

2017

Annual Conservation Plan

Overview



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* Exhibit 3: Program details, with target market, marketing plans, customer incentives
* Exhibit 4: Customer Services List of Measures, Incentives and Eligibility
* Exhibit 5: Prescriptive Measure Tables
* Exhibit 6: Program Evaluation Plan
* Exhibit 7: Marketing Plan
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* Exhibit 9: Condition Compliance Status Report
* Exhibit 10: Northwest Energy Efficiency Alliance Plan
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# Executive Summary

Consistent with WAC 480-109-120(2),[[1]](#footnote-1) requirements outlined in Commission Order 01 of Docket No. UE-152058, and applicable Sections of Exhibit F, UG-011571,[[2]](#footnote-2) Puget Sound Energy (“PSE”) presents this 2017 Annual Conservation Plan (the “Plan” or “ACP”). The Plan represents program modifications that PSE is putting into place in order to achieve Portfolio conservation savings of 309,932 Megawatt-hours (MWh), or 35.4 average megawatts (aMW), and 3.53 million therms. The Company requests that the Commission allow the Plan to become effective on January 1, 2017. PSE has planned expenses of $103.45 million for electric programs and $14.69 million for natural gas program operations and support functions.

Table I‑1 presents PSE’s Portfolio budgets, savings goals, and Total Resource Cost (“TRC”) planned for its 2017 electric and natural gas programs. Tables in Chapter 3: *2017 Annual Conservation Plan Development*, page 33, present additional summaries at the Sector level.

Table I‑1: 2017 Energy Efficiency Savings Goals and Budgets

The Plan consists of this Overview document and a series of supporting Exhibits, in which PSE provides electric and natural gas program updates specific to 2017.

## Updates to the 2016-2017 Biennial Conservation Plan

In Chapters 4 through 10, PSE includes the original 2016-2017 program overview discussions as a courtesy to readers. PSE highlights these with unique section headers to clearly differentiate the discussions. These provide a point of comparison to 2017 modifications—also denoted by a unique section header—in compliance with WAC 480-109-120(2) and emphasizes PSE’s adaptive management through its application of Total Quality Management (“TQM”). PSE also notates updated 2017 savings, measure values, and budget figures throughout Exhibit 1: *Savings and Budgets*.

Comparisons of original 2017 figures to those updated in the 2017 ACP refer to the 2017-specific page of the 2016-2017 Exhibit 1: *Savings and Budgets*.[[3]](#footnote-3)

### 2017 Electric Figure Revisions

In its 2016-2017 Biennial Conservation Plan (“BCP”), PSE indicated that its original 2017 savings goal was 310,687 MWh, with an anticipated expenditure of $100.38 million (including Other Electric Programs). As indicated in Table I‑1, the updated 2017 savings goal is now 309,932 MWh with anticipated expenditures of $103.45 million. These figures represent a 0.2 percent decrease and 3 percent increase over the original values, respectively.

It is important to note that a significant portion of the anticipated expenditure increase results from the inclusion of a new, $322,000 allocation for the administrative costs of developing demand response programs,[[4]](#footnote-4) approximately $400,000 for PSE’s participation in a regional end-use load study and appliance saturation study, and an additional $296,000 to extend the EV Charger Incentive into 2017.

Until Demand Response RFP responses are evaluated, it isn’t possible to clearly ascertain the potential PSE capital cost impact of the program, and therefore, PSE proposed that a recommendation as to the program’s funding source be delayed until after the ACP filing at this time.

In PSE’s October 12 CRAG meeting, CRAG members indicated that they were supportive of collecting the administrative development costs of the program through the Conservation Rider. PSE added the 2017 EV Charger Incentive pilot budget in response to a Commission request to extend the program into 2017. The program was originally slated to conclude at the end of 2016.

### 2017 Natural Gas Figure Revisions

In its 2016-2017 BCP, PSE indicated that its original 2017 savings goal was 3.46 million therms, with an anticipated expenditure of $14.77 million. As indicated in Table I‑1, the updated 2017 savings goal is now 3.53 million therms with anticipated expenditures of $14.69 million. These figures represent a 2 percent increase, and 1 percent decrease over the original values, respectively.

## Achieving the 2017 Savings Goals

In 2017, the Energy Efficiency organization will continue to maximize customer engagement and participation, while driving electric and natural gas conservation savings through innovation and adaptive management techniques, consistent with WAC 480-109-100(1)(a)(iv).

### Electric

The Residential Energy Management (“REM”) Sector faces continued downward pressure on prescriptive measure savings values, which frequently result in cost-effectiveness issues. Accordingly, the Retail Lighting program is discontinuing its CFL rebates and its refrigerator replacement offering. Similarly, the Weatherization program’s Low-E Storm Windows offering is put on hiatus for 2017. LED measures continue the strong uptake, and are forecast to supplant some of the lost savings. With the support of PSE’s Conservation Resource Advisory Group (“CRAG”), PSE will continue its Home Energy Reports (“HER”) program in 2017. REM expects continued growth in its air sealing measures, with heat pump water heaters also making inroads. REM will maximize customer participation through a number of online portals; DSMc, Contractor Alliance Network (“CAN”) referral, and ShopPSE.com. The Sector will continue its highly effective marketing campaigns, including Energy Upgrades and pop-up events.

In the Business Energy Management (“BEM”) Sector, lighting programs will be greatly simplified to increase customer participation and satisfaction, with an increase in customer participation carrying over from 2016.

This includes offering one commercial lighting rebate program at the point of sale and one business lighting grant program. The Resource Conservation Management program will continue its initiatives to serve smaller portfolio customers, and will sustain the Urban Smart Bellevue program. The Sector will manage the implementation of an online indoor agricultural grant application process, and anticipates continued strong savings in the horticulture lighting market. Originally slated for hiatus in this biennium, BEM will continue to offer its Energy Smart Grocer program in both the Retrofit and New Construction markets. Program staff will also continue their work to expand the suite of measures offered in conjunction with its Advanced Rooftop Controller (“ARC”) rebate program.

### Natural Gas

Despite the effects of continued adverse market conditions and downward pressure on measure savings values, PSE’s 2017 natural gas conservation target remains healthy, with a slight increase in Portfolio savings from the original 2017 values indicated in the 2016-2017 BCP.

Planned Residential Individual Energy Report pilot savings are a central driver of the increased Portfolio savings; both REM and BEM natural gas savings are expected to decline slightly in 2017 from the originally planned therm savings.

In the REM Sector, an increase in uptake of the web-enabled thermostats offering will provide some savings relief to reductions in key programs. Many of the reductions are based on revised unit throughput estimates, and on 2016 year-to-date performance. Decreased therm savings in C/I New Construction will be slightly offset by a planned increase in Retrofit therm savings and the continuation of the Energy Smart Grocer natural gas offerings. Reductions in several key measure prescriptive savings values also led to an overall reduction in planned therm savings. Lastly, the 2015 Washington State Non Residential Energy code that went into effect in July 2016 further reduces gas savings potential in the C/I sector in future years.

## Principal Considerations Influencing 2017 Revisions

2017 key savings drivers include PSE’s responses to continued downward pressure on electric and natural gas Unit Energy Savings (“UES”) values of high-value measures, reduced market demand on measures that are now becoming saturated in the market, Biennial Electric Conservation Achievement Review (“BECAR”) recommendations, and energy code impacts, among others.

Some key budget revision drivers are updated corporate overhead values, the inclusion of updated Demand Response, EV Chargers, and end-use load studies discussed in section I.A.1, adaptive measure incentive adjustments made to sustain customer demand, outside services costs, and updated staffing requirements.

PSE provides more detailed discussions of key savings and expenditure drivers in Chapter 3: 2017 Annual Conservation Plan Development, section III.B, starting on page 34.

## Cost Effectiveness Considerations

In the 2017 biennial cost-effectiveness calculations, PSE applied all available RTF-established Non-Energy Benefits (“NEBs”) to the applicable prescriptive rebate programs, including electric and natural gas. Cost-effectiveness calculations by program are located in Exhibit 2: *Cost-Effectiveness Estimates*.

### Electric

PSE estimates that the aggregate of electric programs will achieve a Utility Cost (“UC”) benefit-to-cost ratio of 2.24 and a Total Resource Cost (“TRC”) benefit-to-cost ratio of 1.71 at the Portfolio level.

### Natural Gas

Current cost-effectiveness calculations indicate that only one natural gas program—Single Family Weatherization—will yield TRC benefit-to-cost ratios of slightly less than 1.0, while the overall Portfolio estimated natural gas TRC benefit-to-cost ratio will be 1.54. Natural gas programs will, in aggregate, achieve an overall UC of 1.78.

## Regulatory Stakeholder Engagement and Reporting

Throughout the Plan, PSE addresses and references discussions, requests, and agreements made with its Regulatory Stakeholders in 2016.

### Conservation Resource Advisory Group

PSE proactively engaged the CRAG in the development of this ACP, and provided the CRAG with:

* Key 2017 ACP focus areas in August, 2016, and
* Draft budgets and program details in October.

In accordance with WAC 480-109-110(3), PSE provided the CRAG with an electronic draft 2017 ACP on October 14, 2016.

PSE will continue to provide its periodic CRAG newsletter “*CRAG Communications”* at appropriate intervals to ensure that the CRAG is up-to-date with Energy Efficiency developments. 2017 is a planning year for the 2018-2019 biennium; PSE anticipates that there will be five CRAG meetings, four of which will focus on the BCP development.

### 2014-2015 Biennial Conservation Report Comment Follow-up

In the 2017 Plan, Energy Efficiency provides discussions on several initiatives, business practices, and guiding principles that it developed, incorporated, or adopted over more than a decade of service.

Key among these include:

* The assessment of advanced measurement and verification (“M&V”) techniques,[[5]](#footnote-5)
* The application of Total Quality Management (“TQM”) principles to adaptively manage its suite of energy efficiency programs.
* Its many initiatives to encourage customer participation in underserved and hard-to-reach market segments.
* Review of opportunities in the marketplace for potential pilot measures or programs.

PSE appreciates the opportunity to provide these details in response to various Stakeholder comments and requests made on these topics in PSE’s 2014-2015 Biennial Conservation Report (“BCR”).

Energy Efficiency commits to engage the CRAG as it develops a pilot program to apply M&V 2.0 on an appropriate large commercial project. Energy Efficiency will also keep the CRAG apprised of potential new pilot programs throughout 2017, and report the status of single large facilities separately for consideration of potential excess savings, applicable to WAC 480-109-100(3)(c)(ii). In an additional discussion, Energy Efficiency included a more comprehensive discussion on its long-standing adaptive management through the application of TQM in Chapter 2: *Introduction*.

## Following Chapters

This document discusses the management steps that PSE put into place in order to achieve the indicated savings goals while effectively managing expenses and providing exemplary stewardship of customer funds.

PSE discusses key drivers of budgets and savings goals in Chapter 3: *2017 Annual Conservation Plan* *Development*, and in the Sector Overview discussions.

As biennially-focused documents, some standard Energy Efficiency Exhibits are excluded from the 2017 ACP.

These are:

* Exhibit 6: *Evaluation Plan*,
* Exhibit 7: *Marketing Plan*,
* Exhibit 8: *EM&V Framework*,
* 12: *Biennial Condition Revisions*,
* Exhibit i: *Ten-Year Potential, Two-Year Target Development*.

Also, as a backward-looking compliance review, Exhibit 9: *Condition Compliance Checklist* is included in PSE’s Annual Reports, and is therefore omitted from the Plan.

With this 2017 ACP, PSE continues its principle of providing a wide range of business information in a form that meets Stakeholder needs with a high degree of transparency. The Plan demonstrates PSE’s long-standing application of TQM principles—in all Energy Efficiency business operations, including all support functions—to adaptively manage its conservation Portfolio in a dynamic marketplace. As a courtesy to Stakeholders, PSE actively solicits, welcomes, and incorporates comments and suggestions on all of its filing documents.

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# Introduction

The 2017 Annual Conservation Plan (“ACP”, or the “Plan”) will discuss PSE conservation program objectives and initiatives that update, revise, or modify those discussed in the 2016-2017 Biennial Conservation Plan (“BCP”), filed in Docket Nos. UE-152058 and UG-152075.[[6]](#footnote-6) The ACP fulfills the requirements of WAC 480-109-120(2), as it relates to electric programs, and applicable natural gas Sections of Exhibit F, the Settlement Terms for Conservation in Docket No. UG-011571. These electric-and natural gas-specific requirements indicate that PSE must provide detailed annual budgets, program updates, and any tariff revisions for Stakeholder review.

The 2017 ACP discusses updated strategies that PSE will employ in order to exceed customer expectations, prudently use the funds that they’ve entrusted to PSE, and be proactive in adjusting to ever-evolving market conditions while achieving its Commission-approved savings targets, consistent with the requirement of WAC 480-109-120(2):

(2) Annual conservation plan. On or before November 15th of each even-numbered year, a utility must file with the commission, in the same docket as its current biennial conservation plan, an annual conservation plan containing any changes to program details and annual budget.

The Plan provides details of PSE’s implementation of innovative and adaptive program design with a focus on customer satisfaction and participation, leading to achievement of its Portfolio savings goals of 309,932 Megawatt-Hours (“MWh”), (35.4 Average Megawatts [“aMW”]), with anticipated expenditures of $103.45 million. Its 2017 natural gas conservation goal is 3.53 million therms, with an associated anticipated expenditure amount of $14.69 million.

## PSE Requests that the Commission Approve its 2017 Annual Conservation Plan

PSE requests that the Washington Utilities and Transportation Commission (“WUTC”, “UTC”, or “Commission”) approve the 2017 electric and natural gas conservation goals, along with their associated budgets as discussed in the Plan, with an effective date of January 1, 2017.

## 2017 Sector-Level Savings and Budgets: Original BCP vs Updated ACP

Table II‑1 provides a comparison of the 2017 electric and natural gas savings to the anticipated expenditures originally stated in the 2016-2017 BCP.. The following sections in this chapter and in Chapter 3: *2017 Annual Conservation Plan Development,* will provide insight to the key revision drivers.

Table II‑1: 2017 Savings and Planned Spending Compared to Original BCP Figures

The electric savings values noted represent goals necessary to achieve all targets associated with the overall Portfolio, including PSE’s decoupling commitment of 5 percent over the course of the biennium.

PSE conducted an extensive examination of considerations in updating its original 2017 conservation Portfolio. Program staff scrutinized issues such as marketplace dynamics, and externalities (for instance, utility actions and partnerships, regional initiatives, regulatory requirements, etc.). They also assessed the potential for new offerings, historical performance, and customer participation and feedback.

Finalization of the Plan included updating cost-effectiveness calculations, incorporating Conservation Resource Advisory Group (“CRAG”) and trade ally recommendations, and accounting for RTF Unit Energy Savings (“UES”) value adjustments[[7]](#footnote-7) and technology updates, among others.

By applying Total Quality Management (“TQM”) adaptive management principles and experience gained in 2016, program staff honed the 2017 estimates—developed in 2015—to a higher degree of precision and transparency. PSE presents detailed savings goals and budgets by program in Exhibit 1: *Budgets and Savings*.

### Compliance with Conservation Types Included in the Portfolio

The revisions in the 2017 ACP reflect program staff’s review of all elements listed in WAC 480-109-100(1)(b)—listing the types of conservation that must be included in a utility’s portfolio, where possible.[[8]](#footnote-8) The chapter locations of PSE’s program discussions are presented in Table II‑2.

Table II‑2: 2017 Conservation Type References

## 2017 Cost-Effectiveness Calculations

In compliance with WAC 480-109-100(8) and (10), and condition (8), PSE evaluated its programs using methodologies consistent with those used by the Northwest Power & Conservation Council, and its portfolio passes the required cost-effectiveness tests. Details on cost-effectiveness calculations are contained in Exhibit 2: *Cost-Effectiveness Estimates*.

It is important to note that PSE incorporated RTF-defined Non-Energy Benefit figures for applicable prescriptive measure, including electric and natural gas. Table II‑3 provides summary views of the portfolio cost-effectiveness calculations.[[9]](#footnote-9)

Table II‑3: 2017 Portfolio Cost-Effectiveness Calculations

## 2017 Priorities

In addition to a comprehensive design of savings goals and well-vetted anticipated expenditures, the Energy Efficiency department maintained clear focus on its other important priorities throughout the 2017 planning process. PSE discusses highlights of its priorities in the following sections.

### Maximize PSE Customer Participation and Approval

One of the most critical elements of any successful conservation plan depends on maximized customer engagement and support. A key focus for PSE in the upcoming year is the need to continue providing customers with a positive energy-efficiency experience.

PSE will make it easy to participate in Energy Efficiency programs and provide customers with an array of energy-efficiency options that meet their expectations.

Energy Efficiency will continue the advancements made in 2016 to raise customers’ awareness and encourage participation. All of PSE’s energy-efficiency marketing communications; its brochures, energy-efficiency web pages, and media broadcasts, focus customers’ attention on these points.

Energy Efficiency will continue to provide consistent conservation messaging in its direct customer-facing activities (in-person field activities, such as retail events, community initiatives, telephone interactions with PSE energy advisors, email interactions, etc.). PSE’s targeted outreach strategies, including small business “blitzes”, community events, door-to-door outreach, along with its fun and engaging Energy Upgrade campaigns are updated for 2017.

In addition to these customer-facing activities and services, PSE will continue to adaptively manage the implementation of numerous “back office” customer-focused process refinements in 2017. These include, but aren’t limited to: streamlining rebate and custom grant application processing; Verification Team process enhancements; a Contractor Alliance Network (“CAN”) web referral portal; new interconnection application software for Net Metering customers, and making refinements to DSMc as Energy Efficiency enters the first full year of employing the new system.

### Continuous Innovation & Adaptation

Another PSE priority is to explore inventive methods of delivering outstanding customer service and cost-effective conservation. By consistently applying TQM adaptive management principles to its iterative and robust program management decision-making throughout the year, PSE expects to realize continued improvement in department operations, with the intention of maximizing customer participation and conservation savings in 2017. PSE discusses its application of TQM principles in Section II.E.

### Encourage Participation in Underserved and Hard-to-Reach Segments

As discussed in more detail in the following program-specific overviews, Energy Efficiency employs a variety of techniques, tools, and resources in its efforts to reach every customer segment, and maximize awareness of and have the opportunity to participate in its wide range of services.

Energy Efficiency recognized the need to reach underserved and hard-to-reach customer segments early in its history. Over the past several years, it has implemented and expanded numerous initiatives to ensure that Energy Efficiency calls to action reach every customer segment throughout PSE’s service territory.

Past successful leading-edge initiatives included:

* The second Rock the Bulb campaign, targeting multi-ethnic segments.
* Commercial Rebates programs designed to specifically address underserved segments: small-to-medium lodging establishments, small businesses and restaurants.
* Manufactured Home Direct Install. This program has achieved such a degree of success and market saturation that a program delivery change was needed.
* Appliance replacement outreach to organizations that serve customers in need: food banks, senior centers, community centers, etc.

In 2017, Energy Efficiency will build upon and enhance past years’ successes—employing data and program performance analyses, customer research, evaluations and surveys—to reach customers in the applicable market segments.

The following list includes, but is not a comprehensive view of key Energy Efficiency steps used to engage underserved and hard-to-reach segments. PSE provides additional discussion of these initiatives in the respective program sections in the following chapters.

1. Energy Efficiency’s collateral (printed and electronic) is available in multiple languages, and there is even a “for renters” site on PSE’s Energy Savings website.[[10]](#footnote-10) Residential Home Energy Reports are another important tool for reaching customers who may be reticent to participate in efficiency programs.
2. The Energy Efficient Communities and Community Outreach organizations continually scan for underserved and hard-to-reach segments of PSE’s service territory. These efforts often result in PSE’s participation in events that feature multi-ethnic and English-as a-second-language participants.

The groups also coordinate booths at ethnic grocers, radio and print advertisements in-language, and presentations at ethnic community organizations. Contractors with whom the groups are engaged have staff on-hand that are fluent in various languages. Energy Efficient Communities also target their door-to-door Home Energy Assessment in neighborhoods with older homes, who are more likely to be underserved or unaware of energy efficiency opportunities.

1. The three Direct Install programs (Lodging, Small Agriculture, and Small Business) also target those businesses that may have a lower awareness of Energy Efficiency programs, may be rural,[[11]](#footnote-11) may be difficult to access, are locally owned/operated, skeptical of utility efficiency programs, be unavailable at particular seasons or times of day, not interested in making efficiency upgrades,[[12]](#footnote-12) etc. Particularly effective strategies include “blitzes”, where PSE representatives visit these businesses door-to-door to offer direct installation or low-cost measures.
2. The Low Income Weatherization (“LIW”) program provides services to the broadest range of target customers. With no spending cap, LIW program staff work closely with low-income agencies to ensure that its offerings are clear and made available to as many eligible customers as possible, limited only by low-income agency processing capacity.

The LIW’s program reach spans several housing types (manufactured homes, multifamily and single-family) and aligns with most of Energy Efficiency’s marketing, promotional, outreach, and measure offering initiatives (for instance, appliances, duct sealing, lighting, etc.). In order to maximize efficiency opportunities for this segment, PSE is allowed to offer measures that result in a lower Total Resource Cost (“TRC”) than other programs.[[13]](#footnote-13) Similarly, low-income agencies can use PSE shareholder funds to enable the installation of measures, including repairs to low-income dwellings that are needed as a condition of efficiency upgrade installation.[[14]](#footnote-14)

1. Manufactured homes and multifamily structures also represent an underserved/hard-to-reach segment, which includes an element of low-income customers.
2. Energy Efficient Communities’ door-to-door canvases include manufactured homes, and Energy Efficiency will continue to use an assessment-driven approach[[15]](#footnote-15) to connect these customers with pre-vetted contractors through a streamlined process.
3. Commercial tenets may also represent an underserved segment of the PSE service territory. Energy Efficiency provides these customers with numerous opportunities to participate in its programs, including its new Urban Smart Bellevue and its Premium HVAC service.

The Lighting to Go program also provides an efficient avenue for businesses—regardless of their rate Schedule—to acquire a wide range of efficient lighting products. Tenants may also be unaware of the efficiency programs that are available to them; Energy Efficiency’s communication efforts address this need.

1. Energy Efficiency also provides industrial customers with ample opportunities for energy-efficiency upgrades, whether they are in rural locations or are large industrial customers that qualify for PSE’s Large Power User/Self-Directed program. Each are eligible for custom grants and Lighting-to-Go discounts.
2. Energy Efficiency’s promotions also target hard-to-reach segments. These include, but aren’t limited to the Energy Upgrade campaign, and pop-up events, where PSE focused on areas of its service territory with a smaller population. 2017 initiatives will include a similar focus.

### Assess Pilot Program Potential

An important 2017 priority for Energy Efficiency is to assess the potential for new pilot programs. As it has for many years, program staff will continue to scrutinize the energy efficiency horizon for new and innovative technologies. Energy Efficiency will inform the CRAG of potential new opportunities throughout 2017.

One such initiative that PSE is planning to implement is an evaluation pilot, colloquially described as “M&V 2.0”. PSE has been assessing this refined evaluation approach—“real-time monitoring”, which typically provides preliminary evaluation results in a matter of months, versus years—since the concept has evolved over the last two years. This concept has evolved with technological and software improvements, such as sub-metering sensors and advanced analytics, and has the potential to improve savings reporting accuracy at reduced costs.

At the time of the Plan filing, Energy Efficiency is in the initial scoping and strategizing process of selecting an applicable program for the first M&V 2.0 pilot evaluation. It is anticipated that the pilot will launch in the first half of 2017. It is important to note that this methodology is new and unproven, and does not supplant traditional evaluation methodologies.

PSE also provides a comprehensive discussion on its pilot program protocols in Chapter 3: 2017 Annual Conservation Plan Development, section III.B.1.e.

### 2017 Business System Refinements

Energy Efficiency began migrating several disparate tracking and reporting into a single software solution: DSMc, in 2015.

DSMc unified these separate databases and systems in 2016:

* Customer Management System (CMS),
* Customer Solutions sYstem (CSY),
* The EES Tracking and Forecasting System,
* The Source of Savings Database,
* The Low Income Weatherization portal.

DSMc also provides a portal for Energy Efficiency’s trade allies and contractors to enter, view and manage project information. It will provide customers with a portal to view the status of their rebate applications and payment status. A significant value-add is the potential for a customer to, if they see that their application may be missing a piece of information, append their application with that information, and get the processing moving again—all in real time.

The 2017 focus for this initiative will be to complete the data migration—including measure and savings archives, for instance—from CMS, CSY and the Source of Savings database into DSMc. PSE will maintain redundancy in the former systems for an appropriate length of time for audit and historical purposes.

DSMc’s impact on the overall Energy Efficiency tracking and reporting system is reflected in Figure II‑1, Energy Efficiency’s refined systems overview diagram.

##### Figure II‑1: Enhanced Energy Efficiency Systems Interfaces

### 2017 Updates to Ensure Accurate and Transparent Reporting

PSE has consistently demonstrated its commitment to providing accurate and transparent information to its Regulatory Stakeholders, in addition to its internal constituents and governmental agencies. This commitment is reflected in its extensive and comprehensive collection of Exhibits and Supplements[[16]](#footnote-16) provided in its compliance filings.

As noted in section II.H, beginning on page 28, PSE added a “micro-overhead” budget category to several programs. This updated accounting practice does not result in incremental expenses, as it supplants expenses that were formerly assessed to labor charges. The improved accounting will also provide for more straightforward Schedule 120 annual reviews in the future. The addition of “2017 Program Update” discussions in the following program overviews also provide Stakeholders with an efficient comparison to PSE’s 2016-2017 BCP strategies.

### Maximizing Regulatory Stakeholder Engagement

As PSE has consistently demonstrated for several years, its focus on providing an excellent customer experience extends to its Regulatory Stakeholders. PSE is committed to ensuring that its Stakeholders have all of the information, program background, measure details, and process guidelines necessary to fulfill their advisory roles. PSE treats the satisfaction of their expectations with a very high regard.

In 2017, PSE will continue providing its CRAG Newsletter, “CRAG Communications” that keeps CRAG members up-to-date on program developments outside of the CRAG meeting environment. PSE will also provide the CRAG with regular updates of its Condition Compliance Checklist, Exhibit 9. Although excluded from Conservation Plans, the Checklist is included in PSE’s Annual Reports of Energy Conservation Accomplishments.

PSE will focus on continuously improving the value of information provided, and update the CRAG regularly in 2017. Energy Efficiency program staff continue to enthusiastically welcome CRAG members’ input on a variety of conservation topics in 2017. 2017 is the 2018-2019 BCP planning year, and PSE will depend on critical CRAG engagement throughout the process prior to filing the BCP in November 2017.

## Implementing Adaptive Management through the Application of TQM

By applying the continuous cycle of ASSESS🡪PLAN🡪EXECUTE🡪VERIFY steps of TQM, Energy Efficiency staff are able to consistently demonstrate adaptive management. Figure II‑2 illustrates a simplified interpretation of the TQM process flow.

##### Figure II‑2: The TQM Process Flow

It is important to note that in the dynamic environment in which Energy Efficiency conducts business, these four conceptual stages are (1) rarely sequential or discreet steps;[[17]](#footnote-17) program staff may need to complete the assessment and planning stages more than once before implementing a program modification, for instance. (2) TQM typically include several steps in each stage; any business operations revision often requires the involvement of several PSE departments—such as Marketing, Purchasing, Accounts Payable, IT, etc.

The entire process may be put into effect in a matter of days (in the case of a minor business process enhancement), or it may take several months (as is the case with Energy Efficiency’s DSMc platform implementation).

### Each of the Four Stages are put into a General Context Applicable to Energy Efficiency Organizations.

**Assess.** In this phase, staff determine the need or the potential for new/different opportunities.

Throughout a program’s or business function’s life cycle, program and functional staff make extensive use of performance metrics, market research, program evaluation reports, vendor and contractor input, customer surveys, and assessment of other utility programs. Performance metrics can include, but aren’t limited to: Number of website visits; Energy Upgrade ticket redemptions; number of rebate applications; ShopPSE units sold; average days to process rebate applications; number of customer sites visited by the Verification Team; etc.

Energy Efficiency and support staff conduct assessments in each business unit throughout the year in order to maximize operational effectiveness. The results may lead to an immediate adjustment in process implementation, or be accumulated and incorporated into the following year’s business plan.

**Plan.** Once potential enhancements or new opportunities are identified and vetted, staff create operational plans.

Similar to the year-round assessment of new/modified/ongoing program and functional business assessments, Energy Efficiency staff update operational planning throughout the majority of the year. While intentional and forward-thinking, planning is quite often iterative, and requires numerous inputs. Program staff incorporate data and information from a variety of sources. They design their suites of energy-efficiency offerings with a clear focus on making it easy for customers to engage in energy-efficiency programs and provide customers energy-efficiency options. Program staff incorporate new technological innovations, economies of scale, and build on shared expertise between Business and Residential teams. Program staff also must include each of the supporting functional organizations, even for small or targeted offerings.

As noted in section E.2, program or support functional revisions often involve ancillary PSE departments, including Accounts Payable (rebates or vendor payments), Purchasing (vendor or trade ally contracts), Accounting (create order numbers, etc.), the Customer Access Center, Energy Advisors, and IT (DSMc integration, for instance). Careful and thorough planning ensures a smooth process implementation. The plan is vetted at various development stages for feasibility, customer satisfaction, vendor and contractor impacts, savings potential, and a variety of other factors, until it receives management approval.

**Execute.** Following a plan’s approval, staff then need to execute and maintain the initiative.

As a result of efficient processes and collaborative relationships that break down barriers, program and support staff are able to deftly execute their planned strategies outlined in the ACP.

Once planned and vetted, there are sometimes circumstances that allow Energy Efficiency to launch a completely new program; Lodging Direct Install,[[18]](#footnote-18) for instance. Following a market assessment, performance of similar programs, extensive marketing and implementation planning, a fairly significant program can be successfully launched in its full-scale form. Similarly, specific measures within an existing program can be introduced following a rapid assessment and planning period with no disruption of overall program operations (adding TLEDs or heat pump dryers, for instance).

Other customer-focused enhancements must be implemented in a more phased approach; customer awareness tools, and Low Income Weatherization’s incorporation of the SIR cost-effectiveness benchmark, for example. The implementation of DSMc—that involves significant IT resources, and is being implemented on a program-by-program basis is also a relevant illustration.

In some cases, these principles result in the retirement of programs or measures. Measures that were once cost-effective and innovative eventually become standard practice through market transformation or code requirements. Throughout the course of a measure life, it is often necessary to adjust incentive amounts, or bundle (cross-marketing, or cross-program in some cases) offerings.

Programs also conduct limited-time promotions, and maximize the visibility on the PSE energy-efficiency website, etc.[[19]](#footnote-19)

**Verify.** Staff use a variety of metrics to determine whether the process, program, or service is meeting expectations.

Program and operational staff closely monitor new systems, processes, and offerings to ensure that the actual results meet those that were planned. It is at the critical implementation phase where execution modifications can be rapidly made. Staff verify results not only during the implementation phase, but throughout the lifecycle. If at any point the operation is not performing as expected, staff will re-assess the initial assumptions and expectations and develop plans to adjust the initiative.

### Adaptive Management Through TQM Includes all Business Groups

In 2017, Residential Energy Management (“REM”) and Business Energy Management (“BEM”) will adaptively manage their programs by applying TQM approaches they have employed for several years.[[20]](#footnote-20) It is also important to note that organizations that provide program support (for instance, Energy Efficiency Brochures, Verification Team, Data and Systems Support, etc.) also apply these TQM practices throughout the year in their business practices. The following discussions are brief outlines of how Energy Efficiency applies the TQM principles to the adaptive management of its conservation programs.

As illustrated in the following discussion, program adaptive management practices include, but are not limited to: proactively managing Energy Efficiency’s suite of measures; monthly savings and expense forecasting; aligning with updated RTF UES values annually; active participation in trade shows and community events; effective Trade Ally communications; cooperating and partnering with regional utilities; collaborating in NEEA committees; continuously improving business processes; utilization of market research; and incorporating feedback from customers. This outline is not a comprehensive list of all TQM activities in Energy Efficiency.

#### Proactively manage Energy Efficiency’s suite of measures

Each program in Customer Energy Management (“CEM”: Residential Energy Management and Business Energy Management) demonstrates adaptive management by actively examining its measures and mix of measures throughout the year to ensure that they are effectively meeting customer expectations and driving conservation savings as planned. Periodically, circumstances reveal new measures (TLEDs are an example, as is the Advanced Rooftop Controller [“ACR”] initiative that were not a part of the original 2014-2015 BCP). Program staff will often incorporate such a measure—bypassing the pilot process—immediately into its suite of measures. This proactive management often has a significant impact on realized savings.

When a planned measure isn’t performing as expected, program staff may strategize a limited-time offer or other promotion to stimulate activity. Similarly, when a measure is no longer in demand or becomes cost-ineffective (Retail refrigerator replacements, for instance), program staff retire that measure.

#### Monthly savings and expense forecasting

Each month, CEM staff review monthly and year-to-date savings and expenditure metrics and compare the results to expected performance. This high degree of rigor and proactive management ensures that necessary adaptation is put into effect quickly, and that each Energy Efficiency Sector maintains close familiarity of challenges and opportunities within the entire Portfolio.[[21]](#footnote-21)

#### Aligning with updated RTF UES values annually

PSE’s policy of updating its prescriptive measure UES values, which it developed in 2008, clearly demonstrates adaptive management. Energy Efficiency program staff track RTF UES values for their programs’ suite of measures throughout the year, and incorporate updated or new values during the program planning process. Commensurate with annual planning filings, program staff build (in the case of new measures) or update (in the case of existing measures) their measure business cases to reflect RTF UES values that are in place on September 1.

#### Active participation in trade shows and community events

Trade shows and conferences are good sources of new and innovative conservation technological advancements. Energy Efficiency’s sponsorship of, involvement with, and participation in trade shows and conferences are other key element of its adaptive management steps. Similarly, Energy Efficiency gains valuable insight into customer expectations and potential opportunities for strategic advancement by attending community events, hosting promotions at large retailers, conducting community “blitzes”, etc.

#### Effective Trade Ally communications

Several CEM program staff are members of industry committees, providing technical expertise and real-world experience while gaining insight into regional developments and potentials for market transformation. Energy Efficiency staff also conduct regular vendor and contractor trainings, recognition events, and conferences, where important exchanges provide critical two-way communication as to market potential and customer demand. PSE’s participation in eSource also provides program staff with a portal to services and technologies beyond the Puget Sound Region. This is another key component of CEM’s adaptive management implementation.

#### Cooperating and partnering with regional utilities

PSE routinely engages with other utilities in the Puget Sound region to devise comparable customer offerings, standardize application forms and processes, combine evaluation efforts, and ensure consistency of business practices. Examples include the Advanced Rooftop Controller (“ACR”) incentive, where PSE partnered with the “I-5” utilities, and its work with its regional counterparts on proactively managing standalone Energy Smart Grocer programs. Singly, some utilities aren’t able to execute innovative strategies. By partnering, though, economies of scale are realized and there is more assertive adaptation progress.

#### Collaboration in NEEA committees

Energy Efficiency staff participate in a wide range of NEEA committees, including the Residential Advisory, Commercial Advisory, Natural Gas Advisory, and Cost Effectiveness Advisory Committees, for example. Staff’s committee involvement not only provides valuable insight into leading-edge practices and technologies, but also helps influence regional efficiency directions and shape market adaptation.

#### Continuously improving business processes

Program implementation, even with new measures or incentives, would be sub-optimal if Energy Efficiency’s supporting business processes weren’t continually reviewed and upgraded. CEM’s program staff collaborate with their marketing counterparts, the Data and Systems Services team, Rebate Processors, the Verification Team, Energy Advisors, Market Research, and others. They measure the ease with which customers can participate in Energy Efficiency programs, how effective the incentives or delivery mechanisms are, where there are potential process defect opportunities, or the time needed to process customer requests. The implementation of DSMc is a key example of a department-wide initiative to provide customers with a positive energy-efficiency experience and keep customers returning for additional conservation opportunities.

One of the most significant business process enhancements that Energy Efficiency has undertaken in several years is the implementation of DSMc. Having reached full implementation at the end of 2016, DSMc will play a critical role in allowing program staff to adjust nimbly to market conditions, meet customer expectations, maximize communications with Trade Allies and Regulatory Stakeholders, provide real-time performance data, and reduce rebate processing time lags.

The application of TQM principles in its business processes is a significant Energy Efficiency adaptive management constituent.

#### Utilization of market research

A significant portion of CEM programs rely on up-to-date market research for indications of customer behavior, expectations, and satisfaction with Energy Efficiency’s programs.

Program staff review research findings throughout the year and apply results to their offerings, often developing customized services for particular PSE territories or demographics, such as English-as a-second-language, rural customers, etc. Essential market research is important to promotions such as Energy Upgrades and pop-up events; these types of projects are considerable participation boosters.

Market research is a key adaptive management tool for the effective implementation of REM programs.

#### Incorporating feedback from customers

PSE customers are vital source of performance indicators, and Energy Efficiency places a high degree of reliance on what they tell program staff about the services provided. Program staff adaptively manage various elements of their implementation tactics throughout the year based (in large part) on their customers’ input.

### Highlights of 2017 Adaptive Management Initiatives

PSE will implement several adaptive and continuous-improvement initiatives in 2017 that will positively impact Energy Efficiency’s success. Those listed below are among the highlights that are discussed in more detail in the coming chapters and Exhibit 3: *Program Details*. Some business enhancements include, but aren’t limited to:

* Initiating an M&V 2.0 pilot project that has the potential to provide timely and actionable feedback on the performance of large energy efficiency projects with increased savings reporting accuracy with reduced costs.
* Expanding the number of small business “blitzes” and community outreach.
* Expanding the number of homes visited by Energy Efficient Communities as part of the Home Energy Assessment program.
* Retiring the retail refrigerator replacement offering due to eroding cost-effectiveness.
* Continue enhancements of the Business Lighting grant application process, increase the consistency of lighting grant amounts across all business customers. Adjusted incentives to reflect current LED market trends. Eliminate the need for the customers and contractors to navigate very different processes for projects which may be very similar with the exception of varying electric rate schedules.
* Creating an Indoor Agricultural Website with standardized tools for project submittals.
* Participating in or coordinating events that target multi-ethnic and English-as a –second-language to reach underserved and hard-to-reach segments.
* Full-scale integration of PowerClerk® online application software to enhance Net Metering customer interconnection experience.

This commitment to constant innovation and proactive management has resulted in PSE consistently meeting conservation goals for the past decade while utilizing PSE customer funding contributions wisely and prudently.

## Compliance

This 2017 Annual Conservation Plan complies with WAC 408-109-110(2).[[22]](#footnote-22)

The 2017 ACP also complies with applicable conditions in Appendix A of Order 01 in Docket No. UE-152058 relative to program design, cost-effectiveness tests, required involvement in preparation of 2017 activities, etc. The Plan is also consistent with condition (4)(a), which indicates that PSE’s annual budgets must be provided in a detailed format and show projected savings.

Lastly, the ACP is consistent with Section F.11[[23]](#footnote-23) of the 2010 Settlement Agreement in Docket No. UE-100177, and the natural gas-specific sections of the 2002 Rate Case Stipulation Agreement, Exhibit F of Docket No. UG-011571.

PSE provides an updated 2017 compliance discussion, in Chapter 12: *Compliance*.

## Conservation Tariff Schedule Revisions

It is likely that PSE will file a Tariff Schedule for its residential Demand Response program in summer 2017. PSE’s existing Schedule 271 applies to commercial load control.

## Annual Conservation Plan Contents

Where there are notable differences, or where it is applicable, electric initiatives will be discussed separately from natural gas initiatives. Where there is not a distinction, the Energy Efficiency program staff will adaptively manage program strategies that address both fuel type programs.

### References to 2017 Updates

Many discussions will reference and summarize supporting Exhibits, which provide a substantial amount of detailed, important information. Applicable Exhibits are updated to reflect 2017-specific initiatives and information.

Where possible, PSE provides a reference to the originally-stated 2017 information for a straightforward comparison to the updated values; most notably, PSE provides this updated information in the detail pages of Exhibit 1: *Savings and Budgets*.

Similarly, in Chapters 4 through 10, PSE provides the original 2016-2017 program overview discussions—indicated with a unique section heading—with an updated 2017-specific content below.[[24]](#footnote-24) This allows Stakeholders straightforward comparisons of PSE’s original program plans to its updated 2017 plans, and reflects PSE’s commitment to adaptive management through the application of TQM.

### Regulatory Citations

Throughout this Plan, PSE may cite WAC 480-109 and UTC conditions where applicable within program or function discussions. Conditions include requirements outlined in Appendix A of Order 01 in Docket No. UE-152058; Sections A through J of the 2010 Electric Settlement Agreement, Docket No. UE-100177; and applicable Sections of Exhibit F in the 2001 General Rate Case Stipulation Agreement, Docket No. UG-011571.

This discussion and the Glossary of Commonly Used Terms section contain the only citation of the complete, formal name of those orders and conditions. In the following discussions, the report will only reference “Section”, “condition”, or “order” to avoid unwieldy repetition and unnecessary verbiage.

### Plan Organization

In order to present the Plan contents in a logical filing structure that is manageable for Stakeholders, PSE will follow it standard organizational tenets. Part 1 is the 2017 Plan Overview (this document). Part 2 includes of all of the Exhibits. This naming principle will assist Stakeholders in their filing comments or data request references.

Next, in consideration of Stakeholder requests, PSE condensed all of the ACP information into two manageable volumes; these are presented in both hard-copy and electronic (available via PSE’s secure FTP portal) format.

Energy Efficiency organized the volumes accordingly:

#### Volume One

***Part 1***

* + - Plan Overview

***Part 2***

* Exhibit 1: Savings and Budgets (*Portfolio and Sector views only*)
* Exhibit 2: Cost-Effectiveness Calculations (*summary only*)
* Exhibit 3: Program details, with target market, marketing plans, and customer incentives descriptions,
* Exhibit 4: Energy Efficiency List of Measures, Incentives and Eligibility.

#### Volume Two

***Part 2,*** *continued*

* Exhibit 1: Program-level budget and savings goals details,
* Exhibit 2: Cost-effectiveness tables.
* Exhibit 5: Prescriptive Measure Tables,[[25]](#footnote-25)
* Exhibit 10: Northwest Energy Efficiency Alliance (“NEEA”) Plan,

### 2017 Programs

This document: Part 1 - the 2017 *Annual Conservation Plan Overview*, provides general discussions relative to the development of the ACP, outlines of PSE’s plans for executing its conservation programs, and other topics that may not be germane to the attached Exhibits (for instance, a review of PSE’s compliance or a discussion of Energy Efficiency’s application of TQM principles).

It is intended to provide readers with the sense of focus that Energy Efficiency’s program staff employed to develop this considerable amount of detailed and thorough program planning for this impressive portfolio.

### 2017 Annual Conservation Plan Exhibits

In this Plan, PSE references six Exhibits, all updated to reflect 2017 revisions, listed in section II.J.1.b, that provide details about key elements of Energy Efficiency operations.[[26]](#footnote-26)

## Key Plan Enhancements

Continuous improvement initiatives are not limited to Energy Efficiency conservation programs. PSE included a variety of noteworthy upgrades to its Plan standards in this 2017 ACP. Readers will recognize that several enhancements resulted from Stakeholder comments and requests.

PSE appreciates Stakeholder comments relative to its documentation ease-of-use, presentation formatting, and ability to effectively access the required information. PSE re-prioritized the information presented in the Plan that Stakeholders indicated isn’t as valuable, expanded that which is useful, and organized the entire ACP package in a logical and consistent flow.

Even with these improvements, PSE maintained the traditional chapter/section focus and presentation style to maintain continuity with PSE’s other reporting and planning documents. The Energy Efficiency Staff continue to value and incorporate Stakeholder suggestions whenever possible.

Highlights of ACP upgrades include:

1. Exhibit 1: Savings and Budgets
   1. Stakeholders will notice several modifications to the program detail pages, including: 2016 totals are greyed out; the horizontal table that feeds the Sector tables is organized chronologically top-to-bottom, including the original 2016 and original 2017 figures, along with updated 2017 figures; applicable budget tables now include “micro-overhead” calculations; PSE created 2017-specific measures tables in programs with a very large number of measure revisions (Lodging Direct Install, for instance) for more straightforward comparisons of 2016 values versus updated 2017 values.
   2. Micro-overhead is a new calculation that represents planned expenses that formerly assessed to program labor amounts. Energy Efficiency included the new calculation—resulting from enhanced PSE accounting practices—in the Overhead budget classification. The value is clearly noted and results from a computation of the labor amount indicated by program staff. This new value does not represent an incremental cost; it merely takes the place of expenses that formerly assessed to labor costs.

Costs that formerly assessed to labor include those that were not applicable to a specific order number, such as CRAG meetings, trade ally seminars, conferences, etc. The micro-overhead classification will make annual Schedule 120 reviews more straightforward and transparent.

1. The Plan Overview document program discussions include the original 2016-2017 content, followed by a “2017 Updates, Revisions, Enhancements, Adaptive Management” section. This enhancement will make it quite clear what program modifications and adaptive management steps are planned for the upcoming year.

# Developing 2017 Updates to the 2016-2017 BCP

Chapter 3 focuses on the key factors and considerations PSE incorporated to develop its updated 2017 electric and natural gas targets, cost-effectiveness estimates, and corresponding budgets.

## 2017 Conservation Savings Goals and Anticipated Expenditures

Table III‑1 presents the overall electric savings and budgets by Energy Efficiency Sector, as compared to the originally-stated 2017 budgets in the 2016-2017 Biennial Conservation Plan (“BCP”).

Table III‑1: Comparison of Electric Savings and Planned Expenditures

### Decoupling Considerations

Decoupling is a two-year savings figure that isn’t possible to assign programmatic or timing attribution. Therefore, PSE does not allocate an annual total that is applicable to the 2016-2017 decoupling commitment of 27,993 MWh, or 3.5 aMW. PSE makes the distinction that decoupling savings are not sequential, and it isn’t possible to indicate that it will achieve 2.5 percent over its EIA target in 2016 and an additional 2.5 percent in 2017. Nor is it possible to indicate that it will achieve all 5 percent in 2017, after PSE achieves the EIA Target.

PSE presents the overall natural gas savings and budgets by Energy Efficiency Sector in Table III‑2, which compares the originally-stated 2017 budgets in the 2016-2017 BCP to the 2017 revisions.

Table III‑2: Comparison of Natural Gas Savings and Planned Expenditures

## Principal Considerations Influencing 2017 Revisions

Energy Efficiency staff examined several considerations while adaptively managing their programs 2016 with an eye toward developing the 2017 ACP. The following discussions highlight some of the key assumptions and factors that Program Staff used to guide their planning processes.

### Key 2017 Savings Revision Drivers

Throughout the 2017 planning process, staff carefully considered the dynamics of PSE’s and the region’s marketplace, trade ally support, customer requirements, internal and external resources, actions taken by other utilities, and the potential for new and untested customer offerings, among others. Energy Efficiency program staff conducted rigorous savings reviews for both natural gas and electric Portfolios.

One of the key electric-only savings revision drivers was the savings value calculation recommendations made in the 2014-2015 Biennial Electric Conservation Achievement Review (“BECAR”).

The remainder of the savings drivers pertain similarly to electric and natural gas updated savings values. Central among these include, but aren’t limited to: annual revisions to RTF Unit Energy Savings (“UES”) and PSE Deemed values; the eroding market demand and product saturation of key measures; and the impact of Washington State Non-Residential Energy Code adoption, among others.

It is important to note that, although excluded from PSE’s EIA Target, Northwest Energy Efficiency Alliance (“NEEA”) savings and pilot programs[[27]](#footnote-27) are included in the overall Energy Efficiency Portfolio and funded by PSE customers. As Portfolio contributors, PSE includes them in this discussion.

#### Incorporating 2014-2015 BECAR Recommendations

SBW Consulting, Inc. made several savings calculation-specific recommendations in the 2014-2015 Biennial Electric Conservation Achievement Review (“BECAR”), including:

###### Horticulture Lighting

SBW recommended that PSE make improvements to the savings estimates for cannabis horticulture LED lamps under E251-C/I New Construction, including operating hours calculations, HVAC interaction, and other factors.

###### RTF UES Values

SBW recommended that PSE update its archived RTF UES values to the current RTF workbooks.

###### PSE Deemed Measure Values

SBW made recommendations relative to LED HVAC interaction factors, pre-existing baseline wattages, RTF and EISA references.

These recommendations aligned with PSE’s standard measure revision process. Thus, where possible, PSE incorporated each of these recommendations in its 2017 suite of prescriptive measures.

Although not specifically identified in the affected programs’ measure tables,[[28]](#footnote-28) all prescriptive savings values reflect these recommendations, as well as annual measure savings prescribed in Energy Efficiency’s *Measure Revision Guidelines.*

#### Annual Prescriptive Measure Updates: RTF UES and PSE Deemed

As a key proportion of Energy Efficiency’s overall conservation goal, program revised the RTF measures in their portfolios to the values published by the RTF as of September 1, 2016. The 2017 ACP reflects—when applicable—these RTF UES values. Similarly, PSE Deemed measures are also updated annually. In 2017, Energy Efficiency will report those savings values that are calculated by December 31, 2016. In applicable cases, PSE will follow accepted methodology and protocols to develop a PSE Deemed value[[29]](#footnote-29) that is consistent with WAC 480-109-100(5)(a).This is consistent with Energy Efficiency’s *Measure Revision Guidelines*.

Program staff have updated the savings values for their programs’ suite of measures in each program detail page of Exhibit 1. Applicable revised savings figures[[30]](#footnote-30) are noted in the “Measure Information” — “Savings” column. The revisions are denoted by the “(2017-Specific Values)” heading at the top of the column.

###### Highlights of significant prescriptive measure revisions

Table III‑3 provides a few highlights of electric and natural gas prescriptive measure revisions.[[31]](#footnote-31) Very few programs, both in REM and BEM, were unaffected by these UES value revisions.

While very few measures’ UES values increased, most, as evidenced in the table —and expected in the evolving energy efficiency marketplace—trended to lower savings. This is true for both electric and natural gas measures.

To varying degrees, adjustments included LED lamps, showerheads, several appliance types, and HVAC measures. Some adjustments resulted in measures becoming cost-ineffective.

Energy Efficiency put these measures on hiatus and will not offer them in 2017. Program staff also adjusted UES values for prescriptive measures identified in the 2014-2015 BECAR.

Although some per-measure value adjustments may seem insignificant, when multiplied by thousands (or in the case of retail LED lamps, millions), the adjustments will have a considerable impact. This circumstance has been present since the beginning (2008) of Energy Efficiency’s practice of adjusting its prescriptive measure values annually. As a result, program staff are adept at employing a variety adaptive management solutions to overcome these challenges.

It is noteworthy that, in a departure from its standard annual UES value adjustment, Energy Efficiency adjusted the Residential LED UES values indicated in Table III‑3[[32]](#footnote-32) retroactively for the 2016 reporting period to the indicated 2017 values. Energy Efficiency took the initiative to make this voluntary savings adjustment due to the significant impact on the Company’s power planning forecasts, as well as to ensure a high degree of savings reporting accuracy. PSE does not intend to set a precedent by making an adjustment of this magnitude, nor does it expect to make similar adjustments in the future.

PSE consulted the CRAG on this initiative in its October 12 meeting, explaining that the magnitude of the savings impact (over 41 million kWh) overwhelmed all other potential adjustments.

The CRAG generally agreed that the action was warranted and appropriate.

Table III‑3: Highlights of Prescriptive Measure Savings Revisions

#### Erosion of Market Demand & Product Saturation

Nowhere is the erosion of market demand and product saturation more evident that in the lighting market. As a result of market saturation, lower costs of LED lamps, and increased options, PSE will no longer offer rebates on CFL lamps in 2017. Similarly, due to a significant drop in customer demand and cost-ineffectiveness, the Direct to Consumer Channel’s Refrigerator Replacement program will be retired for 2017. Dwindling demand isn’t limited to the retail market.

The Low Income Weatherization natural gas program experienced a drop in qualifying residences in 2016, leading to a significant curtailment of its 2017 expectations. Potential causes may include, but aren’t limited to: the loss of a key Seattle agency who formerly generated multifamily projects; The LIW program offerings for natural gas customers are few due to cost-effectiveness limitations; and PSE has observed management transitions in some agencies who provide natural gas weatherization.

Likewise, the Large Power User/Self-Directed program has seen a reduction in in the savings per project and cost effectiveness of projects from eligible customers, due in large part to the measures still available to customers.

#### 2015 WSEC Adoption

Washington adopted its 2015 Non-Residential Energy Code in June, 2016. This resulted in several measures becoming cost-ineffective—primarily in the Multifamily and Commercial/Industrial New Construction programs—which both saw sizeable savings reductions from their original 2017 plans.

#### Pilot Savings

Although the potential savings are excluded from the EIA Target, Energy Efficiency includes the following discussion on pilot program and activity in 2017 Key Savings Revision Drivers section because it is an element of customer-funded overall Portfolio initiatives and savings goals.

###### Pilot savings are excluded from the EIA Target

During the development of the 2014-2015 BCP, the CRAG and PSE agreed that is was appropriate to exclude selected initiatives from the EIA Target. This tenet makes allowances for savings uncertainty, persistence, and minimizes the risk of potential financial penalties. The 2014-2015 results substantiate the wisdom of the agreement.

As noted in the 2014-2015 BCR, the 2014-2015 Individual Energy Report (“IER”) pilot savings original savings estimate for the (combined residential and business) initiatives was 34,900 MWh. The verified savings, however, were 18,897 MWh; more than 16,000 MWh less than expected, or a decrease of 45 percent from goal.

This pilot was once again excluded from the 2016-2017 EIA Target, with the support of the CRAG.

Additionally, CRAG members agreed, in discussions leading up to the Commission’s Order 05,[[33]](#footnote-33) that pilot programs with uncertain savings potential should be excluded from utilities’ future EIA targets after consultation with their advisory groups.[[34]](#footnote-34)

###### Stakeholder requests

In their 2014-2015 BCR comments,[[35]](#footnote-35) some Stakeholders indicated that they expected to see more pilot programs in the Energy Efficiency suite than they did. For instance, Commission staff indicated in their BCR comments:

“Staff expects to see the utilities, in cooperation with their advisory groups, meaningfully expand their pilot offerings during the 2016-2017 biennium.”[[36]](#footnote-36)

PSE will ensure that it reviews the status of its pilot program activities and any potential pilots in-depth with the CRAG throughout 2017.

###### Energy Efficiency consideration for pilot initiatives

A key aspect of PSE’s evaluation of potential pilot programs is the potential for cost-effective energy savings in the current or subsequent biennium.[[37]](#footnote-37)

WAC 480-109-100(1)(c) indicates that a utility must implement pilot projects:

“…when appropriate and expected to produce cost-effective savings **within the current or immediately subsequent biennium**,[[38]](#footnote-38) as long as the overall portfolio remains cost-effective.”

Throughout the 2016-2017 biennial planning process and in 2016, Energy Efficiency staff examined the energy-efficiency landscape, consulted with its trade ally network, and partnered with regional utilities for new technologies and new savings opportunities.

This work continues through 2016 in order to potentially develop new and innovative customer offerings that reflect a prudent use of their Rider funding.

If program staff, based upon their extensive experience and professional opinion, cannot justify the ratepayer expenditure on an offering that isn’t expected to produce verified savings within several years, it is prudent to pass that product by and potentially consider it in a future biennium.

Within Energy Efficiency’s Portfolio, there are many instances of offerings and services that could be classified as “Pilots”, but are excluded from the Pilots program line in Exhibit 1: *Savings and Budgets*.

Offerings or services that may be classified as “Pilots” may be incorporated into the Portfolio as a part of BEM’s Energy Efficiency Technical Evaluation program (Schedule 261), or they may be directly incorporated into an existing program.   
Furthermore, several NEEA initiatives could also be considered pilots. Where program staff believe that there is feasibility and customer demand with a potential for program execution and a degree of savings uncertainty, PSE classifies these initiatives as pilots in Exhibit 1: *Savings and Budgets*.

The following discussions outlines some other instances that may otherwise be classified as pilots.

###### Business Energy Management technology and pilot assessments

BEM’s Energy Efficiency Technical Evaluation program operates under the terms of Schedule 261, and screens potential commercial pilots each year.

Energy Management Engineers (“EMEs”) receive occasional solicitations for potential energy efficiency projects. As discussed in the program’s Exhibit 3: Program Details (page 74):

“[…] Ideally, PSE would identify cost effective technologies and measures with significant savings potential, which are commercially available. However, there are many emerging technologies that range from “commercially available, but not used in the Northwest,” to “conceptual” or “prototypical” technologies still in the development phase. […]”

Energy Efficiency EMEs subject potential projects that are submitted to rigorous assessments; most of which have not been performed by the applicant. As a result, many of these proposals’ savings claims are unsupported, inaccurate, not cost-effective, or not market-ready.

When the program generates an opportunity, though, (for instance, Energy Management Information System [“EMIS”] pilot utilizing Retroficiency’s software platform),[[39]](#footnote-39) Energy Efficiency includes it in its Exhibit 1 documentation in the Energy Efficiency Technology Evaluation line of the BEM Sector, and presents it to the CRAG.

Other efforts in the Sector can also be considered “pilots”. For instance:

* BEM’s Urban Smart Bellevue program[[40]](#footnote-40) is testing the potential of expanding the concepts proven in its Resource Conservation Management (“RCM”) program by applying those principles to an entire municipal entity. Although the RCM program is a best-in-class, well-vetted program, its principles have not been applied to such a varied and broad constituency, and so, could also be considered a pilot.
* Another component of that category of savings is BEM’s pursuit of Strategic Energy Management (“SEM”) in the Industrial System Optimization Program (“ISOP”).
* As the cannabis growing industry is evolving, many projects can also be considered pilots. Growers who started operations in garages or backyard gardens and are now using warehouses or greenhouses are creating opportunities for best-in-class engineering evaluations and efficiency standards.
* Lastly, many custom grant applications; in BEM’s Commercial/Industrial (“C/I’) Retrofit, New Construction, and Large Power User/Self-Directed programs, are based on or include leading-edge or new technologies.

While the project itself may pass BEM’s grant funding formulae for cost-effectiveness and conservation potential, BEM often uses these projects as proving grounds to test persistence and long-term viability. One such instance is the HVAC system known as “Turbocor®” centrifugal compressors, which were new and untested 10 years ago, but are now considered a standard C/I upgrade.

###### Measures that are added directly to a Sector or a program’s suite of offerings

There are often new technologies that are so promising that program staff incorporate them directly into their suite of offerings, rather than term them “pilots”. Heat pump clothes dryers, super-efficient pre-rinse spray valves, TLEDs (introduced in 2014), and web-enabled thermostats are good examples. Others include the 2016 incorporation of Multifamily air sealing,[[41]](#footnote-41) Low-e storm windows and the Multifamily Retrofit SEM (Strategic Energy Management) program. The Business Sector also routinely adds new and promising measures, including commercial web-enabled thermostats.

Several of these were incorporated directly into the program because they were already vetted with provisional savings values. Otherwise, PSE may have considered classifying them as pilots.

Energy Efficiency also incorporates new programs into its Residential or Business Sectors; Small Agriculture Direct Installs is an example.

###### Collaborating with industry partners on the development of new products

Energy Efficiency staff continually work with a wide range of entities each year on the development of new and technologically-advanced potential measures, which could result in new measures or a pilot.

A few examples include:

* PSE is working with WSU to leverage CEEP funding to conduct a 6-month field trial on line voltage thermostats. The pilot would focus specifically on hard-to-reach workforce housing customers.
* Energy Efficiency staff are exploring a second-generation advanced power strip (“APS”) with Bluetooth functionality in a field trial, focused on the Multifamily segment. These units interact with a mobile app and include valuable Measurement and Verification (MV) features for utilities.
  + - Energy Efficiency is in early conversations focused on conducting a regional collaborative ductless heat pump study in the Multifamily segment, as there is currently no RTF UES value for this product.
    - Similar to the ShowerStart thermostatic restricting valve, Energy Efficiency is investigating a new auto-diverting tub spout system. Currently, there is only one manufacturer of this product. Program staff are assessing third party evaluations by Lawrence Berkeley National Laboratory and field trial data from California utilities.
* Energy Efficiency is also researching the customer acceptance of “Value” LED lamps; non-dimmable, non-Energy Star rated, etc.

###### New initiatives are not limited to measures

Through the application of adaptive management, many Energy Efficiency supporting functions implement exciting and inventive methods of connecting with customers throughout the year. While not specifically measure-related, these efforts are designed to lead to cost-effective conservation by making it easy for customers to participate in Energy Efficiency programs and provide additional opportunities to participate.

Some examples include (but are not limited to):

* During door-to-door outreach visits, representatives can schedule a same-or next-day Home Energy Assessment. This quick turnaround normally leads to an increased awareness of measure offerings. Similarly, the Energy Efficient Communities have expanded their small business blitzes to specifically target hospitality customers. The team is exploring additional opportunities for 2017.
* PSE assumed the task of creating internally-designed propensity modelling, which builds on the tool created in 2015. In a parallel effort, Energy Efficiency is fine-tuning its LIW customer segmentation tool that assists in identifying hard-to-reach segments. This will lead to work with social service agencies to test outreach and marketing tactics for identified segments.
* PSE is researching and is in the process of understanding the trend of buying energy efficient products online. Program staff are exploring the likelihood of making a future energy efficiency purchase online, and the demographics of customers making these purchases online. Research is focused on answering questions such as “is there more PSE can be doing online to reach a new demographic of customer?”

###### NEEA initiatives

A large portion of NEEA’s electric market transformation activities could be classified as pilots. Some Energy Efficiency staff are members of NEEA’s Retail Product Portfolio (“RPP”) committee, which assesses a substantial number of initiatives that could be deemed as pilots.[[42]](#footnote-42)

On the natural gas side, PSE is the majority funder of NEEA’s five-year natural gas pilot. The Natural Gas Advisory Committee manages a portfolio of five pilot natural gas potential measures. While NEEA expects that these potential measures will yield cost-effective savings in the long term, there are no natural gas savings forecast for 2017. The Committee’s five-year plan is to test the technical viability, manufacturing, the potential to transform the natural gas market, and influence the remaining regional natural gas utilities to participate in the pilot.

###### Conventional pilots

Although the small-to-medium business individual energy report pilot did not meet expectations, Energy Efficiency continues to evaluate the results with the intention of ascertaining next steps. The assessment includes consideration of offering design, target customers, engagement strategy or platform, outreach channels, etc. These criteria will be informed by the results of the follow-up evaluation.

Consistent with the agreement reached with the CRAG on August 24, 2016, REM will continue the Individual Energy Report (“IER”) expansion pilot for 2017. Evaluated savings for that pilot are trending well year-over-year, and are still cost-effective.

#### NEEA Savings

With the agreement the CRAG, NEEA savings are also excluded from the EIA Target calculations. NEEA savings are also included in the Department of Commerce’s annual update of biennial conservation achievement.

Since NEEA activities and savings are funded by PSE customers, and are included in the overall Energy Efficiency Portfolio, Energy Efficiency includes this key element in its discussion on 2017 key savings revision drivers.

Energy Efficiency’s Portfolio includes both the established NEEA electric program, and NEEA’s natural gas market transformation pilot.

###### NEEA Electric

NEEA’s original projection for 2017 electric savings is natural gas savings was 14,016 MWh; the updated figure, provided by NEEA, is 15,593 MWh.

###### NEEA Natural Gas Market Transformation

Similarly, NEEA’s original 2017 forecast for natural gas savings, achieved through its Natural Gas Market Transformation Collaborative pilots, was 37,680 therms. Over the course of 2016 analyses, NEEA has adjusted that estimate to 0 therms.[[43]](#footnote-43)

### Key 2017 Expenditure Revision Drivers

While the drivers of many savings revisions can be applied to both electric and natural gas programs, the drivers of planned spending revisions are straightforward, and can be attributed to either electric or natural gas programs in a clear-cut fashion.

One key driver of updated 2017 planned expenses that applies to all Energy Efficiency programs and supporting functions is updated overhead rates.

#### Updated 2017 Corporate Overhead Rates

The updated PSE corporate labor overhead rate was revised from 68 percent to 68.8 percent for 2017. As discussed in section 2.I.1.b. in Chapter 2, PSE’s accounting enhancement created “micro-overhead”,[[44]](#footnote-44) which is calculated to be 21 percent.

#### Electric

The electric budget of $103.45 million considers, but is not limited to the following key drivers.

###### Demand response funding

When PSE developed the 2016-2017 BCP, it was uncertain about potential costs that would be budgeted to the Conservation Rider for its demand response initiative. Following the development and subsequent Commission approval of PSE’s demand response RFP, 2017 estimated that implementation expenditures would be approximately $1 million. At its October 12, 2016 CRAG meeting, PSE discussed its original proposal that the demand response program be funded through the Conservation Rider.

While the CRAG agreed that program administrative costs associated with developing the program are appropriately funded through the Rider (similar to Net Metering funding), the attendees did not reach a consensus agreement that the entirety of the program should be funded through the Rider.

Subsequent to the CRAG meeting, PSE management recommended that the non-administrative costs of the program be removed from the 2017 ACP budget at this time. PSE made this recommendation because the vendor responses to PSE’s Requests For Proposal (“RFPs”) will not be available until November 2016. Once PSE has assessed the potential impact on its capital costs, it will update its demand response funding recommendation.

As a result, PSE removed over $1 million in costs from the October 14 draft Exhibit 1: *Savings and Budgets* Demand Response program detail. The remaining $322,000 represents anticipated costs incurred to evaluate RFP responses, and manage the development of the program.

###### A decrease in commodity prices

As market pricing on LED products (an exceptionally large contributor to Energy Efficiency savings) continues to fall, Residential and Commercial program staff are adaptively managing incentive amounts needed to drive participation.

###### Falling customer demand

Similar to the reduced demand for refrigerator replacements, natural gas retail showerheads also experienced a sharp reduction in demand in 2016, reducing incentive and overall program expenditures. Similarly, fewer eligible New Construction measures also translates into lower incentive costs.

###### Efficiencies, economies of scale, and new staff

Some programs—web-enabled thermostats for instance—are now fully integrated and require less “hand-holding” from program management. Energy Efficiency’s DSMc system will yield productivity gains across all programs. Conversely, additional staff required to manage the new Demand Response program increased the Programs Support budget by a significant amount.

###### Outside Services contracting costs

Services provided for Energy Efficiency’s Direct Install (Lodging, Agriculture, and Small Business) and Multifamily programs were in the planning stages when PSE filed the original 2016-2017 BCP.

During the 2017 ACP development through 2016, program staff solidified the delivery strategies for these programs and selected a contractor to perform the on-site functions. These programs’ updated 2017 budgets reflect that selection.

###### Extension of the Electric Vehicle Charger Incentive Pilot

PSE planned to end its EV Charger incentives in 2016. However, per a Commission request, PSE will extend the program until June, 2017. The resultant increase in budget[[45]](#footnote-45) is $296,000.

###### Regional end-use load study

Consistent with the 7th Power Plan, and as part of the 2017 IRP process, PSE will fund approximately $375,000 of a regional electric end-use load study.

#### Natural Gas

The natural gas budget of $14.69 million is largely a result of the continued low natural gas natural gas avoided costs and PSE’s concerted adaptive efforts to maintain a robust suite of natural gas offerings.

###### Reduced customer demand

Retail showerheads experienced a lower uptake level throughout 2016, leading to a reduced expectation for 2017. Similarly, Low-income agencies significantly curtailed their natural gas applications in 2016, resulting in a much lower level of spending planned for 2017.

###### 2015 WSEC non-residential code adoption

While both the Commercial/Industrial New Construction and Multifamily New Construction program are impacted by the adoption of the 2015 Energy Code, a key driver of the C/I New Construction program’s anticipated expenditure is the delay of a large natural gas project, originally slated for a 2017 completion.

###### Anticipated expenditure increases

Programs will compensate for reduced offerings with slight increases in spending for additional promotions, advertising, online presence, and marketing. Both the Lodging Direct Install, natural gas web-enabled thermostats, and Commercial HVAC programs expect significant increases in uptake and natural gas savings, resulting in increased incentive expenditures.

### Notable 2017 Reporting Revision Drivers

In their 2014-2015 BCR comments, Commission Staff requested that single large facilities be reported in the 2017 ACP separately.

Specifically:

“Staff encourages utilities to pursue these potential savings, and recommends that any program engagement with a potentially qualifying single large-facility customer be discussed with the utility’s advisory group early in the process. In addition, Staff requests that with its next business plan update each utility include an analysis of the savings potential of large facilities in its service territory.

When single large facility savings are achieved, they must be clearly reported as “single large facility savings.” When excess savings are earned at the end of a biennium, the utility should classify the quantity of single large facility savings that will be used to meet the target and how much will be held for future shortfalls.”[[46]](#footnote-46)

As of the date of the creation of the 2017 ACP, PSE has 13 customers that meet the criteria for single large facilities,[[47]](#footnote-47) all of whom are eligible to participate in PSE’s Large Power User/Self-Directed program, outlined in Schedule 258.

Staff’s request is significant, in that it would be onerous for EMEs, and unduly impose on those customers to provide access to their facilities and staff in order to create a savings potential analyses.

These customers are eligible to participate in the Schedule 258 competitive RFP process, which commenced in 2015 and will conclude in 2017. Projects submitted may not be indicative of future savings potential. To the contrary, these proposals may represent already-allocated or forecasted savings.

As part of the overall 2017 ACP, Energy Efficiency provides an electric savings estimate for the aggregate of this program. PSE commits to providing the CRAG with summary of these customers’ potential savings following the analyses and vetting of the RFPs.

PSE further commits to providing a breakout of these customers in its 2016 and going-forward Annual Reports, as a sub-set of its Large Power User/Self-Directed program achievements. This will provide the necessary detail to adequately determine potential excess savings classification details.[[48]](#footnote-48)

PSE discusses further enhancements, revisions, and additions in more detail in Chapters 4 through 10, and in Exhibit 3: *Program Details*.

## Portfolio Cost Effectiveness

Table III‑4 on page 54 presents the projected 2017 electric and natural gas program cost-effectiveness ratios, as measured using the Utility Cost (“UC”) Test and Total Resource Cost (“TRC”) test. It is important to note that cost effectiveness calculations performed for planning purposes rely on measure cost, customer incentive, and savings projections. Energy Efficiency finalize definitive cost-effectiveness rates only after actual costs are accumulated and reported. PSE provides program-level cost-effectiveness calculations in Exhibit 2: *Cost-Effectiveness Calculations*.

PSE will provide the 2017 actual cost-effectiveness results, based on the reported 2017 costs and savings in the Annual Report of Conservation Accomplishments in March, 2018.

### Application of Non-Energy Benefits

For 2017 cost-effectiveness analyses, PSE will continue to incorporate RTF-calculated Non-Energy Benefits (“NEBs”) into the TRC calculation for the majority[[49]](#footnote-49) of electric prescriptive measures using RTF UES values. PSE applied this policy to its suite of gas measures as well.

The RTF indicates the first-year value of the applicable NEB. That value could be based on square footage or per unit (for instance, attic insulation versus showerheads).

In its Exhibit 2 cost-effectiveness calculator, PSE then multiplies that first-year NEB value by the measure life to determine the total NEB value for each measure. It is important to note that PSE uses only RTF-calculated NEBs and those NEBs validated in evaluation studies.

For its suite of prescriptive natural gas measures, PSE incorporated NEBs through (1) using the kWh-to-therm savings conversion tool for natural gas measures that are based on RTF electric UES values,[[50]](#footnote-50) then (2) applying the RTF-calculated electric first-year NEB figure.

### Electric Cost Effectiveness

Energy Efficiency’s overall Portfolio cost-effectiveness remains healthy, and experienced only an inconsequential impact from the incorporation of the SIR (Savings to Investment Ratio) cost-effectiveness test for low-income projects in which the low-income agency based their savings on TREAT[[51]](#footnote-51) model calculations.

Energy Efficiency’s electric portfolio’s cost-effectiveness considerations remain intact, with very little change from 2016. Reductions in RTF UES values and market saturation increase pressure on program staff to balance their programs’ measure mixes.

#### Low Income Weatherization[[52]](#footnote-52) Electric Cost-Effectiveness Factors

The Low Income Weatherization (“LIW”) program will continue to operate its electric offerings in compliance with Section 10(a) of WAC 480-109-100.

### Natural Gas Cost Effectiveness

As in the recent past biennia, program staff must display skillful management in every Energy Efficiency program in order to sustain the Portfolio’s suite of natural gas programs. The LIW cost-effectiveness tests (application of the SIR test) outlined for its electric offerings in the above discussion do not apply to its natural gas suite of offerings. Therefore, the LIW natural gas offerings must be managed commensurately with the overall natural gas portfolio.

In the natural gas portfolio, only the Residential Sector’s Single Family Weatherization is anticipated to achieve a TRC of below 1.0 (estimated to be a TRC of 0.92 in 2017). No programs in BEM are estimated to finish 2017 below a TRC of 1.0. The Regional Natural Gas Market Transformation Initiative, administered by the Northwest Energy Efficiency Alliance (NEEA), will have no therm savings by the end of the biennium, and so will not be cost-effective in 2017.

As it has for the past several years, PSE assigns a 10 percent adder to the natural gas TRC figures for illustrative purposes.

### 2017 Cost-Effectiveness Estimates

As indicated in Table III‑4, the overall Portfolio exceeds an estimated TRC of 1.0 for its electric programs, consistent with the requirement of WAC 480-109-100(8).

PSE’s natural gas conservation programs also exceed an overall TRC of 1.0.

Table III‑4: 2017 Energy Efficiency Cost Effectiveness Estimates, Sector View

**Implementing Energy Efficiency Programs**

Chapters 4 through 10 provide, by Sector (following the organization of Exhibit 1’s Portfolio View), details of 2017 Annual Conservation Plan strategic initiatives that will be put into effect in order to meet PSE conservation targets.

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# Residential Energy Management Sector

Consistent with its application of the adaptive Total Quality Management approach, the Residential Energy Management (“REM”) Sector has demonstrated exceptional results for over a decade. With a focus on maximizing customer participation and continuous improvement, the Sector will make enhancements and revisions to several program strategies and measure offerings. It will also implement adaptations and appropriate revisions to programs in order to meet its 2017 savings goals.

In the following program plans, PSE includes the original 2016-2017 Biennial Conservation Plan program overviews (denoted with a unique heading) to differentiate and provide a point of comparison with the updated 2017 program plans (also separated by a unique heading).

## REM Highlights

For 2017, notable REM highlights include:

* At over 50 percent, lighting makes up the majority of the Sector electric savings.
  + LED lamps and fixtures comprise the majority of these savings. For 2017, CFL lamps will no longer be incentivized.
* With consensus from the CRAG, the Home Energy Reports (“Legacy”) program will continue in 2017.
* With eroding customer demand and a decrease in cost-effectiveness, refrigerator replacements will be retired. Clothes washer replacements will continue, however.
* The Sector will pursue initiatives that broaden the reach and leverage standardization of commercial measures, streamlining incentive and grant application processes for customers.
* As a result of low demand and poor cost-effectiveness in 2016, the Low-E Storm Window measure is removed from the Dealer Channel portfolio.
* Prescriptive Air Sealing measures will continue development through 2017.
* Natural gas web-enabled thermostats are expected to experience a significant upsurge.
* The Low Income Weatherization natural gas program’s savings are anticipated to be down more than 50 percent from the original 2017 plan due to lack of agencies’ projects.

Additional details are provided in the following program overview discussions, in Exhibit 3: *Program Details*, and in Exhibit 4: *Energy Efficiency Measures, Incentives & Eligibility*.

Table IV‑1 provides a summary of the Residential Energy Management Sector’s 2017-savings goals, specific budgets, and cost-effectiveness estimates. Several constituents of these figures are noted in the following program discussions. Only the Single Family Weatherization natural gas program is expected to finish 2017 with a Total Resource Cost benefit-to-cost ratio of below 1.0: 0.92. All other programs in both the electric and natural gas portfolios, are expected to achieve a greater than 1.0 TRC in 2017.

Details of specific budget and savings changes are thoroughly reviewed in the specific budget detail sheets for each program in Exhibit 1: *Savings and Budgets.*

Table IV‑1: 2017 REM Conservation Targets, Budgets & Cost-Effectiveness Estimates

### Tariff Schedule Adjustments

Residential Energy Management has no revisions to its Conservation Schedules (Schedules 200 – 249) planned in 2017.

## Low Income Weatherization

***Schedules E/G 201***

***Original 2016-2017 Biennial Conservation Plan Content***

In 2016, Low Income Weatherization (“LIW”) will also be referenced as Weatherization Assistance in some of PSE’s customer-facing communications collateral pieces. PSE will make this update to better align with similar national and state organizations. The program’s constituents remain the same, as does PSE’s commitment to completely funding agencies’ cost-effective projects to their capacity in assisting low-income customers install energy-efficient measures that help lower their energy bills.

The program will put an enhanced marketing and outreach strategy into place, with added emphasis on coordination with the PSE Energy Assistance Program, and engaging in public forums to be a visible advocate on behalf of lower-income customers. LIW will also use customer surveys to better understand how eligible customers want to receive energy-efficiency information, and will work to develop tools to assist its customer segment connect with applicable social service agencies in their area.

PSE will use targeted education and communication methods, including direct mail pieces, advertisements, and social media content, in addition to coordinating with local agencies.

The program’s measure mix will add innovative electric measures, including slab-on-grade insulation and T-8 LED retrofits, while natural gas measures continue to be a challenge for agencies to meet cost-effectiveness tests. It is expected that SIR measures[[53]](#footnote-53) installed as a result of agencies using TREAT modeling, will add almost 500,000 kWh of savings, with the majority of savings resulting from insulation measures.

The 2016-2017 LIW program, consistent with Order 07, Docket Nos. UE-121697 and UG-121705 (PSE Amended Petition for Decoupling Mechanisms, consolidated), and UE-130137 and UG-130138 (PSE’s ERF, consolidated) Granting (PSE’s decoupling) Petition and its associated Attachments, incorporates $500,000 in Conservation Rider funding. Shareholder funding of $400,000 also reflects compliance with this Order.[[54]](#footnote-54)

While it isn’t possible to specifically delineate each of these amounts from within the overall budgets, Stakeholders can be confident that the amounts are indeed included.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

#### Program Operations, Incentives, Measures

In 2017, in addition to continuing 2016 initiatives, the Low Income Weatherization program will retire some measures in the electric program as a result of becoming cost-ineffectiveness.

The program is forecasted to achieve less natural gas savings than originally planned for 2017: from 18,641 (as originally stated for 2017 in the 2016-2017 BCP) to a revised total of 8,786 therms. This reduced forecast reflects more closely what is expected based on 2016 actual production, which has been lower than originally planned.

The reasons for the reductions are due to three primary factors: 1) Gas savings are based on reduced RTF estimates for all housing stocks in 2017, which  means fewer savings for similar levels of work; 2) A key Seattle-based partnering gas agency terminated its Agency Weatherization Agreement in 2016, reducing overall gas production; and, 3) fewer natural gas applications are being received at the agency level. PSE is working with natural gas agencies to increase production and find new opportunities.  One example includes marketing support recently provided to the Metropolitan Development Council for a direct mail campaign to targeted census blocks in the agency service area of Tacoma.

###### Underserved and Hard-to-reach segments

In addition to its direct partnerships with the state’s low-income agencies, the LIW program will continue its efforts to reach renters directly,[[55]](#footnote-55) who may not be aware that they are able to enroll in efficiency services. The program will distribute targeted brochures and reinforce this awareness through the low-income agencies.

In 2017, the program will continue its focus on weatherization of manufactured homes and multifamily structures, where it is often challenging to reach all of the residents. Program staff will also continue their close engagement with state agencies and the CRAG to assess the key drivers of lower housing units served trends and develop innovative ways to maximize customer participation.

#### WAC 480-109-100(10) Compliance

The Low Income Weatherization program successfully incorporated processes needed to comply with the WAC, which indicates that utilities may fully fund projects that pass the Savings to Investment Ratio (SIR) test for projects: (1) using the TREAT model or (2) use measures that are in the Department of Commerce’s Weatherization Manual:

“A utility may fully fund low-income conservation measures that are determined by the implementing agency to be cost-effective consistent with the *Weatherization Manual* maintained by the department. Measures identified through the priority list in the *Weatherization Manual* are considered cost-effective. In addition, a utility may fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures.”

Although the WAC doesn’t address natural gas savings and natural gas cost-effectiveness, the LIW program will operate in accordance with the Commission’s 2013 Policy on gas cost-effectiveness,[[56]](#footnote-56) and Schedule 183, Section 9: Special Conditions, which allow PSE to operate its Low Income Weatherization program with a TRC benefit-to-cost ratio of 0.667.

## 

## Single Family Existing

***Schedules E/G 214***

This Sector group is the largest contributor of savings in REM and is made of these programs:

* Direct to Consumer Channel
  + Residential Lighting,
  + Home Appliances,
  + Showerheads,
  + Home Energy Reports.
* Dealer Channel
  + Space and Water Heat,
  + Weatherization,
  + Home Energy Assessment,
  + Fuel Conversion,[[57]](#footnote-57)
  + Business Rebates.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Single Family Existing organization composition will remain intact.

### *Direct to Consumer Channel*

***Original 2016-2017 Biennial Conservation Plan Content***

In 2016-2017, the Direct to Consumer Channel—one of three customer-focused organizations—will focus on the quality of measures and initiatives while maximizing customer participation. The Channel will maximize customer value through market research intelligence, measuring success, assessing, refining, and testing. This Total Quality Management approach will accomplish:

* Increased energy-efficiency equity within stores.
* Leveraged rebate and product pricing structures.
* Knowledge of the real barriers to customer participation.
* Programs designed to meet PSE customers’ needs.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Direct to Consumer Channel group composition remains unchanged for 2017.

###### Underserved and Hard-to-reach segments

The Direct to Consumer Channel will continue its highly successful Energy Upgrades campaign, and implement promotions that target these segments. Promotion designs will include further emphasis on reaching the multi-cultural market.

#### Retail Lighting

***Original 2016-2017 Biennial Conservation Plan Content***

The primary focus of the Direct to Consumer Channel’s Retail Lighting program is residential consumers, participating in the Company’s program offerings at retail establishments, community events, and electronic channels such as ShopPSE for instance. Management of the Retail Lighting program includes Lighting to Go. Although the Lighting to Go program is considered a retail offering, its primary focus is the commercial market. Accordingly, Lighting to Go is discussed in more detail in the Business Rebates section of the Business Energy Management chapter, Section V.H.1., page 92.

For 2016-2017, PSE will respond to a market where A-Lamp and BR-30[[58]](#footnote-58) lamps have seen a dramatic price decrease. Overall, LED market prices have also declined, while CFL purchases have fallen. LEDs will now account for nearly 70 percent of lamps sold, with the remaining 30 percent being CFLs. The vast majority of the program’s savings will originate from LED measures. With the reduced costs of LEDs, PSE has adjusted its incentives according, making the program more cost-effective, while still maintaining the same level of funding for customer education and marketing to further increase product adoption. PSE will also add TLED[[59]](#footnote-59) and LED shop lights to its suite of measures.

PSE will implement a highly-focused marketing and promotional plan[[60]](#footnote-60) that focuses on provide customers options to choose the best energy-efficient products for them.

Some strategies include:

* Using propensity modeling and market intelligence on buying habits,
* Simplify the in-store buying process, focusing on point-of-sale materials,
* Collaborating with the Energy Efficient Communities team to coordinate outreach efforts to select priority communities,
* Evaluation of past marketing campaigns and promotions to apply customer responses and successes,
* Cross-Channel cooperation and promotions,
* Developing new and sustaining existing partnerships with retailers and manufacturers,
* Increase customer awareness of the variety of products available and ensuring in-store point of purchase materials drive customers to purchase PSE-incentivized options.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

PSE will continue to respond to a market where LED lamps have seen price decreases and Energy Star has ceased the certification of the CFL bulb. LEDs will now account for 100 percent of lamps claimed through the retail lighting program.

With the reduced costs of LEDs, PSE will continue to adjust its incentives accordingly while still maintaining the same level of funding for customer engagement to further increase product adoption.

#### Home Appliances

***Original 2016-2017 Biennial Conservation Plan Content***

PSE will expand its appliance rebates to all three tiers of clothes washers and refrigerators in 2016,[[61]](#footnote-61) with incentives ranging from $25 for Tier 1 appliances to $75 for Tier 3 appliances. This range of incentives provides ample opportunity for customers to participate in PSE’s popular and highly-regarded appliance program.

PSE will also offer incentives on heat pump clothes dryers. As these dryers typically extend the clothes-drying time, PSE will market this measure as a bundle with a coordinating clothes washer, rather than a standalone measure. PSE will incent both a vented and ventless clothes dryer.

A sizable portion of the program’s electric savings will come from the advanced power strip measure, along with the well-established refrigerator/freezer decommissioning, and clothes washer replacement offerings. The natural gas savings in this program will be derived from natural gas clothes washers installed in PSE gas-only or electric and natural gas combined territories.

PSE is also excited about its initiative to offer instant rebates to customers making a major appliance purchase. This inventive rebate method will vastly streamline the incentive process; the PSE customer will immediately see the effect of the incentive at the point of sale. The instant rebate will be rolled out at major retailers initially, with those that can provide the applicable technology to follow. Of course, traditional rebate application process will still be available.

PSE will also focus on increasing consumer awareness of larger appliances, where there is limited product on a retailer’s showroom floor, and develop regionally-oriented outreach programs. PSE’s marketing collateral will also be made available in more prominent public areas and at local community events.

PSE will also more fully develop its social media, email and other communications means, while encouraging customers to recycle old, inefficient appliances.

Infrared sensing advanced power strips will also be offered through the Channel through online purchases, brick-and-mortar retailers, mail-in requests, and leave-behind methods.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Driven by customer data analyses, PSE will simplify its rebates to a flat incentive for all Energy Star clothes washers, refrigerators, and freezers in 2017. This simplification will provide many opportunities for customers to participate in PSE’s popular and highly-regarded appliance program.

PSE also will continue to provide customers with a modest energy efficiency kit during the pick-up of old appliances as part of the appliance decommissioning and replacement offerings. This kit includes an LED, showerhead, faucet aerators, and additional information on PSE’s many programs.

PSE discontinued its Refrigerator Replacement measure at the end of 2016. PSE has seen a steady decline in customer participation, and the measure was no longer cost-effective on its own. PSE will continue to offer the clothes washer replacement measure.

#### Showerheads

***Original 2016-2017 Biennial Conservation Plan Content***

In this biennium, PSE will communicate a variety of showerhead purchasing options to customers and streamline the purchasing process with clear point-of-sale materials and improved online functionality. Examples include retail stores and online at ShopPSE.

PSE’s engagement of its customers will focus on a quality high-efficiency showerhead. This engagement occurs at outreach events throughout our electric and electric-natural gas combined service territory. Unlike the direct-mail delivery, this delivery gives PSE a personal touch where it is able to answer customer questions and engage in other energy-efficiency messages.

PSE will partner with retailers and manufacturers to provide the best customer value such as, but not limited to; limited-time-offers and merchandising activities.

WaterSense faucets (including efficient aerators) are a new measure in this group, and are expected to contribute almost a third of the electric, and a small amount of therm savings. This measure will be offered through retail delivery, online, mail-in request and leave-behind.

The program will focus on providing customers with clear point-of-sale materials and improved online functionality, and establishing partnerships with city utility districts to offer low/no-cost high-efficiency showerheads through their billing process. Customer communications will emphasize customer choices and that high-efficiency showerheads do not necessarily equate to a low-quality shower.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

PSE will continue managing the Retail Showerhead program as originally planned. The program has decreased the quantity of showerhead measures based upon the quantity seen YTD within 2016. This has a more profound effect on the natural gas showerhead program savings than electric.

#### Web-Enabled Thermostat

***Original 2016-2017 Biennial Conservation Plan Content***

New for 2016, PSE will offer incentives on web-enabled thermostats that control electric heating in addition to gas heating in residential structures. The $75 rebate will be available to both contractors and do-it-yourselfers that purchase the unit through retail establishments, and can be processed via either mail-in forms or online forms. PSE will pay incentives after the manufacturer has confirmed that the thermostat has been installed and connected to the internet.

The Direct to Consumer Channel will collaborate with other Residential Channels to cross-promote web-enabled thermostats, as well as integrate with events outside of Energy Efficiency to drive customer participation. PSE will provide customers with a positive energy-efficiency interaction with shopping.

Electric savings for units installed to control heat pumps will be higher, as the thermostat is controlling the air conditioning as well as the heating. Although Program Staff forecast relatively few units being installed across the PSE territory, savings for this new measure will constitute almost 1 percent of the overall REM electric savings.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

While implementing the program as originally planned, program staff will implement adjustments to unit energy savings values to reflect new research on savings.

PSE continues to add new qualified manufacturers who meet its product functionality requirements and have the ability to verify customer connectivity. PSE has adjusted the 2017 quantity of thermostat measures for both electric thermostats and natural gas thermostats based on the quantity seen in 2016.

#### Home Energy Reports

***Original 2016-2017 Biennial Conservation Plan Content***

PSE will continue its limited-scope Home Energy Reports program, providing approximately 17,000 reports to participating customers. PSE will continue to evaluate this program on an annual basis, reporting total annual savings for 2016 results through the 2016 program year.

The expansion pilot of Home Energy Reports (both electric and gas savings) to approximately 100,000 new participants is discussed in more detail in the REM portion of the Pilots chapter.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

With the support of the CRAG, PSE will continue the Home Energy Report program through 2017.

### *Dealer Channel*

The Dealer Channel is the second customer-focused organizations within Residential Energy Management.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The 2017 Dealer Channel composition remains unchanged.

###### Underserved and Hard-to-reach segments

In 2017, the Dealer Channel will continue to coordinate its door-to-door Home Energy Assessment efforts with the Energy Efficient Communities (“EEC”) organization. The program will target single family and manufactured homes, providing no-cost home energy assessments and direct installation of lighting, water savings, and plug load measures.

In partnership with EEC, the program will run a targeted marketing “community blitz” approach in areas that are difficult to access, rural in nature, or otherwise deemed hard to reach.  These areas are similar to communities that PSE has visited, including:

* + Tumwater
  + Auburn
  + Des Moines
  + Buckley
  + Cle Elum
  + Roslyn

The Channel’s efforts relative to manufactured home services are also closely aligned with the Low Income Weatherization program. PSE provides comprehensive services through a turnkey approach to eligible low income manufactured home customers, and PSE has designed an assessment driven approach to connecting manufactured home customers with pre-vetted contractors who are qualified to deliver PSE rebates through a streamlined process. The Channel leverages Home Energy Assessments as a vehicle to reach these customers to identify cost-effective improvements and connect them with pre-vetted contractors.

#### Space & Water Heat

***Original 2016-2017 Biennial Conservation Plan Content***

The programs were affected by the RTF reduction in UES values. Energy Star® Tier 2 air-source heat pumps, for instance, saw a 17 percent reduction, ductless heat pump UES values were reduced by 3 percent, while heat pump sizing and lockout controls’ UES savings plunged 45 percent.

To adapt the program to account for these revisions, program staff are considering the addition of heat pump water heater replacements to its suite of offerings, and will add faucet aerator measures to its electric portfolio.

Additionally, the program will utilize data analytics to deliver outreach campaigns to targeted communities, drive customer referrals to PSE’s Contractor Alliance Network (CAN), and ensure that customers understand their energy-efficiency options through clear and concise messaging. Program Staff will also collaborate with manufacturers, distributors and contractors to provide special discounts and limited-time customer offers.

Replacement units will be Tier 3, high-efficiency models, and the focus will be on replacing existing resistance heating units, rather than one-for-one heat pump water heater exchanges. The program will also add a NEEA Tier 3 heat pump water heater measure and offer contractor-installed web-enabled thermostats for both electric-and gas-heated structures.

Two of the top electric savers in the Water Heat program’s portfolio will be 95 percent water heaters and NEEA Northern Climate Specs heat pump water heaters.

Due to the lack of cost-effective natural gas measures, no savings are planned forthe natural gas water heat program in 2016-2017. Program Staff will continue to evaluate the market for potential savings.

Among its measure offerings, key drivers of the Space Heat program’s electric savings will be ductless heat pumps, forced air furnace-to-heat pump conversions, and ductless heat pumps for manufactured homes. Natural gas savings will result from installation of 95% furnaces, efficient fireplaces and new integrated space & water heat measures.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the program will continue to implement 2016 initiatives, and will work with other regional utilities to more closely align rebate amounts for ductless heat pumps.

#### Home Energy Assessment

***Original 2016-2017 Biennial Conservation Plan Content***

In 2016, the HomePrint™ program will become the Home Energy Assessment program. PSE made this change to eliminate some customer confusion caused by the original program name. The program plans on expanding its services to the rental market, potentially working in conjunction with the Multifamily Channel.

PSE will also offer customers self-service online tools in addition to an onsite assessment rebate. Measures can be delivered through online fulfillment and direct installation. Customers interested in energy-efficiency upgrades will be provided follow-up resources and limited-time offers, and PSE will continue its door-to-door sign-up campaigns, based on propensity modeling and home age data. Another key program enhancement is the potential of regional delivery of this service through a service provider model; Program Staff are evaluating the impacts of this concept and will ensure that the CRAG is appraised of developments throughout the coming biennium.

The program’s savings will be derived from leave-behind and directly-installed measures such as LED lamps and showerheads.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, PSE will continue the work of transitioning the Home Energy Assessment (HEA) program. The program will utilize both a service provider and pre-vetted CAN partners to provide the service to eligible customers. PSE will work to ensure that consistency is present throughout the process, regardless of which partner is providing the service to the customer, with the exception of the use of PSE logos and marks differing by delivery partner.

In 2016, PSE, in collaboration with its service partner, successfully launched an online scheduling tool, hosted on PSE.com. PSE will focus the majority of marketing efforts for the program in 2017 to utilize the online tool as the primary call-to-action for customer participation.

In 2016, the PSE program team originally sought to create a co-pay option for a customer to acquire additional efficiency materials after the assessment was complete. However, the effort concluded with the development of PSE’s shop.PSE.com online platform. The HEA program will support the shop.PSE.com platform and other PSE single-family rebate opportunities through the report and communications from the Energy Specialist in the event a customer is interested in additional efficiency measures.

The exception to this is that PSE will offer qualified electric customers who participate in the HEA program a special promotion to acquire an advanced power strip by redeeming a promotional code to purchase the product at a subsidized cost. The program savings will be derived from the leave-behind and direct install measures such as LED lamps, showerheads, and faucet aerators.

Eligibility criteria of the HEA program also changed throughout 2016 to include adding manufactured and mobile home customers and revising qualification based on the date of service. The program eligibility has historically been one HEA per site address. In 2016, a date of service eligibility criteria was established to allow a home to participate if the date of service was greater than two program cycles. For example, beginning January 1, 2017, a home that has previously participated before January 1, 2015, will be eligible to receive another assessment.

#### Manufactured Home Duct Sealing

This program is another electric-only offering, and will leverage select directly-installed measures including LED lamps, showerheads, and advanced power strips. Program Staff will develop targeted marketing engagements to reach customers living in manufactured homes.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Manufactured Home Duct Sealing program changed significantly throughout 2016 to become a more comprehensive set of offerings for the customers. Among the changes include: creating a set of measures to be offered by PSE’s Contractor Alliance Network (CAN) partners instead of a single contracted service partner; and, providing customers access to the PSE Home Energy Assessment program. Customers who reside in manufactured and mobile homes will have access to an expanded set of rebate programs and measures throughout 2017, and by leveraging the aforementioned programs.

Cost and savings accounting were subsumed into the Single Family Weatherization program in 2016.

#### Weatherization

***Original 2016-2017 Biennial Conservation Plan Content***

Similar to other program affected by RTF UES value adjustments, the Weatherization program has adapted its complement of measure offerings for the coming biennium.

Although energy-efficient double-pane window replacement of existing double-pane windows[[62]](#footnote-62) can no longer be offered in either the electric or natural gas programs, PSE will offer a Low-e storm window measure as an alternative. The program will also develop a prescriptive air-sealing measure, and is examining the potential of offering a quality assurance/quality control in-home service.

Electric measure categories will include insulation (attic, floor, wall), new storm windows measures, duct sealing (prescriptive and Performance Tested Comfort Systems [PTCS]), and air sealing.

A large contributor of program savings is attributed to a new initiative being undertaken in 2016, which combines duct sealing with the installation of a furnace.

Two key natural gas therm savings measures will be prescriptive duct sealing and single-pane window upgrades, in addition to the new storm window measure and the program’s proven attic, floor, and wall insulation measures.

The Weatherization program will develop marketing and communications that are streamlined and promote the convenience and customer options, providing an easy call to action. Program Staff will integrate partners in their messaging, and utilize customer testimonials.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2016, due to the reduction of RTF UES values, most significantly impacting shell and window measures, the program team sought to develop a low-e storm window measure to replace the double pane to double pane replacement measure. However, due to the lack of maturity in the low-e storm market in terms of products and awareness, the measure did not perform as expected. As a result, PSE has decided to remove the low-e storm window measures from electric and gas portfolio for the 2017 program year.

In 2016, the program team did successfully develop many new measures in the portfolio of offerings including manufactured home duct sealing, manufactured home floor insulation, prescriptive duct sealing (targeting newer homes), and prescriptive air sealing. Throughout 2017, the program team will work with its pre-vetted CAN partners to ensure that compliance to the technical and installation specifications through QA/QC services, in-field and office trainings as well as contractor roundtable meetings.

## Single-Family Fuel Conversion

***Schedule E216***

***Original 2016-2017 Biennial Conservation Plan Content***

In 2016-2017, the Fuel Conversion program will remove the minimum electric usage requirement for incentives. The program will develop CAN and partner collateral that educates customers, and leverage Energy Efficient Communities’ door-to-door outreach efforts to build program awareness.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

It has been identified that the minimum electric usage requirement was not a significant barrier to participation in 2016. Program staff have decided to leave the usage requirement in place.

## Residential Business-to-Business Channel

The third customer-focused Channel in the REM Sector is Residential Business-to-Business (RB2B). This group focuses on Low Income Weatherization (discussed in Section IV.B., on page 59), Multifamily Existing, and Residential New Construction markets. Residential New Construction is made up of Single Family and Multifamily New Construction groups.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The 2017 Channel composition remains unchanged.

### Multifamily Existing

***Schedules E/G 217***

***Original 2016-2017 Biennial Conservation Plan Content***

The Multifamily Existing program will add TLEDs (tubular—or linear—LEDs), doors, dishwashers, clothes dryers, and ductless heat pumps to their broad electric measure portfolio in 2016. Other electric measures include insulation, clothes washers and clothes washer replacement, heat pumps, a wide array of LEDs, showerheads and thermostatic showerhead restrictors, windows, and a variety of calculated measures.

The program will also offer natural gas measures, including showerheads and showerhead restrictors, insulation, windows, direct-installed aerators, and several calculated measures; boilers, and common-space improvements for instance.

In order to raise tenant and property management awareness, PSE will co-host onsite events, including energy fairs, during direct installation activities on multifamily campuses. The program will work with multifamily property owners and property managers, and leverage relationships with trade ally contractors. Using market segmentation studies, PSE will provide customized outreach to multifamily communities, especially those with the highest savings potential.

Another customer awareness tool is the program’s “Strive for Five” recognition plaque. When a property installs a minimum of three measures, they are presented with the “Strive for Five” plaque, which they can display in a prominent location. There is space on the plaque for five total measures.

The plaque provides a tool for the property management to engage potential renters or buyers on the benefits of the building’s energy efficiency. They are also excellent motivators for existing residents.

The Multifamily Existing program partners with several multifamily associations who manage industry events to generate leads.

The program will also work with the Energy Efficient Communities team to develop and implement target outreach strategies for both business partners and customers.

Program Staff will communicate with property managers, owner, and tenets through quarterly e-newsletters, and is investigating the potential of providing energy-use monitoring devices.

The program typically uses a bundled approach to provide print advertisements in trade publications, direct mail and E-blasts, social media, television advertisements, and contractor advertising, among others.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Multifamily Existing program will continue to offer its broad electric measure portfolio in 2017, including an array of common direct-installed LEDs.

The Multifamily Existing program seeks new ways to cross promote with the Small Business Direct Install program with their Community Blitzes. The SBDI program aims to serve commercial small businesses with low and no cost measures which is precisely similar to the Multifamily direct install program targeting residents. Through this collaboration, both business owners and residents in mixed use commercial and multifamily buildings will benefit from these programs.

The program’s savings are particularly impacted by UES value revisions. While the electric savings are down very slightly from the original 2017 plan, natural gas savings were more significantly affected—especially insulation measures, which make up a large proportion of the program’s measure suite. In order to counteract these circumstances, the program’s third-party implementer engaged a portfolio manager to work with large property owners in PSE’s natural gas territories.

Program staff will also work with PSE’s adjacent utilities like Seattle City Light to ensure that there is coordination on conservation projects that yield both electric savings for them and natural gas savings for PSE. The program will also partner with low-income agencies specifically targeting workforce housing properties to ensure that they are aware of Multifamily Existing offerings. Workforce housing can often be overlooked because if falls just outside of LIW’s program focus.

#### Strategic Energy Management

***Original 2016-2017 Biennial Conservation Plan Content***

The program has also developed an exciting new multifamily customer service, which will be called Strategic Energy Management.

Leveraging the concepts established in the Resource Conservation Management program, the innovative service will engage property owners, managers, maintenance staff and residents to achieve electric energy cost reductions of 5 percent over the property portfolio baseline. Program Staff will manage the activities of a third-party implementer in a controlled rollout to a limited number of qualifying properties.

Customers who meet the minimum consumption standards will be offered—at no cost to them—the development of a portfolio baseline, a portfolio energy management plan, energy management workshops, performance monitoring, and tenant gamification (contests, challenges, etc.).

This interaction would also raise awareness of PSE energy efficiency initiatives in general, and create sustainable energy management practices.

For the 2016-2017 biennium, the program will be limited to customers that consume a minimum of 1 million kWh annually. As a result of fuel type mixes in some multifamily complexes, PSE anticipates that there will also be natural gas savings available.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The program will continue the implementation of this initiative in 2017.

### Residential New Construction

***Schedules E/G 215 and E/G 218***

***Original 2016-2017 Biennial Conservation Plan Content***

For 2016-2017, program staff are considering the ETO eQuest-based “plug and play” model featuring a tiered incentive approach. The tiered incentive approach gives developers a fast and easy way to calculate different incentive scenarios in language ($/sqft) with which they are familiar.

The program will also create greater awareness through in-person and online presence with developers, renters, condo buyers, and communities, concentrating on engaging decision-makers early in the design process. It will also develop post-construction marketing collateral that identify energy efficiency upgrades.

PSE will also develop letters to new residents, in-unit upgrades information, project completion plaques—similar to the “Strive for Five”, discussed in the Multifamily Existing plan—and on-site project celebration events.

The program will focus particular attention on affordable rental housing, and provide those affected customers with energy efficiency information that helps them manage their energy bills. The Residential New Construction program created a higher incentive level available to qualifying projects.

The program will also drive its constituency to new construction home shows and demonstrations, and conduct energy-efficiency presentations to various community audiences. Program Staff will enhance communication and awareness by providing direct-to-builder brochures, newsletters and electronic media development.

The program will also partner with other Residential and Business Sector teams to build strong program positioning.

The program’s electric measures will primarily consist of common-area and calculated measures, along with showerhead, in-unit whole-home ventilation, HVAC equipment upgrades, and clothes washer measures. PSE anticipates that natural gas measures, including condensing water heaters, showerheads, and calculated measures will see limited installation in this market; primarily due to the efficient equipment’s first-cost considerations for developers and builders. Additionally, gas acquisition costs are higher than for equivalent electric equipment.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In addition to continuing its 2016 implementation strategy, the program’s electric and natural gas customer incentives will include:

* **Component Measures:** Which includecustom analysis funding of individual measures, and may be up to 100 percent of incremental cost to exceed code.
* **Whole Building Analysis:** (For natural gas customers, PSE must also provide electric service.)Theseincentives are based on the percent savings over code baseline as determined by building energy simulation analysis.
* **Rebates:** Includeprescriptive rebates for incremental upgrades exceeding code requirements.

The 2017 Multifamily New Construction program will continue to see growth due to lowered housing stock in the region and increased multifamily building construction.

Consistent with the Commercial/Industrial New Construction inventive approach to implementing lighting projects, PSE plans on employing the Lighting Power Density (“LPD”) calculation in the new construction program. LPD utilizes the current energy code as a baseline for applicable space types; the incentive will be based on the proposed design in comparison to the energy code. Due to code baseline efficiencies for domestic hot water heaters changing from 80 percent to 90 percent efficiency, the Multifamily New Construction program estimates a sizable reduction in forecasted therms saved for 2017, relative to the original plan established in 2015. The electric suite of measures is similarly affected by the Energy Code revision.

PSE anticipates the majority of gas savings will derive from showerhead and whole building incentives. PSE will employ standard energy models, including EQuest and code models, to standardize evaluations and streamline the custom grant processing.

# Business Energy Management Sector

The Business Energy Management (BEM) Sector has consistently achieved superior results through its proactive application of continuous improvement and TQM adaptive principles for over ten years. By implementing strategies outlined in this Plan, updated for 2017, PSE plans that this trend will continue in the rest of the biennium. For 2017, BEM program staff responded to customer feedback, technology advancements, process efficiencies, and marketplace dynamics in adapting and making applicable revisions to robust programs that PSE forecasts will meet savings targets while prudently applying its customers’ funding.

In the following program plans, PSE includes the original 2016-2017 Biennial Conservation Plan program overviews (denoted with a unique heading) to differentiate and provide a point of comparison with the updated 2017 program plans (also separated by a unique heading).

## BEM Highlights

BEM Program Staff applied creative adaptation to the management of their suite of electric programs as they prepared for the 2017 program year. A key program enhancement for 2017 is the continued focus on streamlining of business lighting application processes. The Urban Smart Bellevue project, managed by the Resource Conservation Management program, will realize significant savings in its first full year of operation. Increased electric savings will also be realized by the Commercial HVAC, and Agriculture and Lodging Direct Install programs, which will also be in their first full year of operations.[[63]](#footnote-63) These increases in electric savings, along with planned strong performance by the Custom Lighting Grants program, will help to offset anticipated shortfalls in the Large Power User/Self-Directed program, which experienced drop-offs in program submittals in 2016.

A key driver of BEM’s natural gas anticipated 2017 performance is the effect of the 2015 Washington State Non-Residential Energy Code adoption in June 2016; updated baselines will, in some cases, have a significant effect on C/I New Construction grant applications. Additionally, a sizable New Construction project, slated for completion in 2017, is now anticipated to be delayed until 2018. In order to calculate natural gas program cost-effectiveness, the Sector will be consistent with the Commission’s policy statement on the treatment of natural gas cost-effectiveness calculation.[[64]](#footnote-64)

BEM will apply Non-Energy Benefits in the Resource Conservation Management (“RCM”) program, commensurate with the findings in SBW Consulting Inc.’s 2013 evaluation study.[[65]](#footnote-65)

All BEM programs—both electric and natural gas—are exceed to achieve a TRC benefit-to-cost ratio of 1.0 or greater.

While the majority of BEM program offerings remain consistent into 2017, four key enhancements are noteworthy:

1. PSE is launching a website for the Indoor Agriculture sector. PSE currently offers incentives to this sector through the C/I Retrofit and C/I New Construction programs. A standardized calculation template, contact information, and marketing material will be available on this website to streamline the application process for this sector.
2. The Business Lighting program plans to adjust incentives to reflect current market trends with LED products. LED products have become significantly more cost effective in the past year and PSE plans to align incentives available through the Business Lighting program to be more consistent with neighboring utilities and to reflect current LED pricing trends.
3. PSE plans to continue offering the Energy Smart Grocer (“ESG”) program through the end of 2017. Several utilities in the region including Clark Public Utilities, Tacoma Power, and Snohomish PUD are offering a version of the ESG program through the end of 2017. The program still has value to grocery chains that operate regionally in Puget Sound and across Western Washington due to the coordination between the utilities offering this regional program,
4. Commercial Direct-Install Programs – In 2017, PSE continues to offer direct install measures to agriculture and lodging sector customers through the Small Business Direct Install program. These difficult-to-reach markets have been challenging in the past. However, Program Staff have developed innovative penetration strategies to continue serving these customer segments.

Table V‑1 provides a summary of the Business Energy Management Sector’s 2017 ACP budgets, savings goals and cost-effectiveness estimates. Program plans are discussed in the following sections, with comprehensive reviews of target markets, marketing and outreach initiatives, and customer incentives contained in Exhibit 3: *Program Details*.

Details of specific budget and savings changes are thoroughly highlighted in the specific budget detail sheets for each program in Exhibit 1: *Budgets and Savings*.

Table V‑1: 2017 BEM Conservation Targets, Budgets & Cost-Effectiveness Estimates

## Tariff Schedule Adjustments

There are no Tariff Schedule revisions planned for BEM (Schedules 250 – 299).

## Commercial/Industrial (C/I) Retrofit

***Schedules E/G 250***

***Original 2016-2017 Biennial Conservation Plan Content***

The team of EMEs, supervisors and contract administration staff will engage with customers, developers, contractors and engineers to develop, evaluate, manage, and verify custom grants for both lighting-specific and other retrofit projects during this upcoming biennium. In addition, the staff will provide outside evaluation support, participate on RTF subcommittees, inter-utility initiatives, and contribute to NEEA advisory committees.

As noted in the BEM introductory discussion, C/I Retrofit will significantly simplify its lighting program. Beginning in 2016, customers will be able to receive incentives for their lighting projects either through Energy Efficiency’s commercial retail program Lighting to Go, or through the Business Lighting program, where they can collect 25¢ per kWh, up to 60 percent of the measure cost. PSE will also simplify the incentive application tools; in survey results, some customers have expressed dissatisfaction with the program’s Microsoft™ Excel®-based forms. Program Staff are exploring the potential of web-based applications.

The C/I Retrofit program will also transition away from its third-party program for data centers. PSE believes that it has reached the largest data centers, and will support requests in the next biennium through its custom grant process. This revision leaves the Industrial System Optimization Program (“ISOP”) as the only contracted C/I Retrofit program.

The C/I Retrofit group will add post-occupancy commissioning to its Comprehensive Building Tune-Up (“CBTU”) electric and natural gas programs. Formerly offered in the C/I New Construction program, commissioning applied to buildings that were occupied 6 to 18 months. CBTU applied to building three years or older.

To enhance consistency, PSE will leverage the CBTU incentive structure for post-occupancy commissioning. CBTU will be extended to 18 months, in order to bridge the gap between programs.

PSE plans to phase out its electric and natural gas Energy Smart Grocer program, beginning in the second quarter of 2016. This is the result of the retirement of BPA’s Energy Smart Grocer program offering, energy code revisions, and the potential for expansion of the Small Business Direct Install program. There is a possibility for PSE to offer Energy Smart Grocer services to the large supermarket customers through the end of 2017 if other regional utilities continue to offer the programs.

If, however, other utilities discontinue their grocer rebates, PSE will continue to accommodate customers seeking installation of prescriptive grocery measures through its Direct Install program or through custom grants.

Following its 2015 creation, PSE plans to launch the Advance Rooftop Controller (“ACR”) rebate for electric and natural gas projects. This service was conceived in a joint-utility collaboration, and will greatly simplify the customer experience. This is especially true when a customer’s location is served by different utilities for its fuel types; they will have a single point of contact and will receive a single incentive payment. Cooperating with partnering utilities also promotes consistency and efficiency, and will leverage additional savings opportunities.

The remainder of Commercial/Industrial Retrofit activity will be comprised of commercial non-lighting projects, predominately consisting of HVAC and controls upgrades, as well as data center energy efficiency measures. The majority of industrial savings will be predominately delivered via third-party programs and Schedule 258 Large Power User/Self-Directed activity.

Although natural gas retrofit projects have been in decline, application of the alternative TRC test threshold will maintain the scope of the program.[[66]](#footnote-66)

The C/I Retrofit team will primarily rely on internal PSE Channels, including Business Services, Energy Efficiency Communities contacts, trade ally relationships, and engineering design firms to generate a significant portion of its project leads. The group’s collateral will be more awareness-driving than project-generation focused, its internet focus will be on providing more effective communication of the program offerings. Program Staff are also considering the development of web-based applications and webinars as self-service or independent learning tools, while the Energy Efficient Communities team will conduct presentations to a range of constituents, including local governments.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

PSE plans to continue offering its electric and natural gas Energy Smart Grocer program through 2017. This is a result of other regional utilities continuing to offer this program to grocery customers. This provides a more consistent approach to the grocery sector in the Puget Sound region.

PSE will offer the ACR rebate for electric and natural gas projects. Conceived in a joint-utility collaboration, the process greatly simplifies the customer experience for this measure. This is especially true when a customer’s location is served by different utilities for its fuel types; they now a single point of contact and receive a single incentive payment. Cooperating with partnering utilities also promotes consistency and efficiency, and leverages additional savings opportunities. PSE plans to expand this offering by including additional products that qualify for incentives and is exploring additional measures to this offering that compliment ARC incentives such as smart thermostats.

The program is making further enhancements of the Business Lighting grant application process, increase the consistency of lighting grant amounts across all business customers, and eliminate the need for the customers and contractors to navigate very different processes for projects which may be very similar with the exception of varying electric rate schedules. The program also adjusted incentives to reflect current LED market trends and rates.

The program maintains a standard co-generation project template to evaluate the qualifications for co-generation grant applications in 2017. Although program staff received a small number of applications in 2016, none met all of the qualifications necessary as defined in WAC 480-109-060(13):

(13) "High-efficiency cogeneration" means the sequential production of electricity and useful thermal energy from a common fuel source resulting in a reduction in customer load where under normal operating conditions the useful thermal energy output is no less than thirty-three percent of the total energy output. […]

The program also maintains a website on the PSE portal:

<https://pse.com/savingsandenergycenter/ForBusinesses/Pages/Combined-Heat-and-Power.aspx>

## Commercial/Industrial New Construction

***Schedules E/G 251***

***Original 2016-2017 Biennial Conservation Plan Content***

Electric and natural gas customer incentives will include:

* **Component Measures:** Which includecustom analysis funding of individual measures, and may be up to 100 percent of incremental cost to exceed code,
* **Whole Building Analysis:** (For natural gas customers, PSE must also provide electric service.)Theseincentives are based on the percent savings over code baseline as determined by building energy simulation analysis,
* **Rebates:** Includeprescriptive rebates for incremental upgrades exceeding code requirements,
* **Grocery Sector Incentives:**[[67]](#footnote-67) PSE plans to phase out its Energy Smart Grocer/New Construction program, commensurate with the C/I Retrofit plans for this program. As is the case in the Commercial/Industrial Retrofit group, PSE will fulfill customer requests for installation of prescriptive grocery measures through new construction custom grants.

2016-2017 New Construction savings will see significant growth in indoor horticulture lighting, with approximately 6 million kWh forecasted for 2016-2017.

In this market, a single project has the potential for significant savings, where upgrades to LED from high-pressure sodium lamps can lower usage by almost 50 percent. Other general lighting projects will also contribute to the program’s electric savings.

In another inventive approach to implementing lighting projects, PSE plans on employing the Lighting Power Density (“LPD”) calculation in the new construction program. LDP utilizes the current energy code as a baseline for applicable space types; the incentive will be based on the proposed design in comparison to the energy code.

New projects that are due to be completed in 2016-2017 will drive natural gas custom grants. These projects tend to be very large; an apparent few projects usually contribute the largest amount of natural gas savings.

PSE will employ standard energy models, including EQuest and code models, to standardize evaluations and streamline the custom grant processing.

Due to the long planning and development timeline for new construction projects and recent resurgence in construction planning activities, a portion of program staff time in 2016-2017 will be spent working on projects that will deliver savings in 2018 or beyond.

The program staff will work in concert with its Marketing counterparts to reach architects, municipalities, developers, and engineers early in the building design stages. The program’s collateral will reflect customers’ need for a more comprehensive representation of program offerings, while electronic content will be updated and optimized. PSE will develop additional case studies and “mini” case studies that include new construction commissioning, and communications will also extend to multifamily new construction projects.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

PSE plans to continue its Energy Smart Grocer/New Construction program through at least the end of 2017 based upon other regional utilities offering the program through this time period. Horticultural lighting projects are forecast to achieve approximately 5 million kWh in 2017 by replacing high-pressure sodium and metal halide lamps.

PSE plans to continue to offer the LPD calculation in the new construction program. The LPD approach utilizes the current energy code as a baseline for applicable space types; the incentive is be based on the proposed design in comparison to the energy code.

PSE anticipates that projects that are due to be completed in 2017 will drive natural gas custom grants. BEM staff will also dedicate a portion of their time in 2017 to projects that will deliver savings in 2018 or beyond.

The program’s planned 2017 therm savings is approximately 39 percent lower than originally stated in the 2016-2017 BCP. This is primarily a result of one large gas project that was planned to be completed in 2017 being delayed until 2018. The construction of the facility and corresponding energy efficiency measure has been lagging. Additionally, the 2015 Washington State Non Residential Energy code that went into effect in July 2016 further reduces gas savings potential in the C/I sector in future years.

## Resource Conservation Management

***Schedules E/G 253***

***Original 2016-2017 Biennial Conservation Plan Content***

A key RCM initiative that will be implemented in 2016 is the retirement of the Strategic Resource Management program. This sub-set of RCM offerings provided a similar service to customers that didn’t have enough electric or natural gas usage to qualify for RCM enrollment. In 2015, some customers indicated that the two sets of qualifications and program operations were confusing.

In order to accommodate as many interested customers as possible, in 2016, the Program Staff will lower the electric threshold from a range of 5 to 20 million kWh/year to 1 to 20 kWh/year. The natural gas threshold will be reduced from a range of 625,000 to 2 million therms/year to a range of 135,000 to 2 million therms. This adjustment, along with the potential for customers to share RCM staff among the constituent buildings/sites, and providing customers the option to select third-party implementers,[[68]](#footnote-68) will afford customers more flexibility while resulting in maximized savings.

Another exciting initiative within the RCM program is the implementation of the Urban Smart Bellevue project. This initiative was created to drive technology, communications, facilities management, and collective actions among an aggregated group of Bellevue businesses, with as many participants as possible; as many as 200 businesses in the Bellevue urban core. This project alone will contribute approximately 7 million kWh of electric savings.

With the completion of a major software project in 2015, RCM natural gas costs will be lower in 2016-2017, resulting in an increased ability to acquire natural gas savings.

In the 2016-2017 biennium, the RCM program will continue to offer:

* Program start-up support,
* Resource accounting software,
* Technical assistance,
* Education and training,
* Energy data services,
* Financial incentives.

The RCM program utilizes a broad array of marketing materials and training activities to reach its customer base. The nature of the RCM program and its need for ongoing communications efforts with customers merits an integrated approach to support this program. The program’s communication strategy will focus on existing customers, with recognition and awards to outstanding customers, enhancing the ease of tool usage and ownership, and improving the RCM web pages. To attract potential customers, Program Staff will continue to develop case studies, and feature them in monthly newsletters. The RCM team will also leverage internal PSE groups, including the Energy Efficient Communities and Business Services to communicate program information and updates.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the RCM program will continue to provide customers with incentives to encourage energy reduction through behavior change and O&M improvements. These incentives will be provided through the standard program as well as through Urban Smart Bellevue which will continue to work with businesses in the downtown core of Bellevue. Program changes include:

1. Increased focus on whole building savings analysis methodology that aligns with industry standard practice.
2. Continuous improvement of the information and services provided through Urban Smart Bellevue based on customer feedback and needs.
3. Ongoing improvements to the Resource Accounting software tool built in-house for the use of RCM customers.

## Large Power User Self-Directed

***Schedule E258***

***Original 2016-2017 Biennial Conservation Plan Content***

The Large Power User/Self-Directed program’s allocations increased 40 percent over the previous cycle: approximately $19 million in the 2010-2014 cycle to approximately $26 million in the 2015-2018 cycle. Thus, 2016-2017 electric savings in this program are expected to reach approximately 44 million kWh.

During the 2016-2017 planning period, Program Staff remained consistently engaged with Schedule 258 customers to ensure that they were able to fully use their allocations. For the 2015-2018, the program is back on a standard 4-year cycle.[[69]](#footnote-69)

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The program will continue to manage this unique customer base as originally planned, with an emphasis on enabling streamlined PSE engineering interactions while providing a wide range of energy efficiency options.

### Single Large Facilities

As defined in RCW 19.285.040(1)(c)(ii)

"’single large facility conservation savings’ means cost-effective conservation savings achieved in a single biennial period at the premises of a single customer of a qualifying utility whose annual electricity consumption prior to the conservation savings exceeded five average megawatts.”

WAC 480-109-060(26) defines Single Large Facility as:

“[…] means cost-effective conservation savings achieved in a single biennial period at the premises of a single customer of a utility whose recent annual electricity consumption prior to the conservation savings exceeded five average megawatts.”

At the time of 2017 planning, PSE has 20 customers that meet the Single Large Facility definitions.

Of those, 7 are wholesale or power purchase customers; these don’t pay into the Conservation Rider, and so, are ineligible for Energy Efficiency programs. The remaining 13 are eligible to participate in Energy Efficiency’s Large Power User/Self-Directed program. It isn’t possible for PSE to create savings targets for these specific customers. It is, though, possible to provide savings achieved metrics at the aggregate of their locations at the end of the year.

These customers provide savings estimates as part of the program’s RFP process, which began in 2015 and will continue into 2017. The projects, though, may not be indicative of actual savings. Due to the difficulty and potential for dissemination of customer information associated with attempting to project the savings for this specific set of customers, PSE will instead report on this customer segment’s savings achievement in its Annual Reports henceforth.

### 2017 Savings

Based on 2016 project costs and savings to date, program staff estimate that 2017 Large Power User/Self-Directed expenses will be higher, and 2017 savings will be lower than originally planned. Key drivers include market and measure saturation, and increased costs for measures in submitted projects, resulting in higher incentive payments.

### Future Evaluations

Although the program is in its mid-cycle (2015-2018), PSE will consider incorporating comments and suggestions made by Stakeholders relative to the 2013 program evaluation in its future program evaluations. These include, but aren’t limited to: budgeting for in-depth interviews with eligible customers; a follow-on best practices study; will make clear distinctions between results, findings, and recommendations; incorporate sample designs that provide more inclusive results and provide a basis for statistical significance.

## Technology Evaluation

***Schedules E/G 261***

***Original 2016-2017 Biennial Conservation Plan Content***

During the 2016-2017 planning process, there were no new energy-efficient technologies on the horizon that weren’t already being evaluated in other forums. Therefore, no savings or expenses were budgeted for 2016-2017. PSE Program Staff will continuously scan for new technologies throughout the year and will, in consultation with the CRAG, consider amending the Technology Evaluation status for the 2017 Annual Conservation Plan.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

As noted in Section III.B.1.e.iv, Business Energy Management technology and pilot assessments, the majority of technological proposals that EMEs receive are through the custom grant process. In 2017, for those proposals that program staff receive outside of the CI Retrofit or CI New Construction grant application process, PSE will provide the CRAG with Technical Evaluation program updates as program staff receive unique proposals.

## Commercial Rebates

***Schedules E/G 262***

The Commercial Rebates organization is comprised of several rebate programs:

* Lighting to Go
* Small Business Direct Install
* Lodging Direct Install
* Agriculture Direct Install
* Commercial Kitchens & Laundry
* Commercial HVAC

The 2016-2017 planning process was an exciting time; the first in which the Business Rebates team operated as a cohesive unit.[[70]](#footnote-70) The team brought together ideas for continuous improvement and market adaptation throughout the planning process. Program Staff anticipate that this cohesiveness will also translate to PSE’s vendors, along with the addition of new and exciting marketing and advertising.

### *Lighting to Go*

***Original 2016-2017 Biennial Conservation Plan Content***

Beginning in 2016, commercial customers will purchase screw-in LED lamps through the Lighting to Go program. Availability of these types of lamps will be removed from commercial lighting programs. As Lighting to Go is a direct-purchase program, PSE will utilize the existing retail resources: field services, store signage, marketing, and outreach (akin to limited-time offers) to support the commercial-focused efforts. Lower prices on LEDs resulted in a reduced incentive needed to drive market participation, which in turn, reduced the program costs, while communications and marketing levels will remain constant. All LED UES values are PSE Deemed.

The program will also simplify and align the rebate application process with PSE’s residential retail program, minimizing confusion and allowing vendors to discuss the program attributes with a wide range of customers.

The Lighting to Go program will focus its marketing and communications efforts on ensuring that Point of Purchase (“POP”) signage for instant rebate vendors is appropriately placed, and that collateral provided increased awareness of PSE’s Retail Lighting program incentives. These efforts will be coordinated with the Direct to Consumer Channel’s initiatives.

This electric-only program’s measure mix is comprised exclusively of LEDs, including tubular LEDs (“TLEDs”).

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Lighting to Go program will continue managing to its original 2016-2017 plan.

### Small Business Direct Install

***Original 2016-2017 Biennial Conservation Plan Content***

In order to provide a more comprehensive suite of electric and natural gas measures to small businesses, PSE will build a small co-pay into its program structure starting in 2016. PSE believes that its ability to provide a wider range of services will offset any resulting participation dis-incentive.

PSE’s very successful small-business “blitzes” will be expanding in the coming biennium; from three to five per year. The program will also engage local contractors to assist with the measures that require more installation expertise. The program will also increase its focus on hard-to-reach small business customers.

These particular businesses may be located in rural areas, lack upfront capital due to low profit margins, rents their space, or may be uncertain about their longevity.

Some strategies that PSE will put into place for this set of customers include focusing on them during blitzes; PSE will also offer a subset of measures at no-cost; and financing for measures that have a co-pay. Program Staff will also coordinate marketing and promotional efforts with blitzes, and ensure that city officials and Chambers of Commerce are also engaged. Products and rebate offerings will also be promoted between the Residential and Commercial Sector Channels.

In order to provide a higher degree of efficiency and reduce turnaround, PSE will also locate field crews and inventory in the northern, central, and southern areas of its territory. This will provide an opportunity to communicate with several disparate businesses, rather than only those in a central location.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Program staff will continue managing the Small Business Direct Install electric suite according to its original BCP outline. On the natural gas side, there aren’t many natural gas direct-install measures available, Additionally, natural gas aerators, formerly large savings contributors, experienced a reduction in savings as a result of a Navigant evaluation recommendation. Thus, the 2017 natural gas projection is much reduced from the originally-planned figure.

In an effort to counter the reduction of natural gas savings potential, program staff are pursuing an inter-utility agreement in PSE’s gas-only territories. Such an agreement may allow the program’s service provider to offer electric DI measures and gas DI measures to customers at the same time. This holistic approach can make it cost-effective to serve PSE’s gas-only customers that had previously been more difficult to reach.

#### Underserved and Hard-to-reach segments

The Small Business Direct Install program targets a unique set of customers who may be in rural areas, have limited access to resources, may be in difficult-to-access areas (for instance, Point Roberts), or be skeptical of efficiency services.

Because several small business proprietors lease their space, they aren’t always inclined to make efficiency improvements. For these reasons, this set of customers could be considered underserved or hard-to-reach.

In 2017, program staff will coordinate with the Energy Efficient Communities organization on community “blitzes” in the more remote areas of PSE’s service territory. The program will also offer comprehensive energy surveys, direct installation of lighting, water savings and refrigeration measures, and subsidized rebates which help small businesses overcome hurdles to participating in traditional energy efficiency programs.

### Lodging Direct Install

***Original 2016-2017 Biennial Conservation Plan Content***

This new offering will initially target the larger lodging establishments, where there is a high confidence of participation, speaking directly corporate offices of chain hotels to ensure contact with the correct decision-maker. The program has developed an expanded measure list to offer a more comprehensive program. The program will also direct its outreach to ensure that PSE is also serving independent hoteliers.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Lodging Direct Install program will continue executing its original implementation plan, originally outlined in the 2016-2017 BCP.

#### Underserved and Hard-to-reach segments

As an update to the program outline discussed in the 2016-2017 BCP, the Lodging Direct Install’s focus throughout 2016 and moving into 2017 has been and will be to target small to medium-size hotel/motel customers; a unique set of customers who may be in rural areas, have limited access to resources, may be in difficult-to-access areas (for instance, Point Roberts), be skeptical of efficiency services, or simply too busy with their bottom line to navigate PSE’s efficiency program(s). Similar to the small business customer treated by the Small Business Direct Install Program, these customers represent an underserved segment.

### Agriculture Direct Install

***Original 2016-2017 Biennial Conservation Plan Content***

Another new offering in Business Rebates, this program will focus on small and medium agricultural customers, where there is typically a mix of electric and natural gas residential and commercial measure applications. Program staff are updating the measure mix for this program. The customer types may include greenhouses, dairies and livestock producers, nurseries, crop farmers and food processors.

The program will streamline the delivery of direct-installation services, and, similar to the Small Business Direct Install program, engage local contractors to provide expedited services for the more complex measure installations.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The majority of work for this program will be performed in 2017. In addition to the customer types originally listed in the 2016-2017 BCP, the program will ensure that offerings are directed to produce farmers, on-farm food processors, and cold-storage facilities that support farms. There are a very limited number of natural gas measures, as most farms in the PSE service territory are far from natural gas lines. The program will work in conjunction with other Residential and Commercial programs to address site-specific opportunities such as residences that are on the same property as the commercial buildings that would be eligible for HEA, and kitchen equipment for processing on site of “value added” products.

#### Underserved and Hard-to-reach segments

The small-to-medium agriculture customers are, to a larger extent than small business customers, geographically diverse. Farms are typically in outlying areas that are rarely targeted for conservation by other vendors. This customer base is also skeptical about the utility motivations around energy efficiency programs. Additionally, farms aren’t able to address energy efficiency upgrades during growing seasons; they can only do upgrades during late fall and winter.

Program staff will coordinate marketing and promotional materials that are specific to this market. They will also collaborate with County Conservation Districts throughout PSE’s service territory to reach agriculture customers and work with WSU Extension Energy Program for Agricultural Efficiency to leverage their agricultural expertise.

### Commercial Kitchens & Laundry

***Original 2016-2017 Biennial Conservation Plan Content***

This program will expand its electric and natural gas measure mixes to provide a more comprehensive offering in customer facilities. The program will coordinate market and outreach efforts with the Small Business Direct Install program, allowing for SBDI to assess, treat, education and connect customers with the rest of the PSE program portfolio. Examples include appliances, HVAC, Direct Control Kitchen Ventilation(“DCKV”. This system would manage the ventilation system over the cooking surfaces.), and custom grant processing.

The program will engage local market partners to deliver a streamlined point of purchase experience in both the kitchen and laundry sectors, translate its collateral materials for hard-to-reach customers, and will develop creative marketing campaigns to better engage decision-makers. It will also work to identify opportunities to cross-promote commercial kitchen and laundry programs to customers who have participated in other commercial efficiency programs, and continue its involvement in multi-channel initiatives and campaigns, including the Small Business Direct Install program.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

For 2017, program staff expanded the suite of Commercial Kitchen measures for both electric and natural gas portfolios. The program will also continue building on existing partnerships with other local utilities—adding Tacoma Water, for instance—to ensure that customers receive a “one stop shopping” experience.

#### Underserved and Hard-to-reach segments

The Commercial Kitchen Program customer is particularly underserved due to limited access to resources, skepticism of efficiency services, and owner/operator time constraints making them simply too busy with their bottom line to navigate PSE’s efficiency program(s).

PSE’s strategy and sensitivity to this customer segment helps the program maintain participation. Speaking with this segment face-to-face on Small Business Direct Install “blitzes” and engaging them through local market partners when they purchase equipment help take away the need for this customer to “figure it out” themselves.

In addition, this program continues to take a leadership role with five local utilities to deliver one program offering (consisting of a single application, qualifying product lists, point of contact, etc.). This ensures that customers and market partners[[71]](#footnote-71) alike, who are served by more than one utility provider can more easily participate in the program offerings.

### Commercial HVAC

***Original 2016-2017 Biennial Conservation Plan Content***

The Commercial HVAC program, in addition to the Premium HVAC offering, will expand its electric and natural gas measure mixes, including web-enabled thermostats, a morning warm-up natural gas measure, and advanced rooftop controls.

The morning warm-up rebate will be the program’s top-performing measure. When a building has a gas rooftop unit that serves electric-heat terminal boxes, this process will keep the economizer closed for a period of time, helping the building heat faster.

Commercial HVAC is also re-designing its contractor engagement strategy in order to increase participation, including developing a series of contractor trainings throughout the service territory.

Program Staff will collaborate with manufacturers, distributors and contractors to co-promote HVAC incentives, and will direct outreach of its Premium HVAC service to large property management firms.

PSE will participate in all relevant industry trade show and will examine opportunities to connect face-to-face with target customers and contractors.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

For 2017, program staff are researching the potential of adding a commercial web enabled thermostat rebate, including assessing other commercial web enabled thermostat programs to determine the feasibility. The Commercial HVAC program is also examining increasing the rebate amounts on our premium service program, based on feedback from contractors and customers. The intention would be to make the program more attractive to PSE customers.

### Comprehensive Audit Solution

***Original 2016-2017 Biennial Conservation Plan Content***

Different than Energy Reports, PSE is examining the potential to develop a web-based software that allows trade allies, third-party implementer, and Program Staff to conduct comprehensive on-site energy audits for a variety of business customers.

Program Staff are exploring the potential opportunity to expand existing residential software to include commercial assessments. This is a service that several business customers have recently requested from PSE.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

As Residential and Business program staff implemented programs throughout 2016, the original strategies pivoted. As the year progressed, several of the Comprehensive Audit Solution concepts were integrated into existing Residential and Commercial programs; Home Energy Assessments, and Small Business Direct Install programs for instance. One key driver was the implementation of DSMc, which affected the overall intent of providing a single solution platform for contracted vendors performing energy audits. In 2017, Energy Efficiency will continue to perform these functions within the applicable, separate programs.

# Pilots

***Schedules E/G 249***

For additional pilot background, please also reference the discussion of pilots in the Key 2017 Savings Revision Drivers in section III.B.1.

One key source of potential pilots is the EE RFP process.  PSE assesses the viability of proposals submitted through the biennial Energy Efficiency RFPs.  Proposals are examined for attributes such as implementation effectiveness, customer impact (for instance, will the proposed offering be easy for the customer to participate in? Is there adequate customer demand? etc.), savings potential, impact on overall portfolio savings, impact on program operations, marketing potential, overall costs, prudence of expenditures, and potential impact on cost-effectiveness. BEM’s Technology Evaluation team also reviews “one-off” technologies that are received from various sources (individual customers, engineering firms, existing vendors, contractors, etc.), using the same criteria.

Technologies that are estimated to have market potential and have a high degree of savings confidence are often incorporated directly into a program’s suite of offerings.  TLEDs are a prime example.  Others include web-enabled thermostats, advanced smart strips, and heat pump clothes dryers.  One could also reasonably assert that Custom Grants exist to analyze, quantify, and incentivize energy savings from many different technologies. Energy Efficiency program staff are also closely involved with the development of potential new and innovative measures.

Additionally, as a key contributor to NEEA’s electric conservation efforts, PSE programs benefit from their technology evaluation efforts as well.

In the following program plans, PSE includes the original 2016-2017 Biennial Conservation Plan program overviews, with an updated discussion below with a unique section heading to indicate 2017-specific updates.

## Residential

***Original 2016-2017 Biennial Conservation Plan Content***

PSE’s Home Energy Report pilot program, including three new customer segments:

* Rural,
* High Relative Use,
* Electric.

Is expected to conclude in 2016, when the impact evaluation is scheduled to be published.In the 2017 Annual Conservation Report planning process, Program Staff will, in consultation with the CRAG, decide on the viability of continuing with this offering as a full-fledged program or cancel the effort altogether.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

With support from the CRAG, PSE will continue the Residential Energy Report pilot expansion through 2017.

## Business

***Original 2016-2017 Biennial Conservation Plan Content***

The Business Energy Management Sector’s Small-to-Midsize Business Energy Reporting pilot, is expected to end in May 2016. The goal of the pilot is to evaluate the operational savings achievable in this sector through energy reports, as well as increase participation in commercial efficiency programs while improving the relationship between PSE and Small-to-Midsize Business customers. PSE will conduct an impact evaluation and share the results with the CRAG at its earliest opportunity. During the 2017 Annual Conservation Plan development, PSE will, in consultation with the CRAG, decide on whether to continue the initiative as a full-fledge program or not.

During the development of the 2014-2015 BCP, PSE and the CRAG agreed that it was appropriate to exclude these behavior-based pilots[[72]](#footnote-72) from the EIA target.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

As a result of the Business Energy Reports pilot not meeting its objectives, PSE will discontinue the pilot in 2017.

# Regional Programs

In the following program plans, PSE includes the original 2016-2017 Biennial Conservation Plan program overviews, with an updated discussion below with a unique section heading to indicate 2017-specific updates.

## Northwest Energy Efficiency Alliance

***Schedule E254***

***Original 2016-2017 Biennial Conservation Plan Content***

NEEA’s updated operational plan for 2016-2017 is included in this ACP as a standalone document, Exhibit 10. It should be noted that at the time of the publication of PSE’s 2016-2017 BCP, NEEA’s board has not approved their 2016 operating plan. PSE extends its appreciation to the NEEA Staff for their gracious cooperation and the additional effort and resources expended to develop this content.

### Natural Gas Market Transformation

In 2016-2017 NEEA will continue development of five key natural gas initiatives, as discussed in Exhibit 10:

* Gas heat pump water heaters,
* Combination water and space heat systems,
* Gas clothes dryers,
* Rooftop HVAC,
* Hearth products,

consistent with its 2015-2019 Business Plan and its 2015-2016 Operations Plan. NEEA estimates that the first of these products to yield therm savings will be hearth products in 2016. (It is important to note that this initiative is not a replication of PSE’s energy-efficient fireplace incentive. As a member of NEEA’s Natural Gas Advisory Committee, PSE will work to prevent a potential for double-counting of savings.) Although the natural gas heat pump water heater pilot was concluded in the fall of 2015, data from the field installations will continue to be analyzed into 2016 while product modifications (resulting from the field tests) are made.

NEEA believes that thefinal units may be ready for commercialization some time in 2016, when they will begin to generate therm savings.

PSE’s share of the natural gas market transformation funding is 41.25 percent, with a 2016-2017 total of $2.48 million.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

After considerable examination of the five pilot measures, the Natural Gas Advisory Committee agreed that its most promising potential measure—hearth products—would not reasonably be expected to generate savings in 2017. The Collaborative will focus on continuing its efforts to thoroughly understand the natural gas market segment, including customer characteristics (a key driver in understanding the expectations for hearth product performance), and continuing analyses of the rooftop HVAC pilot installations. NEEA will also work with its sub-contractors to move the gas-fired heat pump water heater closer to production capabilities, and work with natural gas clothes dryers to better define the efficiency parameters.

## Distribution Efficiencies

***Schedule E292***

***Original 2016-2017 Biennial Conservation Plan Content***

PSE’s 2016-2017 plans include implementation of Conservation Voltage Regulation (“CVR”) at substations most likely to provide cost-effective energy savings to customers from this added level of monitoring and control. The plan for CVR implementation includes required system upgrades, implementation of RTF prescribed measurement & verification protocols, as well as the required phase-balancing work which is a precursor to successful CVR implementation. PSE will target seven substations for CVR in 2016-2017.

Analyses performed during the 2016-2017 planning revealed that there are no cost-effective measures available for PSE generation facilities. Program Staff will maintain examination of these facilities in 2016 and will, in consultation with the CRAG, adjust its 2017 Annual Conservation Plan, should conservation opportunities in generating facilities present themselves. These programs will operate under Schedule 292 and require coordination between various PSE departments.

2017 CVR projects will yield over 3,000 MWh of savings.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Energy Efficiency EMEs will coordinate with PSE’s generating facilities to upgrade plant lighting on a fix-upon-failure basis in 2017. CVR and phase balancing at selected substations will be based on available O&M funding.

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# Portfolio Support

In the following program plans, PSE includes the original 2016-2017 Biennial Conservation Plan program overviews, with an updated discussion below to indicate 2017-specific updates. To minimize clutter and repetition, the original content is not specifically identified with the following heading for each function or activity (which is used for this discussion):

***Original 2016-2017 Biennial Conservation Plan Content***

Portfolio Support functions and activities provide needed services to Residential andBusiness Sector Program Staff. These include providing a wide range of options for customers to ask questions and obtain information about PSE’s energy efficiency programs, ensure that PSE’s awareness messaging is consistent across all platforms, process enormous amounts of rebate application and measure installation data, efficiently process and follow-up on rebate applications, and provide resources for developing new and updated program offerings.

Over the previous biennia, PSE has endeavored to provide maximized transparency, while maintaining reporting consistency and efficiency. The most recent example of PSE’s commitment resulted in Rebates Processing and Data and Systems Support budget being separately enumerated in the 2015 Annual Conservation Plan. In the 2016-2017 biennium, PSE continues to improve its budget representations in the Portfolio Support group, as will be discussed in the following sections.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The majority of functions and activities in the Portfolio Support group will continue to operate consistently with the originally-outlined 2016-2017 Plan. As readers will note, several functions are associated with or support the implementation of Energy Efficiency’s new customer management software DSMc, or will provide direct support of the implementation of PSE’s Demand Response program.

## Tariff Schedule Adjustments

There are no tariff Schedule revisions needed for 2017 in the Portfolio Support group.

## Customer Engagement & Education

The Customer Engagement & Education section is comprised of four organizations; Energy Advisors, Events, Brochures, and Education. Each function is focused on providing information on a broad range of energy-efficiency topics, rather than program-specific information (although energy advisors have a high degree of expertise in the majority of REM and BEM programs).

### Energy Advisors

The Energy Advisor department will continue to locate EA Staff in local PSE offices, in addition to the Bellevue-based core team; including Olympia, Bellingham and South Whidbey Island. The Staff are implementing new outreach methods, including outbound calls for Home Energy Assessment customers. New metrics will also be put into place to show customer trends.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

For 2017, the team will staff the Tacoma PSE office in addition to those noted above. Energy advisors will make outbound calls for contractor referral follow-up, rather than to Home Energy Assessment customers in order to potentially drive additional measure uptake. Customer metrics will be updated, and the staff will support the implementation of DSMc.

### Events

The Energy Efficiency Events team will continue to manage requests from communities, trade shows, and other interested organizations for PSE’s Energy Efficiency department participation in over 200 events per year.

The team will provide materials and moving services for custom interactive displays, using a tracking database to ensure consistent and accurate logistical flow. Major conferences planned for the 2016-2017 biennium include but aren’t limited to the West Coast Energy Management and the Powerful Business conferences.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Events Team streamlined processes and increased focus on recording post event feedback in 2016 in order to better evaluate the community activities PSE engages with to improve how and where it places its resources.

#### Underserved and Hard-to-Reach Segments

The Events and Communities teams will be seeking and identifying opportunities to engage with audiences that PSE’s normal means of messaging don’t reach well. The teams will coordinate participation at community events that target multi-ethnic and English-as a-second-language populations (for instance, Fiestas Patrias, Cornucopia Days, and ethnic celebrations). This is a key initiative in connecting with hard-to-reach segments.

### Brochures

This Energy Efficiency department category includes brochures that are not program-specific; home improvements, tips for controlling moisture, general energy-savings tips, general energy-savings appliances, and a variety of brochures for non-English-speaking customers, for instance. This function will continue to re-print, replenish, and distribute these brochures to customers using continuously-improving methodologies.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

PSE continues to improve the means of information distribution to customers based on their changing needs. PSE make use of immediate emails with PDF attachments via its Energy Advisors as well as mailed hardcopy brochures through its brochure fulfillment process.

#### Underserved and Hard-to-Reach Segments

The organization is considering efforts to increase the availability of materials in different languages to serve more customers by leveraging online distribution PSE’s brochures are designed to engage English-as-a-second language, and low-income customers. These include general efficiency overview brochures, as well as program-specific brochures, including Low Income Weatherization, Multifamily, etc.

### Education

***Schedules E/G 202***

PSE will continue to provide Independent Colleges of Washington grants in 2016-2017.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Independent Colleges of Washington is collaborating with the Education team to identify projects that will involve and impact a greater number of students and perhaps community members without increasing resources.

## Electronic Media and Marketing Tools

The Customer Online Experience section is re-named in 2016 to better reflect the variety of information platforms in which customers receive energy-efficiency messaging. The group is comprised of two teams—Digital Experience and Market Integration—that consistently adapt to evolving technology and consumer trends. They ensure that PSE customers are provided with fast and reliable access to energy-efficiency resources through a wide variety of internet, telephony, radio, television and print vehicles. Other than an updated designation, the group’s focus is consistent to the previous biennium’s.

### Digital Experience

This group’s name is also updated for 2016. PSE implemented this revision as an indication that customer interactions with PSE are no longer limited to the internet. Customers expect PSE to communicate its energy-efficiency offerings in a wide variety of electronic media, and expect the information in the form and at the time they want it, rather than driving them to a PSE-designated site. This group will continue to improve the ways in which it communicates with energy-efficiency customers, and support energy analysis tools.

Customer Digital Experience will also support interactive content development, e-newsletters, database and web hosting services.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Customer Digital Experience organization will continue implementation of its original biennial plans.

#### Underserved and Hard-to-Reach Segments

PSE’s websites includes content that engages English-as a-second-language and low-income customers. There are also easy-to-navigate pages that are a click away from the Energy Center landing page that provide low-income resources, financing options, and abundant information on energy-efficiency services.

### Market Integration

For 2016-2017, the Market Integration group will continue supporting the enhancement of online energy-efficiency tools, and coordinating with traditional communications strategies and tactics.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Market Integration team will proceed with energy efficiency online enhancements and maximizing communication strategies and tactics for 2017.

### Automated Benchmarking System

This free website, called MyData and launched in the autumn of 2013, provides building owners an easy to use, self-service portal that will allows users to set up automated monthly reporting of their building’s usage. The tool was designed and offered by PSE allows building owners, managers and operators to track and assess energy consumption of their buildings. Customers register their property to receive quick and accurate data on a monthly basis for their building. Customers can track energy usage for a portfolio of buildings, track the results of energy efficiency projects, develop Energy Star® ratings and comply with state and city regulations.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Automated Benchmarking System (also referred to as “MyData”) team will continue to work with PSE’s Information Technology (“IT”) department to identify opportunities that enhance the user friendliness of the software and automate processes. No major upgrades are planned, but continued incremental improvements will be implemented.

## Programs Support

This functional group is made up of a Program Development team, and Data and Systems Services.

### Program Development

In 2016-2017, the Program Development team will provide program planning, development and support functions for Energy Efficiency program implementation Staff. The group will also provide infrequent demand response and related customer load control research as opportunities present themselves.

The Program Development team will provide NEEA-PSE savings attribution coordination, tracking and reporting, and will provide RTF subcommittee participation support.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The organization will provide demand response and related customer load control program planning for the department in 2017. Programs Support will continue to manage 2016 initiatives, including, but not limited to: biennial planning activities, RFP process management and assisting with the implementation of DSMc.

### Data and Systems Services

This team is responsible for reviewing and ensure data integrity from a wide variety of sources, including vendors, Program Staff, and contractors. They interface with several disparate data systems, including SAP, program databases, and the Measure Metrics archival system. The team provides systems for Program Staff to enter measure data on a monthly basis to feed reporting systems, and uses measure data and projections to build monthly forecasting models.

The team will continue employing Total Quality Management and Six-Sigma techniques to ensure updated and reliable data, reporting, and forecasting tools. A key deliverable for 2016 will be the full-scale implementation of the DSM Central software facility, which started in the second half of 2015. Current plans are for the DSM system to assume all data collection, tracking, and reporting functions from several disparate internal Energy Efficiency systems.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Data and Systems Support staff will be responsible for administering, maintaining, and improving the new DSM system throughout 2017, with an emphasis on ensuring the integrity and migration of historical data.

## Rebates Processing

The Rebates Processing team will focus on continued process improvement gains, maximized customer satisfaction, and added value for Residential and Business programs in 2016-2017. Until 2015, the budgets for this team of rebate analysts and systems analysts were embedded with the programs. In the interests of transparency and clarity, the budgetswere listed separately in the 2015 Annual Conservation Plan; this is the first Biennial Plan in which the team is listed as a separately-budgeted function. It is important to clarify that the budgeted amount does not represent an incremental expense from previous biennia.

This team plays a critical role in PSE’s ability to achieve its customer participation and conservation goals, as they are a key energy-efficiency contact point for PSE customers.

The staff must be well-versed in all Energy Efficiency programs, the terms and conditions of PSE incentives, and be sensitive to how they represent the Energy Efficiency department to customers. The Team also uses feedback provided by PSE constituents to collaborate with Program Staff to make process improvements within the programs throughout the year.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Rebates Processing team will play an integral role in the full-scale implementation of the DSMc system. The team will collaborate with REM and BEM program staff to ensure smooth and accurate rebate application processing, and develop nimble responses to all customer-facing issues.

## Energy Efficient Communities

The Energy Efficient Communities team partners with and adds value to many organizations within the Energy Efficiency department. These include the Events and Energy Education teams, as well as the Residential and Business Energy Management organizations. In the budget for the 2016-2017 biennium, the Energy Efficiency Communities team represents three staff members that were formerly embedded in program budgets (similar to Rebates Processing staff, and prior to that, the Data and Systems Services team). This enhanced representation does not indicate an incremental budget amount from previous biennia.

The team will emphasize proactive, direct residential and business customer outreach, with an emphasis on in-person engagement. This strategy will augment the other forms of energy-efficiency exposure that customers receive, including telephone contact, internet (including social media), and print. The team will partner with other PSE organizations to promote energy-efficiency programs.

Customer engagements will include, but will not be limited to:

* + Small Business Direct Install blitzes,
  + Door-to-door Home Energy Assessments outreach,
  + Cross-program promotions,
  + Leveraging corporate initiatives to promote energy efficiency,
  + Training PSE employees in other customer-facing departments on energy-efficiency programs.
* **2017 Updates, Revisions, Enhancements, Adaptive Management**

Throughout 2016, the team has been implementing the various successful outreach initiatives and finding opportunities to increase awareness and participation in EE programs. An example of an improvement that was made in the Home Energy Assessment door to door outreach was to increase the number of door knocks in each community that PSE was reaching out to. The team was able to do this as a result of better processes and more experience with these. and therefore The team’s enhancements allow for opportunity to reach more customers.

Another area where the program team and EE Communities team tested a new approach is in having the third party contractor available for appointments the day of and next day of the campaign so customers ready to participate right away could do so before losing the momentum. This tactic worked well and will be implemented again in 2017.

### Underserved and Hard-to-Reach Segments

The Energy Efficient Communities efforts span several Energy Efficiency programs throughout the PSE service territory, including Small Business Direct Install, Multifamily, Low Income Weatherization, and the Direct to Consumer Channel.

2017 efforts will build on the successes of past years, and will include, but not be limited to:

* Appliance replacement outreach to organizations that serve customers in need to jointly promote the program to those who could benefit from it the most (Food banks, senior centers, community centers, tribes),
* Attendance at community events that target multi-ethnic and English-as a –second-language populations,
* Partnerships with community organizations that serve lower income, hard to reach customers to promote our programs through presentations, workshops, event presence, etc. (Housing authorities, senior centers, behavioral health centers),
* Home Energy Assessment door to door to connect with customers targeted in neighborhoods with older homes, which are more frequently owned by lower income populations. Also targeted outreach to military communities,
* Outreach to tribes to promote Rock the Bulb and other EE programs.

## Trade Ally Support

In 2016-2017, the Trade Ally Support team will support broad-based support services for energy-efficiency programs, including:

* BOMA: Building Owners & Managers’ Association,
* CEE: Consortium for Energy Efficiency,
* ESource,
* The China-US Energy Efficiency Alliance,
* Electric League,
* ESC: Energy Solutions Center,
* NEEC: Northwest Energy Efficiency Council.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

2017 Trade Ally Support functions will continue as originally planned.

## Contractor Alliance Network

This revenue-neutral program will continue to connect interested customers with PSE-approved contractors for their energy-efficient equipment installation needs. The program will be managed by a dedicated team of REM staff, and is expected to also expand its support of a limited number of business customer requests as well.

CAN has been successful in and will continue recruiting contractors who provide lighting and refrigeration services for all types of business customers. Commercial projects will be processed through the Commercial and Industrial Retrofit, Direct Install and New Construction programs.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Contractor Alliance Network will expand their contractor training portfolio to improve contractor engagement on multiple fronts. This expansion in training offerings will aim to improve contractor knowledge in technical, customer service and program service aspects, and is intended to improve the customer experience through a more responsive and informed contractor base.

# Research & Compliance

The primary deliverable of this group is to provide critical research, customer information, such as survey results, demographic information, etc., evaluations, and assistance in the development of PSE’s Conservation Potential Assessment every two years.

In the following program plan discussions, PSE includes the original 2016-2017 Biennial Conservation Plan program overviews, with an updated discussion below to indicate 2017-specific updates. To minimize clutter and repetition, the original content is not specifically identified with the following heading for each function or activity (which is used for this discussion):

***Original 2016-2017 Biennial Conservation Plan Content***

## Tariff Schedule Adjustments

There are no tariff Schedule revisions required in the Research & Compliance group.

## Conservation Supply Curves

The 2016-2017 focus of this group will be to select a consultant for the 2017 potential assessment, and providing staff support for the development of the 2017 Integrated Resource Plan (“IRP”).

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Since most of Conservation Potential Assessment for the 2017 IRP will be completed in 2016, the focus in 2017 will be on report writing for the IRP and any follow-up analysis that is needed. Time will also be spent working with Energy Efficiency program staff to incorporate the IRP results into planning for the 2018-2019 biennium.

## Strategic Planning

The Strategic Planning group’s 2016-2017 primary activities will include an oversample of regional Commercial Building Stock Assessment and continued implementation of more efficient research methods. For the upcoming biennium, there will be lower labor expenditures.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Strategic Planning function will provide oversight and support for 2018-2019 biennial program planning, regulatory and legislative policy activities, and other special projects.

The Strategic Planning function is also responsible for managing PSE’s 2016-2017 Biennial Electric Conservation Achievement Review (“BECAR”) required by WAC 480-109-120(4)(b)(v). In 2017, the BECAR will complete review of electric portfolio savings for the 2016 program year, as well as perform substantial work on other deliverables that are scheduled for completion in 2018.

The organization incorporated the adaptive management step of reviewing 2016 UES prescriptive measure values during the program year, rather than wait until 2017. This review enhancement provides substantial leeway for program staff to effect program modifications should the UES review reveal any savings value discrepancies.

## Market Research

The Market Research activities include energy-efficiency customer satisfaction surveys and tactical program target-marketing support. This team of analysts will provide much-needed customer data, including an understanding of customer perceptions, barriers to the adoption of energy-efficient behavior, and tracking customer awareness of energy-efficiency programs. They will also support program-specific requests for analyses of localized customer characteristics, attitudes, energy-usage trends, and behaviors.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Market Research organization will continue to provide research findings in support of Residential and Business Sector programs to advance conservation efforts. The team will also provide an emphasis on hard-to-reach and underserved customer segments.

## Verification Team

The Verification Team will perform on-site inspections and confirmations of randomly-selected participated homes and business to assure energy-efficiency measures are properly installed. The Team will update verification policies, protocols, guidelines and processes.

Supporting mainstream field work in 2016-2017, Verification continuous improvement activities will include the following:

1) Data Systems

The Verification tracking and scheduling database will be closely aligned with the new DSM database to continue simplifying and automating the project sampling and job-pulling process. This streamlines workflow between the program and verification teams.

2) Sampling Rates

Verification sampling rates will be based on installation forecasts from the program teams and anticipated compliance/discrepancy rates. These forecasts are anticipated to be finalized subsequent to the filing of the 2016-2017 BCP. In the last biennium, though, over 2,000 random verifications were forecast, and the Verification Team anticipates that the upcoming biennium will require a commensurate number, based on savings goals. Individual measures/programs will each have a target number ofverifications. Reviewing compliance rate results will inform Program Staff in the continued management of process improvements, data integrity, savings validity, and program delivery efficiency.

3) Additional Verification Measures

The Verification Team will continue to assist in other areas of Residential or Business efficiency programs, including non-random visits. Non-random visits, typically performed at the request of program managers for case-specific interests, are considered quality assurance reviews, and may also result in documented discrepancies for program management follow-up. Additionally, new measures/programs are planned for the Verification portfolio, including phone Verification for Appliances Recycling and De-commissioning, and site verification for Business Rebates-Commercial Kitchens.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

In 2017, the Verification Team will expand its phone verification to include follow-up for the Home Energy Assessment program. Phone verifications of the appliance recycling and decommissioning programs will end as a result of the retirement of those programs.

## Program Evaluation

The 2016-2017 BCP’s Exhibit 6**:** Evaluation Plan, describes an ongoing process for prioritizing measures and programs, as well as the four-year timetable to evaluate all Energy Efficiency programs, consistent with condition (6)(f).

Exhibit 6 provides a detailed table of evaluations planned for the upcoming biennium.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

Evaluation staff undertook key projects that use M&V 2.0 principles in 2016, including a study to test the effectiveness of remote auditing of large commercial customers, using Retroficiency’s software. In the RCM program, Evaluation staff partnered with program staff to utilize sub-monthly data to analyze energy savings, and are considering pooled regression analysis for more rapid program feedback.

The Evaluation team will continue to explore opportunities for additional projects, leading a study to assess Energy Efficiency programs and outline applicable M&V 2.0 methodologies. The team is also developing a pilot program to assess the benefits of M&V 2.0 for 2017. PSE will also coordinate a regional research effort on advance power strips in 2017. This research is an extension of the Residential Rebates evaluation, started in 2016.

This updated measurement and verification methodology utilizes advanced analytics and interval data. It depends on technological and software advancements, such as sub-metering, sensors, and advanced metering infrastructure. During the Evaluation team’s assessments to date, there is a potential for reduced the evaluation costs and increase the accuracy of reported savings. At the time of the Plan filing, the pilot project hasn’t been selected, although it is reasonable to surmise that a large commercial project would be a sensible test.

It is expected that this new measurement and verification pilot will not supplant traditional evaluation efforts. There are potentially significant issues to resolve, such as managing the enormous amount of data required, managing a software-as-a-solution (“SaaS”) provider.

PSE will ensure that the CRAG is apprised of this effort as it progresses.

The Evaluation team will consider Stakeholder comments in the design of future evaluations of the Large Power User/Self-Directed program in 2017. Although the program is in its mid-cycle (2015-2018), with the next program evaluation potentially occurring in 2019, PSE will take into consideration enhancements and improvements relative to the 2013 program evaluation in its future program evaluations. These improvements include, but aren’t limited to: budgeting for in-depth interviews with eligible customers or creating a Delphi panel; a follow-on best practices study; PSE will also ensure that future evaluations will make clear distinctions between results, findings, and recommendations; and incorporate sample designs that provide more inclusive results and provide a basis for statistical significance.

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# Other Electric Programs

Other Electric Programs is segregated from other Customer Solutions Electric and Gas Rider programs because they are not used in calculating cost-effectiveness of the overall Portfolio.

In the following program plans, PSE notes original 2016-2017 Biennial Conservation Plan program overviews in *italics* to differentiate and provide a point of comparison with the updated 2017 program plans.

## Tariff Schedule Adjustments

PSE anticipates that it will need to file a new or revised residential demand response Schedule in 2017.

## Net Metering

***Schedule E150***

It is anticipated that the regional interest in customer renewables, and net metering in particular will maintain the pace of 2015, when PSE added over 1,000[[73]](#footnote-73) customers. This sustained growth is caused by the Washington production incentive, the federal 30 percent tax credit (that ends in 2016), and falling equipment prices. The Commission accounting Order[[74]](#footnote-74) for the treatment of distribution costs resulted in an apparent increase in the program’s 2016-2017 budget versus the 2014-2015 biennium.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

The Net Metering program will continue to manage customer-generator interconnections and process state incentive payments to eligible customers in 2017. 2017 will also mark the first full year of utilizing the PowerClerk® online application processing tool for interconnection applications. This tool, funded in the 2016 Net Metering budget, streamlines customers’ and contractors’ applications, reducing lead times, and increases record accuracy and staff productivity

## Demand Response

### Background

Due to low market prices, and C/I Load Control program prices that were higher than supply side capacity resources, PSE deferred development and implementation of a conventional Demand Response program in the 2014-2015 biennium. During this program deferral and market assessment period, PSE’s work in demand response is managed by Program Development staff in the Programs Support organization as summarized in VIII.D. on page 109.

### Next Steps

In response to the 2015 IRP, PSE is actively developing demand response programs for implementation in 2017. The IRP indicates that, by 2021, up to 121 MW of winter peak capacity can be acquired cost-effectively using demand response programs. PSE issued two RFPs for technology and implementation services for demand response:

1. Technology and Implementation Services in support of PSE’s Commercial & Industrial Demand Response Program.
2. Technology and Implementation Services in support of PSE’s Direct Load Control (“DLC”) Program.

The Commercial and Industrial program is intended for customers with ≥ 150 kW peak demand. The DLC program is intended for residential and small/medium business customers with less than 150 kW peak demand.

The solicitation/acquisition process may reveal costs or attributes different from those assumed in the 2015 IRP, and this could lead to adjusting the amount of demand-response acquired up or down. Changes to the resource need are driven by updates to the long-term load forecast and revisions to the regional resource adequacy analysis, both of which may also affect the quantity of demand-response.

PSE may revise Schedule 271 in anticipation of the program launch; PSE may also need to develop new schedules for demand response. Dedicated program staff will be assigned for programs as they are established.

## Electric Vehicle Charger Incentive

***Schedule E195***

PSE will use point of sale communication tactics, and possibly manufacturer, retailer and installer marketing to drive participation. It is expected that the electric vehicle charger incentives will end in 2016, when the incentive cap of 5,000 customer rebates paid is reached. As PSE collects and evaluates the energy use data provided by customers receiving incentives, it will share the resultant information with the CRAG.

**2017 Updates, Revisions, Enhancements, Adaptive Management**

As of the filing of this 2017 Plan, PSE was requested to continue the EV Charger Incentive pilot until June 2017. An updated budget figure is noted in Exhibit 1: *Savings and Budgets.*

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# Exhibit Updates

This section provides an overview of the updates to the 2016-2017 BCP Exhibits that apply specifically to the 2017 Annual Conservation Plan.

## Exhibit 1: Savings and Budgets

The format of Exhibit 1 remains unchanged from the previous two biennia. In keeping with its TQM principles, it is PSE’s intention to enhance the presentation of the budget and measure details with each iteration. PSE takes into account development and reporting efficiencies of PSE staff, with a keen eye toward Stakeholder needs, requests and observations. Energy Efficiency reviewed its 2016-2017 Exhibit 1, and made the following enhancements (in descending order of granularity):

1. The Portfolio View table is specific to 2017 only.
2. In the Sector View tables, PSE separated out the 2017-specific and 2016-2017 original measure tables in some programs with very large suites of measures (Lodging Direct Install, Commercial HVAC, for instance).[[75]](#footnote-75) Although this makes for a very large spreadsheet, PSE believes that it is the best method of representing updates to (quite often) more than 100 measures at a time. The savings figures noted in the horizontal table at the top of each detail page is linked to the corresponding measure table totals. In the illustration, (1) is linked to “Projected Savings, 2017” at (2).[[76]](#footnote-76)

The horizontal tables at the top of each detail page are used to link to the Sector View pages in the Microsoft® Excel™ workbook. An extract of such an example is provided in illustrated in Figure XI‑1.

The illustration also highlights another modification made to the measure table: in those affected programs, the “2016” totals for “units” (3), “savings” (4), and “combined” (5) are omitted from the 2017-specific measure table. The 2016-2017 measure table, located below the 2017-specific table, contain the originally-estimated values. (Some columns are hidden in this extract for presentation purposes. In the actual workbook, there are no hidden cells.)

##### Figure XI‑1: Example of an Exhibit 1 Program Detail Page Measure Table Reference

(a)



(b)

(c)

2

Also notable in Figure XI‑1 are the row headers (6) of the horizontal table. PSE presents a larger image of the same table in Figure XI‑2.

##### Figure XI‑2: Row Heading Revisions for 2017



These row headings provide a “chronological” view of (a) the original 2016-specific budget and savings figures (“2016 (Reference only)”, in grey print), as noted in the 2016-2017 BCP. In the electronic worksheet, Stakeholders will see that these are hard-coded.

Similarly, (b) the originally-estimated 2017 figures below the 2016 figures (“Original 2017 Figures, as noted in 2016-2017 BCP”) are also hard-coded. Only the bottom line, (c) highlighted in yellow (“2017 (Updated for 2017 ACP)”) links to the budget detail table, illustrated in Figure XI‑3 contains active links to data listed in the budget detail table on each page.

##### Figure XI‑3: Example of a 2017 Budget Detail Table



This illustration highlights two additional 2017 enhancements to Exhibit 1:

1. 2016 figures are greyed out (and are not linked), indicated at (7), and
2. The addition of a “micro-overhead” value in the OVERHEAD portion of the table, indicated at (8).

### Micro-Overhead

PSE created a new budget category, micro-overhead, for the 2017 and beyond Energy Efficiency budget. The new category eliminates the need to calculate assessments and apply those costs to the labor budget category, which has made researching assessments difficult during the annual UTC Schedule 120 expense review.

#### How does Micro-Overhead Work?

Expenses that were formerly charged to a cost center (office supplies, department staff meetings, seminars, conferences, department trainings, etc.) will now be charged to a single order number, and will be classified as “micro-overhead”.[[77]](#footnote-77) The micro-overhead percentage of 21 percent is applied to all 2017 Energy Efficiency programs that formerly assessed to the three primary Energy Efficiency cost centers (Residential Energy Management, Business Energy Management, and Programs Support).[[78]](#footnote-78) Rather than create a new budget category, the micro-overhead value is added to the Labor Overhead value (that was updated to the 2017 corporate ratio of 68.8 percent).

#### Why was it Created?

PSE’s General Accounting department is enhancing its enterprise financial accounting methodologies by reducing or eliminating the practice of charging expenses to cost centers. Expenses charged to cost centers causes them to “assess” to all of the order numbers that roll up to the order number.[[79]](#footnote-79) Additionally, the Budget, Evaluation, Administration, and Regulatory organization—which does not have a specific Exhibit 1 budget—assessed to each Energy Efficiency cost center.

When program managers review the expenses charged to their programs, they often see these assessments, and have a difficult time determining what the specific charge is for.[[80]](#footnote-80) This is also true when Commission Staff perform their annual Schedule 120 review; when they query an unusual expense, it sometimes requires quite a bit of research in SAP to determine the ultimate expense.[[81]](#footnote-81)

Micro-overhead represents an allotment, arrived at by analyzing the past three years’ Energy Efficiency expenses to determine how the assessments flowed across Energy Efficiency by adding the assessed labor to the non-labor charges and dividing that total by the direct labor charged to the order number. The result was used to determine a percentage that will be used for the applicable cost centers for budget-setting only: 21 percent.

The actual micro-overhead amount will be reviewed and trued-up quarterly henceforth.

#### What is the Effect on the Overall 2017 Budget?

A key principle of micro-overhead is that this new budget element is not an incremental expense. Similar to past efforts to enhance financial transparency, PSE assures Stakeholders that the new value is not an additional expense. Rather, it is re-allocating budget amounts that formerly assessed to the Labor budget category and moving them to the Overhead category.

It is important to note that, similar to past financial reporting enhancements, it isn’t possible to make a direct correlation to previously-stated budget totals. For instance, it won’t be possible to review REM’s budget amount and surmise that the 2017 value will be 21 percent less than the 2016 budget value. That is because staffing for an organization of that size is rarely static; the number of staff may change from year-to-year, salaries adjust, enterprise overhead rates change, etc.

### WAC 480-109-120(1)(b)(vi)(B): EM&V Budget

PSE presents its EM&V budget on line *bl i*n its Portfolio view of Exhibit 1: *Savings and Budgets*.

In that view, PSE highlights support functions that comprise the majority of its EM&V budget; Data and Systems Support, Program Evaluation, Biennial Electric Conservation Acquisition Review (“BECAR”), and Verification Team. PSE provides detailed budget information in each functional group’s Exhibit 1 electric and natural gas page.

## Exhibit 2: Cost Effectiveness Estimates

PSE updated the 2017 Exhibit 2: *Cost-Effectiveness Estimates* to reflect program revisions updated savings values, new measures, and updated RTF NEBs.

## Exhibit 3: Energy Efficiency Program Details

Program staff updated their program details in the 2017 iteration of Exhibit 3: *Program Details.*

## Exhibit 4: Energy Efficiency Measures, Incentives & Eligibility

Program staff updated exhibit 4: *Measures, Incentives & Eligibility* to reflect new and revised 2017 initiatives.

## Exhibit 5: Energy Efficiency Prescriptive Measures

Exhibit 5 represents the savings values that PSE will use for eligible prescriptive measures in 2017. It is important to note that when PSE develops and files its conservation plans, not all UES measures have been updated by the RTF, or are in the process of being updated at the time that PSE is required to file the ACP.[[82]](#footnote-82) Therefore, some measure savings values listed in Exhibit 5 may not align with RTF UES values currently noted at the RTF website.

Any necessary adjustments needed to align with RTF UES values published after September 1, 2016 will be made to the savings values at the beginning of 2018, consistent with PSE’s *Measure Revision Guidelines*.

## Exhibit 10: Northwest Energy Efficiency Alliance Plan

NEEA plans and reports are standalone documents, comprising Exhibit 10. Treating this document in this manner reflects the significant effort expended by NEEA Staff to create these references for inclusion in PSE filings.

PSE intentionally left this page blank for pagination purposes.

# Compliance

PSE will continue its commitment to complete compliance with regulatory requirements, as reflected by its long-running track record of Stakeholder engagement and compliance transparency.

## RCW 19.285

RCW 19.285 does not specify a requirement for an annual update to a utility’s biennial conservation plan.

## WAC 480-109

PSE ensures that its conservation operations are in compliance with WAC rules in a manner similar to the process that it uses to track and report compliance with the biennial conditions, Exhibit 9: *Condition Compliance Checklist*. PSE tracks and report on WAC compliance by incorporating the WAC requirements that are unique, in addition to PSE’s biennial conditions, into its Exhibit 9. Since Exhibit 9 is a “look-back” document, it is filed with its Annual Reports on March 1 of each year, and is excluded from the planning publications.

The 2017 ACP is consistent with the requirement outlined in WAC 480-109-120(2).

PSE held CRAG meetings to discuss specifics around the development of the 2017 ACP on August 24 and October 12, 2016. In addition to these in-person meetings, PSE maintained a high level of CRAG engagement, as required in applicable sections of WAC 480-109-110(1), including sub-sections (e) through (g), (i), (j), and (m).

## Six Sets of Requirements in Commission Orders

Throughout the decade-long evolution of conservation regulatory expectations, PSE has sustained successful compliance with an ever-increasing and complex set of requirements. Since 2013, in order to consolidate reporting and tracking of those requirements, PSE migrated requirements from a diverse set of Commission Orders[[83]](#footnote-83) into its Exhibit 9: *Condition Compliance Checklist*.

Doing so maximized PSE compliance efficiencies and provided Stakeholders added value in reviewing PSE compliance with conservation requirements in a single document.

PSE provides Stakeholders with its compliance status on six sets of requirements, listed in Table XII‑1, in its Annual Reports of Energy Conservation Accomplishments, filed each March 1.

Table XII‑1: Dockets Containing Conservation Orders, Requirements and Rules

|  |  |
| --- | --- |
| **Docket Number** | **Summary of Requirements** |
| UG-011571 | First set of natural gas conditions & established the CRAG |
| UE-100177 | First biennial conditions. Sections A – J & L still in effect. Section K replaced by subsequent biennial conditions. |
| UE-152058 | 2016-2017 conditions |
| UG-121207 | Commission Policy Statement on natural gas cost-effectiveness recommendations |
| U-072375 | Merger Agreement; Low-income funding commitment and net metering |
| UE-121697  UG-121705 | Decoupling Order, requiring Low Income Weatherization funding increases. |

Although not explicitly required to do so, PSE has operated its natural gas conservation programs consistent with the same set of requirements and deliverables as enumerated for PSE’s electric conservation programs since the acceptance of the 2010 Electric Settlement Agreement.

## Specific Conditions Applicable to the Annual Conservation Plan

### Appendix A, Order 01, Docket No. UE-152058

The 2017 ACP is submitted in compliance with conditions (4)(a) – *Annual Budgets and Energy Savings*, (5) - *Program Details,* and(7) *- Program Design Principles*.

### Electric Settlement Terms, Conditions, Docket No. UE-100177

Sections A through H and L remain in force from this 2010 Order. Section F.11, for instance, requires that annual conservation budgets be built from the bottom-up.

### Settlement Terms for Conservation, Exhibit F, Docket No. UG-011571

The 2017 ACP complies with Section H.21 – (Annual) *Budget Development*.[[84]](#footnote-84)

PSE provides the CRAG with compliance progress updates routinely throughout the year, using its Exhibit 9 formatting. PSE also includes references to applicable conditions in each CRAG meeting slide presentation.

### Energy Efficiency Compliance Controls

PSE and Energy Efficiency will continue to evaluate and examine compliance controls in 2017. Management review, compliance processes and compliance tracking are consistently updated and tested to not only ensure compliance with the above-noted conditions, but also with other business management subjects, such as:

* Ensuring that Rider funds are spent appropriately,
* Ensuring that invoices are approved only by applicable managers,
* Providing segregation of duties for financial activities (such as incentive payment processing & reporting),
* Effectively coordinate CRAG meetings, associated summary briefs, and all CRAG-related exchanges, information and communications,
* Confirming savings accuracy, including all savings adjustments,
* Substantiating financial reporting accuracy,
* Others, as required.

Highlights of some of the most important compliance controls that PSE maintains and updates at regular intervals include:

* Clearly defined signature authority for invoice approval,
* Clearly defined delegation of commitment authority policies,
* Clearly defined regulatory training,
* Clearly defined measure guidelines, including implementation of new measures, revision of existing measures,
* Segregation of duties provide cross-checks and ensures that payments cannot be mis-appropriated,
* Energy Efficiency employs a dedicated compliance management staffing to oversee regulatory deliverables compliance.

Additionally, one of the best and most effective compliance controls is clear and consistent communication with Regulatory Stakeholders.

# Glossary of Terms

|  |  |
| --- | --- |
| **Calculated Savings** | This savings type is different than deemed values (described below). This term indicates that there is a pre-approved, stipulated input savings value (or cost) per measure. This value (or cost) is then multiplied by site-specific input values to arrive at the overall savings value (or cost). |
| **Channel** | Within an Energy Efficiency Residential or Business sector, an organization that is established to focus on the value chain—consisting of manufacturer, distributor, dealer, contractor to the end-use customer—with the most similar market, delivery methods and ultimate purchasers or product users. |
| **Conditions** | Specific deliverables and stipulations with which the Company must adhere through the course of operating and managing energy efficiency programs. In addition to compliance requirements outlined in the Settlement Terms Sections A through J and L in Docket No. 100177, 2014-2015 conditions are listed in Appendix A of Order 01 in Docket No. UE-132043. Conditions are typically included in Commission Orders approving PSE’s biennial conservation targets. |
| **Custom Savings** | This savings type applies to conservation projects where a PSE EME performs specific evaluation and review of a unique customer site to determine savings values—therms or kWh—that apply only for that site. For this type of measure, there is insufficient information, the occurrence is too infrequent or it cannot be specifically defined to justify development of a Calculated or Deemed protocol. |
| **Deemed Measure** | As in a measure’s deemed savings value; a savings (or cost) value that applies to a unit of specific measure, regardless of where or how the measure is installed. Measures for which it is possible to “deem” per-unit energy savings, cost and load shape based on program evaluation data and engineering estimates. (For instance, one residential interior CFL lamp may have a deemed value of 24 kilowatt-hours per year.) This classification applies to both RTF and PSE Deemed (noted on the following page). This term has been supplanted by “UES”, defined below. |

Glossary, continued

|  |  |
| --- | --- |
| **Direct Benefit to Customer (DBtC)** | Rebates, grants, credits or services that are of value to customers. Services can include, but aren’t limited to, credits on a monthly bill, upstream incentive provided to channel partners or trade allies—either within the PSE service territory or regionally—and free energy efficient devices available by mail. |
| **Direct-Install Measure** | A conservation measure that is installed by a PSE representative—rather than a PSE customer—into a qualifying structure. |
| **Distribution** | For the purposes of Schedule 292, means electrical facilities within the State of Washington that the Company owns or operates to convey electricity from the point of generation or purchase to the point of use by a Customer. Distribution includes transmission and distribution lines related substations and transformers. |
| **EIA** | Energy Independence Act. A reference to the 2006 voter initiative, The Washington Clean Energy Initiative. The vote resulted in the creation of RCW 19.285 and WAC 480-109, which is now referred to as the Energy Independence Act. The EIA was also sometimes colloquially referred to as “I-937”. |
| **I-937** | An informal reference to the 2006 voter initiative, The Washington Clean Energy Initiative. The vote resulted in the creation of RCW 19.285 and WAC 480-109, which, by law, is now referred to as the Energy Independence Act (“EIA”). |
| **Measure** | A product, device, piece of equipment, system or building design or operational practice used to achieve greater energy efficiency or to promote Fuel Conversion and Fuel Switching. Unless specifically enumerated in a specific Energy Efficiency Program, all Measures, proposed by Customers or otherwise, shall meet or exceed the efficiency standards set forth in the applicable energy codes, or, where none exists, “standard industry practice” as determined by the Company. Measures will meet common construction practices, and meet industry standards for quality and energy efficiency.[[85]](#footnote-85) Measures should also meet cost-effectiveness standards. |

Glossary, continued

|  |  |
| --- | --- |
| **Orders (see also Conditions)** | Overarching instructions to an entity under the purview of the Washington Utilities and Transportation Commission (UTC or Commission). Orders may be made at the conclusion of a Docket proceeding or throughout the course of a Docket’s existence. At the time of the publication of this BCP, PSE is operating under Order 01 of Docket No. UE-132043. |
| **Program** | Programs may consist of a single measure, an assortment of related measures or a suite of measures that are related strictly by delivery type or customer segment. |
| **PSE Deemed** | Relative to measure savings types (Custom, Calculated, PSE Deemed or RTF Deemed), these measures are supported by PSE engineering calculations or evaluation studies, in compliance with condition (6)(c) in Docket No. UE-132043. |
| **RTF Deemed (see also UES)** | A legacy term, only used in the Source of Savings database. Relative to PSE savings types (Custom, Calculated, PSE Deemed or RTF Deemed), supported by RTF analyses, in compliance with condition (6)(b) in Docket No. UE-132043. |
| **Savings** | Savings (both natural gas and electric) are defined and reported as those recognized in the first year of a measure’s total expected life. PSE reports the total savings for the year that the measure was implemented, regardless of when it is installed. Electric savings are counted at the customer meter, not the busbar. Gas savings are counted at the customer natural gas meter.  It is important to note that all measures have an associated life, during which the noted annual savings accumulate. Each measure has a different life, as determined by rigorous evaluation. The average measure life per program can be found in the Energy Efficiency Cost-Effectiveness tables in Exhibit 2 of this report. As noted above, measures have associated savings beyond the first year; those savings continue to accrue to the benefit of PSE. |
| **System** | In this document, System may have the following meanings:   1. Any software program—supported by PSE’s IT department or otherwise—or physical apparatus used to record, track, compile, report, archive, audit energy savings claims or financial data. 2. Electrical, and/or natural gas equipment that is either attached together or works in concert to provide space conditioning, plumbing functions or other end-uses associated with structures, such as HVAC systems, pumping systems, etc. |

## Acronyms

|  |  |
| --- | --- |
| **ACP** | Annual Conservation Plan |
| **aMW** | Average MegaWatt. An expression of energy (versus “power”). It is used to express very large amounts of energy. The term represents an average of power (Megawatts [MW]) used over time (the standard term being one year or 8,760 hours). Thus, 1 aMW = 8,760 MWh. |
| **BCP** | Biennial Conservation Plan |
| **BCR** | Biennial Conservation Report |
| **BEM** | Business Energy Management |
| **BOMA** | Building Owner and Managers Association |
| **CBTU** | Comprehensive Building Tune-Up (program in the BEM Sector). |
| **CFL** | Compact Fluorescent Lamp |
| **C/I** | Commercial/Industrial. References programs in the Business Energy Management sector. |
| **CMS** | Customer Management System. A PSE proprietary software application that tracks customer activities, inventory and rebate processing. |
| **CRAG** | Conservation Resource Advisory Group |
| **CSY** | Customer Solutions database; used to process custom grants and select prescriptive rebates within Energy Efficiency. |
| **DR** | Demand Response |
| **EES** | Energy Efficiency Services; an acronym that is still associated with some tracking and reporting systems and databases, referencing Energy Efficiency’s former name. (Eliminating this reference would cause severe disruption of queries and reports in some systems and filing structures.) |
| **EE** | Energy Efficiency |
| **EME** | Energy Management Engineer |
| **EM&V** | Evaluation, Measurement and Verification |
| **FTE** | Full Time Equivalent, in reference to PSE staffing levels |
| **HVAC** | Heating, Ventilation and Air Conditioning |

Acronyms, Continued

|  |  |
| --- | --- |
| **IRP** | Integrated Resource Plan |
| **kWh** | Kilowatt Hour. 1,000 watt-hours = 1 kWh, which is equivalent to 10 100-watt incandescent lamps being turned on for one hour. |
| **LED** | Light Emitting Diode (typically, a lamp type) |
| **MWh** | Megawatt-hour. 1,000 kWh = 1 MWh |
| **NEBs** | Non-Energy Benefit, Quantifiable. Attributes having a direct cost-effectiveness correlation applicable to the Total Resource Cost test and Participant Cost Test. It is important to note that any reference to NEBs in any PSE document refers to those that are quantifiable. Any non-quantifiable benefits will be specifically noted. |
| **NEEA** | Northwest Energy Efficiency Alliance |
| **O&M** | Operations & Maintenance |
| **RB2B** | Residential Business to Business Channel. Comprised of Multifamily Existing, Multifamily New Construction, Low Income Weatherization, and the Single Family New Construction programs. Formerly referred to as the Multifamily Channel. |
| **RCW** | Revised Code of Washington. |
| **REM** | Residential Energy Management |
| **RTF** | Regional Technical Forum, an advisory committee and a part of the Northwest Power and Conservation Council. The RTF develops standardized protocols for verifying and evaluating conservation. |
| **SBDI** | Small Business Direct Install (program within the BEM Sector, Commercial Rebates). |

Acronyms, continued

|  |  |
| --- | --- |
| **TRC** | Total Resource Cost: The cost to the customer and/or other party costs to install or have installed approved Measures plus Utility Costs and minus Quantifiable Benefits (or Costs).[[86]](#footnote-86) |
| **TQM** | Total Quality Management; the general business management principle established in the early 1980s that is focused on continuous improvement, consisting of (in the majority of models) Assess🡪Plan🡪Execute🡪Verify. Also associated with the concept of adaptive management. |
| **UC** | Utility Cost: The Company’s costs of administering programs included, but not limited to, costs associated with incentives, audits, analysis, technical review and funding specific to the Measure or program and evaluation.[[87]](#footnote-87) |
| **UES** | Unit Energy Savings. Formerly “Deemed”, the RTF updated the term in 2011. |
| **WAC** | Washington Administrative Code |
| **WUTC, or UTC** | Washington Utilities and Transportation Commission |

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# Conclusion

This concludes Energy Efficiency’s 2017 Annual Conservation Plan. PSE acknowledges, and is very appreciative of the partnership with the CRAG and the collaboration that was cultivated with CRAG members throughout 2016. PSE looks forward to further success in 2017.

PSE additionally appreciates the input and cooperation of its regional partners, other PSE divisions, and its constituents. As PSE progresses through the upcoming biennium, PSE will continue to keep its Stakeholders apprised of progress, program refinements, measure updates, and other adjustments as PSE utilizes its business management acumen to anticipate and stay ahead of regional conditions in moving toward achievement of its 2016-2017 biennial savings targets.

Most importantly, PSE extends its thanks to PSE customers. PSE sincerely appreciates their acknowledgement of its efforts and trust that they put in the dedicated men and women of Energy Efficiency. PSE is a steward of their efficiency efforts to prudently use the funds that they provide and improve the environment for them and their children. PSE consistently strives to provide the highest level of customer service in the Northwest.

The Energy Efficiency Staff look forward to a productive and collaborative 2017!

Respectfully submitted,



*Puget Sound Energy*

*Energy Efficiency*

1. WAC 480-109-120(2): **Annual conservation plan.** On or before November 15th of each even-numbered year, a utility must file with the commission, in the same docket as its current biennial conservation plan, an annual conservation plan containing any changes to program details and annual budget. [↑](#footnote-ref-1)
2. Exhibit F, Settlement Terms for Conservation, is often referred to as the “Stipulation Agreement”. The corresponding electric portion of the Agreement, UE-011570, was vacated by the 2010 Electric Settlement Agreement in Docket No. UE-100177. Sections with which this Plan complies include, but are not limited to C.5, E.14, H.21-27, and K.34. [↑](#footnote-ref-2)
3. In addition to 2016-2017 combined Portfolio and Sector views within Exhibit 1, there are also individual 2016 and 2017-specific pages, (or tabs, if viewing the Microsoft® Excel™ workbook). [↑](#footnote-ref-3)
4. In its October 12, 2016 discussion with the CRAG, PSE indicated that it included a budget placeholder of $1 million in demand response implementation expenditures. Subsequent to that meeting, PSE management recommended that the expenditure be removed from the Conservation Rider budget. The revised, filed 2017 ACP includes only the program development and RFP evaluation expenditures of $322,000. [↑](#footnote-ref-4)
5. Colloquially termed “M&V 2.0” in 2015. [↑](#footnote-ref-5)
6. Rather than file separate electric and natural gas Plans (and achievement Reports), PSE combines the information into a single compliance package. This approach reflects Energy Efficiency’s program operations, where program initiatives are much more efficient, effective, and innovative when the two fuel types are managed within the same expert staffing organizations. [↑](#footnote-ref-6)
7. It is important to note that PSE aligns its RTF Deemed (UES) savings values to those outlined in the version of applicable RTF tables in effect on September 1 of a planning year. PSE reviews and updates these applicable values annually, rather than biennially, in order to reflect actual conservation savings in the most accurate manner. [↑](#footnote-ref-7)
8. As noted in WAC 480-109-100(1)(a)(ii), “[…] If no cost-effective, reliable and feasible conservation is available from one of the types of conservation, a utility is not obligated to acquire such a resource.” [↑](#footnote-ref-8)
9. Indicated electric and natural gas TRC values include a 10 percent adder, consistent with condition (8)(a). [↑](#footnote-ref-9)
10. Renters sometimes believe only the landlord or property owner is eligible to apply for efficiency incentives. This can especially be true of low-income customers and small business proprietors. [↑](#footnote-ref-10)
11. This is especially true with small-to-medium farms. [↑](#footnote-ref-11)
12. Again, particularly applicable to business proprietors that lease their space. [↑](#footnote-ref-12)
13. As stipulated in Schedules 83 and 183 (electric and natural gas, respectively), section 9.a, Low Income agencies may receive funding equal to a value that will result in a TRC benefit-to-cost ratio of no less than 0.667. [↑](#footnote-ref-13)
14. For instance, it is unhealthy/hazardous to install new insulation in an attic structure than has mold or dryrot, etc. A detailed discussion of repairs and health & safety measures is included in LIW’s Exhibit 3: Program Details. [↑](#footnote-ref-14)
15. Using the results of a customer Home Energy Assessment, it is possible for PSE to align customers’ expectation with the most complete suite of measures that will meet their specific needs, installed by a Contractor Alliance Network (“CAN”) member contractor. [↑](#footnote-ref-15)
16. The primary document containing Exhibit Supplements is the Annual Report of Conservation Accomplishments. For instances, Exhibit 1, Supplement 1 is a representation of actual-versus-planned expenditures by budget category. Exhibit 1, Supplement 4 lists the number of key measure types installed by program. There are no Supplements included in the Annual Conservation Plan. [↑](#footnote-ref-16)
17. It would be operationally inefficient and ineffective for program staff to interrupt the process flow and formally indicate “now, I’m going to assess….now, I’m going to plan” with checklists, forms, etc. Rather, program staff ensure that they complete each step in the process organically and fluidly within the business environment. [↑](#footnote-ref-17)
18. Although Lodging Direct Install was considered a new program for 2016, there were elements of it in previous iterations of the Small Business Direct Install, and Hospitality rebates in the overall Commercial Rebates programs prior to 2016. [↑](#footnote-ref-18)
19. PSE ensures that all elements of program design and execution are consistent with condition (7)(a) through (7)(c), which outline requirements around sector inclusion, program outreach, and incentive levels. [↑](#footnote-ref-19)
20. Pilot programs and Regional programs, including NEEA, are also managed by REM and BEM staff. Collectively, Energy Efficiency Staff often refer to REM and BEM together as “Customer Energy Management” or CEM. [↑](#footnote-ref-20)
21. Sectors (Residential Energy Management, Business Energy Management, etc.) consist of a collection of associated Channels and programs. In REM, for instance, the Direct to Consumer Channel consists of Retail Lighting, Retail Showerheads, Retail Appliances, etc. programs.) REM, BEM, etc. then make up the overall Portfolio for Energy Efficiency. The general hierarchy (from most detailed to most general) is thus: Programs🡪Channels🡪Sectors🡪Portfolio. [↑](#footnote-ref-21)
22. In Appendix A of Order 01, Docket No. UE-152058, all conditions relative to reporting were expunged and moved to WAC 480-109-120. [↑](#footnote-ref-22)
23. Pertaining to the development of an annual electric budget. [↑](#footnote-ref-23)
24. Where there is an action or commitment related specifically to 2016 in the *original* BCP program discussion, PSE will provide follow-up in its 2016 Annual Report of Energy Conservation Accomplishments, filed on March 1, 2017. [↑](#footnote-ref-24)
25. PSE adds new measures and measure revisions to the Source of Savings database when they are approved and active. Therefore, the final measure data is not available at the time the BCP is filed. Exhibit 5 is derived from program planning document contents. The majority of the measure savings data is also reflected in the program detail pages of Exhibit 1: Savings and Budgets. Actual measure savings values aren’t available until the 2016 Annual Report is published in March 2017. [↑](#footnote-ref-25)
26. In its Annual Conservation Plans, PSE excludes four Exhibits that are a part of its Biennial Plans: Exhibit i: *Ten-Year Potential, Two-Year Target*; Exhibit 6: Evaluation Plan; Exhibit 7: *Marketing Plan*; and Exhibit 8: *The EM&V Framework*. [↑](#footnote-ref-26)
27. In their 2014-2015 Biennial Conservation Report (“BCR”) comments, Commission staff requested utilities to add pilot programs to their Portfolios. Although comments on pilots were made in the electric docket UE-132052, Energy Efficiency program staff also carefully review the potential for natural gas pilots as well. The Web-enabled thermostats program in the Direct-to-Consumer Channel is a case in point. [↑](#footnote-ref-27)
28. It isn’t possible to efficiently indicate the original-versus-updated savings values in each detail page measure table. Attempting to do so results in a cumbersome, unclear, and difficult-to-manage workbook. For programs with a very large measure portfolio with a significant number of revisions (Lodging Direct Install, for instance), PSE added an entirely new 2017 measure table, while relocating the 2016 table below. [↑](#footnote-ref-28)
29. In cases where PSE pursues the conversion of a measure from RTF UES to PSE Deemed, the measure cannot be used until the evaluation, engineering analysis, or actual usage studies are completed and approved. This impacts PSE’s ability to meet its savings targets and goals. [↑](#footnote-ref-29)
30. If an RTF measure’s value was not updated by September 1, 2016, or if there was no revised business case for a PSE Deemed measure by December 31, the value will be the same as was noted in the original 2016-2017 BCP’s Exhibit 1 detail page measure table. [↑](#footnote-ref-30)
31. Figures in the “2016-Indicated kWh Value for 2017” column represent the savings value indicated for 2017 in the original 2016-2017 Biennial Conservation Plan, filed in November, 2015. [↑](#footnote-ref-31)
32. The LED measures indicated in Table III‑3 are only a few of the Residential LED UES values adjusted in 2016. [↑](#footnote-ref-32)
33. Docket No UE-132043, August 15, 2016, Order 05 approving PSE’s 2014-2015 electric conservation achievement. [↑](#footnote-ref-33)
34. PSE will report all savings, however—including savings realized from pilot programs—in its annual updates of biennial conservation achievement to the Washington Department of Commerce. [↑](#footnote-ref-34)
35. Docket No. UE-132043. [↑](#footnote-ref-35)
36. Staff comments on 2014-2015 Biennial Conservation Reports, Docket UE-132043, ¶ 3, pg 9. [↑](#footnote-ref-36)
37. Although Energy Efficiency’s current pilots are excluded from the EIA Target, and thus, not a key EIA savings driver, pilots with savings contribute to the overall Portfolio savings. [↑](#footnote-ref-37)
38. Emphasis is added for purposes of this discussion. [↑](#footnote-ref-38)
39. Subsequently acquired by Ecova in 2015, Retroficiency Inc. conducted energy-efficiency data analytics. [↑](#footnote-ref-39)
40. Urban Smart Bellevue is a commercial behavioral program aimed at office, retail, lodging and health care businesses in downtown Bellevue. The program uses strategic energy management (SEM), community-based social marketing (CBSM) and behavioral strategies to encourage stakeholders at all levels of an organization – building owners, property managers, facility managers and tenants – to take simple actions to change how and when equipment operates in order to save energy and achieve the goal of reducing collective annual energy use by five percent (16,000,000 kWh) in two years. [↑](#footnote-ref-40)
41. Multifamily Air Seal provides whole building air sealing for multifamily buildings. Because there is no available PSE- or RTF- approved savings estimates the pilot will develop impact results and look into developing savings estimates going forward such that the measure can be offered to the mass market. The pilot is limited to multifamily buildings with electric resistance heating and built prior to 1991 Washington State Energy Code. [↑](#footnote-ref-41)
42. Approximately 10 percent of PSE’s NEEA budget is directed toward the RPP. [↑](#footnote-ref-42)
43. NEEA’s original therm savings estimate for 2017 was based on the projected adoption of efficient hearth products. As the Collaborative assessed its portfolio of five measures throughout 2016, NEEA revised the savings estimate for the hearth products measure to zero therms in 2017. [↑](#footnote-ref-43)
44. The “micro-overhead” account tenet removes assessments that were formerly added to the Labor budget category. The addition of micro-overhead did not result in an incremental increase in the overall budget. [↑](#footnote-ref-44)
45. The original 2017 Plan anticipated no costs for the EV Charge Incentive program. [↑](#footnote-ref-45)
46. *Staff Comments on 2014-2015 Biennial Conservation Reports, Dockets UE-132043, UE-132045, UE-132047,* page 6, ¶ 3. [↑](#footnote-ref-46)
47. WAC 480-109-060(28) defines single large facility: “Single large facility conservation savings” means cost-effective conservation savings achieved in a single biennial period at the premises of a single customer of a utility whose recent annual electricity consumption prior to the conservation savings exceeded five average megawatts.” [↑](#footnote-ref-47)
48. Determining the appropriate application of potential excess savings as related to RCW 19.285.040(1)(c)(ii): *Beginning January 1, 2014, a qualifying utility may use single large facility conservation savings in excess of its biennial target to meet up to an additional five percent of the immediately subsequent two biennial acquisition targets, such that no more than twenty-five percent of any biennial target may be met with excess conservation savings allowed under all of the provisions of this section combined. For the purposes of this subsection (1)(c)(ii), "single large facility conservation savings" means cost-effective conservation savings achieved in a single biennial period at the premises of a single customer of a qualifying utility whose annual electricity consumption prior to the conservation savings exceeded five average megawatts.* And WAC 480-109-100(3)(c)(ii): *A utility may use single large facility conservation savings achieved in excess of its biennial target to meet up to five percent of each of the immediately subsequent two biennial conservation targets.* [↑](#footnote-ref-48)
49. A very limited number of measures, such as faucet aerators, did not have RTF-calculated NEBs at the time that Energy Efficiency developed the 2017 ACP. In these cases, PSE used RTF methodologies to calculate water-saving NEBs, as it has successfully done in the past. [↑](#footnote-ref-49)
50. PSE provided this Microsoft® Excel™ tool, based on an industry-standard formula, to the CRAG on September 1, 2015. [↑](#footnote-ref-50)
51. Targeted Residential Energy Analysis Tool. [↑](#footnote-ref-51)
52. “Low Income Weatherization” is referred to as “Weatherization Assistance” in some PSE collateral. As will be discussed in more detail in Chapter 4, Residential Energy Management, this name change doesn’t alter PSE’s constituency in this market. The change is made only to reflect the now-current reference in other regions of the United States. [↑](#footnote-ref-52)
53. The incorporation of SIR calculations, as applicable to Low Income Weatherization savings, is discussed in WAC 480-109-100(10) Compliance on page 61. [↑](#footnote-ref-53)
54. It is important to clarify that neither the Order nor the Amended Petition require PSE to add these amounts each year to the previous year’s budget total. PSE understands that its budgeting treatment is consistent with the Order, in that those amounts were added to the 2014 Low Income Weatherization budget and then carried forward to subsequent years. As has been discussed with the CRAG, it isn’t possible for PSE to indicate the specific budget areas that represent these incremental amounts, however. [↑](#footnote-ref-54)
55. Some renters mistakenly believe that only their landlord or property owner can apply for efficiency incentives. [↑](#footnote-ref-55)
56. Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs, Docket No. UG-121207, where, in ¶ 36, page 14, the Commission indicates that *“…the UCT is an acceptable option when a properly balanced TRC is not available.”* Accordingly, PSE shares its Low Income Weatherization program UC and TRC calculations with the CRAG during its annual conservation planning processes. [↑](#footnote-ref-56)
57. Although Fuel Conversion is included in PSE’s Schedule 216, the management of the program is conducted within the Dealer Channel. [↑](#footnote-ref-57)
58. These are reflector-type lamps, with the “BR” standing for Bulged Reflector. [↑](#footnote-ref-58)
59. Tubular (linear) LEDs. [↑](#footnote-ref-59)
60. PSE includes marketing plan overviews in the Exhibit 3: *Program Details* discussions and Exhibit 7*: Marketing & Outreach Executive Summary.* [↑](#footnote-ref-60)
61. Where there is 2016-specific activity noted in the original 2016-2017 BCP overview, PSE will report on the results of those activities in its 2016 Annual Report of Energy Conservation Accomplishments, to be filed by March 1, 2017. [↑](#footnote-ref-61)
62. The program will continue to offer qualifying double-pane upgrades from single-pane windows. [↑](#footnote-ref-62)
63. As these were new programs in 2016, Direct Install programs took several months to ramp up to their full savings potential. [↑](#footnote-ref-63)
64. Docket No. UG-121207, Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs. [↑](#footnote-ref-64)
65. This study, *Resource Conservation Manager* [sic] *Program Evaluation, November 25, 2013*, indicated that a ratio of 37 percent per project is appropriate. NEBs in RCM projects account for environmental benefits other than water savings. Sewage, garbage, recycling reduction and lower operations & maintenance costs, for instance. [↑](#footnote-ref-65)
66. As discussed on page 61, Energy Efficiency will make use of definitions and terms within Schedule 183, Natural Gas Conservation Service, Sections 1: Purpose, and 4: Definitions (#aa; Total Resource Cost Test), that indicate that in some cases, a program’s TRC benefit ratio may be 0.667. [↑](#footnote-ref-66)
67. Grocery sector incentives are provided by the same third party implementer for both the Retrofit and New Construction environments. [↑](#footnote-ref-67)
68. In the now-retired SRM program, a third-party program implementer was selected through RFP by PSE. [↑](#footnote-ref-68)
69. In 2011, PSE and the CRAG agreed to extend the 2010 cycle to five years, in order to accommodate the program peak credit method accounting mechanics. [↑](#footnote-ref-69)
70. In previous biennia, there were Program Staff residing in Business Energy Management, and others residing in Residential Energy Management. In late 2014, Energy Efficiency brought the staff members into a single organization, where their collective expertise contributes to a higher degree of synergies and better standardization for commercial customers. [↑](#footnote-ref-70)
71. Market partners primarily consist of commercial kitchen equipment distributors. [↑](#footnote-ref-71)
72. It is important to clarify that the “legacy” Home Energy Reports are added to the pro-rata share of the IRP-derived savings because the savings have been verified over multiple evaluations since 2009. [↑](#footnote-ref-72)
73. Projected completed projects for 2015 as of the time of the Plan’s publication. [↑](#footnote-ref-73)
74. Commission Order in Docket No. UE-990016, in response to PSE’s petition to authorize deferral of Net Metering expenditures and recover those expenditures in the Schedule 120 Conservation Rider. [↑](#footnote-ref-74)
75. Only those programs with a significant number of measures or many measure revisions are modified in this way; these are also identified in the Sector View tables. Programs with fewer measures maintained the original 2016-2017 measure tables, and updated the Savings value in the “Savings” column. That column is also labeled “(2017-Specific Values)”. [↑](#footnote-ref-75)
76. In the discussion, numbers in parentheses: (1), (2), etc. correspond to numbered items illustrated in the noted Figures. [↑](#footnote-ref-76)
77. The order number will not be a “1823nnnn” format. These numbers are strictly reserved for conservation-related expenses and cannot be used for anything else. Assigning one of these order numbers to micro-overhead would create the potential for double-counting conservation expenses. [↑](#footnote-ref-77)
78. PSE omitted the micro-overhead value in: Market Research, Market Integration, Conservation Supply Curves, Strategic Planning, or Other Electric Programs. [↑](#footnote-ref-78)
79. In the case of Energy Efficiency, the Residential Energy Management organization, cost center “1234”, has more than 50 order numbers that roll up to it. If an expense is charged to that cost center, the expense amount is assessed, via a pre-determined methodology, to the applicable order numbers by a certain percentage. (Cost center 1234 is fictional, and is only referenced for illustration.) [↑](#footnote-ref-79)
80. Assessments, as noted in SAP, always start with a specific set of unique numbers, and have very general descriptions, such as “labor assessment”, or “rent assessment”, etc. [↑](#footnote-ref-80)
81. For instance, if there was an REM all-staff meeting costing $400, charged to cost center “1234”, only a certain percent of that expense would be charged to Multifamily Existing, Retail Lighting, Low Income Weatherization, etc. If a Commission Staff member asked about a particular Multifamily Existing assessment of, say, $25, it would take several steps, working backwards, to determine that the amount ultimately came from that all-staff meeting. [↑](#footnote-ref-81)
82. In order to comply with the requirement of WAC 480-109-110(3), which requires PSE to provide the CRAG a draft BCP filing 30 days in advance of the filing, the Measure Revision Guidelines were adjusted so that henceforth, PSE will employ RTF UES values or PSE Deemed values that are effective on September 1 of each planning year. [↑](#footnote-ref-82)
83. The 2001 Stipulation Agreement is formally known as Exhibit F of PSE’s 2001 General Rate Case, Docket No. UE-011570 and UG-011571. These natural-natural gas unique requirements were only added to Exhibit 9 for tracking and reporting purposes. [↑](#footnote-ref-83)
84. Although there are other natural gas-specific requirements in Exhibit F, they are primarily biennial in nature, and are addressed in PSE’s Biennial Conservation Plans. [↑](#footnote-ref-84)
85. Schedule 83, section 4, Definitions, #m. Schedule 183, section 4, #l. [↑](#footnote-ref-85)
86. Schedule 83, section 4, Definitions, #z. Schedule 183, section 4, #x. [↑](#footnote-ref-86)
87. Schedule 83, section 4, Definitions, #bb. Schedule 183, section 4, #z. [↑](#footnote-ref-87)