



# Exhibit 6

## 2019 Evaluation Plan Updates

*November 15, 2018*



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## I. INTRODUCTION

This document outlines the *2018-2019 Evaluation Plan* developed by the Evaluation Team for Puget Sound Energy's portfolio of electric and gas energy efficiency programs. The overall role of the Evaluation Team at Puget Sound Energy (PSE) is to:

- Document and measure the effects of a program and determine whether it met its goals with respect to being a reliable energy resource.<sup>1</sup>
- Help understand why those effects occurred and identify ways to improve or discontinue current programs, and develop future programs.<sup>2</sup>

In preparing this plan, the Evaluation Team at PSE has developed a structured process that serves to:

- Assess the overall needs for program evaluation in a systematic manner, and
- Allocate limited financial and staff resources accordingly.

This plan summarizes the program evaluation prioritization strategy for 2018 and 2019. Specific evaluation plans for PSE's Energy Efficiency programs will be updated annually and refined with further clarification for the Conservation Resource Advisory Group (CRAG) and Washington Utility and Transportation Commission (WUTC) staff.

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<sup>1</sup> National Action Plan for Energy Efficiency (2007). Model Energy Efficiency Program Impact Evaluation Guide, Appendix B: Glossary. Prepared by Steven R. Schiller, Schiller Consulting, Inc. [www.epa.gov/eeactionplan](http://www.epa.gov/eeactionplan)

<sup>2</sup> Id.



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## II. MANAGING PROGRAM EVALUATION

Consistent with our EM&V Framework, Puget Sound Energy has developed a four year cyclical plan. This plan is illustrated in Figure II-2 on the following page. The timing of these program evaluations is consistent with the four-year timetable to evaluate all energy efficiency programs, as specified in condition(5)(c).<sup>3</sup> While the condition does call for programs to be evaluated at least once every four years, Puget Sound Energy plans to evaluate all programs in the 2018-2019 biennium. To the extent possible, the scope of the evaluations will include the programs as implemented in 2018-2019.

The level of rigor of each evaluation is based on the expected contribution of the evaluation to understanding the savings contribution by program and overall portfolio performance. Additional detail on the prioritization is included in the Evaluation Processes section. Figure II-1 shows some of the variables that will be used to assess the evaluation rigor required for each program. The characterization of programs will depend on an analysis of these and other relevant factors.

To identify common evaluation objectives and pool resources as needed, the Evaluation Team will continue coordinating with other bodies, such as the CRAG, other regional utilities, the Regional Technical Forum (RTF),<sup>4</sup> the Northwest Energy Efficiency Alliance (NEEA)<sup>5</sup> and the Northwest Research Group (NWRG).<sup>6</sup> These types of evaluation projects are recognized in the four year evaluation plan as the line items “Schedule 249: Pilots” and “Other Projects”.

By planning and coordinating closely with verification group, the Evaluation Team takes a systemic approach to the measurement and verification of savings.

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<sup>3</sup> Attachment A, Order 01, Docket UE-152058.

<sup>4</sup> The Regional Technical Forum (RTF) is a regional advisory committee established in 1999 to develop standards to verify and evaluate measure savings.

<sup>5</sup> The Northwest Energy Efficiency Alliance is a private non-profit organization funded by Northwest utilities, the Energy Trust of Oregon and the Bonneville Power Administration.

<sup>6</sup>NWRG is comprised of evaluation and research staff of the regions utilities, NEEA and BPA, seeking to find common evaluation and research needs, and opportunity to collaborate.



**Figure II-1: Program Characteristics and Corresponding Tiers of Evaluation Rigor**

Tier 1 (low rigor)	Tier 2 (moderate rigor)	Tier 3 (high rigor)
<ul style="list-style-type: none"> <li>• Mature</li> </ul>	<ul style="list-style-type: none"> <li>• New/Changing</li> </ul>	<ul style="list-style-type: none"> <li>• New/Pilots</li> </ul>
<ul style="list-style-type: none"> <li>• Reliable savings estimates</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite savings estimates</li> </ul>	<ul style="list-style-type: none"> <li>• Complex savings estimates</li> </ul>
<ul style="list-style-type: none"> <li>• Low relative savings</li> </ul>	<ul style="list-style-type: none"> <li>• Low-Mid relative savings</li> </ul>	<ul style="list-style-type: none"> <li>• High relative savings</li> </ul>
<ul style="list-style-type: none"> <li>• Static market</li> </ul>	<ul style="list-style-type: none"> <li>• Dynamic market</li> </ul>	<ul style="list-style-type: none"> <li>• Uncertain market</li> </ul>
<ul style="list-style-type: none"> <li>• Previously evaluated (consistent results)</li> </ul>	<ul style="list-style-type: none"> <li>• Previously evaluated (divergent results)</li> </ul>	<ul style="list-style-type: none"> <li>• Not previously evaluated</li> </ul>

Figure II-2 and Figure II-3 present the levels of evaluation rigor expected in 2018-2019. All levels of rigor will be consistent with the principles, objective, and metrics prescribed in the guiding Evaluation Framework (Exhibit 8). The actual levels of evaluation rigor are subject to change based on actual performance of the programs and any additional input from PSE staff, third-party evaluators, or the CRAG.



**Figure II-2: Two Year Plan for Program Evaluation – Residential Programs**

PSE Program	Tariff Schedule†	Initial Evaluation Tiers (Impact / Process)
Low Income	E/G 201	1 / 1
<b>Single Family Existing</b>	<b>E/G 214</b>	
Home Appliances		1 / 1
Residential Showerheads		1 / 1
Residential Lighting		2 / 2
Shop PSE		1 / 1
Web-Enabled Thermostats		2 / 2
Space Heat		1 / 1
Mobile Home Duct Sealing		2 / 2
Water Heat		1 / 1
Home Energy Assessment		2 / 2
Weatherization		1 / 1
Home Energy Reports		2 / 2
<b>Single-Family New Construction*</b>	<b>E/G 215</b>	<b>3 / 3</b>
<b>Multifamily Retrofit</b>	<b>217</b>	<b>2 / 2</b>
<b>Multifamily New Construction</b>	<b>218</b>	<b>1 / 1</b>



**Figure II-3: Two Year Plan for Program Evaluation – Non-Residential Programs**

PSE Program	Tariff Schedule <sup>†</sup>	Initial Evaluation Tiers (Impact / Process)
<b>C/I Custom Grants</b>	<b>E/G 250</b>	
Business Lighting		1 / 1
Industrial Systems Optimization		2 / 2
Comprehensive Building Tune-Up / Cx		3 / 3
Major HVAC Controls Grants		2 / 2
Retrofit Grants		1 / 1
Advanced Rooftop Controls		1 / 1
<b>New Construction Grants</b>	<b>E/G 251</b>	<b>1 / 1</b>
Cannabis Lighting	E 251	2 / 2
<b>Resource Conservation Manager</b>	<b>E/G 253</b>	<b>2 / 2</b>
Urban Smart Bellevue	E/G 253	2 / 2
High-Voltage Customers	E 258	1 / 1
<b>Commercial Rebates</b>	<b>E/G 262</b>	
Small Business Direct Install		1 / 1
Commercial HVAC		1 / 1
Commercial Kitchen and Restaurants		1 / 1
Commercial Laundry		1 / 1
Lighting-to-Go		3 / 3

### III. EVALUATION PROCESSES

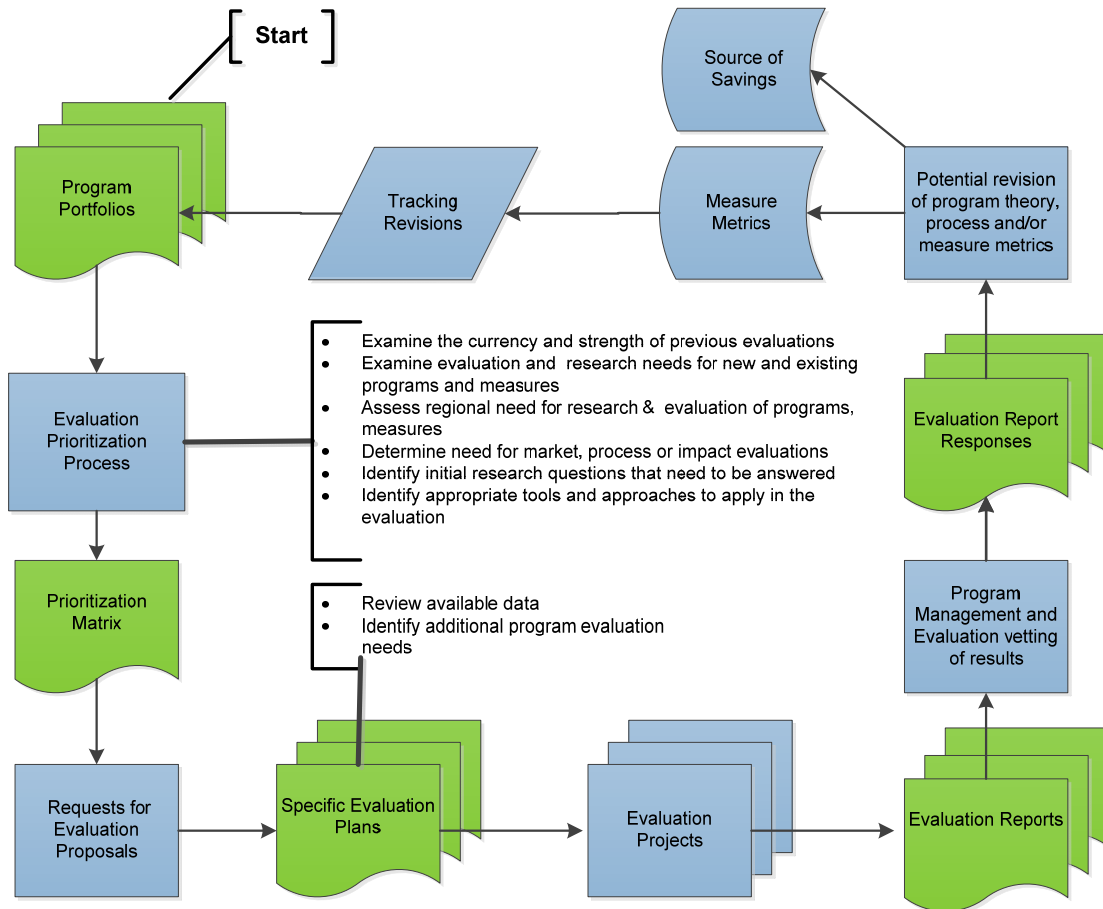
The evaluation process at PSE starts with the company's portfolio of Energy Efficiency programs. Evaluation activity is prioritized by the expected rigor of evaluation activity, based on the programs' relative maturity, demonstrated reliability of savings, size of savings, cost effectiveness and other factors, as outlined above.

For most program evaluations, the PSE Evaluation Team develops Requests for Proposals to engage external consultants to implement the evaluations. External evaluators provide specialized skills and breadth of experience required to complete a successful evaluation project. Further, external evaluators may help alleviate perceived bias in assessing program performance.

As an initial task, evaluators develop specific plans based on additional review of available program data, and of additional evaluation needs identified by EES staff. Throughout the evaluation project, evaluation staff will keep the implementation staff informed of key milestones and findings. Evaluation reports will be reviewed by evaluation staff and implementation staff. The implementation staff will then produce an Evaluation Report Response document that will serve as plan going forward regarding the study's findings and recommendations. Measure Metrics and Source of Savings will be updated as necessary, which will lead to tracking revisions relative to the program portfolio.

This evaluation process is represented in Figure III-1 on the following page.

Figure III-1: Evaluation Process Overview



## IV. STANDARDIZED APPROACH TO PROGRAM EVALUATIONS

Program-specific evaluation plans will be organized internally and will be reviewed and approved by Key program stakeholders. Each program evaluation project scope of work will include the following:

- **Review of Existing Program Data** – general program information including past and forecast budget, savings targets, and performance metrics
- **Identification of Key Program/Measure Considerations** – Any special considerations that assist in framing the history of the program or other evaluation scoping issues
- **Review of Key Performance Elements** – Identified Technical/Economic, Process, Market and Organizational elements
- **Determining Key Evaluation Research Questions** – Outstanding questions that arise from the identified risks that will drive the evaluation strategies
- **Defined Evaluation Strategy & Project Plan** – The strategies frame the near-term evaluation needs. These are articulated in a specific impact, process, and often market evaluation plans where appropriate.
- **Clearly Defined Outcomes** – Reporting, documentation, and dissemination of information.

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## V. THE PROGRAM EVALUATION TOOLBOX

Scopes of work for evaluation projects will generally include one or more of the following research activities depending on what will best answer specific research questions and provide accurate and useful results:

- **Program Theory/Logic Model Review** – This step, which provides an overview of key program goals, objectives, activities and outputs, provides the basis for understanding and measuring program performance against program intent. It helps evaluators identify the type and level of program data and other information needed to understand performance and performance drivers.
- **Data Analysis/File Review** – Generally, program tracking, customer or market data is available to inform need for further data collection, or to form the basis of sampling methodology.
- **Staff Interviews** – Along with Data Analysis/File Review, surveys or interviews with key PSE staff can help direct evaluation scopes of work by revealing what is known, and gaps in organizational knowledge. Outcomes often result in development or updates of process flows and program logic models.
- **EM&V 2.0** – A set of principles that relies on the existing EM&V framework coupled with advanced data analytics to provide continuous, granular results of evaluation activities.
- **Tailored Best Practice Review** – A thorough review of regional, national or worldwide program and marketing practices can be useful to inform decisions regarding program strategies and planning. Best practices outside of the utility industry can be included in the review process.
- **Metering** – Specialized instrumentation used to monitor energy use or hours of operation is used to verify energy savings. Metering is often costly because it requires on-site installation and removal of metering equipment.
- **Billing and/or Econometric Analysis** – Analysis of weather adjusted energy use from billing or metered data, examining energy use in ex-anti and ex-post periods, often comparing a treatment group and a control group. This analysis may also statically compare billing data to engineering estimates. Econometric analysis is complimented by consumer survey data to assist in the control of exogenous variables such as changes in square footage of treated area, operational characteristics or tenant occupancy.
- **Customer Surveys** – Surveys of participating and non-participating customers may have a place in impact or process evaluations to augment billing analysis, assess customer satisfaction, or better understand customer or end-use characteristics,



- **Trade Ally Surveys** – Surveys or key informant interviews with market actors such as contractors, distributors or manufacturers may be required where a better understanding of market actors and business practices is needed for optimization of program delivery.
- **Engineering Analysis** – New measures and programs often lack sufficient empirical data to verify and validate important assumptions. In this case, engineering analysis may be used to develop interim assumptions that allow program staff a basis on which to build a program. Engineering analysis will be later followed up with empirical research when the data is available for collection.



## VI. 2019 EVALUATION BUDGET

The forecast Evaluation budget for electric programs in 2019 is \$1,659,599 and the natural gas evaluation budget is \$200,738. The electric budget includes \$540,000 as PSE's share of RTF sponsorship. Figure VI-1 shows the projected Electric and Natural Gas budgets for 2019.

**Figure VI-1: Program Evaluation Budget, 2019**

	Electric	Natural Gas	Total
2018	\$2,037,578	\$264,569	\$2,302,147
2019	\$1,659,899	\$200,738	\$1,860,637
2-Year Total	\$3,697,477	\$465,307	\$4,162,784