Puget Sound Energy's

2010-2011

Biennial Electric Conservation Achievement

PUGET SOUND ENERGY
The Energy To Do Great Things

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PSE's Report of 2010-2011 Biennial Conservation Results

Puget Sound Energy (PSE or the Company) is pleased to present this 2010-2011 Biennial Report of Electric Savings. Within the Report are details and references substantiating the Company's electric conservation achievements, including:

- Expected electricity savings from the 2010-2011 biennial conservation target.
- Expenditures on electric conservation.
- Actual electricity savings results.

PSE Exceeded its 2010-2011 Electric Biennial Savings Target

For the 2010-2011 period, PSE achieved 644,392 MegaWatt-hours (MWh) of first-year conservation at the customer meter. This is 103.6 percent of the Commission-approved[1] 622,000 MWh target. Please reference Table 2 in the Savings Verification section of this report for details. PSE electric conservation expenditures were $152.9 million.

Supporting Documentation

Readers may refer to the following Attachments for additional 2010-2011 biennial details. Pursuant to the Department of Commerce's Energy Independence Act (EIA) Reporting Instructions of May 2012,[2] Attachments 2 through 7 are included only for the Washington Utilities and Transportation Commission (WUTC) filing, consistent with condition K(8)(h).

1) The Department of Commerce EIA report, in its approved and final format.
2) Savings details by program for 2010, 2011, and the biennial totals. These are extracts from PSE's 2010 and 2011 Annual Reports,[3] both of which were filed under WUTC Docket No UE-970686.

[1] Docket No. UE-100177, October 13, 2010.

[2] Department of Commerce "I-937 ReportTemplate_May2012.xlsx": The Energy Independence Act (EIA) "RCW 19.285.170, Reporting and public disclosure" requires each qualifying utility to develop an annual report describing compliance with the Act. Commerce has developed this template to ensure consistent reporting from all utilities. This template only requests data required to complete the public reporting requirement. Additional documentation will be required by the applicable regulator to demonstrate full compliance with EIA. The EIA reports will be made available to the public via Commerce's web site, www.commerce.wa.gov/energy.

[3] Although the format and name of Exhibit 1 (in 2010, "Appendix A") evolved between 2010 and 2011, the sector definitions, tariff Schedules, and order numbers (used to accumulate and account for expenditures) remained the same.

3) SBW Consulting, Inc.'s (SBW or SBW's) final evaluation report, "*Independent Third-Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*. The document consists of two volumes; the main report is volume I, and volume II includes several Appendices, including Stakeholder comments, submitted in response to SBW's review of its draft final report on April 24, 2012. Please note that both volumes are contained within Attachment 3. Unless otherwise specified, all citations within this report are in reference to Volume 1.
4) KEMA's Home Energy Reports final evaluation, "*Puget Sound Energy's Home Energy Reports Program: Three Year Impact, Behavioral and Process Evaluation".*
5) Detailed savings adjustment and discrepancy logs. Part 1 reflects PSE adjustments that were noted and forwarded to SBW prior to the publication of its final review report. Parts 2 and 3 are results of follow-up to SBW's on-site verification observations.
6) Resource Conservation Manager's (RCM's) Savings Methodology.
7) The final PSE Condition Compliance Checklist, updated for the five remaining 2012 deliverables, indicating that PSE met or exceeded all 2010-2011 target filing conditions enumerated in Amended Order 5 of Docket No. UE-100177.
8) The 2011 Low Income Weatherization (LIW) Renewable Energy Credits (REC) report, in compliance with requirements outlined in Docket No UE-070725.

2010-2011 Electric Conservation Results

The 2010-2011 biennial achievement of 644,392 MWh represents PSE's total obligation, relative to achieving all achievable, feasible, and cost-effective savings for the biennium. Consistent with RCW 19.285 and the rules enumerated in WAC 480-109-010(4)(b), the Commission reviewed and considered the Company's ten-year achievable conservation potential and two-year biennial target, originally filed on January 29, 2010, determining that further scrutiny was required. PSE collaborated with Commission Staff and the CRAG to effect filing revisions, and filed a new ten-year potential and two-year target on June 18, 2010. The Commission issued Amended Order 5, approving the 2010-2011 target on October 13, 2010.[4]

Table 1 provides a summary of 2010-2011 electric conservation targets, expenditures and savings results.

Table 1: Overall Conservation 2010-2011 Results

	Savings	Expenditures
Electric (MWh)	Verified[5] Results: 644,392	$152,873,565
Target	622,000 (71.0 aMW)	
Percent	103.6%	

644,392 MWh divided by 8,760 hours = 73.6 aMW

After the Commission approved the Company's biennial acquisition target of 622,000 MWh on October 13, 2010 with conditions, pursuant to WAC 480-109-010(4)(c), that conservation energy target was deemed to be all cost-effective, reliable, feasible, and available conservation that the Company must pursue for the 2010-2011 biennium.

[4] (Amended) Order 05, Docket No. UE-100177.

[5] Please see *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW Consulting, Inc. Final report, May 22, 2012, Table 40: Summary of Portfolio Savings Review, pgs. 129 & 130, and Table 2: Verified 2010-2011 Savings with Adjustments.

Compliance

This biennial report on PSE's 2010-2011 electric conservation is submitted to the Washington Department of Commerce and the WUTC, 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 the 2010 Energy Independence Act (EIA) Electric Conservation Settlement Agreement, condition K(8)(h),[6] which indicates that the report must be filed with the WUTC.

RCW 19.285.040(1)

The Report and its Attachments will 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.

(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.

PSE identified prior to January 1, 2010, and filed its original 10-year achievable conservation potential on January 29, 2010.[7] A revised filing was made on June 18, 2010,

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

which was accepted by the Commission on October 13, 2010. An overview discussion of the ten-year achievable conservation potential determination is available in the Establishing the 2010-2011 Two-Year Conservation Target section of this report. Details of the determination are available in PSE's 2009 IRP.[8]

(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.

PSE originally filed its 2010-2011 biennial acquisition target on January 29, 2010.[9] A revised filing was made on June 18, 2010, which was accepted by the Commission on October 13, 2010. An overview discussion of the two-year target, including the determination of PSE's pro-rata share, is available in the Establishing the 2010-2011 Two-Year Conservation Target section of this report. Details of the biennial acquisition target methodology are available in PSE's 2009 IRP.[10]

(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.

PSE elected to forego the reporting of savings from cogeneration for the 2010-2011 biennium.

(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.

[7] Docket No. UE-100177.
[8] Docket Nos. UE-080949, UG-080948.
[9] Docket No. UE-100177.
[10] Docket Nos. UE-080949, UG-080948.

PSE demonstrated rigor and consistency with the NW Power and Conservation Council (the Council) methodology in its calculations of all 2010-2011 electric cost-effectiveness results, and was consistent with all regulatory requirements. This was confirmed in SBW's report; *"Independent Third-Party Review of PSE's 2010-2011 Electric Conservation Energy Savings".*[11]

2010 Electric Settlement Conditions

PSE fully complied with condition K(10)(a), which indicates that that 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 K(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.

[11] It its Executive Summary, page ES-7, SBW states that "PSE has met all of these *(ed.: four criteria, including passing the portfolio TRC test)* requirements, and their methodology is consistent with Council guidance for TRC calculation.

CRAG Engagement and Reporting

Throughout the 2010-2011 biennium, PSE engaged its Stakeholders, including the CRAG and other constituents in the development and review of cost-effectiveness tests and their calculation methods.

In its 2010 and 2011 Annual Reports,[12] PSE provided comprehensive reviews of program, sector, and portfolio-level cost-effectiveness calculations, leading to Utility Cost (UC) and Total Resource Cost (TRC) results.

PSE discussed various details of cost-effectiveness calculation methodology with the CRAG over the course of several CRAG meetings. PSE discussed cost-effectiveness tests and their calculation attributes—including UC, TRC, Participant Cost Test (PCT), and Ratepayer Impact Measure (RIM) test—on March 31, 2011. There was a cost-effectiveness discussion focusing on avoided cost calculation methodology on July 21, 2011. An extensive cost-effectiveness and avoided cost discussion, including the components of avoided costs, 2010-2011 calculation revisions and their effect, was conducted during the September 29, 2011 CRAG meeting.

Independent Findings

The 2010-2011 Third-party review also found that PSE's cost-effectiveness methodology is consistent with Council methodology; *"The review team found that PSE's approach to determining cost-effectiveness and avoided costs was sound, and in compliance with Council methodology."*[13] The report also recognized the continuous improvements undertaken by PSE; *"PSE has taken steps to continuously improve the tracking systems and cost-effectiveness analysis."*[14]

(e) The commission may rely on its standard practice for review and approval of investor-owned utility conservation targets.

The Commission approved PSE's 2010-2011 target on October 13, 2010.

[12] In the 2010 Annual Report, Cost-effectiveness information was provided in Appendix D. Exhibit 2 contained all of the program cost-effectiveness information in the 2011 Annual Report.

[13] *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW Consulting, Inc. Final report, May 22, 2012. Page ES-9, ¶ 1.

[14] Ibid, Page 96, Section 4.2. Findings, ¶ 1

Savings Verification

Table 2 represents (1) the baseline first-year, customer-meter savings values PSE originally reported, (2-5) the savings adjustments suggested by independent reviews, and (6) the resulting final, verified savings value.

Table 2: Verified 2010-2011 Savings with Adjustments

		Megawatt-hours		
		PSE	Independent Third-Party Reviewer	
Index	Source	Adjusted Values		Discussion
1	2010 Annual Report	293,559	293,559	Revised 2010 Annual Report, filed April 2011
	2011 Annual Report	348,926	348,926	
	Subtotal	642,485	642,485	Baseline savings value
2	PSE's 2011 savings adjustments	(3)	(3)	PSE provided to SBW during data review. Also noted in Attachment 5.
3	On-site verification discrepancies	(31)	0	Please see detailed discussion in Attachment 5.
4	Resource Conservation Manager (RCM) adjustment	0	(7,938)	Unsupported SBW figure of 17.5%
5	KEMA's Home Energy Report (H.E.R.) Evaluation	1,941	1,941	Adjustment due to Ex Post savings analysis method agreed to by full CRAG, October, 2011.
	Total Adjustments	1,907	(6,000)	
6	**Total after adjustments**	**644,392**	**636,485**	
	2010-2011 Target	622,000	622,000	As filed in Docket No. UE-100177
	Difference	22,392	14,485	From baseline
	Percent Exceeded Target	3.6%	2.3%	

Final, verified electric 2010-2011 savings figures resulted from several reviews and evaluations, including these comments referencing Table 2 index numbers above:

1. The revised 2010[15] and original 2011 Annual Reports of Energy Conservation Accomplishments ("Annual Report"), filed under Docket Nos. UE-979686 and UE-100177. The electric savings values reflected in these reports are accumulated and verified through standard and proven Customer Solutions/Energy Efficiency tracking and reporting tools.

2. In March 2012, during its ongoing standard process reviews and internal reconciliations, PSE discovered two 2011 savings discrepancies; one (102 kilowatt hours [kWh]) in the Residential Energy Management sector, Retail Lighting, and the other (3,314 kWh, or 3.3 Megawatt-hours [MWh]) in the Business Energy Management sector, Business Rebates. PSE forwarded those to SBW during its 2011 data review. These are also detailed in Attachment 5 of this report. The aggregate adjustment is -3.4 MWh.[16]

3. It its report, *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW indicated that "The review team periodically uncovered small documentation discrepancies,[17]….". PSE agrees with SBW's assertion that "…these were minor and in our minds were not symptomatic of larger systemic problems that could call into question the veracity of the claimed savings for a program."[18]

   PSE requested a comprehensive list of all indicated discrepancies subsequent to SBW's review of its draft final report with CRAG members on April 24, 2012. As detailed in Attachment 5, there were 15 Business sector notations, and 10 Residential sector notations. SBW indicated in its report that "Discrepancies that turned up in the file reviews and on-site visits tended to be infrequent and minor, and in our estimation, did not materially affect the overall savings claim."[19] However, PSE's standard practice of reconciling **all** known savings anomalies merited a complete examination of each discrepancy.

[15] During its standard review and reconciliation processes, PSE discovered an inconsistency in the savings values reported in its original 2010 Annual Report, filed under Docket No. UE-100177 and UE-970686. PSE filed replacement pages on April 25, 2011 under the same Dockets.

[16] This amount is reflected in SBW's final verified savings figure in the *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW Consulting, Inc. Final report, May 22, 2012, pg 14, ¶ 2.

[17] *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW Consulting, Inc. Final report, May 22, 2012. Page ES-7, Conclusions and Recommendations, ¶ 2.

[18] Ibid.

[19] Ibid., page ES-5, ¶ 2.

The tables, Part 2 and Part 3, in Attachment 5 represent the results of this research. Although SBW recommended no savings adjustment based on the indicated discrepancies, PSE will make an aggregate adjustment of -30,581 kWh, or -31 MWh to its biennial report, in keeping with its standard practice of complete transparency. The majority of identified discrepancies requiring an adjustment to claimed savings occurred on Small Business Lighting (SBL) rebate projects that were completed in early 2010 at the peak of a large influx of new contractors participating in the program due to the economic downturn.

The discrepancies occurred prior to PSE instituting key quality control improvements, which include a mandatory contractor training program and a dedicated project verification team. These quality control improvements have since significantly improved the accuracy of project submittals while simultaneously increasing the quantity of PSE-conducted site verifications, resulting in decreased project discrepancies.

It is important to note that -31 MWh represents less than one percent of total reported savings for Business Sector SBL and Commercial Rebates projects that received on site verification by SBW.

4. SBW recommends a reduction of 17.5 percent in reported savings for the 2010-2011 Resource Conservation Manager (RCM) program. At issue is PSE's billing analysis approach, which SBW believes may overstate savings for the program. The controversial aspect of this approach is that PSE zeroes out sites for which the consumption increased from the baseline year; for instance, those sites with negative savings. SBW says, "The review team is firm in its belief that the claimed RCM savings is very likely overstated, though the magnitude of this discrepancy is uncertain at this point."[20] SBW goes on to say, "Because of the uncertainties around the program savings estimates, the review team recommends performing a full evaluation of the RCM program as soon as is reasonably possible."[21]

   PSE agrees that there is some uncertainty involved in a billing analysis approach, primarily due to what SBW terms "Naturally-Occurring Variations," or "noise."[22] PSE also agrees with SBW's recommendation to perform a full evaluation of the RCM program as soon as is reasonably possible. However, PSE does not agree that the billing analysis approach used in the RCM program is overstated. The reported savings should not be reduced by any amount without a full evaluation.

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[20] *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW Consulting, Inc. Final report, May 22, 2012. Page 50, Conclusions and Recommendations, ¶ 3.
[21] Ibid, "B. Re-evaluate the program sooner rather than later," ¶ 1
[22] Ibid, pg 47, Table 15: RCM Savings Diagram.

There are four primary reasons:

i. PSE's billing analysis approach has specifically been developed to mitigate the effect of "Naturally-Occurring Variations." SBW's assertion that "The program's current analytical framework rests on the assumption that all reductions to facility electric usage--aside from those attributable to weather, changes in utilized floor area, or PSE-incentivized capital projects--result from RCM actions and thus should be credited to the program"[23] is not accurate. PSE fully realizes that there are many factors that can, and do, affect consumption, both up and down.

PSE's approach is to zero out savings at any site for which the usage has changed from the baseline significantly more than by an amount that can be attributed to an RCM's documented actions. Such "outliers" are suspect, and savings are included only if there is adequate documentation to substantiate that the savings are due to the RCM's efforts. See Attachment 6 for a detailed discussion of PSE's approach to mitigate Naturally-Occurring Variations.

ii. SBW reported that it was often difficult to find what they were looking for, with the appearance that savings were not adequately documented. It is a complicated program, files are large, and RCMs do not always present their results in a standard format. When PSE staff were asked, the required documentation was readily located. PSE believes that savings were adequately documented; however, because of limited time, SBW found that certain documents were difficult to locate or explain. With more time to conduct a full evaluation, this difficulty could be overcome, increasing confidence in the savings documentation.

iii. SBW also reported several inconsistencies, which reflect on the quality of the data and adherence to protocol. PSE disagrees with these assertions. When these inconsistencies were pointed out in the initial draft report, PSE requested specific details to identify the project and verify the claim. We have not received any such feedback from SBW. PSE realizes that the schedule was very tight, and did not allow for much time to communicate these sorts of details. Had there been more time available, as would be the case in a full evaluation, PSE believes these issues would have been resolved to the satisfaction of SBW. Again, a full program evaluation will address these issues.

[23] *"Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*, SBW Consulting, Inc. Final report, May 22, 2012. Page 46, "B. Billing analysis approach may overstate savings attributable to program.", ¶ 1.

iv. SBW conducted a meeting for interested CRAG members on April 24 to review its draft final report, "*Independent Third-Party Review of PSE's 2010-2011 Electric Conservation Energy Savings"*.

Some CRAG members who attended the April 24 webinar submitted email comments suggesting that the initial proposed 35 percent reduction seemed arbitrary and should not be made at this time. Instead, the savings should be determined through a full evaluation.

One commenter said, "A reduction of this magnitude feels premature, given uncertainties, limited data collection, and limited analysis." Another said, "A closer examination of the savings is likely warranted, but until that work is completed I don't support an arbitrary reduction of savings for this program." And another: "I agree that it is premature to reduce the savings for the RCM by such a large amount."

PSE does not believe the third party recommended reduction in savings is substantiated. While the report raised concerns about consistent application of analysis protocols and rolling baselines, no actual examples of inconsistent analyses were cited and PSE is not aware of any such occurrences. Therefore, it must be assumed the recommended reduction in claimed savings is solely based on concerns regarding analysis methodology, which has not received sufficient review and evaluation to determine a realization with sufficient precision to make a savings claim adjustment.

5. KEMA's comprehensive study, "*Puget Sound Energy's Home Energy Reports Program: Three Year Impact, Behavioral and Process Evaluation",*[24] indicated that actual, verified claimed savings values of 276 kWh for continued reports and 164 kWh for suspended reports.[25] The aggregate of these values results in an overall savings report of 7,034 MWh for Home Energy Reports; a net adjustment of 1,941 MWh more than the 5,093 MWh originally reported in the 2011 Annual Report. This methodology was approved by the full CRAG in October, 2011.

   During the October 20, 2011 CRAG meeting, it was agreed that the then-current savings value[26] would be reported in the 2011 Annual Report, with the understanding that the updated, verified figure would be incorporated into the 2010-2011 biennial conservation savings report.

[24] Included in Attachment 4 of this report.

[25] *"Puget Sound Energy's Home Energy Reports Program: Three Year Impact, Behavioral and Process Evaluation,"* DNV KEMA Energy & Sustainability, March 9, 2012. Page 1-4, Table 1-2.

[26] At the time of the publication of the 2011 Annual Report, the 20-month KEMA evaluation, dated October 26, 2010, indicated that this aggregate savings value was 222.1 kWh per home.

Savings Adjustments

As noted in comment 1 on page 10, PSE filed replacement pages to its 2010 Annual Report when, during ongoing and standard internal reviews, it was discovered that reporting anomalies necessitated an adjustment to the savings totals.

As noted in comment 2 on page 10, these routine reviews continued into 2012, resulting in approximately 3,000 kWh, or 3 MWh of reported savings reductions. Rather than file replacement pages to the 2011 Annual Report, PSE consulted with various Stakeholders and reached a decision to reflect those savings adjustments in this biennial savings achievement report.

The final adjustment of 1,941 MWh to PSE's originally reported biennial total is a result of KEMA's Ex Post evaluation findings of Home Energy Reports (H.E.R.) savings, as noted in comment 5 on page 13.

The resulting PSE verified final reported first-year electric conservation savings at the customer meter is 644,392 MWh, which exceeds its approved target of 622,000 MWh by 3.6 percent.

Establishing the 2010-2011 Two-Year Conservation Target

As has been its practice for each biennium since the implementation of the 2002 Stipulation Agreement,[27] PSE developed its 2010-2011 electric conservation target with a high level of due diligence. The Company conducted extensive research, reviewed a wide-ranging catalog of potential measures and conservation initiatives, and engaged its Stakeholders and Constituents in careful and thorough planning. Potential costs and budgets were scrutinized, evaluated, vetted, and reviewed with CRAG members, so as to minimize the impact on PSE Ratepayers.

Some key highlights of those efforts are provided in the following discussion.

Integrated Resource Plan

The Company's 2009 Integrated Resource Plan[28] (IRP) was the source of its ten-year, 2010-2021 conservation potential, which was 3,748,773 MWh of first-year savings, as reported at the customer meter level.

The development of the ten-year potential was reviewed throughout a series of IRPAG (Integrated Resource Potential Advisory Group) and CRAG meetings between 2008 and 2009. The Company's two-year, 2010-2011 conservation target of 622,000 MWh of first-year savings at the customer meter was determined by prorating its ten-year conservation potential, incorporating several factors, as detailed in the IRP, and discussed in the following sub-section.

The relevant portions of the IRP that describe the technologies, data collection, processes, and assumptions that were used in determining the ten-year conservation potential and two-year conservation target are fully discussed in Chapters 5, 8, Appendix I, and Appendix L, Volume 1 of the IRP. The Company's methodologies were consistent with that of the NW Power Planning Council (the Council). The complete final 2010-2011 ten-year conservation potential and two-year conservation target compliance filing was made on June 18, 2010.

Determination of PSE's Pro Rata Share of the Ten-Year Conservation Potential

RCW 19.285.040 requires that, once the ten-year conservation potential has been developed, utilities set a biennial electric conservation acquisition target which is no lower than the utility's two-year pro rata share of its ten-year potential.

[27] Settlement Terms for Conservation, Exhibit F to the Settlement Stipulation in Docket UE-011570.
[28] The 2009 IRP was filed with the WUTC on July 30, 2009 in Docket No. UE-080949.

The WAC rule for setting the biennial target defines "pro rata" simply as "the calculation used to establish a minimum level for a conservation target"[29] and requires that the utility must document how the ten-year cumulative conservation potential was prorated.[30]

The conservation potential in PSE's 2009 IRP assumes that all retrofit end use energy efficiency and fuel conversion potential is accelerated into a ten year period, while other types of conservation or demand-side resources are ramped in more gradually over time over natural measure life cycles or customer growth rates. This is consistent with previous IRP's and is intended as a general planning assumption to demonstrate that there is value to acquiring these resources as quickly as realistically possible, but that they cannot be acquired immediately.

The 2009 IRP expressed concern about the practicality of actually achieving the optimal accelerated level of cost-effective savings, particularly in the short term. The economic downturn and competition for people and resources to implement programs were among the factors identified in the 2009 IRP as having possible impact on PSE's ability to acquire all the conservation identified in the IRP. This led to a decision to reduce the economic, achievable potential in the 2009 IRP from a model-optimized pro-rata level of 41 aMW/year to 38 aMW/year as a more practical and reasonable number.

However, it is not possible for a conservation potential assessment to fully capture all the market feasibility and uncertainty factors that can affect real-world program design and implementation. Furthermore, the conservation potential includes electricity savings from all possible sources: utility programs, codes and standards, market transformation, and adoption of conservation measures outside of any programs or code requirements. Some conservation potential is therefore outside of PSE's control and ability to measure.

Therefore, the company made some additional pro rata adjustments to the cumulative conservation potential, with advice and input from the CRAG. These adjustments were intended to address changing market conditions, technical feasibility, timing issues, and other uncertainty factors beyond those considered in the company's conservation potential assessment. The result of this process was a final 2010-11 target of 71 aMW (622,000 MWh).

Requests for Proposal

PSE regularly explores the market for new or enhanced efficiency program opportunities. This is done through an open RFP process. For the 2010-2011 biennium, PSE had two conservation resource acquisition RFP offerings. The first RFP was an energy efficiency only RFP, issued in 2009. The second RFP, let in 2010, was for demand-side resources as part of the All Source RFP process that follows the Integrated Resource Plan, as required by WAC 480-107.

[29] WAC 480-109-007 (14).
[30] WAC 480-109-010 (2).

The results of these RFP processes contributed to development of the Company's 2010-2011 program portfolio.

The energy efficiency RFP resulted in two agreements for services. PSE hired Proctor Engineering to conduct a residential fan motor upgrade pilot program. The program was ended in late 2010, due in part to lack of customer participation. PSE selected ECOS (now called ECOVA) to manage three separate residential scopes of work; Multifamily Existing, Single Family Weatherization, and Retail Lighting. PSE closed the Retail Lighting program scope of work early as Energy Efficiency program staff gained the appropriate expertise to manage the work internally at reduced costs.

Pilot Programs

Pilot programs consider and evaluate the feasibility, potential market penetration, delivery methods, and customer acceptance of new technologies and new applications. Pilots are typically limited-scale and are not subject to the same cost-effectiveness standards that are required of continuing programs, unless energy savings are claimed.[31]

Examples of pilot initiatives considered during 2010 and 2011 that were retained for full program status[32] included natural gas fireplaces, ductless heat pumps,[33] LED Downlighting, Home Energy Reports, and heat pump sizing & lockout controls. Pilot programs that were concluded within the biennium without converting into permanent offerings included micro-combined heat and power systems, TV turn-in (decommissioning) and residential grants.

RTF Deemed Measures

Per condition K(6)(b), the Company is required to use the Regional Technical Forum's (RTF) deemed[34] measure savings values, unless, as indicated by condition K(6)(c), evaluation data, engineering analyses, or other reliable sources substantiate the use of a different savings value. These values apply primarily to residential customers, although the Business Energy Management sector began adding or converting PSE Deemed measure values to RTF Deemed values in 2011. The majority of small business, retrofit, new construction, and large power user-self directed conservation measures are calculated on a per-site or per-building basis by an energy management engineer.

[31] Condition K(7)(d) of the 2010 Electric Settlement Agreement, Docket No. UE-100177.
[32] Some pilot measures became full programs at the beginning of 2012.
[33] Ductless heat pumps are still considered a provisionally deemed measure by the RTF.
[34] The current RTF designation for these types of measures is UES; Unit Energy Savings.

Within the four RTF measure sectors, there are measure type classifications; 6 agricultural, 38 commercial, two industrial, and 37 residential.[35] Commercial measure types are organized by end-uses, including: appliances, cooking, grocery, and smart strips.

Residential types of RTF sectors include: Appliances, Domestic Hot Water, Heating/Cooling, Lighting, New Construction, and Weatherization. Some of the Commercial measure types do not list specific savings values, as there are ongoing analyses and review, savings values are provisional, or they are calculated; either by an MS Excel template or other engineering input. Many, though, include an MS Excel workbook containing multiple measure variants. Pre-rinse Spray Valves, for instance, has a list of 15.

The residential sector has a more comprehensive list of deemed measures; there are over 80 showerhead variants, and CFL lamp variants number over 30, including both standard and specialty bulbs. There are over 200 variants of Multifamily insulation and windows alone.

PSE reviewed RTF deemed measures that could be implemented for offering to customers and managed in a cost-effective manner. The Company provided a comprehensive list of all resulting prescriptive measures that were available in Exhibit 4 of the 2011 Annual Conservation Plan, and also provided detailed prescriptive measure lists in the 2010 and 2011 Annual Reports.

As the RTF adds new measures or modifies existing measures,[36] PSE adopts those applicable to its programs at the beginning of a calendar year, per its measure revision guidelines.[37] These include measure savings values converted from PSE Deemed to RTF Deemed.

Stakeholder Engagement

In addition to IRPAG and CRAG involvement in the IRP development discussed above, PSE maintained a close involvement of the CRAG throughout 2009. CRAG meetings focusing on 2010-2011 planning began with the June 25, 2009 meeting. Savings targets were the focus of the July 29, 2009. In the September 15 CRAG meeting, PSE shared its draft budget details. Biennial target filing remaining details were reviewed in the October 14 CRAG meeting.

[35] Indicated amounts exclude those measure types that are classified as "inactive" and "proposed" on the RTF website: http://www.nwcouncil.org/energy/rtf/measures/Default.asp. Some measures are further classified as "under review", "provisional", or "out of compliance."

[36] For instance, commercial Hot Food Holding Cabinets were a PSE Deemed measure in 2010. In 2011, PSE switched to the RTF deemed savings value.

[37] Measure Revision Guidelines, published as Attachment 5 of the EM&V framework, Exhibit 8 of the 2012-2013 Biennial Conservation Plan, filed under Docket No. UE-100177, October 28, 2011.

Subsequent to PSE's 2010-2011 tariff filing on December 1, 2009,[38] WUTC Staff initiated an investigation.[39] Between January and March, 2010, PSE had the opportunity to provide a wide variety of details; for instance, program clarifications, budget development details, and savings calculations. This collaborative process, with its high degree of rigor, ensured that the 2010-2011 savings targets and budgets were thoroughly vetted. PSE also partnered with CRAG members throughout the first three quarters of 2010 to design the set of deliverables contained in the EIA Settlement Agreement.

This work led to the Commission approving the Ten-Year Achievable Conservation Potential and Two-year Conservation Target on October 13, 2010.[40] After Commission approval of the Two-year Conservation Target, that Target represents PSE's total obligation, relative to achieving all available, feasible conservation, under the terms of RCW 19.285 and WAC 480-109. That approved Conservation Target is deemed to be all cost-effective, reliable, feasible, and available conservation that the Company must pursue for the 2012-2013 biennium.

[38] Docket Nos. UE-091859, UG-091860, filed November 30, 2009.
[39] Docket No. U-091954, filed December 23, 2009.
[40] Docket No. UE-100177, Order 5 (amended). ¶ 42, pgs 10 & 11.

References

Table 3 provides Docket numbers for all supporting documents[41] and WUTC filings pertaining to the development, progress reporting, and confirming results of the 2010-2011 biennial conservation achievement.

Table 3: Substantiating 2010-2011 Electric Savings Documents and Their Associated Docket Numbers

Document Description	Pertaining to	WUTC Docket No.	Date Filed
2009 IRP	Development of the 10-year potential and 2-year target	UE-080949 UG-080948	Initial: May 30, 2009 Compliance: July 30, 2009
2010-2011 Conservation Filing	Initial documentation of the 2-year target	UE-091860 UG-091859	November 30, 2009
2010 ten-year potential & two-year target	Initial EIA filing	UE-100177	January 29, 2010
2010-2011 EIA compliance filing (revised)	Formalization of the 2-year target	UE-100177	June 18, 2010
2010 Annual Conservation Report & all Attachments	Reporting of 2010 savings and expenditures	UE-970686 & UE-100177	February 15, 2011
2010 Annual Conservation Report replacement pages	Reporting adjusted savings following internal review	UE-970686 & UE-100177	April 25, 2011
2011 Annual Conservation Plan	Detailed plans for 2011 spending and savings	UE-100177	December 1, 2010
2011 Annual Conservation Report & all Exhibits	Reporting of 2011 savings and expenditures	UE-970686	February 15, 2012

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

Acknowledgements

Puget Sound Energy appreciates the concerted and focused effort of its Stakeholders and CRAG members throughout the 2010-2011 biennium. CRAG members demonstrated a commitment to our shared vision for success, actively participated 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 earning a renewed level of trust. We look forward to an energized and positive 2012-2013 biennium.

It is also important to recognize our customers, who provide the energy efficiency funding and make efficient choices daily. We appreciate retailers, contractors, and our trade allies, who act as our partners, providing expertise and installation "boots on the ground" to engage our customers.

Additionally, as SBW indicated in their 2010-2011 electric savings review, the veracity of PSE's electric conservation savings is remarkable, "Considering the complexity and diversity of the PSE portfolio…". This would not be possible without our dedicated Energy Efficiency staff, who consistently exceed customer expectations while meeting challenging goals and demonstrating fiscal responsibility, with a high degree of attention to detail.

Thank you!

CustomerSolutions