EXHIBIT NO. ___(RWS-1T)
DOCKET NOS. UE-111048/UG-111049
2011 PSE GENERAL RATE CASE
WITNESS: ROBERT W. STOLARSKI

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.,** **Respondent.**	**Docket No. UE-111048** **Docket No. UG-111049**

PREFILED REBUTTAL TESTIMONY (NONCONFIDENTIAL) OF ROBERT W. STOLARSKI ON BEHALF OF PUGET SOUND ENERGY, INC.

JANUARY 17, 2012

PUGET SOUND ENERGY, INC.

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PUGET SOUND ENERGY, INC.

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I. INTRODUCTION

Q. Please state your name, business address, and position with Puget Sound Energy, Inc.

A. My name is Robert W. Stolarski. I am employed by Puget Sound Energy ("PSE") as Director, Customer Energy Management. My business address is 355 110th Avenue NE, P.O. Box 97034, Bellevue, WA 98009-9734.

Q. Have you prepared an exhibit describing your education, relevant employment experience, and other professional qualifications.

A. Yes, I have. It is Exhibit No. ___(RWS-2).

Q. What is the purpose of your rebuttal testimony?

A. My testimony responds to two claims related to the Conservation Savings Adjustment ("CSA") mechanism that have been made by other parties in this proceeding. The first claim, made by Commission Staff, is that the energy savings from PSE's energy efficiency programs are not sufficiently rigorous for ratemaking purposes. The second claim, made by Public Counsel and The Energy Project, is that PSE's energy efficiency programs do not meet the low-

income criterion set forth in the Commission's *Report and Policy Statement On Regulatory Mechanisms, Including Decoupling, To Encourage Utilities To Meet Or Exceed Their Conservation Targets*[1] ("Report and Policy Statement").

Q. Please summarize PSE's response to these claims.

A. My testimony demonstrates that both of these claims are unfounded. Regarding the first claim, PSE's process for measuring, verifying, and evaluating its energy efficiency programs are extensive and rigorous, and its process for determining energy savings is sufficient for purposes of PSE's Conservation Savings Adjustment ("CSA") proposal. Commission Staff's proposed standard for verifying the energy savings used in the Company's CSA proposal is impractical, costly, and out of line with industry practice. Regarding the second claim, PSE provides low-income ratepayers with programs aimed at achieving a level of conservation that is comparable to that achieved by other ratepayers, which meets the low-income guidance set forth in the Report and Policy Statement.

[1] *In the Matter of the Washington Utilities and Transportation Commission's Investigation into Energy Conservation Incentives*. Docket U-100522, Report and Policy Statement on Regulatory Mechanisms, Including Decoupling, to Encourage Utilities to Meet or Exceed Their Conservation Targets at ¶¶ 18, 28 (Nov. 4, 2010).

II. VERACITY OF ENERGY SAVINGS FROM PSE's ENERGY EFFICIENCY PROGRAMS

Q. What is the Commission Staff's position regarding the rigor of energy savings from PSE programs?

A. Commission Staff witness Deborah Reynolds states that, "The Company's estimates of energy savings are not rigorous enough for rate making" because "the estimates do not represent what actually happened after the installation itself." Exhibit No. ___(DJR-1T) at page 31, lines 10-17. Ms. Reynolds lists two criteria that, if met, would provide a sufficient level of accuracy for counting energy savings in a CSA-type adjustment. First, the energy savings must be "independently verified and evaluated". Second, this assessment must include "statistically significant post-installation analysis". Finally, Ms. Reynolds states that Commission Staff's reviews of PSE's energy efficiency portfolio are focused on program delivery and budgets, not on energy savings. Exhibit No. ___(DJR-1T) at page 32, lines 13-15.

Q. How does PSE define Evaluation, Measurement and Verification ("EM&V")?

A. The terms evaluation, measurement, and verification are defined in PSE's EM&V Framework, Exhibit No. ___(RWS-3), as follows:

> *Evaluation:* The performance of studies and activities aimed at determining the effects of a program (and/or portfolio); any of a wide range of assessment activities associated with understanding or documenting program performance, assessing program or

> program-related markets and market operations; any of a wide range of evaluative efforts including assessing program-induced changes in energy efficiency markets, levels of demand or energy savings, and program cost-effectiveness. A subset of Evaluation, called *Impact Evaluation* generally consists of statistically robust post-installation studies aimed at determining the effects of a measure, program, or portfolio.
>
> *Measurement and Verification ("M&V"):* Data collection, monitoring, and analysis associated with the calculation of gross energy and demand savings from individual measures or projects. M&V can be a subset of program impact evaluation.

The definitions used by PSE are consistent with the National Action Plan for Energy Efficiency Model Energy Efficiency Program Impact Evaluation Guide ("NAPEE Evaluation Guide"), provided as Exhibit No. ___(RWS-4), Appendix B3.

Evaluation, Measurement & Verification ("EM&V") is a term that embodies all the activities defined above.

Q. Please summarize PSE's process and protocols for EM&V.

A. PSE conducts an extensive set of EM&V activities to determine energy savings. This set of activities determines actual savings or quantifies key inputs to calculate savings after programs are implemented and measures installed. Taken together, this suite of activities ensures that PSE's energy savings are accurate and reliable, and are continually improved. Third-party evaluation firms are used extensively.

Q. Can you elaborate?

A. Since 2003, PSE has been required to meet specific conditions with respect to the scope of EM&V including review and oversight by the Conservation Resource Advisory Group ("CRAG"), which includes Commission Staff[2]. PSE's current EM&V activities are governed by conditions in the settlement agreement for conservation approved by the Commission in Docket No. UE-100177 ("2010 Conservation Settlement Agreement"), provided as Exhibit No. ___(RWS-5). Although specifically directed at electric efficiency programs, most of these EM&V conditions are also voluntarily applied to natural gas efficiency programs as well, which are still governed by the older settlement agreement.

PSE's formal framework of protocols that govern its EM&V activities, provided as Exhibit No. ___(RWS-3), was developed with substantial input from a subcommittee of CRAG members, including Commission Staff, and subsequently reviewed by the entire CRAG. This framework guides development of annual EM&V plans for specific evaluation activities for electric and gas programs. The framework adopts industry best practices for definitions of terms, principles of operation, and protocols.

All evaluations are conducted using best-practice approaches and techniques including those outlined in the NAPEE Evaluation Guide. An independent consultant has also confirmed that PSE's measurement and verification practices

are consistent with or exceed industry standard practices, as I will discuss later in my testimony.

Q. How much does PSE spend on EM&V for its energy efficiency programs?

A. PSE's evaluation expenses have totaled $1.4 million in 2010 and $1.8 million in 2011. PSE is projecting to spend $4.7 million in the 2012-2013 biennium. This level of spending is equivalent to approximately two percent of PSE's total expenditures on energy efficiency. A study of PSE's measurement and verification practices and costs by KEMA found that, in addition to expenditures on program evaluation, $2.6 million was spent on measurement and verification activities in 2011, which was about three percent of total energy efficiency expenditures. Although PSE does not separately track measurement and verification expenditures, it is expected that spending for measurement and verification will continue at levels that are commensurate with those found in the KEMA study. The KEMA study is provided as Exhibit No. ___(RWS-6).

Q. How does PSE's level of EM&V expenditure compare with other utilities?

A. PSE's expenditure levels were found to be comparable to those of a sample of other utilities across the nation in a study on effective evaluation organization conducted for PSE by Research Into Action. See Exhibit No. ___(RWS-7).

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[2] *See Wash. Util. & Trans. Comm v. Puget Sound Energy, Inc.,* Docket Nos. UE-011570 and UG-011571, Twelfth Supplemental Order, Exh. F, Settlement Terms for Conservation, ¶ 11 (June 20, 2002).

Q. Please describe in more detail PSE's procedures for post-installation evaluation of energy savings.

A. As described in the EM&V Framework, Exhibit No. ___(RWS-3), PSE conducts and utilizes impact, process, and market effects evaluations. The EM&V Framework contains extensive discussions on evaluation protocols, processes, and strategies. Impact evaluations, which analyze the energy savings that result from a program after it is implemented, are particularly relevant to this proceeding. Impact evaluations use a variety of techniques (often in combination) including metering, billing/econometric analysis, customer site inspections and customer surveys. Some of these techniques, such as metering and econometric billing analysis, analyze energy use. Other techniques, such as customer surveys and site inspections, gather information on measure installation and/or operation, and are useful where direct analysis of energy use data is impractical or as supplemental information to enhance energy use analysis.

PSE has conducted evaluations of its energy efficiency programs for over 20 years. These studies are conducted periodically as programs and measures evolve, but are generally not repeated every year since program designs and measures do not significantly change that frequently. PSE also relies on unit energy savings from the Regional Technical Forum ("RTF") for some electric efficiency measures. The measure savings obtained through the RTF have been established after thorough technical review and are generally based on EM&V studies performed by regional utilities.

Beginning 2010, PSE performs evaluations annually, on a four year schedule, such that all major electric and gas programs are covered appropriately over that time, consistent with conditions approved by the Commission in the 2010 Conservation Settlement Agreement.

Q. Can you provide an overview of PSE's completed and planned evaluations since 2010?

A. Yes. Table 1 is an evaluation project status table, providing an overview of completed/planned evaluations since 2010, as well as the last evaluation performed on each program prior to 2010. PSE's latest four-year evaluation plan, covering the period 2012-2015 and developed with review and input from the CRAG, is provided as Exhibit No. ___(RWS-8).

Table 1. PSE Evaluation Project Status

Program Name	Completed			Planned			
	Pre-2010	2010	2011	2012	2013	2014	2015
Sch E201/G203: Low Income			X				
Sch E214/G214: Single Family Existing	2009 2008	X	X	X	X		
SchE215/G215: SF New Construction	2008				X		
Sch E216: Gas Conversion						X	
E217/G217: MF Existing	2009		X			X	
Sch E218/G218: MF New Construction					X		
Sch E250/G205, E257: C&I Retrofit & Traffic Lights	2007		X				X
Sch E251/G251: Commercial New Construction	2007			X			
Sch E258: Large Power Customer Self Directed			X				X
Sch E262/G262: C&I Rebates	2009 2007		X		X		
Sch E253/G208: Resource Conservation Manager	2009					X	
Sch 249: Pilots		X		X	X	X	X

To ensure that evaluation results are actually used to improve program savings and delivery mechanisms, each evaluation study is accompanied by an Evaluation Report Response ("ERR"). The ERR process ensures that there is a direct link between evaluation studies, savings tracking systems and the Measure Metrics data documentation system.

Q. Please describe in more detail PSE's procedures for measurement and verification of energy savings.

A. PSE has established a formal set of policies and protocols to guide its measurement and verification ("M&V") activities, which is provided as Exhibit

No. ___(RWS-9). This document was previously provided to the CRAG for review and input.

PSE verifies accurate counting of the number of measures installed or rebated, application of the correct savings values and, when required, logs corrections using standard accounting procedures. A wide range of verification methods are used, including on-site inspections, customer surveys, and auditing of project files and tracking databases.

Verification is conducted on all non-pilot programs throughout the year. The verifications are conducted by PSE engineers or a team of PSE quality assurance specialists. All programs delivered by third-party administrators are required to develop and follow a verification plan that is subject to independent verification by PSE. Verification work is also conducted by third-party evaluators as part of comprehensive program or portfolio evaluations. In a few instances, direct verification of measure installation is not possible. For example, compact fluorescent lighting ("CFL") bulbs and fixtures that are rebated directly through retail stores cannot identify individual participating customers. Therefore, a survey of a sample of customers was conducted to determine the installation rates for CFL products purchased.

Consistent with the M&V protocols in Exhibit No. ___(RWS-9) and starting with 2012, PSE will prepare an annual verification plan. The plan establishes a level of rigor according to the level of risks and costs associated with programs. PSE

plans to follow sampling protocols established by BPA. The 2012 verification plan is provided as Exhibit No. ___(RWS-10). In addition to verifying the savings value of installed measures, it is also imperative that PSE verifies program eligibility attributes such as whether: the applicant is a PSE customer; the purchased equipment qualifies as an eligible measure; and there is a valid receipt demonstrating the equipment was actually purchased. Therefore, customer rebate applications are extensively verified for accuracy prior to rebate payment, which helps to ensure accurate counting of units and savings.

PSE uses several processes and systems to accurately measure and track electric and gas measure savings, customer and measure counts, and costs. All are integral in providing the finest level of detail possible during routine internal program audits.

The Measure Metrics data documentation system plays an integral role in maintaining and applying accurate, up-to-date information. Its primary purpose is to archive detailed measure savings and other information, as well as provide easy retrieval of pertinent data. The system is critical to proper application of measure savings values to the calculation of individual project savings.

Q. Has PSE established guidelines for the accuracy of its energy savings?

A. A key component of PSE's EM&V process is the assurance of energy savings accuracy. Since 2008, PSE has implemented several processes and guidelines to

ensure that the accuracy of its energy savings, both electric and gas, maintain the highest standards.

When formal impact evaluation studies are conducted, PSE achieves statistically significant results, although the level of accuracy can vary between studies. PSE's ability to achieve a given level of statistical precision is a function of several practical considerations, such as cost, analytical method, and the ability to obtain sufficiently large participant and control groups. PSE balances technical research requirements against costs and the level of risk associated with the programs being evaluated, so that evaluation studies are conducted at an appropriate scale and a reasonable cost. Similar to impact evaluations, the general goal for measure installation verification, starting in 2012, is to draw samples that provide statistically significant results, but the level of significance will vary based on budgets, research methods, costs, and ability to recruit participating customers.

Provided as Exhibit No. ___(RWS-11) are PSE's guidelines for ensuring accuracy of energy savings. These guidelines provide for consistency across programs and sectors and outline rounding rules, applicable claims periods and how retired measures are tracked, reported and archived. This document outlines the guidelines for tracking savings derived from rebate applications; directly-installed measures; and savings from retailers, resellers and dealers.

Adjustments to energy savings values are periodically necessary to update RTF unit energy savings, incorporate new impact evaluation findings, or, in rare cases,

to correct counting errors. PSE regularly audits its program tracking and Measure Metrics systems, including periodic audits by external firms, to maintain the most current and correct information.

Q. To what extent does PSE currently use third-party evaluators to evaluate and verify its program or portfolio energy savings?

A. All major impact evaluations are conducted by third-party consultants selected through a competitive bidding process. In addition, PSE has contracted with SBW Consulting to conduct an independent third-party review of the energy savings achieved by PSE's 2010-11 electric energy efficiency program portfolio, required by a condition approved as part of the settlement of Docket No. UE-100177. This review assesses PSE's reported savings by auditing the data contained in PSE's tracking data bases, checking the energy savings calculations and input data documented in a sample of individual customer project files, and, finally performing on-site inspections at a sub-sample of customer facilities. This review also examines PSE's processes and practices, as they existed in 2010 and 2011, with respect to EM&V. This review will be completed in 2012.

Q. Have any interim results of this evaluation been provided to PSE?

A. Yes. An interim report, based on 2010 program tracking system and project file reviews , concludes that "PSE has done a credible job of tracking and reporting program accomplishments for the 2010 electric efficiency portfolio", although the on-site inspection task and review of 2011 programs/projects has not yet been

completed. This third-party portfolio review interim report is provided as Exhibit No. ___(RWS-12).

Q. Does PSE utilize unit energy savings values from the Regional Technical Forum?

A. Yes. In compliance with the 2010 Settlement Agreement conditions from Docket No. UE-100177, PSE uses RTF unit energy savings values whenever possible.

Q. How are the RTF's unit energy savings determined?

A. The RTF usually bases its energy savings values on impact evaluation studies conducted by utilities in the Pacific Northwest region, or, when post-installation evaluation data is not available, on industry-standard engineering analyses. The measure savings are vetted by evaluation experts from utilities, BPA, the Northwest Power and Conservation Council, and other regional organizations. In 2011, The RTF completed a comprehensive review of its unit energy savings estimates by a third-party evaluation consultant and developed an EM&V Framework to guide the updating of these estimates. Based on this third-party assessment, the RTF has developed a plan over 2012-2014 to update its unit energy savings data as needed to be consistent with the new EM&V protocols. Where necessary, the RTF will commission additional evaluation studies by independent consultants to affirm savings.

Q. Does PSE attempt to validate RTF's deemed savings for PSE's circumstances?

A. Yes. Like other regional utilities, PSE conducts its own reviews and evaluations of some RTF unit energy savings values to ensure veracity and applicability to current programs and conditions. PSE then shares the results of its studies with the RTF to improve the unit energy savings values. In turn, PSE benefits from the ability to leverage evaluation studies conducted by other regional utilities and used by the RTF. Also, PSE ensures that the RTF unit energy savings are being applied appropriately and that the unit counts are correct, through the verification process described previously. The independent third party review of PSE's 2010-11 electric portfolio savings, still in progress, as to date found no problems with PSE's application or counting of RTF "deemed" savings.

Q. Are PSE's EM&V activities consistent with industry best practice?

A. Yes. As explained previously, PSE's EM&V activities are governed by the EM&V Framework, Exhibit No. ___(RWS-3). This framework was developed to be consistent with the practices presented in the NAPEE Evaluation Guide, provided as Exhibit No.___ (RWS-4). A comparison of PSE's EM&V Framework and the PIEG is presented in Exhibit No. ___(RWS-13).

PSE's programmatic measurement and verification practices have been reviewed by a third-party consultant, KEMA. This review found that PSE's measurement and verification processes "are either in line with or exceed similar practices

among utility peers." The review also found that PSE "is demonstrating leadership" in incorporating appropriate "policies, guidelines, protocols, and processes into its portfolio." A copy of the KEMA report is provided as Exhibit No. ___(RWS-6).

Finally, PSE's EM&V costs have been found to be comparable to a sample of other utilities by the Research Into Action study provided as Exhibit No. ___(RWS-7).

Q. Are the Commission Staff's criteria for determining the level of accuracy of conservation program energy savings used in PSE's CSA proposal reasonable?

A. No. Commission Staff has created a standard that exceeds industry practices for EM&V. As described previously, PSE conducts thorough and rigorous verification and evaluation of its programs consistent with industry standards and best practices. Neither the National Action Plan's evaluation guide, nor the KEMA report specify as standard or best industry practice that 100 percent of the savings from all programs be evaluated or verified at the level of rigor proposed by Commission Staff. Furthermore, Commission Staff has provided no citations or documentation of any state requiring this level of rigor for energy efficiency EM&V.

Q. What standard does Commission Staff propose to apply to the energy savings used in PSE's CSA proposal?

A. Commission Staff states that PSE's current methods and processes for determining energy savings are inadequate because they do not literally measure changes in use between a general rate case period and a rate-effective period using "statistically significant post-installation analysis"[3]

Q. Why is this unreasonable?

A. Conducting any sort of post-implementation analysis of energy savings requires a period of time to elapse before any post-implementation data can be collected. For example, a post-implementation econometric analysis of energy use typically requires twelve months of post-installation energy use data, so the analysis cannot even be conducted for more than a year after measures have been installed. This introduces a time lag if Commission Staff expects such analysis to be done on a specific time period.

Even assuming that Commission Staff does not mean that such statistical analysis must be for the time that is literally between a general rate case period and a rate-effective period, it is simply not possible to directly measure changes in energy use for all programs. For example, residential compact fluorescent lighting rebates are distributed through retail stores at the time of purchase and do not

[3] See WUTC Staff Response to PSE Data Request No. 022, for example.

identify individual participating customers with dates and specific products purchased. Such information is necessary to conduct any statistical analysis of energy use.

Finally, a general portfolio-level analysis of energy use rather than program-specific analyses, presents insurmountable problems in terms of separating the reduction in use due to programmatic conservation from other decreases or increases in use due to other factors such as energy price elasticity and economic conditions.

Q. Has Commission Staff clarified the standards that they would apply to the energy savings used as part of PSE's CSA proposal?

A. Yes. When asked to explain what was meant by "statistically significant post-installation analysis," Commission Staff responded that the concept is "as a general rule" described by a report prepared by Lawrence Berkeley National Laboratory ("LBNL") on energy savings analysis for PSE's Home Energy Report program. This report describes an analysis based on large, well defined participant and control groups, which achieved 10%-15% accuracy with 95% confidence. Finally, the report concludes that savings should be re-analyzed every year as conditions change.[4]

[4] See WUTC Staff Response to PSE Data Request No. 025.

Q. Has Commission Staff proven that this standard is practical or achievable?

A. No. Commission Staff provides no rationale or substantiation to support that this level of rigor is practical or achievable for all of a utility's program energy savings.

Q. Do you believe this standard is realistic?

A. No. Such a robust study is not realistic to conduct for all programs, particularly at the level of statistical significance achieved.

First, it is not always possible to get participant and control groups that are sufficiently large enough to achieve such high levels of statistical significance because the program participant population is too small, relative to the variance in energy use between customers.

Second, it is not necessary to conduct such an analysis every year for most programs. The Home Energy Report program is an exception because the energy savings are achieved through changes in customer behavior, which could change significantly from year to year, whereas the savings from hardware-based measures, which constitute most of PSE's program energy savings, are stable.

Finally, there is a practical aspect of balancing desire for analytical rigor with the cost to achieve that rigor, particularly for econometric billing history analysis, metered end use energy data analysis, and on-site inspections. The Commission Staff has proposed a standard without any consideration of the additional costs

that will be incurred to meet it. As shown previously in my testimony, PSE is spending or plans to spend approximately three million to five million dollars per year on state-of-the-art EM&V, yet this level of effort falls short of the Commission Staff's proposed standard.

Q. How would PSE conduct the third-party verification proposed as part of its CSA proposal?

A. As discussed in the Prefiled Direct Testimony of Mr. Tom DeBoer, Exhibit No. ___(TAD-1T), PSE proposes to conduct third-party verification, consistent with the criteria described in the 2010 Conservation Settlement agreement.[5] A third-party consultant will review and audit PSE's energy savings, and results will be provided on an annual basis. This review and audit will be expanded to apply to natural gas programs as well as electric programs. The consultant will be selected through a competitive bidding process. The Commission Staff and CRAG will provide ongoing oversight, review and input during all phases of the verification review. The scope of work will include an audit of the data in PSE's program tracking systems, detailed reviews of samples of individual project documentation files, verification of measure installations for samples of projects using on-site inspections or customer surveys, and application of EM&V results.

[5] *See* 2010 Conservation Settlement Agreement, Section K(6)(g), Exhibit No. ___(RWS-5), p. 9.

Q. Does PSE provide Commission Staff and other interested stakeholders with ongoing opportunities to review PSE's program energy savings claims?

A. PSE stakeholders, including the CRAG and Commission Staff, are provided numerous opportunities throughout each year to review, audit, and ask questions about the energy savings for PSE's energy efficiency programs and measures and its EM&V efforts.

PSE provides the CRAG and Commission Staff with copies of all PSE's semi-annual and annual reports on conservation accomplishments, with time to review and comment on the reports. Starting in 2010, the annual reports include copies of all program evaluation studies, and their associated Evaluation Report Responses, completed during the year. In no case has Commission Staff, other CRAG members, or any other party submitted any negative comments to the Commission regarding EM&V or the amount of energy savings reported.

PSE also provides copies of its annual and biennial conservation plans to the CRAG and Commission Staff, with time for review and comment. The 2012-2013 Biennial Conservation Plan contains appendices for an evaluation plan and follow-up guidelines, EM&V Framework, verification policies, energy savings accuracy guidelines. Again, no negative comments or concerns about the amount of energy savings or EM&V plans were submitted to the Commission.

A verification plan for 2012 has also been distributed to the CRAG and Commission Staff. The 2010-2011 third-party review of PSE's electric program

portfolio has been managed jointly with Commission Staff and the CRAG has been involved in development of the project scope, selection of consultant, and review of work plans and results. PSE has hosted workshops for Commission Staff and other interested CRAG members to review how energy savings are tracked, documented, and recorded, including its tracking systems and Measure Metrics documentation and archiving system. Finally, the CRAG, including Commission Staff, receives periodic updates on energy savings achievements and projections, sources of savings, and EM&V activities.

Q. Have PSE's energy savings claims been found acceptable in other regulatory proceedings?

A. Yes. Beginning in 2003, PSE was subject to a financial penalty mechanism for both electric and gas efficiency programs based on whether a target level of energy savings was achieved. PSE's reported savings used to determine compliance were accepted without any objections by any party regarding the veracity of these energy savings results. PSE's electric energy savings achievements have also been accepted by the Commission for determining payments to PSE under the 2007-2009 electric conservation incentive mechanism (gas programs continued to be subject to the penalty-only mechanism). Finally, there has been acceptance of PSE's reported electric energy savings, for the purpose of determining compliance with the Energy Independence Act, including whether financial penalties should be imposed. In all these cases, the Commission has accepted the use of PSE's energy savings for the purpose of

making decisions that affected customer rates without requiring a standard for veracity as stringent as that proposed by Commission Staff.

Q. Do you conclude that PSE's reported program energy savings are sufficiently rigorous to support a regulatory mechanism such as the CSA?

A. I believe that PSE's reported energy savings, as supported by the EM&V efforts described previously, continue to provide the desired level of accuracy necessary for ratemaking purposes. I further believe that Commission Staff's criteria for the level of analytical rigor are not fully achievable and would result in significant additional costs. As discussed previously, PSE utilizes third-party consultants to independently evaluate its energy savings, and PSE's impact evaluation and verification studies are designed to produce statistically significant results based on post-installation data. Furthermore, Commission Staff and other key stakeholders have been given multiple ongoing opportunities to review and provide input on PSE's plans, processes, and results and they have done so.

Q. Is PSE open to modification of its standards for purposes of verifying the results used as part of its CSA proposal?

A. Yes. As previously stated in the Prefiled Direct Testimony of Mr. Tom DeBoer, PSE has already proposed that recovery of the CSA be conditioned upon third-party verification of savings based on the standards established in the 2010 Conservation Settlement Agreement, but PSE is also open to a different standard that may be acceptable to the Commission. Similar to the third-party review

currently under way for PSE's 2010-2011 electric program portfolio, PSE is willing to work with all parties to define a level of analytical rigor that balances cost, timing, risk, and technical feasibility. Ultimately, PSE welcomes any reasonable standards that are achievable and acceptable to the Commission.

III. BENEFITS OF PSE ENERGY EFFICIENCY PROGRAMS FOR LOW INCOME CUSTOMERS

Q. What is the position of Public Counsel and The Energy Project regarding whether PSE's energy efficiency programs provide comparable benefits for low income customers?

A. Public Counsel and The Energy Project witness Andrea Crane asserts that PSE did not meet the low income guidance in the Commission's Report and Policy Statement because there was no evidence that PSE's energy efficiency programs provide benefits to low income customers that are "roughly comparable" to other customers. Exhibit No. ___(ACC-1T) at page 19, line 23, through page 20, line 2. Ms. Crane concludes that low income customers "could end up paying a disproportionate share of the CSA surcharge, depending on the extent to which low-income customers achieve conservation savings relative to other residential customers". Exhibit No. ___(ACC-1T) at page 22, lines 14-16.

Q. Do PSE's programs follow the Commission's low income guidance as set forth in the Report and Policy Statement?

A. Yes, PSE's programs are consistent with this guidance. First, PSE offers conservation programs that provide benefits to low income customers that are comparable to other customers. Second, Ms. Crane's reference to the Commission's low-income guidance is incomplete. She addresses one part of the Commission's low income guidance, namely that a utility's "conservation programs provide benefits to customers that are roughly comparable to other ratepayers". However, she omits the second half of the Commission's statement. In full, the Commission's low income guidance reads as follows.

> *Low-income.* A utility proposing a limited decoupling mechanism must demonstrate whether or not its conservation programs provide benefits to low-income ratepayers that are roughly comparable to other ratepayers *and, if not, it must provide low-income ratepayers targeted programs aimed at achieving a level of conservation comparable to that achieved by other ratepayers, so long as such programs are feasible within cost-effectiveness standards*.[6]

Clearly, PSE's Low Income Weatherization program is such a targeted program. In addition, PSE offers other programs, which PSE believes are likely to reach low income customers, as discussed later in my testimony. All PSE programs are required to be cost-effective and results are reported in each of the semi-annual and annual reports on conservation achievements and the annual and biennial

[6] Report and Policy Statement at ¶¶ 18, 28 (emphasis added on the omitted language).

conservation plans submitted to the Commission. Therefore, PSE's program is consistent with either of the Commission's alternatives.

Q. How do PSE's conservation programs provide benefits to low income customers that are comparable to other ratepayers?

A. As previously stated in the testimony of Tom DeBoer, low income customers receive benefits from conservation programs that compare favorably to other customers, as indicated by the high proportion of program expenditures dedicated to low income weatherization, relative to the number of customers participating in that program.

In addition to the Low Income Weatherization program, PSE offers programs that, at no cost to the occupants, directly install energy efficiency measures in multifamily units and mobile homes, which are likely to directly benefit low income customers who are more likely to rent apartments or live in mobile homes.

Low income customers who participate in any of PSE's energy efficiency programs receive the direct benefit of energy bill savings. Low Income Weatherization participants receive additional direct benefit from structural or equipment repairs which improve occupant comfort, health, and safety as well as save energy – a benefit that is unique to this program compared to PSE's other energy efficiency programs.

Finally, low income customers, like all other customers, also benefit from the avoided energy supply and distribution costs that result from all of PSE's energy efficiency programs, whether or not they participated in those programs.

Q. How does Ms. Crane conclude that PSE provides no evidence that its energy efficiency programs provide benefits to low income customers that are "roughly comparable" to other customers?

A. In part, Ms Crane relies on the fact that PSE does not track program participation by income level. Based on this fact, she concludes that low income customers may not be able to participate "to the same extent as other utility customers". Exhibit No. ___(ACC-1T) at page 21, line 18.

Q. Why does PSE not track all energy efficiency program participation by income level?

A. Income data is impractical or impossible to collect for most program participants (e.g., multifamily, retail lighting). For example, rebate programs that are offered directly through retail stores, such as compact fluorescent lights, do not identify individual participating customers. Even for programs where participating customers can be identified, there is no existing database that identifies the income level of each individual customer. The best that can be hoped for is to survey samples of participating customers in every program, but this is both costly and risks alienating customers by asking about a sensitive personal topic.

Q. Do any other parties acknowledge this issue?

A. Yes. This challenge is acknowledged on page 15 of Commission's Staff's response to the Commission's bench request on decoupling, where Commission Staff concurs that it is unlikely that data exists to actually conduct the analysis of comparability of energy savings achieved by low income customers compared to other ratepayers. Commission Staff goes on to say that "[u]tilities do not maintain data on the economic status of their customers, nor do we suggest they should."

Q. Have any members of the CRAG raised any issues related to the level of conservation programs available to low-income electric customers?

A. No. Consistent with the Conservation Settlement Agreement in Exhibit No. ___(RWS-3), the responsibilities of the CRAG include consideration of issues related to conservation programs for customers with low incomes. Yet, for both the 2010-2011 biennium and the recently started 2012-2013 biennium, no CRAG member filed written objections to PSE's level of conservation programs available for low-income electric customers.

Q. What do you conclude about the benefits that low income customers receive from PSE's energy efficiency programs?

A. I conclude that PSE complies with both parts of the Commission's low income guidance: first, to provide benefits that are "roughly comparable to other

ratepayers"; and second, to provide targeted programs to low income customers that are feasible under cost-effectiveness standards. I also conclude that tracking participant income levels for all conservation programs is highly impractical or impossible and I concur with Commission Staff that utilities should not have to maintain data on the economic status of their customers.

IV. CONCLUSION

Q. Does that conclude your prefiled rebuttal testimony?

A. Yes, it does.