comprehensive reviews of program, sector, and portfolio-level cost-effectiveness calculations, leading to Utility Cost (UC) Test and Total Resource Cost (TRC) Test results. Exhibit 2: *2014-2015 Electric Cost-Effectiveness Results* is included in this Report, incorporates the savings revisions discussed in Chapter 2.

V. References

PSE provides Docket numbers for all publications filed with the UTC relative to the 2014-2015 electric conservation EIA Target[39] and UTC filings pertaining to the development, progress reporting, and confirming results of the 2014-2015 biennial conservation achievement in Table V-1. This Biennial Conservation Report of verified 2014-2015 electric conservation savings and expenditures summarizes information contained in these publications and reviewed with the CRAG at prescribed intervals throughout the biennium.

Table V-1: Substantiating 2014-2015 Electric Savings Documents and Their Associated Docket Numbers

Document Description	Pertaining to	WUTC Docket Number	Date Filed
2013 IRP	Development of the 10-year Potential and 2-year target	UE-120767	Initial: May 25, 2012
2014-2015 Biennial Conservation Plan	Documentation of the 10-year Potential and 2-year Target, along with program and measure details.	UE-132043	November 1, 2013
2014 Ten-year Potential & Two-year Conservation Target	RCW 19.285.040 requirement (Exhibit i)	UE-132043	November 1, 2013
2014 Annual Conservation Report & Exhibits	Reporting 2014 conservation accomplishments and program details	UE-970686 & UE-132043	February 27, 2015
2015 Annual Conservation Plan	Detailed plan revisions, updating the 2014-2015 BCP, for 2015 spending and savings	UE-132043	November 26, 2014
2015 Annual Conservation Report & Exhibits	Reporting 2015 conservation accomplishments and program details	UE-132043	February 26, 2016

[39] Please note that these are the descriptions of the documents, rather than the formal names.

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VI. Acknowledgements

Puget Sound Energy believes that it is important to recognize our customers, who provide the energy efficiency funding and make efficient choices daily. PSE appreciates retailers, contractors, and its trade allies, who act as our partners, providing expertise and installation "boots on the ground" to engage our customers.

PSE also appreciates the concerted and focused effort of its CRAG members throughout the 2014-2015 biennium. CRAG members demonstrated a commitment to our shared vision for success by actively participating in all planning and review processes, and were forthcoming and positive in expressing their ideas and suggestions. Together, we made significant strides in establishing a candid forum, focusing on customer needs, maximizing business transparency, and earned a healthy level of trust. We look forward to an energized and positive 2014-2015 biennium.

Lastly, as SBW indicated in their 2014-2015 electric savings review, the veracity of PSE's electric conservation savings is well-documented and carefully verified. This would not be possible without our dedicated Energy Efficiency staff, who consistently exceed customer expectations while meeting challenging goals and demonstrate fiscal responsibility with a high degree of attention to detail.

Thank you!