# Puget Sound Energy's

# 2012-2013

# Biennial Electric Conservation Achievement

PUGET SOUND ENERGY

The Energy To Do Great Things

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## Attachments

1) The Department of Commerce EIA report, in its approved and final format.
2) Extracts of the 2012 and 2013 Exhibit 1: Savings and Expenditures, included in the Annual Report of Energy Conservation Accomplishments.
3) Extracts of the electric 2012 and 2013 Exhibit 2: Cost-Effectiveness Results by program, included in the Annual Report of Energy Conservation Accomplishments.
4) The final 2012-2013 PSE Condition Compliance Checklist,[1] updated for the seven remaining 2014 deliverables, indicating that PSE met all 2012-2013 Target filing conditions enumerated in Order 01 of Docket No. UE-111881.
5) SBW Consulting, Inc.'s (SBW or SBW's) final Biennial Electric Conservation Achievement Review (BECAR) report, "*Independent Third-Party Review of PSE's 2012-2013 Electric Conservation Energy Savings"*. The Attachment consists of three volumes: the main report; Appendix 1, BECAR supporting documents; and Appendix 2; on-site verification materials.[2]

   At the conclusion of the main report is a copy of SBW's correction memo, outlining Residential Energy Management 2013 savings adjustments, based on 2012-2013 BECAR analyses.
6) DNV • GL's *Home Energy Report Program 2013 Impact Evaluation*.

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

[2] The original document from SBW included 1,048 pages consisting of all impact evaluations that PSE already filed and provided to CRAG members in its 2012 and 2013 Annual Conservation Reports. Providing them again would be redundant.

# Executive Summary

Puget Sound Energy ("PSE" or "the Company") is pleased to present this 2012-2013 Biennial Report of Electric Savings to the Washington Utilities and Transportation Commission ("UTC" or "Commission"). 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,
- PSE regulatory compliance and Regulatory Stakeholder engagement.

## *PSE Surpassed its 2012-2013 Biennial Electric Savings Target*

Over the 2012-2013 period, PSE achieved 698,137 MegaWatt-hours (MWhs) of first-year electric conservation, as reported at the customer meter, or 104.8 percent of the Commission-approved 666,000 MWh Target.[3] This accomplishment represents PSE's total obligation, relative to attaining all available conservation that is cost-effective, reliable, and feasible for the biennium. The achieved electric savings also surpasses PSE's decoupling commitment, as discussed on page 6.

PSE's electric conservation expenditures were $189.27 million[4] over the same timeframe. The Portfolio-level electric Total Resource Cost (TRC) benefit-to-cost ratio was 1.84.

PSE requests the Commission issue a decision, determining that PSE complied with its conservation Target, as discussed in this 2012-2013 electric Biennial Conservation Report.

**Table 1: Portfolio 2012-2013 Electric Conservation Results**

| | Savings (MWh) | Expenditures | Total Resource Cost B/C Ratio |
|---|---|---|---|
| Electric | 698,137<br>79.7 aMW | $189,274,000 | 1.84 |
| Target/ Budget | 666,000<br>(76.0 aMW) | $189,662,000 | |
| Percent | 104.8% | 99.8% | |

698,137 MWh divided by 8,760 hours = 79.7 aMW

[3] Order 01, Docket No. UE-111881, June 14, 2012.

[4] The total 2012-2013 electric expenditures noted excludes $1.12 million applied to Demand Response, Net Metering, and Renewables Education programs.

Table 1 provides a cumulative view of the 2012-2013 electric conservation Target and budgets, savings results and expenditures. Details that comprise these totals are contained in PSE's 2012 and 2013 Annual Reports of Energy Conservation Accomplishments that are PSE's official records of conservation and fully meet the final conservation savings required to be reported to the Commission in RCW 19.285.070.

Consistent with savings correction recommendations noted in SBW Consulting Inc.'s (SBW) Biennial Electric Conservation Achievement Review (BECAR), PSE reduced its final, verified savings by -4,243 MWh. Also included in this final, verified electric savings total is an additional true-up of +1,501 MWh, resulting from the required DNV • GL (formerly KEMA) ex-post evaluation of 2012 and 2013 Home Energy Report verified savings.

Overall, PSE revised its final verified 2012-2013 savings from an originally reported 700,879 MWh to 698,137 MWh.

It isn't necessary to re-file the 2013 Energy Efficiency Annual Report of Energy Conservation Accomplishments, as PSE, SBW, and the Conservation Resource Advisory Group (CRAG) agreed to the savings correction subsequent to the Annual Report's original filing on February 13, 2014. Similarly, the DNV • GL ex-post results were published subsequent to the Annual Report filings.

## Biennial Electric Conservation Performance

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 conditions, technological advancements, and mounting regulatory administrative requirements to maximize its electric conservation achievement, while efficiently and effectively managing ratepayer funding. The 2012 and 2013 PSE Reports of Energy Conservation Accomplishments, both filed under Docket Nos. UE-111881 and UE-970686, provide extensive discussions of these efforts.

PSE engaged its Regulatory Stakeholders early in the 2012-2023 ten-year potential and 2012-2013 target-setting process.[5] Details of PSE's Conservation Potential Assessment (CPA) and target-setting are extensively discussed in the Company's 2012-2013 Biennial Conservation Plan, (BCP) also filed under Docket No. UE-111881.

[5] Biennial target-setting begins more than a year prior to filing the following year's biennial target. In this case, 2012-2013 planning commenced in December 2010, and PSE engaged the CRAG in July, 2011, consistent with condition K(8)(f) of the 2010 Electric Settlement Agreement. Several CRAG members were also involved in the IRP Advisor Group (IRPAG) discussions leading up to the conservation target-setting process.

PSE communicated with the CRAG 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 also demonstrated compliance with all regulatory requirements outlined in three separate sets of conditions:

- Sections A through J and L of the 2010 Electric Settlement Agreement, Docket No. UE-100177,
- The conditions of Order 01, Docket No. UE-111881,
- RCW 19.285, and
- WAC 480-109.

PSE's condition compliance steps are listed in Attachment 4 of this Report.

In many cases, PSE often exceeded requirements; by providing information in advance of requests, by adding valuable supporting data, and by adding—and in some cases, customizing—Exhibits in its conservation publications. PSE adaptively managed its reporting and correspondence to exceed Stakeholder needs, along with providing a best in practice level of budget and planning documentation.

In all cases, the CRAG received copies of reports, plans, Exhibit updates, and tariff revisions prior to their filing. PSE closely engaged the CRAG with the biennial and annual planning process, and provided CRAG members with up to 120 days in some cases to review and comment on plan details. PSE earned compliments from some CRAG members on the amount, detail, and quality of the energy-efficiency information that PSE provides. PSE provided prompt and thorough responses to all Commission Staff and other Stakeholder queries on annual plans and accomplishment reports.

## *Supporting Documentation*

All program result details for the 2012-2013 biennium are provided in PSE's Annual Reports of Energy Efficiency Conservation Accomplishments, each filed in Dockets UE-111881 and UE-970686, with copies provided to the CRAG, and subject to Commission Staff review and follow-up. The 2012-2013 BCP, developed with rigorous CRAG engagement and subject to a 60-day UTC review, is also filed in Docket UE-111881.

In addition to already-filed detailed information, readers may also refer to the Report's Attachments for additional 2012-2013 biennial details.[6]

Pursuant to the Department of Commerce's Energy Independence Act (EIA) Reporting Instructions of May 2014,[7] the Company filed its "*PSE_EIA-2014-ReportWorkbook-5-1-2014*" document with the Department of Commerce concurrent with this UTC-oriented report. That document is included with this report as Attachment 1. Along with Attachment 1, Attachments 2 through 6 are included only for the UTC filing, consistent with condition (8)(i).

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

[7] Department of Commerce "EIA-2014-ReportWorkbook-5-1-2014.xlsx": *(Excerpted)* The Energy Independence Act (EIA) "RCW 19.285.070, Reporting and public disclosure" requires each qualifying utility to submit an annual report describing compliance with the law. This template implements the public reporting requirement. Additional documentation may be necessary to demonstrate full compliance with EIA. The EIA reports will be made available to the public via Commerce's website, http://www.commerce.wa.gov/eia.

## 2012-2013 Electric Conservation Results

The 2012-2013 biennial achievement of 698,137 MWh represents PSE's total obligation, relative to achieving all available conservation that is cost-effective, reliable, and feasible 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, filed on October 28, 2011 in Docket No. UE-111881. The Commission approved the Company's biennial acquisition Target of 666,000 MWh in Order 01 on June 14, 2012 with conditions.

At the conclusion of the biennium, PSE exceeded its Target by 4.8 percent: 698,137 MWh versus a Target of 666,000 MWh. PSE demonstrated a high degree of stewardship in managing ratepayer funds, with expenditures of $189.27 million, finishing at 99.8 of the conservation-specific budget of $189.66 million. [8] PSE also achieved a Total Resource Cost (TRC) benefit-to-cost ratio of 1.84 at the Portfolio level.

PSE could not have achieved these results without Customer Energy Management (CEM) Staff's commitment to satisfying customer expectations, adaptively managing it programs using Total Quality Management (TQM) principles, focusing on innovation, and continuously improving processes to maximize efficiency and effectiveness.

On page 6, Table 2 represents the baseline first-year, customer-meter savings values PSE originally reported for 2012 and 2013 (illustrated in the "Reference" row's "1"). "Reference 2" indicates the Residential Energy Management (REM) savings corrections recommended by SBW.[9] "Reference 3" is the true-up in savings indicated by the required ex-post Home Energy Reports evaluation, performed by DNV • GL.[10] "Reference 4" is the difference of the biennial Target versus the adjusted results, and "Reference 5" is the percentage by which PSE surpassed the Target. The discussion applicable to the final Target achievement relates to PSE's decoupling commitment.

[8] This amount excludes a budgeted $3.77 million for Net Metering, Demand Response and Renewable Education.

[9] The details of the REM savings adjustment (SBW's correction memo) are contained at the conclusion of Attachment 5: Puget Sound Energy 2012-2013 Biennial Electric Conservation Achievement Review (BECAR).

[10] The true-up of Home Energy Report 2012-2013 savings is summarized in Table 4. Detailed analysis is provided in DNV • GL's ex-post Home Energy Reports evaluation, included as Attachment 6 of this Report.

### *Decoupling Commitment*

Although not a part of the EIA biennial Target, it is important to consider the effect of the decoupling agreement on conservation savings. Decoupling became effective on July 1, 2013, (Docket Nos. UE-121697 and UG-121705, Order 07) with one-quarter (25 percent) of the 2012-2013 biennium remaining. PSE is required to achieve 5 percent over its Commission-approved savings Target each biennium per the terms of the decoupling order. Thus, PSE is committed to achieve electric savings 1.25 percent above the Target. (25% of 5% = 1.25%).

By completing the biennium 4.8 percent above the Target, the final total electric biennial savings of 698,137 MWh topped this threshold.

**Table 2: Verified 2012-2013 Savings with Adjustments**

| Reference | Source | Megawatt-hours | Discussion |
|---|---|---|---|
| 1 | 2012 Annual Report | 339,487 | |
| | 2013 Annual Report | 361,392 | |
| | Subtotal | 700,879 | |
| 2 | SBW REM Recommended Corrections | -4,243 | (Totals below values in blue text) |
| | | -187 | Heat pump sizing & lockout controls *Please see Table 3 for additional details* |
| | | -2,255 | Indoor LED fixutre *Please see Table 3* |
| | | -1,801 | Outdoor LED fixture *Please see Table 3* |
| 3 | DNV • GL ex-post Home Energy Reports True-up | +1,501 | (Totals below values in blue text) |
| | | +1,460 | 2012 Home Energy Reports |
| | | +41 | 2013 Home Energy Reports |
| | Final Electric Conservation, MWh | 698,137 | |
| | 2012-2013 Target | 666,000 | |
| 4 | Difference | + 32,137 | |
| 5 | Percent Exceeded Target | 4.8% | Must achieve 1.25% over target in order to avoid decoupling penalty. |

## *Savings Verification*

It is of key significance that readers understand that savings reporting accuracy is of utmost importance to PSE, and it is a charge that CEM Staff executes on a daily basis. The results of their efforts have been validated by independent sources and recognized by CRAG members for the past four years. PSE relies on conservation savings to reduce customer resource needs. Absent regulatory requirements, CEM Staff would continue to exercise the same degree of rigor, oversight, and Total Quality Management that it does today.

Throughout the just-completed biennium, PSE executed numerous approaches to ensure the veracity of its conservation savings reporting and that exceed most examination criteria, both internal or external. Key elements of PSE's CEM department efforts in this regard include, but aren't limited to:

- Staff routinely update their training in database entry and savings reconciliation, and are closely engaged in all evaluations. They are keenly aware of RTF updates and measure revisions.
- Department processes are consistently reviewed and updated—including measure Guidelines that are Attachments to Exhibit 8: EM&V Framework in the 2012-2013 BCP.
- Software systems undergo examination and continuous improvement steps throughout the biennium.

### Internal Reviews

PSE's CEM department, consisting of Residential and Business Energy Management (REM and BEM) organizations, Energy Efficient Communities, and New Program Development & Verification organizations, employs rigorous and tested data assimilation and verification processes to ensure that monthly savings data is of the utmost accuracy.[11]

Key internal reviews that CEM Staff regularly employ include, but are not limited to:

- Verification Team on-site inspection of a wide range of measures prior to incentive payment. Verification Team processes earned high praise from SBW in the 2012-2013 BECAR.
- QC Review by senior engineering staff of Custom Grant analyses and PSE deemed unit energy savings business cases, and 100 percent pre- and post-installation verification on all custom retrofit grants.
- A robust evaluation process, executed by senior Evaluation Staff, as well as capable independent third-party professionals.

[11] The same rigor is also applied to Conservation Rider expenditure review.

- Integral participation in the Regional Technical Forum (RTF); providing evaluation results and engineering input. A PSE staff member is a voting member of the RTF and appointed to the Operations subcommittee. Another PSE staff member acts as liaison between the RTF and PSE, and participates of various RTF subcommittees. PSE Evaluation Staff routinely formally present evaluation results.
- PSE is a leading contributor to the Lighting Design Lab, which has become a standard-bearer for lighting in the Region.
- A best-in-class Measure Metrics archival system that is linked to CEM's tracking and reporting database. Additional to the archival database, Measure Metrics includes a process that requires every prescriptive measure to be fully documented with a business case and source of savings, vetted by Program Staff, and approved by CEM management prior to its implementation.
- A best in class, documented savings adjustment process that recognizes that counting or multiplication errors may occur; either by Program Staff, customers, or contractors. Every savings adjustment is published in each Annual Report.
- Systematic data processing controls, with built-in rules designed to catch discrepancies.
- Constant subject matter expert training, including field experience, contractor interfacing, and customer engagement.
- Although it may seem duplicative, electric (and gas) savings values are not reported directly from SAP,[12] CSY and the EES Tracking Database. Rather, consistent with the segregation of duties[13] accounting principle, they are entered into a separate tracking database by a member of the Compliance team.
- REM and BEM Staff review[14] 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?

[12] SAP is used to report all conservation expenditures. While the focus of this report is primarily savings-oriented, it is important to understand that PSE emphasizes the unqualified accuracy of all of its conservation tracking.

[13] This concept ensures that Staff that create conservation projects cannot also approve invoice payments. It also ensures that there is human intervention and review of system-created data, allowing follow-up queries to be made prior to report publication.

[14] 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.

- Key databases are routinely compared and reconciled each year—often more frequently.
- CEM consistently engages the CRAG by inviting members to field trips, Measure Metrics overviews, system overviews, plan development, and program updates.

## Savings Adjustments

As detailed in the 2012 and 2013 Annual Reports,[15] CEM exercises rigor and adaptive management to ensure the highest degree of savings and financial accuracy. Its focus is to demonstrate prudence and utilize ratepayer funds to acquire the maximum amount of conservation savings. Although not germane to a savings-specific discussion, it is noteworthy that PSE applies the same rigor and TQM principles to ensuring the accuracy of its financial reporting.

One approach that the department uses is its clearly-defined savings adjustment process. Recognizing that it is impossible to manage a conservation portfolio the size of PSE's without occasional discrepancies, CEM developed this comprehensive and documented savings adjustment process so that both REM and BEM can apply this process to savings adjustments. All financial adjustments[16] must also adhere to the adjustment process guidelines. As illustrated in each *Exhibit 1, Supplement 2: Savings Adjustments*, adjustments include savings subtractions as well as additions; there is no preference granted to adjustments that only benefit the Company.

When it is discovered that a savings adjustment is required, Program Staff are encouraged to complete a savings adjustment form, consisting of five questions, and a Microsoft® Excel™ spreadsheet, showing all of the incorrect data, what effect it had, the corrected data, and how the error will be prevented in the future.[17] The spreadsheet clearly shows all counting and multiplication steps applied to indicate (1) how the incorrect information came about and (2) the actual/correct information that must be used to reach the final correct savings figure.

It should be clearly noted that PSE aligns its measure savings values to the RTF on an annual basis. It does so according to its own initiative in order to assure the accuracy of its reported conservation savings without regulatory requirement. The department also reviews and reconciles all of its regulatory reporting, even after filings.

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[15] In Chapter 4: Evaluation, Measurement & Verification of the 2012 Annual Report, and Chapter 8: Measurement & Verification of the 2013 Annual Report.

[16] There are infrequent occasions when, (for instance) due to an incorrectly-completed rebate application, a customer may be paid an incorrect rebate amount. Subsequent to the adjustment approval, either the correct amount is paid to the customer, or—in the case of an overpayment—a customer may be requested to return a rebate check.

[17] PSE discusses this process extensively in the 2012 and 2013 Annual Reports.

On March 12, 2014, PSE filed replacement pages to its 2013 Annual Report when, during the 2014 Schedule 120 filing preparation, it was discovered that the indicated 2013 budget amounts for Customer Online Experience were incorrect.

These caused the overall 2013 budget amounts to be under-represented and disagreed with the 2013 Annual Conservation Plan Exhibit 1 filing. It is important to note that this inconsistency was discovered within existing PSE processes, was proactively reported to the CRAG, and had no bearing on actual 2013 expenditures.

## Independent Findings

In late 2012, SBW Consulting Inc. (SBW) began work on their second independent biennial electric conservation review,[18] examining PSE's 2012-2013 electric conservation savings. SBW's charter, scope of work, work plan, and review progress were managed by Commission Staff and PSE Staff throughout the biennium and into the first half of 2014.

The review was labor-intensive for both PSE and SBW. A wide range of REM and BEM Staff worked diligently to provide SBW with all of the data requested over two years. PSE estimates that the REM and BEM Sectors each have lost the equivalent of almost two FTEs[19] since March 2013 while Program Staff provided files and data request responses to SBW. The direct cost to PSE ratepayers was over $640,000 for this biennial review.[20]

### *SBW's Biennial Electric Conservation Achievement Review (BECAR) Findings*

PSE is pleased that SBW concluded that:

> "Overall, the portfolio savings claim is well-documented and carefully verified. PSE is applying RTF and PSE unit energy savings [sic] values correctly and accurately, and the various inspection practices are sound, and appear to be ensuring project quality. Review team onsite inspections did not reveal any significant issues that warrant corrections to savings."[21]

SBW also acknowledged that PSE applies conservative savings values in most cases.

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[18] SBW Inc. also performed the 2010-2011 electric savings review.

[19] While it would be impractical and inefficient to track and report on the total staff time spent on providing information to the Third-Party review contractor, a reasonable estimate of the time spent on providing data, responding to questions, coordination of file sharing, etc. is between 2,000 and 3,000 aggregates hours per Sector.

[20] Invoiced cost only. This amount does not include PSE Staff labor costs.

[21] *"Puget Sound Energy 2012-2013 Biennial Electric Conservation Achievement Review (BECAR)"*, SBW Inc., Final Report, May 19, 2014. Page ES-5, ¶ 2, *Conclusions and Recommendations*.

During its 2012-2013 review, SBW discovered that three REM measures' reported 2013 savings values weren't in sync with the then-current RTF UES values. SBW's 2012-2013 BECAR recommends a savings adjustment of -4,057 MWh in REM's Retail Lighting program and -187 MWh in REM's Space Heat program.[22] The specific correction values presented by SBW are illustrated in Table 3 and detailed in Attachment 5 with an SBW correction memo following the 2012-2013 BECAR.

**Table 3: SBW 2012-2013 Recommended Savings Corrections**

| Measure | Originally Reported Value (kWh/each) | Corrected Value (kWh/each) | Total Savings Impact (kWh) |
|---|---|---|---|
| Indoor LED Fixtures | 50 | 24 | -2,255,240 |
| Outdoor LED Fixtures | 143 | 58 | -1,801,490 |
| Heat Pump Sizing and Lockout Controls | 1,447 | 1,152 | -186,735 |
| TOTAL | | | -4,243,465 |

The original measures' savings values were vetted and supported by documented business cases as filed in the original 2012-2013 Biennial Conservation Plan.[23] Consistent with adaptive management and PSE's *Measure Revision Guidelines*, they were updated at the end of 2012 to the noted values. The savings values indicated by SBW will be reconciled with RTF values and reported accordingly going forward.

The total value, as detailed in Attachment 5 and reflected in Table 2 on page 6, is a savings adjustment to the PSE portfolio of -4,243 MWh for the biennium, which PSE confirms and supports.

### *DNV • GL Home Energy Reports Evaluations*

REM's Home Energy Reports program is evaluated each year for verified savings from the previous program year. As it relates directly to 2012-2013 results, and due to the short measure life of Home Energy Reports, it is necessary to apply the result of that evaluation to the year in which the savings occurred on an ex-post basis, rather than on a going-forward basis, as is standard practice for evaluations.

[22] *"Table 7: Summary of 2013 Findings"*, page 19, *"Puget Sound Energy 2012-2013 Biennial Electric Conservation Achievement Review (BECAR)"*, SBW Inc., Final Report, May 19, 2014. Items "E214a" and "E214b".

[23] Exhibit 1: Budgets & Savings, program detail tabs 5h: Retail Lighting, and 5d: Space Heat (of the electronic file).

Per PSE's agreement with the CRAG, Home Energy Reports' actual savings are evaluated annually. 2012 electric Home Energy Reports used a placeholder savings value of 222 kWh/year per report. The verified 2012 savings was 300 kWh/year for current, and 184 kWh/year for suspended reports. The 2012 KEMA[24] evaluation of Home Energy Reports was included in Exhibit 6 of the 2013 Annual Report of Energy Conservation Accomplishments.

The 2013 electric Home Energy Reports used a placeholder savings value of 300 kWh/year per report for current reports and 184 kWh/year per report for suspended reports. The verified 2013 savings was 325 kWh/year for current, and 166 kWh/year for suspended reports. PSE provided the 2013 DNV • GL evaluation, along with an extract of Table 4 (following) to the CRAG on May 13, 2014. The evaluation is included with this Report as Attachment 6.

Table 4 summarizes 2012-2013 savings true-ups.

**Table 4: DNV • GL 2012-2013 Recommended Home Energy Report Ex-Post Savings True-up**

**2012**

| Energy Efficiency Annual Report (All expressed as kWh.) | | | | KEMA (DNV • GL) Evaluation (All expressed as kWh.) | | | | Difference (in MWh) |
|---|---|---|---|---|---|---|---|---|
| | Households | kWh | Total HER Reported | | Households | kWh | Total HER Reported | |
| Current | *Not segmented by "current" vs "suspended".* | | | Current | 17,749 | 300 | 5,330,025 | 6,959 |
| Suspended | | | | Suspended | 8,841 | 184 | 1,628,512 | -5,498 |
| Sub-Total | 24,766 | 222 | 5,498,052 | Sub-Total | 26,590 | | 6,958,537 | + 1,460 |
| | | *Source: 2011 KEMA evaluation.* | | | | *Source: 2012 KEMA evaluation.* | | |

**2013**

| Energy Efficiency Annual Report (All expressed as kWh.) | | | | KEMA Evaluation (All expressed as kWh.) | | | | Difference (in MWh) |
|---|---|---|---|---|---|---|---|---|
| | Households | kWh | Total HER Reported | | Households | kWh | Total HER Reported | |
| Current | 19,070 | 300 | 5,721,000 | Current | 16,694 | 325 | 5,430,558 | 6,810 |
| Suspended | 5,696 | 184 | 1,048,064 | Suspended | 8,324 | 166 | 1,379,287 | -6,769 |
| Sub-Total | 24,766 | | 6,769,064 | Sub-Total | 25,018 | | 6,809,845 | + 41 |
| | | *Source: 2012 KEMA evaluation.* | | | | *Source: 2013 KEMA evaluation.* | | |

**Difference**

| | | | | | | | | (MWh) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **Total 2012-2013 HER Adjustment to Overall Portfolio** |
| | | | | | | | | **+ 1,501** |

[24] This was the correct name of the company at the time that the evaluation was completed.

PSE did not adjust the 2012-reported or the 2013-reported electric savings in either Annual Report as the ex-post evaluations were unavailable at the time of Annual Report filings. As it did in the 2010-2011 Biennial Conservation Report, PSE is truing up the Home Energy Report savings at the June 1, 2014 filing timeframe.

# Compliance

This biennial report on PSE's 2012-2013 electric conservation is submitted to the Washington Department of Commerce and 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 condition (8)(i),[25] which indicates that the report must be filed with the UTC. PSE will post a copy of the report on the PSE.com website concurrent with the Report's filing.

## RCW 19.285.040(1)

The Report and its Attachments 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.

[25] In the interest of conciseness and to avoid repetition, PSE will use the terms "condition (n)(x)" or "Section N(x)" when referencing deliverables outlined in Order 01 of Docket No. UE-111881, or 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.

(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 2012-2013 electric conservation Target with the UTC on October 28, 2011 in Docket No. UE-111881. The Commission approved the Target of 666,000 MWh on June 14, 2012 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 2012-2013.

An overview discussion 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*[26] of the 2012-2013 BCP. Details of the biennial acquisition Target methodology are available in PSE's 2011 IRP.[27]

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.

During the 2012-2013 Biennial Conservation period, PSE engaged in dialogue with multiple customers and consultants regarding potential combined heat and power projects, 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. Evaluated projects included an Organic Rankin Cycle power plant utilizing waste heat recovery and proposed installations of natural gas fired microturbine technology in Combined Heat and Power (CHP) applications.

[26] Prior to the 2013 Annual Conservation Plan, this Exhibit was simply referred to as the "Ten-Year Potential and Two-Year Target". As this posed referential difficulties in filing comments, PSE re-named the Exhibit, choosing this somewhat peculiar naming tenet in order to preserve the other Exhibits' naming sequences.

[27] Docket Nos. UE-100961 and UG-100960.

In March 2011, an RFP for new and innovative programs was released to approximately 250 firms. While co-generation proposals would have been entertained, none were received.

Lastly, 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 2012-2013 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. This was confirmed in SBW's report; *"Puget Sound Energy 2012-2013 Biennial Electric Conservation Achievement Review (BECAR) Final Report".*[28]

## WAC 480-109

This report complies with WAC 480-109-040 (1), which requires utilities to report by June 1 each year regarding its progress in meeting the 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. The report will be posted contemporaneously on PSE.com, as required by part (4).

## Biennial Conditions, 2010 Settlement Agreement and 2002 Stipulation Agreement

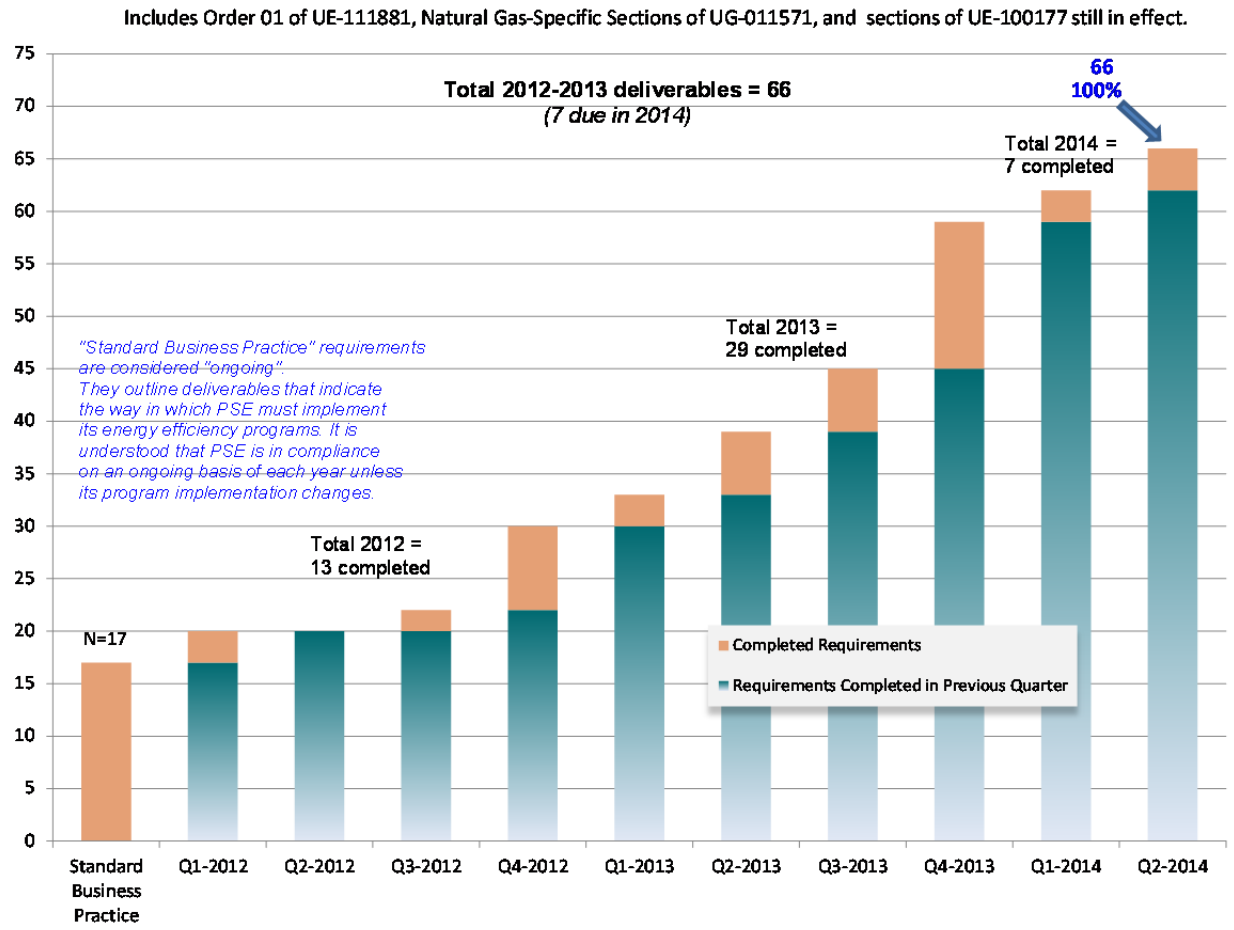
It is important to recognize that PSE manages conservation deliverables from three separate Commission Orders:

1) Exhibit F of the 2001 General Rate Case Stipulation Agreement, Docket No. UG-011571. Only those requirements pertaining to gas conservation are still in place, as the electric requirements were vacated by Order 05 in Docket No. UE-100177.
2) The 2010 Electric Settlement Agreement, Sections A through J and L, Docket No. UE-100177.
3) Order 01 of Docket No. UE-111881, Conditions.

[28] It its Executive Summary of the *"Puget Sound Energy 2012-2013 Biennial Electric Conservation Achievement Review (BECAR) Final Report"*, page ES-5, Cost-Effectiveness Assessment, ¶ 1, SBW states that "… PSE has met all of the Order requirements and is generally in compliance with Council methodology, except for minor differences with Council methodology regarding use of hourly annual avoided costs, inclusion of fewer load shapes, and exclusion of non-energy benefits and O&M costs."

Figure 1 presents PSE's compliance with all Order deliverables, by quarter for the 2012-2013 biennium. It is noteworthy that seven conditions overlapped the biennium into 2014.

**Figure 1: Completion Status of all 2012-2013 Conditions**




Relative to the RCW 19.285 stipulation that the available, reliable and feasible conservation must be cost-effective, PSE fully complied with condition (10)(a), which 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.

## Stakeholder Engagement

In addition to Integrated Resource Plan Advisory Group (IRPAG) and CRAG involvement in the IRP development, PSE maintained a close association with the CRAG throughout 2012 and 2013. CRAG meetings focusing on 2012-2013 planning began with the May 19, 2011 meeting. Savings goals were the focus of the July 21, 2011 meeting. In the August 25 CRAG meeting, PSE shared its draft budget details, and the draft tariff revisions were presented in the September 29 meeting.

PSE closely involved the CRAG in the development of the 2012-2013 BCP, and provided numerous opportunities for the CRAG to preview measure and savings plans and measure revisions throughout the biennium. Biennial Target filing remaining details were reviewed in the October 20, 2011 CRAG meeting. PSE also partnered with CRAG members throughout the first quarter of 2012 to collaboratively design the set of biennial conditions.

This work led to the Commission approving the Ten-Year Achievable Conservation Potential and Two-year Conservation Target on June 14, 2012.[29] The Commission approved the Two-year Conservation Target, representing PSE's total obligation, relative to achieving conservation that is cost-effective, reliable, and feasible, under the terms of RCW 19.285 and WAC 480-109.

Throughout the 2012-2013 biennium, PSE engaged the CRAG in the on-going development of its suite of customer offerings and reviewed program progress and provided status updates throughout the biennium. PSE presented a major update to its programs and measure offerings in the 2013 Annual Conservation Plan (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.

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

In its 2012 and 2013 Annual Reports and the 2012-2013 planning documents,[30] 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.[31]

Throughout the biennium, PSE met with the CRAG nine 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) and Total Resource Cost (TRC) results. Extracts of the 2012 and 2013 *Exhibit 2: Cost-Effectiveness Results* are included in Attachment 3 of this Report, as well as an aggregated cost-effectiveness view, that incorporates the savings revisions discussed in Chapter 2.

[30] The 2012-2013 Biennial Conservation Plan and the 2013 Annual Conservation Plan.

[31] As the biennium progressed, documentation evolved from paper copies to DVDs and to the current practice of providing USB flash drives. These efforts have increased efficiency and reduced costs to ratepayers.

# References

Table 5 provides Docket numbers for all publications filed with the UTC relative to the 2012-2013 electric conservation Target[32] and UTC filings pertaining to the development, progress reporting, and confirming results of the 2012-2013 biennial conservation achievement. This Biennial Conservation Report of verified 2012-2013 electric conservation savings and expenditures summarizes information contained in these publications and reviewed with the CRAG at prescribed intervals throughout the biennium.

**Table 5: Substantiating 2012-2013 Electric Savings Documents and Their Associated Docket Numbers**

| Document Description | Pertaining to | WUTC Docket Number | Date Filed |
|---|---|---|---|
| 2011 IRP | Development of the 10-year Potential and 2-year target | UE-100961<br>UG-100960 | Initial: May 27, 2011 |
| 2012-2013 Biennial Conservation Plan | Documentation of the 10-year Potential and 2-year Target, along with program and measure details. | UE-111881 | October 28, 2011 |
| 2012 Ten-year Potential & Two-year Conservation Target | RCW 19.285.040 requirement (Exhibit i)[33] | UE-111881 | October 28, 2011 |
| 2012 Annual Conservation Report & Exhibits 1 and 2 | Reporting 2012 conservation accomplishments and program details | UE-970686 &<br>UE-100177 | February 15, 2013 |
| 2013 Annual Conservation Plan | Detailed plan revisions, updating the 2012-2013 BCP, for 2013 spending and savings | UE-111881 | December 1, 2012 |
| 2013 Annual Conservation Report & all Exhibits | Reporting 2013 conservation accomplishments and program details | UE-970686 &<br>UE-111881 | March 12, 2014 |

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

[33] As originally filed in the 2012-2013 BCP, this Exhibit was named "Ten-year Potential & Two-year Targets. In the 2013 ACP, it was re-named "Exhibit i", to make reference more straightforward.

## 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 2012-2013 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 2012-2013 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 demonstrating fiscal responsibility with a high degree of attention to detail.

*Thank you!*

EnergyEfficency