



2017
Annual Conservation Plan

Overview

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2016-2017 Biennial Conservation Plan Supporting Documents

- Exhibit i: Ten-year Potential and Two-year Targets
- Exhibit 1: Order number level budget and savings details
- Exhibit 2: Cost effectiveness tables, including Supplements 1 and 2
- 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
- Exhibit 8: Evaluation, Measurement & Verification Framework
- Exhibit 9: Condition Compliance Status Report
- Exhibit 10: Northwest Energy Efficiency Alliance Plan
- Exhibit 11: Tariff Updates

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I. Executive Summary

Consistent with WAC 480-109-120(2),¹ requirements outlined in Commission Order 01 of Docket No. UE-152058, and applicable Sections of Exhibit F, UG-011571,² 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

2017 Energy Efficiency			
	Portfolio Amounts		TRC
	Total Savings	Budgets	
Electric	309,932 MWh	\$103,453,202	1.71
aMW	35.4 aMW		
Natural Gas	3,527,457 Therms	\$14,687,614	1.54
Total Budget		\$118,140,816	

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.

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.

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.

A. 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

1. 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 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.

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).

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.

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.

2. 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.

B. 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).

1. 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.

2. 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.

C. 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.

D. 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*.

1. 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.

2. 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.

E. Regulatory Stakeholder Engagement and Reporting

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

1. 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.

2. 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
- 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*.

⁵ Colloquially termed “M&V 2.0” in 2015.

F. 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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II. 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 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.

A. 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.

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.

B. 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

2017 Comparison: BCP versus ACP Update					
Portfolio	Savings		Expenses		
	Electric (MWh)	Natural Gas (Therms)	Electric \$	Natural Gas \$	Total \$
Original <i>As indicated in 2016-2017 BCP</i>	310,687	3,463,033	\$100,384,810	\$14,767,447	\$115,152,257
Updated 2017 ACP	309,932	3,527,457	\$ 103,453,202	\$ 14,687,614	\$118,140,816
Change	(755)	64,424	\$3,068,392	(\$79,833)	\$2,988,559
Percent Change	-0.2%	2%	3%	-1%	3%

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 adjustments⁷ 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*.

1. 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 The chapter locations of PSE’s program discussions are presented in Table II-2.

Table II-2: 2017 Conservation Type References

WAC 480-109-100(1) Subsection		Chapter	Section
b	Types		
(i)	End-use efficiency	4 & 5	Residential & Business Energy Management
(ii)	Behavioral programs	4 & 5	Direct to Consumer & RCM
(iii)	High-efficiency cogeneration	5	Business Energy Management
(iv)	Production efficiency	7	Transmission & Distribution
(v)	Distribution efficiency	7	Transmission & Distribution
(vi)	Market transformation	7	NEEA 2017 Annual Conservation Plan
c	Pilots	3, 6	Development, Pilots

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.

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.”

C. 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

Table II-3: 2017 Portfolio Cost-Effectiveness Calculations

2017 Energy Efficiency Portfolio Cost-Effectiveness		
	Utility Cost Test	Total Resource Cost Test
Electric	2.24	1.71
Natural Gas	1.78	1.54

D. 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.

1. 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.

⁹ Indicated electric and natural gas TRC values include a 10 percent adder, consistent with condition (8)(a).

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.

2. 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.

3. 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.

- a) 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 Residential Home Energy Reports are another important tool for reaching customers who may be reticent to participate in efficiency programs.
- b) 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.

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.

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.

- c) 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 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 etc. Particularly effective strategies include “blitzes”, where PSE representatives visit these businesses door-to-door to offer direct installation or low-cost measures.
- d) 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 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

¹¹ This is especially true with small-to-medium farms.

¹² Again, particularly applicable to business proprietors that lease their space.

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.

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.

- e) Manufactured homes and multifamily structures also represent an underserved/hard-to-reach segment, which includes an element of low-income customers.
- f) Energy Efficient Communities' door-to-door canvases include manufactured homes, and Energy Efficiency will continue to use an assessment-driven approach¹⁵ to connect these customers with pre-vetted contractors through a streamlined process.
- g) 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.

- h) 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.
- i) 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.

4. 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.

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.

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.

5. 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:

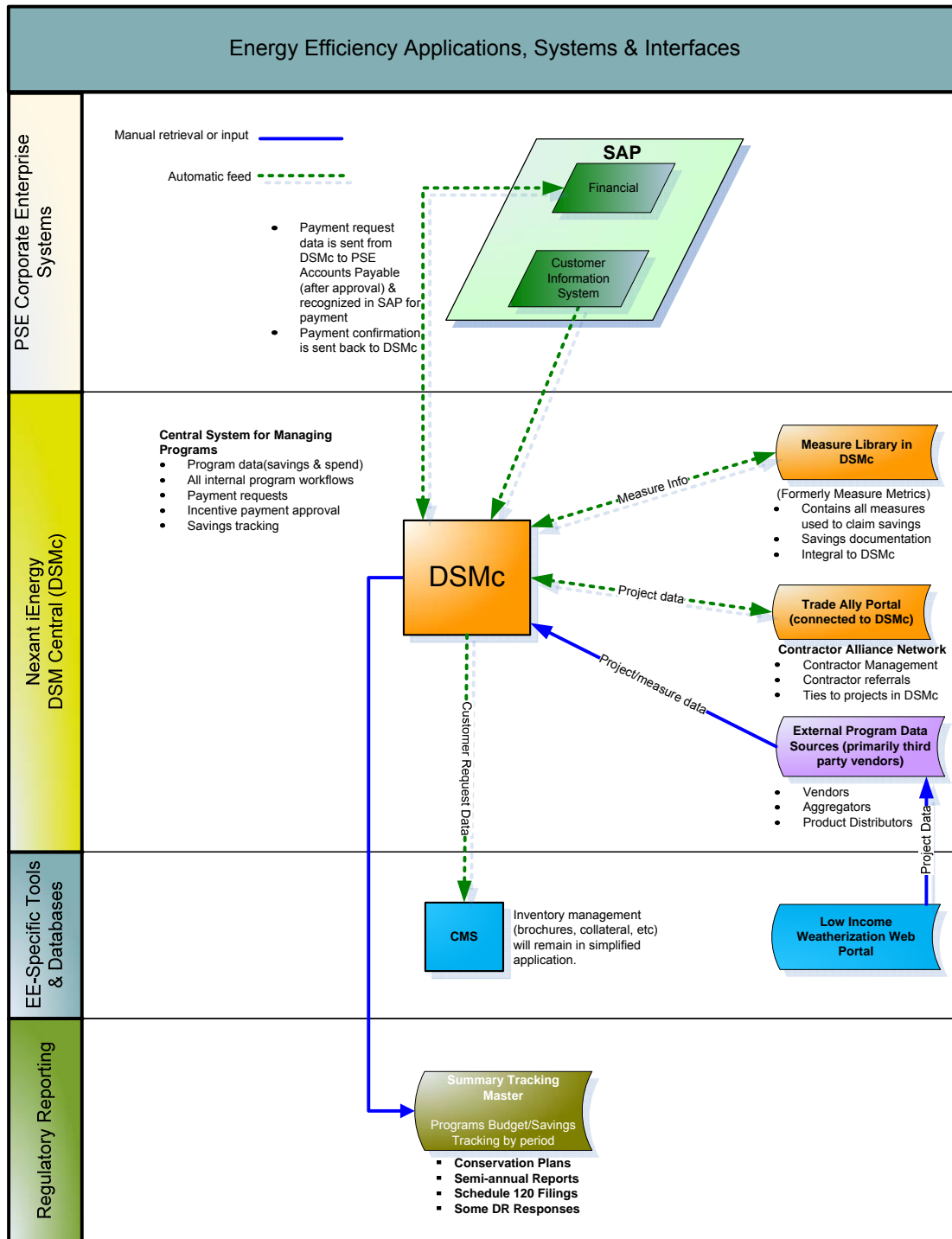
- Customer Management System (CMS),
- Customer Solutions sYstem (CSY),
- The EES Tracking and Forecasting System,
- The Source of Savings Database,
- The Low Income Weatherization portal.

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



6. 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 Supplements¹⁶ 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.

7. 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.

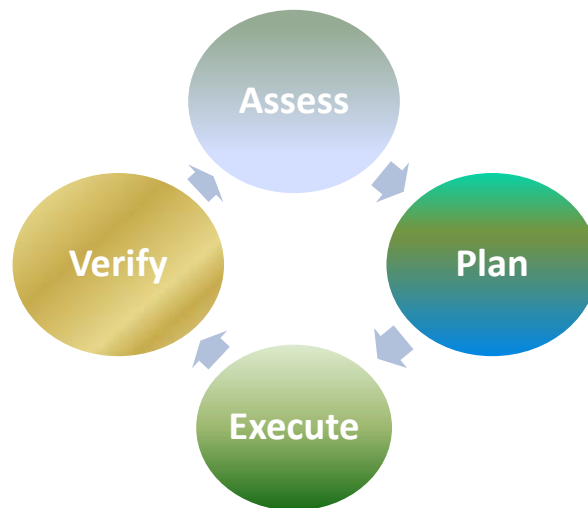
¹⁶ The primary document containing Exhibit Supplements is the Annual Report of Conservation Accomplishments. For instances, Exhibit 1, Supplement 1 is a representation of actual-versus-planned expenditures by budget category. Exhibit 1, Supplement 4 lists the number of key measure types installed by program. There are no Supplements included in the Annual Conservation Plan.

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.

E. 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 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.

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.

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).

1. 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 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.

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.

Programs also conduct limited-time promotions, and maximize the visibility on the PSE energy-efficiency website, etc.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.

2. 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 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.

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.

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.

a. 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.

b. 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

c. 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.

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.

d. 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.

e. 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.

f. 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.

g. 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.

h. 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.

i. 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.

j. 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.

3. 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.

F. Compliance

This 2017 Annual Conservation Plan complies with WAC 408-109-110(2).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.11²³ 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*.

G. 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.

H. 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.

1. 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.

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.

²³ Pertaining to the development of an annual electric budget.

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 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.

2. 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.

3. Plan Organization

In order to present the Plan contents in a logical filing structure that is manageable for Stakeholders, PSE will follow its standard organizational tenets. Part 1 is the 2017 Plan Overview (this document). Part 2 includes 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.

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.

Energy Efficiency organized the volumes accordingly:

a. 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.

b. 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
- Exhibit 10: Northwest Energy Efficiency Alliance (“NEEA”) Plan,

4. 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.

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.

5. 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

I. 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
 - a. 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.

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*.

- b. 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.

2. 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.

III. 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.

A. 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

2017 Comparison: Electric BCP versus ACP Update						
Sector	Savings, MWh			Expenses		
	Original As indicated in 2016-2017 BCP	Updated 2017 ACP	Percent Change	Original As indicated in 2016-2017 BCP	Updated 2017 ACP	Percent Change
Residential Energy Management	128,637	120,762	-6.1%	\$45,684,186	\$43,032,312	-5.8%
Business Energy Management	166,534	166,755	0.1%	\$39,701,447	\$42,546,414	7.2%
Pilots	0	5,323	n/a	\$0	\$978,291	n/a
Regional (NEEA,	15,516	17,093	10.2%	\$5,200,000	\$5,200,000	0.0%
Portfolio Support				\$5,886,467	\$6,471,427	9.9%
Research & Compliance				\$2,952,934	\$3,656,980	23.8%
Other Electric Programs				\$959,776	\$1,567,778	63.3%
Totals	310,687	309,932	-0.2%	\$100,384,810	\$103,453,202	3%

1. 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

2017 Comparison: Natural Gas BCP versus ACP Update						
Sector	Savings, Therms			Expenses		
	Original As indicated in 2016-2017 BCP	Updated 2017 ACP	Percent Change	Original As indicated in 2016-2017 BCP	Updated 2017 ACP	Percent Change
Residential Energy Management	1,646,670	1,558,907	-5.3%	\$7,311,602	\$6,831,311	-6.6%
Business Energy Management	1,778,682	1,651,665	-7.1%	\$4,788,427	\$4,775,232	-0.3%
Pilots	0	316,885	n/a	\$0	\$190,369	n/a
Regional (NEEA, Generation/Transmission/Distribution)	37,680	0	-100.0%	\$1,389,079	\$1,389,079	0.0%
Portfolio Support				\$802,831	\$921,598	14.8%
Research & Compliance				\$475,507	\$580,024	22.0%
Totals	3,463,032	3,527,457	2%	\$14,767,446	\$14,687,614	-1%

B. 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.

1. 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 programs²⁷ are included in the overall Energy Efficiency Portfolio and funded by PSE customers. As Portfolio contributors, PSE includes them in this discussion.

a. 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:

i. 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.

ii. RTF UES Values

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

iii. 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.

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.

Although not specifically identified in the affected programs' measure tables,²⁸ all prescriptive savings values reflect these recommendations, as well as annual measure savings prescribed in Energy Efficiency's *Measure Revision Guidelines*.

b. 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 value²⁹ 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 figures³⁰ are noted in the "Measure Information" — "Savings" column. The revisions are denoted by the "(2017-Specific Values)" heading at the top of the column.

i. Highlights of significant prescriptive measure revisions

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

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.

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.

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.

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.

While very few measures' UES values increased, most, as evidenced in the table—and expected in the evolving energy efficiency marketplace—tended 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-3³² 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.

³² The LED measures indicated in Table III-3 are only a few of the Residential LED UES values adjusted in 2016.

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

Table III-3: Highlights of Prescriptive Measure Savings Revisions

Measure Name	2016-2017 BCP-Indicated Savings Value for 2017	Updated 2017 Savings Value	Difference
Electric			
Kilowatt-hour			
Retail A-Lamp LED	24.09	11.32	-53%
Retail Outdoor LED Fixture	58.47	5.91	-90%
Retail Globe LED	21.19	12.93	-39%
Single Family Ductless Heat Pumps	3,447	3,343	-3%
Retail Showerhead, 1.5 GPM	122	109	-11%
Retail Showerhead, 1.51 – 1.75 GPM	94	88	-6%
Retail ShowerStart, 1.5 GPM	230	177	-23%
Advanced Power Strips	300	216	-28%
Freezer Decommissioning	570	444	-22%
Multifamily Ductless Heat Pump	1,195	2,659	123%
Multifamily Heat Pump Water Heater (Tier 2)	1,221	1,592	30%
Commercial Kitchen Steam Cookers (average of 3- to 10-pan)			-7%
Commercial Dishwashers (average of all measures)			-10%
Natural Gas			
Therms			
Showerhead, Leave-behind	16	11	-31%
Showerhead, Retail, 1.5 GPM or less	10.2	13.8	35%
Showerhead, Retail, 1.76 - 2.0 GPM	5.3	2.9	-45%
Showerstart Adapter	8.06	1.75	-78%
Showerstart Showerhead	13.67	10.86	-21%
Web-Enabled Thermostat	17	50	194%
Commercial Aerators	16	8.2	-49%

c. Erosion of Market Demand & Product Saturation

Nowhere is the erosion of market demand and product saturation more evident than 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 the savings per project and cost effectiveness of projects from eligible customers, due in large part to the measures still available to customers.

d. 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.

e. 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.

i. Pilot savings are excluded from the EIA Target

During the development of the 2014-2015 BCP, the CRAG and PSE agreed that it 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 that pilot programs with uncertain savings potential should be excluded from utilities' future EIA targets after consultation with their advisory groups.³⁴

ii. Stakeholder requests

In their 2014-2015 BCR comments,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

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

iii. 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

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 as long as the overall portfolio remains cost-effective.”

³³ Docket No UE-132043, August 15, 2016, Order 05 approving PSE's 2014-2015 electric conservation achievement.

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.

³⁵ Docket No. UE-132043.

³⁶ Staff comments on 2014-2015 Biennial Conservation Reports, Docket UE-132043, ¶ 3, pg 9.

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.

³⁸ Emphasis is added for purposes of this discussion.

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.

iv. 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 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 program⁴⁰ 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.

³⁹ Subsequently acquired by Ecova in 2015, Retroficiency Inc. conducted energy-efficiency data analytics.

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.

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.

v. 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 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.

vi. 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.

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.

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.

vii. 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?”

viii. 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

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.

ix. 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.

⁴² Approximately 10 percent of PSE’s NEEA budget is directed toward the RPP.

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.

f. 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.

i. 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.

ii. 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

2. 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.

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.

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

a. 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 2.1.1.b. in Chapter 2, PSE's accounting enhancement created "micro-overhead",⁴⁴ which is calculated to be 21 percent.

b. Electric

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

i. 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.

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.

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.

ii. 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.

iii. 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.

iv. 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.

v. 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.

vi. 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 budget⁴⁵ is \$296,000.

vii. 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.

c. 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.

i. 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.

ii. 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.

iii. 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.

⁴⁵ The original 2017 Plan anticipated no costs for the EV Charge Incentive program.

3. 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

As of the date of the creation of the 2017 ACP, PSE has 13 customers that meet the criteria for single large facilities,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.

⁴⁶ *Staff Comments on 2014-2015 Biennial Conservation Reports, Dockets UE-132043, UE-132045, UE-132047*, page 6, ¶ 3.

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.”

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

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

C. 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.

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.*

1. 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 majority⁴⁹ 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 then (2) applying the RTF-calculated electric first-year NEB figure.

2. 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 TREAT⁵¹ 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.

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.

⁵⁰ PSE provided this Microsoft® Excel™ tool, based on an industry-standard formula, to the CRAG on September 1, 2015.

⁵¹ Targeted Residential Energy Analysis Tool.

a. *Low Income Weatherization*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.

3. 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.

4. 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).

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.

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

2017 Energy Efficiency Sector Cost-Effectiveness		
Sector	UC	TRC
Overall EE		
Electric	2.24	1.71
Gas	1.78	1.54
Residential		
Electric	2.84	1.89
Gas	2.49	1.54
Business		
Electric	2.39	1.85
Gas	1.85	2.22

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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IV. 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).

A. 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

2017 Energy Efficiency			
Residential Energy Management			TRC
	Total Savings	Budgets	
Electric	120,762 MWh	\$43,032,312	1.89
<i>aMW</i>	<i>13.8 aMW</i>		
Natural Gas	1,558,907 Therms	\$6,831,311	1.54
Total Budget		\$49,863,623	

1. Tariff Schedule Adjustments

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

B. 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 measures⁵³ 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

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.

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

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

a. 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.

i. 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 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.

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.

⁵⁵ Some renters mistakenly believe that only their landlord or property owner can apply for efficiency incentives.

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.

b. 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 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.

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.

D. 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
 - Business Rebates.

2017 Updates, Revisions, Enhancements, Adaptive Management

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

1. 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.

⁵⁷ Although Fuel Conversion is included in PSE's Schedule 216, the management of the program is conducted within the Dealer Channel.

- 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.

i. 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.

a. 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-30⁵⁸ 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 TLED⁵⁹ and LED shop lights to its suite of measures.

⁵⁸ These are reflector-type lamps, with the "BR" standing for Bulged Reflector.

⁵⁹ Tubular (linear) LEDs.

PSE will implement a highly-focused marketing and promotional plan⁶⁰ 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.

⁶⁰ PSE includes marketing plan overviews in the Exhibit 3: *Program Details* discussions and Exhibit 7: *Marketing & Outreach Executive Summary*.

b. 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 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 incentive 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.

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.

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.

c. 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.

d. 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.

e. 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.

2. 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.

i. 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.

a. 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 for the 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.

b. 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.

c. 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.

d. 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 windows⁶² can no longer be offered in either the electric or natural gas programs,

⁶² The program will continue to offer qualifying double-pane upgrades from single-pane windows.

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.

E. 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.

F. 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.

1. 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 tenants 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 it falls just outside of LIW's program focus.

a. 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.

2. 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 include custom 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.) These incentives are based on the percent savings over code baseline as determined by building energy simulation analysis.
- **Rebates:** Include prescriptive 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 incentive 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.

V. 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).

A. 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 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

⁶³ As these were new programs in 2016, Direct Install programs took several months to ramp up to their full savings potential.

⁶⁴ Docket No. UG-121207, Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs.

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

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*.

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.

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

2017 Energy Efficiency			
Business Energy Management			TRC
	Total Savings	Budgets	
Electric	166,755 MWh	\$42,546,414	1.85
<i>aMW</i>	<i>19. aMW</i>		
Natural Gas	1,651,665 Therms	\$4,775,232	2.22
Total Budget		\$47,321,646	

B. Tariff Schedule Adjustments

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

C. 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

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.

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.

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>

D. 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 include custom 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.) These incentives are based on the percent savings over code baseline as determined by building energy simulation analysis,
- **Rebates:** Include prescriptive rebates for incremental upgrades exceeding code requirements,
- **Grocery Sector Incentives:**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.

⁶⁷ Grocery sector incentives are provided by the same third party implementer for both the Retrofit and New Construction environments.

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 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.

E. 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 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.

⁶⁸ In the now-retired SRM program, a third-party program implementer was selected through RFP by PSE.

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.

F. 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

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.

1. 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.

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.

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.

2. 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.

3. 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.

G. 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.

H. 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 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.

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.

1. 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.

2. 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.

a. 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.

3. 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.

a. 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.

4. 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.

a. 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.

5. 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.

a. 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 partners⁷¹ alike, who are served by more than one utility provider can more easily participate in the program offerings.

6. 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.

⁷¹ Market partners primarily consist of commercial kitchen equipment distributors.

7. 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.

VI. 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.

A. 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.

B. 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 pilots⁷² 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.

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.

VII. 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.

A. 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.

1. 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 the final 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.

B. 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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VIII. 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 and Business 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.

A. Tariff Schedule Adjustments

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

B. 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).

1. 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.

2. 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.

a. 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.

3. 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.

a. 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.

4. 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.

C. 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.

1. 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.

a. 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.

2. 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.

3. 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.

D. Programs Support

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

1. 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.

2. 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.

E. 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 budgets were 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.

F. 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.

1. 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.

G. 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.

H. 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.

IX. 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

A. Tariff Schedule Adjustments

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

B. 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.

C. 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.

D. 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.

E. 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 of verifications. 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.

F. 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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X. 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.

A. *Tariff Schedule Adjustments*

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

B. *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 1,000⁷³ 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 Order⁷⁴ 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

⁷³ Projected completed projects for 2015 as of the time of the Plan's publication.

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.

C. Demand Response

1. 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.

2. 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:

- a. Technology and Implementation Services in support of PSE's Commercial & Industrial Demand Response Program.
- b. 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.

D. 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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XI. 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.

A. 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 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

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.

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)".

⁷⁶ In the discussion, numbers in parentheses: (1), (2), etc. correspond to numbered items illustrated in the noted Figures.

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

This table summarizes the subtotals in the detail table to the left and is used to populate 2016-2017 Sector views.

	Labor	Marketing Labor	Overhead	Employee/Office Expense	Outside Services	DBTC	Revenue	Total Budget	Total Savings	Ratios			Acquisition Cost
2016 (Reference only)	\$34,441	\$6,400	\$27,241	\$5,225	\$1,200	\$0	\$0	\$60,748	1,112,580 kWh	0.0%	26.3%	0.3%	\$ 0.00
17 Figures, as noted in 2016-2017 BCP	\$35,302	\$6,560	\$28,466	\$5,225	\$1,200	\$147,470	\$0	\$298,770	1,112,580 kWh	61.6%	10.7%	0.3%	\$ 0.22
2017 (Updated for 2017 ACP)	\$35,302	\$6,560	\$37,592	\$5,225	\$1,200	\$147,470	\$0	\$24	1,112,580 kWh	93.3%	10.3%	0.3%	\$ 0.22

(a) (b) (c)

(2017-Specific Values. 2016 values are noted in measure table below.) (2016 figures in below table) (2016 figures in below table) (2016 figures in below table)

Measure Name	Measure Information		Unit Totals		Projected Savings			Incentive Totals	
	Savings	UOM	2016	2017	2016	2017	2016	2017	
TOTALS →			\$ 292,590.00			1,112,580		147,470	
Commercial Fryer	2449	kWh	per unit \$ 250.00	1.2%	6	13,470		\$ 1,375.00	
Steam Cooker - 3 Pan - \$250	20866	kWh	per unit \$ 250.00	4.1%	2	45,905		\$ 550.00	
Steam Cooker - 4 Pan - \$350	27560	kWh	per unit \$ 250.00	2.8%	1	30,756		\$ 275.00	
Steam Cooker - 5 Pan - \$250	35255	kWh	per unit \$ 250.00	3.5%	1	35,551		\$ 275.00	
Steam Cooker - 6 Pan - \$500	42150		per unit \$ 500.00	20.8%	6	231,825		\$ 2,750.00	
Steam Cooker - 10 Pan - \$500	70529		per unit \$ 500.00	13.9%	2	156,164		\$ 1,100.00	
Ice Machine - 101 to 300 lbs Ice per Day	805		per unit \$ 100.00	0.8%	11	8,855		\$ 1,100.00	
Ice Machine - 301 to 500 lbs Ice per Day	1117		per unit \$ 100.00	1.1%	11	12,287		\$ 1,100.00	

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

This table summarizes the subtotals in the detail table to the left and is used to populate 2016-2

	Labor	Marketing Labor	Overhead	Employee/Office Expense	Outside Services
2016 (Reference only)	\$34,441	\$6,400	\$27,241	\$5,225	\$1,200
17 Figures, as noted in 2016-2017 BCP	\$35,302	\$6,560	\$28,466	\$5,225	\$1,200
2017 (Updated for 2017 ACP)	\$35,302	\$6,560	\$37,592	\$5,225	\$1,200

(6)

(2017-Specific Values. 2016 values are noted in measure table below.)

Savings Section					
Measure Information					
Measure Name	Savings	UOM	Unit Type	Incentive	Support %
TOTALS →				\$ 292,590.00	
Commercial Fryer	2449	kWh	per unit	\$ 250.00	1.2%
Steam Cooker - 3 Pan - \$250	20866	kWh	per unit	\$ 250.00	4.1%

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

Spending Section				
Overall Total		7	\$ 248,588.35	\$ 338,334.53
Budget Category		2016	2017	Total
FTE	LABOR	\$ 34,440.84	\$ 35,301.62	\$ 69,742.16
0.33	Program Manager	\$29,908.85	\$30,656.67	\$60,565.56
0.05	Market Manager	\$4,531.65	\$4,644.95	\$9,176.60
				\$0.00
				\$0.00
0.38				
FTE	MARKETING LABOR	\$ 2,400.00	\$ 6,560.00	\$ 12,960.00
0.05	Marketing program manager	\$4,000.00	\$4,100.00	\$8,100.00
0.03	Other	\$2,400.00	\$2,460.00	\$4,860.00
				\$0.00
				\$0.00
0.08				
	TOTAL OVERHEAD	\$ 27,240.84	\$37,591.73	\$ 64,832.37
	Labor Overhead Rate	68.70%	68.80%	
	Program Staff Overhead	\$22,971.84	\$24,287.51	\$47,259.35
	Marketing Staff Overhead	\$4,268.80	\$4,513.28	\$8,782.08
	Micro Overhead Rate	8	21.00%	
	Program Staff Overhead		\$7,413.34	\$7,413.34
	Marketing Staff Overhead		\$1,377.60	\$1,377.60
	MARKETING	\$ 15,000.00	\$ 15,000.00	\$ 30,000.00
		\$15,000.00	\$15,000.00	\$30,000.00
				\$0.00

This illustration highlights two additional 2017 enhancements to Exhibit 1:

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

1. 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.

a. 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 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 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).

b. 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 Additionally, the Budget, Evaluation, Administration, and Regulatory organization—which does not have a specific Exhibit 1 budget—assessed to each Energy Efficiency cost center.

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.

⁷⁸ PSE omitted the micro-overhead value in: Market Research, Market Integration, Conservation Supply Curves, Strategic Planning, or Other Electric Programs.

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.)

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 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

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 tried-up quarterly henceforth.

c. *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.

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.

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.

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

PSE presents its EM&V budget on line *bl* in 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.

B. 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.

C. Exhibit 3: Energy Efficiency Program Details

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

D. Exhibit 4: Energy Efficiency Measures, Incentives & Eligibility

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

E. 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 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*.

F. 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.

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.

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XII. 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.

A. RCW 19.285

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

B. 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).

C. 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 Orders⁸³ into its Exhibit 9: *Condition Compliance Checklist*.

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-gas unique requirements were only added to Exhibit 9 for tracking and reporting purposes.

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.

D. Specific Conditions Applicable to the Annual Conservation Plan

1. 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*.

2. 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.

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

The 2017 ACP complies with Section H.21 – (Annual) *Budget Development*.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.

4. 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.

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.

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.

XIII. 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 Measures should also meet cost-effectiveness standards.

⁸⁵ Schedule 83, section 4, Definitions, #m. Schedule 183, section 4, #l.

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	<p>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.</p> <p>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.</p>
System	<p>In this document, System may have the following meanings:</p> <ol style="list-style-type: none"> 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.

A. 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
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
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

⁸⁶ Schedule 83, section 4, Definitions, #z. Schedule 183, section 4, #x.

⁸⁷ Schedule 83, section 4, Definitions, #bb. Schedule 183, section 4, #z.

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XV. 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*

Exhibit 1

2017 PSE Conservation Rider Savings Goals and Budgets

Last revised: 11/11/16 7:23 AM



Schedule Nos. (Unless otherwise noted, applies to both electric and gas)	Ref #	Program Name	Titles are hyperlinks to 2017 Sector Views				Total Tariff Budget
			MWh Savings	Electric Rider Budget	Therm Savings	Gas Rider Budget	
Residential Energy Management							
a	201	Low Income Weatherization	1,836	\$ 3,735,428	8,786	183,600	\$ 3,919,028
b	214	Single Family Existing	96,696	\$ 27,657,200	1,426,705	5,789,539	\$ 33,446,739
c		Residential lighting	69,473	\$ 13,833,179			\$ 13,833,179
d		Space heat	7,731	\$ 3,996,974	618,205	2,349,235	\$ 6,346,208
e		Water heat	728	\$ 477,188	-	-	\$ 477,188
f		Home Energy Assessment	5,039	\$ 2,843,948	-	-	\$ 2,843,948
g		Home Appliances	6,722	\$ 4,458,255	40,705	14,805	\$ 4,473,060
h		Mobile Home Duct Sealing	-	\$ -	-	-	\$ -
i		Web-Enabled Thermostats	703	\$ 158,040	170,000	353,040	\$ 511,080
j		Showerheads	4,273	\$ 640,815	187,783	330,536	\$ 971,351
k		Weatherization	2,028	\$ 1,122,427	410,013	2,698,911	\$ 3,821,339
l		Home Energy Reports	-	\$ 126,375	-	43,012	\$ 169,387
m	215 & 218	Residential New Construction	1,294	\$ 728,455	38,880	249,213	\$ 977,669
n	216	Fuel Conversion	1,950	\$ 837,031			\$ 837,031
o	217	Multi Family Existing	18,985	\$ 10,074,198	84,536	608,958	\$ 10,683,156
p		Total, Residential Programs	120,762	\$ 43,032,312	1,558,907	\$ 6,831,311	\$ 49,863,623
Business Energy Management							
q	250	Commercial / Industrial Retrofit	72,000	\$ 18,924,730	425,000	1,998,657	\$ 20,923,387
r	251	Commercial/Industrial New Construction	10,000	\$ 2,482,963	100,000	534,927	\$ 3,017,890
s	253	Resource Conservation Management	30,250	\$ 2,038,023	550,000	546,324	\$ 2,584,347
t	E258	Large Power User - Self Directed Program	21,474	\$ 10,965,426			\$ 10,965,426
u	261	Energy Efficient Technology Evaluation	-	\$ -	-	-	\$ -
v	262	Commercial Rebates	33,031	\$ 8,135,272	576,665	1,695,324	\$ 9,830,596
w		Subtotal, Business Programs	166,755	\$ 42,546,414	1,651,665	\$ 4,775,232	\$ 47,321,646
Pilots							
x	249	Residential Pilots - Individual Energy Reports	5,323	\$ 978,291	316,885	190,369	\$ 1,168,660
y	249	Business Pilots - Individual Energy Reports	-	\$ -	-	-	\$ -
z		Subtotal, Pilots	5,323	\$ 978,291	316,885	\$ 190,369	\$ 1,168,660
Regional Efficiency Programs							
aa	E254	NW Energy Efficiency Alliance	15,593	\$ 5,200,000			\$ 5,200,000
ab		NEEA Natural Gas Market Transformation			-	1,389,079	\$ 1,389,079
ac		Generation, Transmission and Distribution	1,500	\$ -			\$ -
ad		Subtotal, Regional Programs	17,093	\$ 5,200,000	-	\$ 1,389,079	\$ 6,589,079
Energy Efficiency Portfolio Support							
ae		Customer Engagement and Education		\$ 1,927,582		\$ 216,606	\$ 2,144,188
af		Energy Advisors		\$ 1,168,422		\$ 86,790	\$ 1,255,212
ag		Events		\$ 649,765		\$ 112,790	\$ 762,555
ah		Brochures, non program-specific		\$ 100,594		\$ 16,052	\$ 116,646
ai	202	Education		\$ 8,800		\$ 975	\$ 9,775
aj		Electronic Media Tools & Marketing		\$ 1,190,833		\$ 193,947	\$ 1,384,780
ak		Customer Digital Experience		\$ 588,990		\$ 88,010	\$ 677,000
al		Market Integration		\$ 459,599		\$ 83,541	\$ 543,140
am		Automated Benchmarking System		\$ 142,243		\$ 22,396	\$ 164,639
an		Rebates Processing		\$ 546,940		\$ 82,046	\$ 628,986
ao		Programs Support		\$ 700,102		\$ 104,716	\$ 804,818
ap		Data and Systems Services		\$ 1,097,134		\$ 164,146	\$ 1,261,279
aq		Energy Efficient Communities		\$ 895,611		\$ 143,617	\$ 1,039,227
ar		Trade Ally Support		\$ 117,661		\$ 21,015	\$ 138,676
as		Contractor Alliance Network (net of revenue + cost)		\$ (4,434)		\$ (4,495)	\$ (8,929)
at		Subtotal, Portfolio Support		\$ 6,471,427		\$ 921,598	\$ 7,393,026
Energy Efficiency Research & Compliance							
au		Conservation Supply Curves		\$ 251,498		\$ 37,580	\$ 289,079
av		Strategic Planning		\$ 711,473		\$ 50,278	\$ 761,751
aw		Market Research		\$ 292,170		\$ 43,658	\$ 335,828
ax		Program Evaluation		\$ 1,777,721		\$ 363,107	\$ 2,140,828
ay		Biennial Electric Conservation Acquisition Review		\$ 54,000			\$ 54,000
az		Verification Team		\$ 570,118		\$ 85,401	\$ 655,519
ba		Subtotal, Research & Compliance		\$ 3,656,980		\$ 580,024	\$ 4,237,004
bb		Total MWh, Efficiency Programs Included in CE Calculations	309,932	\$ 101,885,424	3,527,457	\$ 14,687,614	\$ 116,573,038
Other Electric Programs							
bc	E 150	Net Metering		\$ 949,697			\$ 949,697
bd	E nnn	Demand Response (Residential + Commercial)		\$ 322,457			\$ 322,457
be	E195	Electric Vehicle Charger Incentive		\$ 295,624			\$ 295,624
bf		Subtotal, Other Electric Programs		\$ 1,567,778		\$ -	\$ 1,567,778

bg	Go to Building the Electric Target Page	GRAND TOTAL All Programs	309,932 MWh	\$ 103,453,202	3,527,457	\$ 14,687,614	\$ 118,140,816
			35.4 aMW				

bh	Go to Building the Gas Target Page	Total, All Programs, less (NEEA + Energy Report Pilots)	289,017 MWh		3,210,572 therms		
			33.0 aMW				

bi	Blue cells = use for 10% "info-only" calculation:	7.3%	7.6%
	Add up all blue cells and divide by "Total, Efficiency Programs Included in CE Calculations" line. HER program costs excluded from "info-only" calculation because savings will be measured.		

bk	Purple cells = use to indicate a reasonable amt. spent on EM&V (condition (6)(c)):	4.1%	5.3%
bl	EM&V Budget (WAC 480-109-120(1)(b)(vi)(B))	\$ 3,498,973	\$ 612,654

(Line bk) Add up the sum of [Data & Systems Services + Program Evaluation + BECAR + Verification purple cells] and divide by the [Residential + Business] purple cells.

(Line bk) Add up the sum of [Data & Systems Services + [Program Evaluation + BECAR + Verification] purple cells]

Energy Efficiency 2017 Budgets, Sector View
Electric Programs

Press to return to 2017 Portfolio View | Go to 2017 Gas Sector

Please see category descriptions at the bottom of the sector table.

Order Number

(Click on the order# below to link to the detail page)

Budget Category

Workbook Name	Schedule	Comment	Description (Blue, indented text indicates a sub-total value)	Order Number	Program Labor	Marketing Labor	Overhead	Marketing	Employee/Office Expense	Outside Services	Materials	Miscellaneous	DBTC	Revenue	Total Budget	Total Savings kWh	Comments
Residential Energy Management																	
LIW Detail_REM E201_Elec	E201		Low Income Weatherization	18230611	\$ 100,686	\$ 14,400	\$ 103,347	\$ 45,000	\$ 4,000	\$ 6,500	\$ 1,000	\$ 1,000	\$ 3,459,494	\$ -	\$ 3,735,428	1,835,728	
HomePrint Detail_REM E214_Elec	E214		Home Energy Assessments	18230625	\$ 39,527	\$ 22,561	\$ 55,755	\$ 134,200	\$ 3,000	\$ 220,819	\$ 1,000	\$ 2,000	\$ 2,365,086	\$ -	\$ 2,843,948	5,039,322	
WaterHeat Detail_REM E214_Elec	E214		SF Existing Water Heat	18230626	\$ 10,885	\$ 6,153	\$ 15,300	\$ 78,750	\$ 1,200	\$ -	\$ 5,000	\$ 2,400	\$ 357,500	\$ -	\$ 477,188	727,675	
Wx_Detail_REM E214_Elec	E214		SF Existing Weatherization	18230627	\$ 48,165	\$ 24,612	\$ 65,354	\$ 150,545	\$ 5,302	\$ 144,750	\$ -	\$ -	\$ 683,699	\$ -	\$ 1,122,427	2,027,725	
SpHeat Detail_REM E214_Elec	E214		SF Existing Space Heat	18230628	\$ 56,772	\$ 22,561	\$ 71,241	\$ 228,000	\$ 7,200	\$ -	\$ 17,200	\$ 4,000	\$ 3,590,000	\$ -	\$ 3,996,974	7,730,775	
HmApplic_Detail_REM E214_Elec	E214		Home Appliances	18230434	\$ 82,698	\$ 38,875	\$ 109,173	\$ 388,395	\$ 3,000	\$ 388,734	\$ 3,000	\$ 500	\$ 3,443,880	\$ -	\$ 4,458,295	6,721,709	
ShwrHead_Detail_REM E214_Elec	E214		Residential Showerheads	18230435	\$ 26,025	\$ 5,400	\$ 28,219	\$ 80,915	\$ 1,000	\$ 43,006	\$ 1,000	\$ 500	\$ 454,750	\$ -	\$ 640,815	4,272,610	
Lighting Detail_REM E214_Elec	E214		Energy Efficient Lighting Services	18230440	\$ 171,161	\$ 101,075	\$ 244,468	\$ 1,847,331	\$ 11,000	\$ 1,590,926	\$ 8,250	\$ 5,000	\$ 9,853,969	\$ -	\$ 13,833,179	69,473,421	
MHDR Detail_REM E214_Elec	E214		Mobile Home Duct Sealing	18230634	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HER Detail_REM E214_Elec	E214		Home Energy Reports	18230461	\$ 6,220	\$ -	\$ 5,586	\$ 14,040	\$ 500	\$ 49,769	\$ 250	\$ 250	\$ 49,760	\$ -	\$ 126,375	-	
Web_Totat_Detail_REM E214_Elec	E214		Web-Enabled Thermostat	18230023	\$ 15,550	\$ 1,944	\$ 15,709	\$ 35,272	\$ 250	\$ 28,965	\$ 250	\$ 100	\$ 60,000	\$ -	\$ 158,040	703,200	
SFNC Detail_REM E215_Elec	E215	PIO Res. New Construction	Single Family New Construction	18230405	\$ 11,663	\$ 778	\$ 11,171	\$ 26,000	\$ 1,000	\$ 2,500	\$ 2,000	\$ -	\$ -	\$ -	\$ 55,111	-	
NCMghome Detail_REM E215_Elec	E215	PIO Res. New Construction	Energy Star Manufactured Home	18230433	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
FuelConv Detail_REM E216_Elec	E216		Fuel Conversion Rebate	18230612	\$ 44,277	\$ 16,408	\$ 54,496	\$ 85,000	\$ 2,000	\$ 2,000	\$ 1,000	\$ 3,000	\$ 628,850	\$ -	\$ 837,031	1,949,857	
MF Retr Detail_REM E217_Elec	E217		Multi-Family Existing	18230407	\$ 151,613	\$ 40,000	\$ 172,068	\$ 75,000	\$ 4,000	\$ 1,150,000	\$ 1,000	\$ 1,000	\$ 8,479,517	\$ -	\$ 10,074,198	18,985,266	
MFNC Detail_REM E218_Elec	E218	PIO Res. New Construction	Multi-Family New Construction	18230486	\$ 152,390	\$ 15,550	\$ 150,810	\$ 30,000	\$ 4,000	\$ -	\$ 500	\$ 500	\$ 319,594	\$ -	\$ 673,344	1,294,293	
Total, Residential Energy Management					\$ 917,630	\$ 310,317	\$ 1,102,697	\$ 3,216,448	\$ 47,452	\$ 3,627,969	\$ 41,450	\$ 20,250	\$ 33,746,099	\$ -	\$ 43,032,312	120,761,582	
<i>Original 2017 Figures</i>					\$ 1,174,744	\$ 326,404	\$ 1,020,780	\$ 3,239,233	\$ 50,604	\$ 3,596,000	\$ 66,975	\$ 43,000	\$ 36,166,447	\$ -	\$ 45,684,186	128,636,802	
Business Energy Management																	
CI Retr Detail_BEM E250_Elec	E250		Commercial/Industrial Retrofit	18230711	\$ 461,443	\$ 18,000	\$ 187,617	\$ 35,000	\$ 30,000	\$ 1,380,000	\$ 10,000	\$ -	\$ 5,250,000	\$ -	\$ 7,372,060	26,000,000	
BusLgtGrants_BEM E250_Elec	E250		Custom Lighting Grants	18230724	\$ 1,317,100	\$ 17,100	\$ 1,198,130	\$ 35,785	\$ 72,362	\$ 140,000	\$ 20,193	\$ 12,000	\$ 8,740,000	\$ -	\$ 11,552,670	46,000,000	
CI NC Detail_BEM E251_Elec	E251		Commercial/Industrial New Construction	18230715	\$ 158,400	\$ 13,340	\$ 154,223	\$ 24,000	\$ 4,000	\$ 120,000	\$ 4,000	\$ 5,000	\$ 2,000,000	\$ -	\$ 2,482,963	10,000,000	
Resource Conservation Management																	
RCM Detail_BEM E253_Elec	E253		RCM	18230723	\$ 385,000	\$ -	\$ 345,730	\$ 8,000	\$ 15,000	\$ 163,500	\$ 4,000	\$ 15,000	\$ 498,750	\$ -	\$ 1,434,980	14,250,000	
RCM B-U-S Detail_E253_Elec	E253		Bellevue Urban Smart	1823nnnn	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 494,086	\$ -	\$ -	\$ -	\$ -	\$ 494,086	16,000,000	
ResAcctSW Detail_PSW_Elec			Resource Accounting Software	1823yyyy	\$ 44,473	\$ 684	\$ 40,551	\$ -	\$ 1,500	\$ 21,750	\$ -	\$ -	\$ -	\$ -	\$ 108,957	-	
High Voltage, Self-Directed																	
LPSD_Detail_449_Elec	E258		449 Customers	18230720	\$ 358,557	\$ -	\$ 318,219	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,288,650	\$ -	\$ 10,965,426	21,474,005	
LPSD_Detail_Non-449_Elec	E258		Non-449 Customers	18230721	\$ 96,952	\$ -	\$ 86,045	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,339,841	\$ -	\$ 2,522,838	4,245,976	
TechEval Detail_BEM E261_Elec	E261		Technology Evaluation	18230448	\$ 261,605	\$ -	\$ 232,174	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,948,809	\$ -	\$ 8,442,588	17,228,029	
Business Rebates																	
Comm Lgt Mchx_E262_Elec	E262		Lighting to Go-also referred to as Business Lig	18230714	\$ 290,829	\$ 58,823	\$ 313,987	\$ 147,500	\$ 30,475	\$ 728,943	\$ 11,740	\$ 764,696	\$ -	\$ 8,135,272	33,031,055		
Comm KIt-Laund_E262_Elec	E262	Added 2017 Measure Table	Commercial kitchen and laundry	18230716	\$ 72,516	\$ 19,438	\$ 82,574	\$ 50,000	\$ 6,750	\$ 182,963	\$ 3,000	\$ 500	\$ 5,788,280	\$ -	\$ 1,221,230	10,447,837	
Comm HVAC_E262_Elec	E262	Added 2017 Measure Table	Commercial HVAC	18230718	\$ 27,870	\$ 6,560	\$ 30,918	\$ 15,000	\$ 5,225	\$ 1,200	\$ 240	\$ 148,190	\$ -	\$ 235,203	1,112,601		
Comm ExptLgt_E262_Elec	E262		Business Lighting Express	18230722	\$ 60,384	\$ 4,100	\$ 57,907	\$ 42,500	\$ 5,000	\$ 258,595	\$ 5,000	\$ 1,000	\$ 730,500	\$ -	\$ 1,164,986	3,448,522	
Sm Agr DI_E262_Elec	E262		Small Agriculture Direct Install	1823xxxx	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lodging DI_E262_Elec	E262	Added 2017 Measure Table	Lodging Direct Install	1823xxxx	\$ 20,438	\$ -	\$ 18,353	\$ -	\$ -	\$ 10,185	\$ -	\$ 152,775	\$ -	\$ 613,806	2,880,132		
Sm Bus DI_E262_Elec	E262		Small Business Direct Install	18231134	\$ 27,870	\$ 23,805	\$ 46,404	\$ 10,000	\$ 10,000	\$ 222,000	\$ 1,000	\$ -	\$ 1,366,053	\$ -	\$ 1,707,133	5,099,015	
Total, Business Energy Management					\$ 3,015,801	\$ 107,947	\$ 2,558,457	\$ 245,285	\$ 158,337	\$ 3,048,279	\$ 49,933	\$ 796,696	\$ 32,565,680	\$ -	\$ 42,546,414	166,755,060	
<i>Original 2017 Figures</i>					\$ 3,261,684	\$ 102,632	\$ 2,267,012	\$ 217,285	\$ 144,337	\$ 2,015,640	\$ 48,233	\$ 1,031,696	\$ 30,612,928	\$ -	\$ 39,701,447	166,533,822	
Pilots																	
REM Pilots E249_Elec	E249		Residential Energy Report Expansion	18230522	\$ 46,650	\$ 7,775	\$ 48,874	\$ 22,950	\$ 4,000	\$ 422,521	\$ 2,000	\$ 1,000	\$ 422,521	\$ -	\$ 978,291	5,322,641	
BEM Pilots E249_Elec	E249		Business Energy Reports	18230629	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total, Pilots					\$ 46,650	\$ 7,775	\$ 48,874	\$ 22,950	\$ 4,000	\$ 422,521	\$ 2,000	\$ 1,000	\$ 422,521	\$ -	\$ 978,291	5,322,641	
<i>Original 2017 Figures</i>					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Regional Efficiency Programs																	
NEEA Detail_E254_elec	E254		Northwest Energy Efficiency Alliance	18230421	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000	\$ -	\$ -	\$ 3,640,000	\$ -	\$ 5,200,000	15,592,800	
T&D Detail_Reg E292_elec	E292		Transmission & Distribution	18230711	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	
Total, Regional Efficiency Programs					\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000	\$ -	\$ -	\$ 3,640,000	\$ -	\$ 5,200,000	17,092,800	
<i>Original 2017 Figures</i>					\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,560,000	\$ -	\$ -	\$ 3,640,000	\$ -	\$ 5,200,000	15,516,000	
Energy Efficiency Portfolio Support																	
(Title pg)																	
Engy Adv Detail_PSC_Elec			Customer Engagement & Education	18230610	\$ 1,015,573	\$ 22,100	\$ 713,919	\$ 20,830	\$ 52,720	\$ 69,385	\$ 31,705	\$ 1,350	\$ -	\$ -	\$ 1,927,582		
Events Detail_PSC_Elec			Energy Advisors	18230602	\$ 662,957	\$ -	\$ 456,115	\$ -	\$ 44,000	\$ 1,000	\$ 3,000	\$ 1,350	\$ -	\$ -	\$ 1,168,422		
Brochures Detail_PSC_Elec			Events	18230482	\$ 335,940	\$ 2,600	\$ 232,915	\$ 7,830	\$ 8,720	\$ 56,975	\$ 4,785	\$ -	\$ -	\$ -	\$ 649,765		
Educatn Detail_PSC_E202_Elec	E202		Brochures, non program-specific Education	18230621	\$ 16,676	\$ 19,500	\$ 24,889	\$ 13,000	\$ -	\$ 2,610	\$ 23,920	\$ -	\$ -	\$ -	\$ 100,594		
(Title pg)																	
CustOnline Detail_PSW_Elec			Electronic Media Tools & Marketing	18230408	\$ 322,860	\$ 1,000	\$ 236,463	\$ -	\$ 10,200	\$ 620,310	\$ -	\$ -	\$ -	\$ -	\$ 1,190,833		
Mkt Intgrn Detail_PSW_Elec			Customer Digital Experience	18230466	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 588,990	\$ -	\$ -	\$ -	\$ -	\$ 588,990		
ABS Detail_PSW_Elec			Market Integration	18230411	\$ 258,874	\$ -	\$ 178,105	\$ -	\$ 8,700	\$ 13,920	\$ -	\$ -	\$ -	\$ 459,599			
Rebr Prog Detail_Elec			Automated Benchmarking System	18230507	\$ 63,986	\$ 1,000	\$ 58,357	\$ -	\$ 1,500	\$ 17,400	\$ -	\$ -	\$ -	\$ 142,243			
ProgDev Detail_R&C_Elec			Rebates Processing	18230810	\$ 274,995	\$ -	\$ 246,945	\$ -	\$ 20,000	\$ -	\$ 5,000	\$ -	\$ -	\$ 546,940			
Data & System Svcs_Elec			Programs Support	18230745	\$ 357,451	\$ -	\$ 320,991	\$ -	\$ 21,660	\$ -	\$ -	\$ -	\$ -	\$ 700,102			
ECC Detail_PS_Elec			Data and Systems Services	18230811	\$ 512,136	\$ -	\$ 459,898	\$ 12,000	\$ -	\$ 113,100	\$ -	\$ -	\$ -	\$ 1,097,134			
TradeAlly Detail_PS_Elec			Energy Efficient Communities	18230730	\$ 407,783	\$ 9,830	\$ 287,318	\$ 66,275	\$ 73,515	\$ 28,275	\$ 22,615	\$ -	\$ -	\$ 895,611			
CAN_Elec			Trade Ally Support	18230746	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,550	\$ -	\$ 61,111	\$ -	\$ 117,661			
Contractor Alliance Network (revenue + cost)					\$ 138,604	\$ 4,100	\$ 128,148	\$ 25,000	\$ 5,000	\$ 20,000	\$ 1,500	\$ -	\$ -	\$ (326,785)	\$ (4,434)		
Total, Portfolio Support					\$ 3,029,401	\$ 37,300	\$ 2,393,681	\$ 112,105	\$ 195,095	\$ 907,620	\$ 60,820	\$ 62,461	\$ -	\$ (326,785)	\$ 6,471,427		
<i>Original 2017 Figures</i>					\$ 2,844,922	\$ 37,030	\$ 1,978,858	\$ 127,660	\$ 183,531	\$ 903,620	\$ 60,170	\$ 62,461	\$ -	\$ (311,785)	\$ 5,886,467		
Research & Compliance																	
SuppCrv Detail_R&C_Elec			Conservation Supply Curves	18230809	\$ 102,709	\$ -	\$ 70,664	\$ -	\$ 1,044	\$ 77,082	\$ -	\$ -	\$ -	\$ -	\$ 251,498		
Strat Plan Detail_R&C_Elec</																	

Energy Efficiency 2017 Budgets, Sector View
Gas Programs

[Press to return to 2017 Portfolio View](#) [Go to 2017 Elec. Sector](#)

Please see category descriptions at the bottom of the sector table.

Budget Category

Workbook Name	Schedule Comment	Description (Blue, indented text indicates a sub-total value)	Order Number (Click on the order# below to link to the detail page)	Budget Category								DBTC	Revenue	Total Budget	Total Savings Therms
				Program Labor	Marketing Labor	Overhead	Marketing	Employee/Office Expense	Outside Services	Materials	Miscellaneous				
Residential Energy Management															
LIW Detail_REM G201 Gas	G201	Low Income Weatherization	18230661	\$ 15,939	\$ 1,600	\$ 15,750	\$ 5,000	\$ 1,000	\$ 1,000	\$ 500	\$ 500	\$ 142,312	\$ -	\$ 183,600	8,786
HmPrint Detail_REM G214 Gas	G214	Home Energy Assessments	18230635	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
WtrHeat Detail_REM G214 Gas	G214	SF Existing Water Heat	18230636	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Wx Detail_REM G214 Gas	G214	SF Existing Weatherization	18230637	\$ 27,192	\$ 12,306	\$ 35,470	\$ 41,179	\$ 2,500	\$ 327,523	\$ -	\$ 15,000	\$ 2,237,741	\$ -	\$ 2,698,911	410,013
SpHeat Detail_REM G214 Gas	G214	SF Existing Space Heat	18230638	\$ 44,592	\$ 14,357	\$ 52,936	\$ 225,000	\$ 5,400	\$ 18,000	\$ 17,200	\$ 4,000	\$ 1,967,750	\$ -	\$ 2,349,235	618,205
ShwrHead Detail_REM G214 Gas	G214	Residential Showerheads	18230700	\$ 11,727	\$ 2,333	\$ 12,626	\$ 80,346	\$ 300	\$ 20,000	\$ 300	\$ 150	\$ 198,750	\$ -	\$ 330,536	187,783
HmAppSvgs Detail_REM G214 Gas	G214	Home Appliances	18236888	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,805	\$ -	\$ 14,805	40,705
MHDS Detail_REM G214 Gas	G214	Mobile Home Duct Sealing	18230680	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
WebTstat Detail_REM G214 Gas	G214	Web-Enabled Thermostats	18230687	\$ 15,550	\$ 1,944	\$ 15,709	\$ 35,272	\$ 250	\$ 28,965	\$ 250	\$ 100	\$ 255,000	\$ -	\$ 353,040	170,000
HER Detail_REM G214 Gas	G214	Home Energy Reports	18230738	\$ 2,333	\$ -	\$ 2,095	\$ 9,960	\$ 250	\$ 14,045	\$ 100	\$ 150	\$ 14,080	\$ -	\$ 43,012	-
NCM#Homes Detail_REM G215 Gas	G215	Energy Star Manufactured Home	18230442	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
SFNC Detail_REM G215 Gas	G215	Single Family New Construction	18230684	\$ 11,663	\$ 778	\$ 11,171	\$ 6,000	\$ -	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ 30,611	-
MF Rer Detail_REM G217 Gas	G217	Multi-Family Existing	18230736	\$ 42,763	\$ 14,400	\$ 51,332	\$ 4,000	\$ 1,000	\$ 200,000	\$ 500	\$ 500	\$ 294,464	\$ -	\$ 608,958	84,536
MFNC Detail_REM G218 Gas	G218	Multi-Family New Construction	18230673	\$ 17,105	\$ 7,775	\$ 22,342	\$ 10,000	\$ 500	\$ 500	\$ 500	\$ 500	\$ 159,880	\$ -	\$ 218,802	38,880
Total, Residential Energy Management				\$ 188,863	\$ 55,492	\$ 219,431	\$ 416,757	\$ 11,200	\$ 613,537	\$ 20,350	\$ 20,900	\$ 5,284,782	\$ -	\$ 6,631,311	1,558,907
<i>Original 2017 Figures</i>				<i>\$ 224,084</i>	<i>\$ 62,570</i>	<i>\$ 194,925</i>	<i>\$ 414,541</i>	<i>\$ 10,950</i>	<i>\$ 529,000</i>	<i>\$ 20,450</i>	<i>\$ 21,050</i>	<i>\$ 5,834,033</i>	<i>\$ -</i>	<i>\$ 7,311,602</i>	<i>1,646,670</i>
Business Energy Management															
CI Rtr Detail_BEM G250 Gas	G250	Commercial/Industrial Retrofit	18230731	\$ 281,700	\$ 10,000	\$ 261,957	\$ -	\$ 8,000	\$ 135,000	\$ 2,000	\$ -	\$ 1,300,000	\$ -	\$ 1,998,657	425,000
CI NC Detail_BEM G251 Gas	G251	Commercial/Industrial New Construction	18230706	\$ 51,300	\$ 1,367	\$ 47,260	\$ 9,000	\$ 1,000	\$ 12,000	\$ 1,000	\$ 2,000	\$ 410,000	\$ -	\$ 534,927	100,000
Resource Conservation Management				\$ 175,155	\$ 500	\$ 157,719	\$ -	\$ 8,700	\$ 43,250	\$ 1,000	\$ 5,000	\$ 155,000	\$ -	\$ 546,324	550,000
RCM				\$ 165,000	\$ -	\$ 148,150	\$ -	\$ 8,000	\$ 40,000	\$ 1,000	\$ 5,000	\$ 155,000	\$ -	\$ 522,150	550,000
Resource Accounting Software				\$ 10,155	\$ 500	\$ 9,569	\$ -	\$ 700	\$ 3,250	\$ -	\$ -	\$ -	\$ -	\$ 24,174	-
Technology Evaluation				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Business Rebates				\$ 82,680	\$ -	\$ 74,247	\$ 25,250	\$ 6,225	\$ 172,891	\$ 840	\$ 74,155	\$ 1,259,037	\$ -	\$ 1,695,324	576,665
Commercial Kitchen & Laundry				\$ 23,225	\$ -	\$ 20,856	\$ 15,000	\$ 5,225	\$ 600	\$ 240	\$ -	\$ 366,102	\$ -	\$ 431,248	225,939
Commercial HVAC				\$ 13,935	\$ -	\$ 12,513	\$ -	\$ 500	\$ 55,976	\$ 100	\$ 120	\$ 123,800	\$ -	\$ 206,944	69,010
Small Agriculture Direct Install				\$ 16,722	\$ -	\$ 15,016	\$ -	\$ -	\$ 315	\$ -	\$ 4,725	\$ -	\$ -	\$ 36,778	-
Lodging Direct Install				\$ 9,290	\$ -	\$ 8,342	\$ 10,000	\$ 500	\$ 110,000	\$ 500	\$ 500	\$ 747,959	\$ -	\$ 887,091	258,211
Small Business Direct Install				\$ 19,509	\$ -	\$ 17,519	\$ 250	\$ -	\$ 6,000	\$ -	\$ 68,810	\$ 21,176	\$ -	\$ 133,263	23,505
Total, Business Energy Management				\$ 590,835	\$ 11,867	\$ 541,182	\$ 34,250	\$ 23,925	\$ 363,141	\$ 4,840	\$ 81,155	\$ 3,124,037	\$ -	\$ 4,775,232	1,651,665
<i>Original 2017 Figures</i>				<i>\$ 598,267</i>	<i>\$ 6,653</i>	<i>\$ 411,322</i>	<i>\$ 34,250</i>	<i>\$ 23,925</i>	<i>\$ 72,165</i>	<i>\$ 4,840</i>	<i>\$ 81,155</i>	<i>\$ 3,555,850</i>	<i>\$ -</i>	<i>\$ 4,788,427</i>	<i>1,778,682</i>
Pilots															
REM Pilots Detail_G249 Gas	G249	Residential Energy Report Expansion	18230622	\$ 10,108	\$ 2,333	\$ 11,171	\$ 10,050	\$ 1,000	\$ 77,479	\$ 500	\$ 250	\$ 77,479	\$ -	\$ 190,369	316,885
BEM Pilots Detail_G249 Gas	G249	Business Energy Reports	18230639	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Total, Pilots				\$ 10,108	\$ 2,333	\$ 11,171	\$ 10,050	\$ 1,000	\$ 77,479	\$ 500	\$ 250	\$ 77,479	\$ -	\$ 190,369	316,885
<i>Original 2017 Figures</i>				<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>-</i>
Regional Efficiency Programs															
NW Gas Market Transformation				\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,389,079	\$ -	\$ -	\$ -	\$ -	\$ 1,389,079	-
Total, Regional Efficiency Programs				\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,389,079	\$ -	\$ -	\$ -	\$ -	\$ 1,389,079	-
<i>Original 2017 Figures</i>				<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ 1,389,079</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ 1,389,079</i>	<i>37,680</i>
Energy Efficiency Portfolio Support															
(Title pg)				\$ 108,816	\$ 2,970	\$ 76,909	\$ 2,530	\$ 9,112	\$ 10,090	\$ 5,978	\$ 202	\$ -	\$ -	\$ 216,606	-
Customer Engagement & Education				\$ 46,270	\$ -	\$ 31,833	\$ -	\$ 7,832	\$ 200	\$ 453	\$ 202	\$ -	\$ -	\$ 86,790	-
Energy Advisors				\$ 60,272	\$ -	\$ 41,467	\$ 530	\$ 1,280	\$ 8,525	\$ 715	\$ -	\$ -	\$ -	\$ 112,790	-
Events				\$ 2,274	\$ 2,970	\$ 3,608	\$ 2,000	\$ -	\$ 390	\$ 4,810	\$ -	\$ -	\$ -	\$ 16,052	-
Brochures, non program-specific				\$ -	\$ -	\$ -	\$ -	\$ -	\$ 975	\$ -	\$ -	\$ -	\$ -	\$ 975	-
Education				\$ 57,050	\$ 500	\$ 41,707	\$ -	\$ 2,000	\$ 92,690	\$ -	\$ -	\$ -	\$ -	\$ 193,947	-
Electronic Media Tools & Marketing				\$ -	\$ -	\$ -	\$ -	\$ -	\$ 88,010	\$ -	\$ -	\$ -	\$ -	\$ 88,010	-
Customer Digital Experience				\$ 47,489	\$ -	\$ 32,672	\$ -	\$ 1,300	\$ 2,080	\$ -	\$ -	\$ -	\$ -	\$ 83,541	-
Market Integration				\$ 9,561	\$ 500	\$ 9,035	\$ -	\$ 700	\$ 2,600	\$ -	\$ -	\$ -	\$ -	\$ 22,396	-
Automated Benchmarking System				\$ 41,094	\$ -	\$ 36,902	\$ -	\$ 3,300	\$ -	\$ 750	\$ -	\$ -	\$ -	\$ 82,046	-
Rebates Processing				\$ 53,412	\$ -	\$ 47,964	\$ -	\$ 3,340	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 104,716	-
Programs Support				\$ 76,526	\$ -	\$ 68,720	\$ -	\$ 2,000	\$ 16,900	\$ -	\$ -	\$ -	\$ -	\$ 164,146	-
Data and Systems Services				\$ 61,981	\$ 1,690	\$ 43,806	\$ 13,195	\$ 10,855	\$ 4,225	\$ 7,865	\$ -	\$ -	\$ -	\$ 143,617	-
Energy Efficient Communities				\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,450	\$ -	\$ 12,565	\$ -	\$ -	\$ 21,015	-
Trade Ally Support				\$ 139,381	\$ 4,100	\$ 128,846	\$ 25,000	\$ 5,000	\$ 20,000	\$ 1,500	\$ -	\$ (328,322)	\$ (4,495)	\$ 921,598	-
Contractor Alliance Network (revenue + cost)				\$ 538,259	\$ 9,260	\$ 444,854	\$ 40,725	\$ 35,607	\$ 152,355	\$ 16,093	\$ 12,767	\$ -	\$ (328,322)	\$ 921,598	-
Total, Portfolio Support				\$ 511,956	\$ 9,260	\$ 354,427	\$ 29,725	\$ 33,671	\$ 148,355	\$ 15,993	\$ 12,767	\$ -	\$ (313,322)	\$ 802,831	37,680
<i>Original 2017 Figures</i>				<i>\$ 511,956</i>	<i>\$ 9,260</i>	<i>\$ 354,427</i>	<i>\$ 29,725</i>	<i>\$ 33,671</i>	<i>\$ 148,355</i>	<i>\$ 15,993</i>	<i>\$ 12,767</i>	<i>\$ -</i>	<i>\$ (313,322)</i>	<i>\$ 802,831</i>	<i>37,680</i>
Energy Efficiency Research & Compliance															
(Title pg)				\$ 17,371	\$ -	\$ 10,559	\$ -	\$ 156	\$ 11,518	\$ -	\$ -	\$ -	\$ -	\$ 37,580	-
Conservation Supply Curves				\$ 17,371	\$ -	\$ 10,559	\$ -	\$ 156	\$ 11,518	\$ -	\$ -	\$ -	\$ -	\$ 37,580	-
Strategic Planning				\$ 22,486	\$ -	\$ 15,470	\$ -	\$ 636	\$ 4,864	\$ 202	\$ -	\$ -	\$ -	\$ 43,658	-
Market Research				\$ 24,037	\$ -	\$ 16,537	\$ -	\$ 150	\$ 321,634	\$ -	\$ 750	\$ -	\$ -	\$ 363,107	-
Program Evaluation				\$ 37,382	\$ -	\$ 33,569	\$ -	\$ 1,850	\$ 11,700	\$ 900	\$ -	\$ -	\$ -	\$ 85,401	-
Verification Team				\$ 116,622	\$ -	\$ 88,086	\$ -	\$ 2,947	\$ 370,516	\$ 1,102	\$ 750	\$ -	\$ -	\$ 580,024	-
Total, Research & Compliance				\$ 131,977	\$ -	\$ 89,744	\$ -	\$ 2,371	\$ 249,914	\$ 917	\$ 585	\$ -	\$ -	\$ 475,507	37,680</

2017 Program Planning: Gas Cost-Effectiveness Tests

WACC 7.80%																
Prog. No.	Program Name	link	link	link	link	link	link	link	link	link	formula	formula	link	Link	formula	formula
		Weighted Measure Life by Program	Therm Savings	Program Overhead Costs	Total Incentive Payments	Customer Costs & Agency Costs	Incremental Measure Costs	Total Utility Costs	Total Resource Costs	Present Value of Total Utility Costs in Time Zero	Present Value of Total Resource Costs in Time Zero	Present Value Therm Savings In Time Zero	Present Value of Non Energy Benefits in time Zero	Utility Cost Test: Benefit Cost Ratio	Total Resource Cost Test: Benefit Cost Ratio	
Portfolio Page		Follow Below Hyperlinks for Program Details														
G203	Weatherization Assistance Gas	23	8,786	\$ 41,288	\$ 142,312	\$ -	\$ 118,593	\$ 183,600	\$ 150,556	\$ 170,316	\$ 139,662	\$ 106,707	\$ 22,253	0.63	1.00	
G214	Home Energy Assessment															
G214	SF Existing Water Heat															
G214	Residential Space Heat	18	618,205	\$ 381,485	\$ 1,967,750	\$ 1,690,135	\$ 3,657,885	\$ 2,349,235	\$ 4,039,370	\$ 2,179,253	\$ 3,747,096	\$ 6,701,733	\$ -	3.08	1.97	
G214	Residential Appliances 1	11	40,705	\$ -	\$ 14,805	\$ -	\$ 14,805	\$ 14,805	\$ 14,805	\$ 13,734	\$ 13,734	\$ 198,408	\$ -	14.45	15.89	
G214	Residential Showerheads	10	187,783	\$ 131,786	\$ 198,750	\$ 689,250	\$ 888,000	\$ 330,536	\$ 1,019,786	\$ 306,619	\$ 945,998	\$ 826,243	\$ 3,005,044	2.69	4.14	
G214	Mobile Home Duct Sealing															
G214	Web Enabled Thermostats	20	170,000	\$ 98,040	\$ 255,000	\$ 381,990	\$ 636,990	\$ 353,040	\$ 735,030	\$ 327,495	\$ 681,846	\$ 1,961,288	\$ -	5.99	3.16	
G214	Single Family Retrofit-Wx	25	410,013	\$ 461,170	\$ 2,237,741	\$ 5,881,219	\$ 8,118,960	\$ 2,698,911	\$ 8,580,130	\$ 2,503,628	\$ 7,959,305	\$ 5,158,910	\$ 1,621,845	2.06	0.92	
G214	Home Energy Reports	2	0	\$ 28,932	\$ 14,080	\$ -	\$ 14,080	\$ 43,012	\$ 43,012	\$ 39,900	\$ 39,900	\$ -	\$ -	0.00	0.00	
G216	EnergyStar Manufactured Home	30	0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
G215	Single Family New Construction	30	0	\$ 30,611	\$ -	\$ -	\$ -	\$ 30,611	\$ 30,611	\$ 28,396	\$ 28,396	\$ -	\$ -	0.00	0.00	
G217	Multifamily Existing	12	84,536	\$ 314,494	\$ 294,464	\$ 219,075	\$ 513,539	\$ 608,958	\$ 828,033	\$ 564,896	\$ 768,120	\$ 510,927	\$ 451,547	0.90	1.32	
G218	Multifamily New Construction	14	38,880	\$ 58,722	\$ 159,880	\$ 6,000	\$ 165,880	\$ 218,602	\$ 224,602	\$ 202,785	\$ 208,351	\$ 293,101	\$ -	1.45	1.55	
Total Residential Efficiency Programs			1,558,907	\$ 1,546,529	\$ 5,284,782	\$ 8,867,669	\$ 14,128,732	\$ 6,831,311	\$ 15,665,935	\$ 6,337,023	\$ 14,532,408	\$ 15,757,316	\$ 5,100,689	2.49	1.54	
G205	Commercial / Industrial Retrofit	17	425,000	\$ 698,657	\$ 1,300,000	\$ 584,058	\$ 1,884,058	\$ 1,998,657	\$ 2,582,715	\$ 1,854,042	\$ 2,395,839	\$ 3,571,959				
G251	Commercial/Industrial New Construction	24	100,000	\$ 124,927	\$ 410,000	\$ 167,465	\$ 577,465	\$ 534,927	\$ 702,392	\$ 496,222	\$ 651,570	\$ 1,044,716		2.11	1.76	
G208	Resource Conservation Manager	3	550,000	\$ 367,150	\$ 155,000	\$ 287,857	\$ 442,857	\$ 522,150	\$ 810,007	\$ 484,369	\$ 751,398	\$ 887,829	\$ 738,978	1.83	2.28	
G208	Resource Accounting Software	na		\$ 24,174	\$ -	\$ -	\$ 24,174	\$ 24,174	\$ 24,174	\$ 22,425	\$ 22,425	\$ -	\$ -			
G261	Energy Efficient Technology Evaluation															
G262	Commercial Rebates		576,665	436,287	1,259,037	553,756	1,812,784	1,695,324	2,249,071	\$ 1,572,657	\$ 2,086,337	\$ 2,672,607	\$ 3,369,464	1.70	3.02	
G262	Small Business Direct Install (G)	7	23,505	\$ 112,087	\$ 21,176	\$ 3,936	\$ 25,112	\$ 133,263	\$ 137,199	\$ 123,620	\$ 127,272	\$ 74,224	\$ -	0.60	0.64	
G262	Commercial Kitchen/Laundry (G)	12	225,939	\$ 65,146	\$ 366,102	\$ 225,757	\$ 591,850	\$ 431,248	\$ 656,996	\$ 400,044	\$ 609,458	\$ 1,215,830	\$ 1,725,505	3.04	5.03	
G262	Commercial Direct Install (G)	6														
G262	Commercial HVAC (G)	6	69,010	\$ 83,144	\$ 123,800	\$ 49,605	\$ 173,405	\$ 206,944	\$ 256,549	\$ 191,971	\$ 237,986	\$ 251,131	\$ -	1.31	1.16	
G262	Small Agr. DI Gas	na	0	\$ 36,778	\$ -	\$ -	\$ -	\$ 36,778	\$ 36,778	\$ 34,117	\$ 34,117	\$ -	\$ -	0.00	0.00	
G262	Lodging DI Gas	10	258,211	\$ 139,132	\$ 747,959	\$ 274,458	\$ 1,022,417	\$ 887,091	\$ 1,161,549	\$ 822,905	\$ 1,077,504	\$ 1,131,422	\$ 1,643,960	1.37	2.68	
Total Commercial Programs			1,651,665	\$ 1,651,196	\$ 3,124,037	\$ 1,593,136	\$ 4,717,164	\$ 4,775,232	\$ 6,368,359	\$ 4,429,715	\$ 5,907,569	\$ 8,177,110	\$ 4,108,442	1.85	2.22	
NEEA Gas Market Transformation Study			10	0	\$ 1,389,079	\$ -	\$ -	\$ 1,389,079	\$ 1,389,079	\$ 1,288,571	\$ 1,288,571	\$ -	\$ -	0.00	0.00	
Total Regional Programs			0	\$ 1,389,079	\$ -	\$ -	\$ -	\$ 1,389,079	\$ 1,389,079	\$ 1,288,571	\$ 1,288,571	\$ -	\$ -	0.00	0.00	
G249	Commercial Home Energy Reports Pilot															
G249	Residential Home Energy Report Expansion	2	316,885	\$ 112,890	\$ 77,479	\$ -	\$ 77,479	\$ 190,369	\$ 190,369	\$ 176,595	\$ 176,595	\$ 299,537	\$ -	1.70	1.87	
Total Pilots			316,885	\$ 112,890	\$ 77,479	\$ -	\$ 77,479	\$ 190,369	\$ 190,369	\$ 176,595	\$ 176,595	\$ 299,537	\$ -	1.70	1.87	
Customer Engagement & Education								\$ 216,606	\$ 216,606	\$ 200,934	\$ 200,934					
Energy Advisors								\$ 86,790	\$ 86,790	\$ 80,510	\$ 80,510					
Events								\$ 112,790	\$ 112,790	\$ 104,629	\$ 104,629					
Brochures, non program-specific								\$ 16,052	\$ 16,052	\$ 14,890	\$ 14,890					
Education								\$ 975	\$ 975	\$ 904	\$ 904					
Electronic Media Tools & Marketing								\$ 193,947	\$ 193,947	\$ 179,914	\$ 179,914					
Customer Digital Experience								\$ 88,010	\$ 88,010	\$ 81,642	\$ 81,642					
Market Integration								\$ 83,541	\$ 83,541	\$ 77,496	\$ 77,496					
Automated Benchmarking System								\$ 22,396	\$ 22,396	\$ 20,776	\$ 20,776					
Rebates Processing								\$ 82,046	\$ 82,046	\$ 76,110	\$ 76,110					
Programs Support								\$ 104,716	\$ 104,716	\$ 97,139	\$ 97,139					
Data and Systems Services								\$ 164,146	\$ 164,146	\$ 152,269	\$ 152,269					
Energy Efficient Communities								\$ 143,617	\$ 143,617	\$ 133,225	\$ 133,225					
Trade Ally Support								\$ 21,015	\$ 21,015	\$ 19,494	\$ 19,494					
Contractor Alliance Network (revenue + cost)								\$ (4,495)	\$ (4,495)	\$ (4,170)	\$ (4,170)					
Total Portfolio Support								\$ 921,598	\$ 921,598	\$ 854,915	\$ 854,915					
Conservation Supply Curves								\$ 37,580	\$ 37,580	\$ 34,861	\$ 34,861					
Strategic Planning								\$ 50,278	\$ 50,278	\$ 46,640	\$ 46,640					
Market Research								\$ 43,658	\$ 43,658	\$ 40,499	\$ 40,499					
Program Evaluation								\$ 363,107	\$ 363,107	\$ 336,834	\$ 336,834					
Verification Team								\$ 85,401	\$ 85,401	\$ 79,222	\$ 79,222					
Total Research & Compliance								\$ 580,024	\$ 580,024	\$ 538,056	\$ 538,056					
Grand Total All Gas Programs			3,527,457	\$ 4,699,694	\$ 8,486,297	\$ 10,460,805	\$ 18,923,375	\$ 14,687,614	\$ 25,115,365	\$ 13,624,874	\$ 23,298,112	\$ 24,233,963	\$ 9,209,131	1.78	1.54	

1. The electric residential appliance program offers clothes washers that save both gas and electricity. The bulk of the savings is electric savings. Therefore, the gas savings are simply an extra non-electric benefit of the program. This is why there are gas savings with no program incentives, overhead, or customer costs.

"Time Zero" means the current year. "Time Zero" means the current year. "Time Zero" means the current year. "Time Zero" means the current year.

Exhibit 2: 2017 Cost-Effectiveness Estimates

Summary

[Go to Electric Portfolio Page](#)

Electric Programs: Benefit Cost Summary

Program Name	Energy Savings	Utility Costs	Present Value of Non-Energy Benefits	UCT	TRC
Weatherization Assistance	1,835,728	\$ 3,735,428	\$ 725,672	0.99	1.98
Residential Lighting	69,473,421	\$ 13,833,179	\$ -	4.18	1.94
Space Heat	7,730,775	\$ 3,996,974	\$ -	2.96	1.36
Water Heat	727,675	\$ 477,188	\$ -	1.25	1.24
Home Energy Assessment	5,039,322	\$ 2,843,948	\$ 396,580	1.35	1.64
Home Appliances	6,721,709	\$ 4,458,255	\$ 317,333	0.84	1.00
Showerheads Elect	4,272,610	\$ 640,815	\$ 5,846,553	4.45	10.42
Weatherization Total	2,730,925	\$ 1,280,467	\$ 250,993	4.42	2.11
Home Energy Reports	0	\$ 126,375	\$ -	-	-
Single Family New Construction	0	\$ 55,111	\$ -	-	-
Fuel Conversion Rebate	1,949,857	\$ 837,031	\$ -	4.43	1.31
Multifamily Existing	18,985,266	\$ 10,074,198	\$ 859,705	2.20	1.87
Multifamily New Construction	1,294,293	\$ 673,344	\$ -	1.69	1.82
Total Residential Energy Management	120,761,582	\$ 43,032,312	\$ 8,396,835	2.84	1.89
Commercial/Industrial Retrofit	26,000,000	\$ 7,372,060	\$ -	2.37	1.67
Business Lighting Grants	46,000,000	\$ 11,552,670	\$ -	2.70	1.86
Commercial/Industrial New Construction	10,000,000	\$ 2,482,963	\$ -	3.03	3.17
Resource Conservation Management	14,250,000	\$ 1,434,980	\$ -	1.94	1.29
Resource Conservation Management Urban Smart	16,000,000	\$ 494,086	\$ -	6.31	6.94
Resource Accounting System	0	\$ 108,957	\$ -	-	-
High Voltage, Self-Directed 449	4,245,976	\$ 2,522,838	\$ -	1.33	1.19
High Voltage, Self Directed non-449	17,228,029	\$ 8,442,588	\$ -	1.61	1.44
Technology Evaluation	0	\$ -	\$ -	-	-
Business Rebates	33,031,055	\$ 8,135,272	\$ 1,324,455	2.76	2.19
Total Business Energy Management	166,755,060	\$ 42,546,414	\$ 1,324,455	2.39	1.85
Residential HER Expansion	5,322,641	\$ 978,291	\$ -	0.91	1.00
Commercial Energy Report Pilot	0	\$ -	\$ -	-	-
Total Pilots	5,322,641	\$ 978,291	\$ -	0.91	1.00
Northwest Energy Efficiency Alliance	15,592,800	\$ 5,200,000	\$ -	0.95	1.04
Transmission & Distribution	1,500,000	\$ -	\$ -	-	-
Total Regional Programs	17,092,800	\$ 5,200,000	\$ -	0.95	1.04
Total Portfolio Support	0	\$ 6,471,427			
Total Research & Compliance	0	\$ 3,656,980			
Total All Programs used in CE Calculations	309,932,083	101,885,424	9,721,290	2.24	1.71
Total Other Electric Programs	0	\$ 1,567,778		n/a	n/a
Total Electric Portfolio	309,932,083	103,453,202	9,721,290		

[Go to Gas Portfolio Page](#)

Gas Programs: Benefit Cost Summary

Program Name	Energy Savings	Utility Costs	Present Value of Non-Energy Benefits	UCT	TRC
Weatherization Assistance Gas	8,786	\$ 183,600	\$ 22,253	0.63	1.00
Residential Space Heat	618,205	\$ 2,349,235	\$ -	3.08	1.97
Residential Appliances 1	40,705	\$ 14,805	\$ -	14.45	15.89
Residential Showerheads	187,783	\$ 330,536	\$ 3,005,044	2.69	4.14
Web Enabled Thermostats	170,000	\$ 353,040	\$ -	5.99	3.16
Single Family Retrofit-Wx	410,013	\$ 2,698,911	\$ 1,621,845	2.06	0.92
Home Energy Reports	0	\$ 43,012	\$ -	-	-
EnergyStar Manufactured Home	0	\$ -	\$ -	-	-
Single Family New Construction	0	\$ 30,611	\$ -	-	-
Multifamily Existing	84,536	\$ 608,958	\$ 451,547	0.90	1.32
Multifamily New Construction	38,880	\$ 218,602	\$ -	1.45	1.55
Total Residential Efficiency Programs	1,558,907	\$ 6,831,311	\$ 5,100,689	2.49	1.54
Commercial / Industrial Retrofit	425,000	\$ 1,998,657	\$ -	-	-
Commercial/Industrial New Construction	100,000	\$ 534,927	\$ -	2.11	1.76
Resource Conservation Manager	550,000	\$ 522,150	\$ 738,978	1.83	2.28
Resource Accounting Software	0	\$ 24,174	\$ -	-	-
Energy Efficient Technology Evaluation	0	\$ -	\$ -	-	-
Commercial Rebates	576,665	\$ 1,695,324	\$ 3,369,464	1.70	3.02
Total Commercial Programs	1,651,665	\$ 4,775,232	\$ 4,108,442	1.85	2.22
Total Pilots	316,885	\$ 190,369	\$ -	1.70	1.87
Total Regional Program (Gas Market Tra	0	\$ 1,389,079	\$ -	-	-
Total Portfolio Support	0	\$ 921,598	\$ -	-	-
Total Research & Compliance	0	\$ 580,024	\$ -	-	-
Total Gas Portfolio	3,527,457	\$ 14,687,614	\$ 9,209,131	1.78	1.54



Energy Efficiency

Exhibit 3

2017

Program Details



**PUGET
SOUND
ENERGY**

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I. INTRODUCTION

Exhibit 3: Program Details provides discussion about PSE’s Energy Efficiency department conservation programs, functions and activities, including those that do not have an associated Conservation Schedule. Exhibit 3 is associated with PSE’s Annual And Biennial Conservation Plans, and is continually updated at appropriate intervals throughout the year. The contents of Exhibit 3 are developed to be consistent with applicable sections of WAC 480-109, the conditions outlined in Appendix A of Order 01 in Docket No. UE-152058, and sections A through J and L of the 2010 Electric Settlement Agreement in Docket number UE-100177, including but not limited to:

- (3)(a)(vi)(1) Discussion of efficiency marketing efforts,
- (3)(a)(vi)(2) Discussion of Incentives,
- (5) Program Details filings,
- (7) Discussion of Program Design Principles.

Although not required by EIA-related Orders, The Exhibit 3 program details also include gas program discussions. This is consistent with the Commission’s recommendations in its Policy Statement on the Evaluation of the Cost Effectiveness on Natural Gas Conservation Programs in Docket No. UG-121207.

A. Associated Documents

As a part of its 2017 Annual Conservation Plan (“ACP”) filing, PSE includes several documents associated with Exhibit 3. It is noteworthy that Exhibit 3 may be updated and filed, consistent with condition (5) when there are major program updates. Additional documents, updated for 2017, included with the BCP are:

Savings and budgets (both electric and gas) order number details	Exhibit 1
Cost Effectiveness Calculation Tables	Exhibit 2
List of Measures, Incentives and Eligibility	Exhibit 4
Northwest Energy Efficiency Alliance (NEEA) Plan	Exhibit 10

B. Program Details

Following each program's title is the corresponding Conservation Schedule number. A number preceded by an "E" indicates that this is an electric Schedule. Similarly, a number preceded by a "G" indicates that this is a natural gas Schedule. All conservation programs have the same Conservation Schedule number for both natural gas and electric service.

1. Program Detail Revisions

As has been its standard business management practice, consistent with Total Quality Management principles, PSE makes adjustments to its conservation offerings, delivery methods, marketing, incentives, and other elements of its programs on a periodic basis. This ensures that PSE anticipates and adapts to customer demand, market trends, and is positioned to achieve aggressive conservation savings targets. Consistent with WAC 480-109-110(3), the Conservation Resource Advisory Group ("CRAG") was presented with draft copies of Exhibit 3: Program Details on October 14, 2016, prior to the filing of the final draft with the Washington Utilities and Transportation Commission ("UTC" or "Commission") on November 15, 2016.

Following this filing, any subsequent filings will be provided to the CRAG in their "mark-up" version prior to UTC filings, per condition (5).

2. Program Details Organization

The organization of program detail discussions aligns with that of Exhibit 1: Savings and Budgets.¹ This facilitates easy reference from a program's budget to its description, marketing plan, incentive offerings, etc.

¹ One exception is in the Residential Energy Management's Residential Business-to-Business Channel, as discussed in the REM introduction.

C. Document Contents

All program details within this Exhibit were updated to reflect the most accurate representation of their planned 2017 offerings and services. Most Program Details² contain the program's:

- Purpose,
- Description,
- Customer Experience,
- Target Market,
- Customer Incentives,
- Marketing and Outreach Plan.

D. Programs, Functions, and Services Common to Conservation-Savings Programs

1. Contractor Alliance Network

Many Energy Efficiency programs, including those in the Residential Dealer Channel and Business sectors, work in partnership with select contractors to implement large, costly, or complex measures for customers. The Company provides this valuable service as a part of PSE's Contractor Alliance Network (CAN). This strategic trade ally platform allows PSE to efficiently manage and effectively leverage its trade ally relationships to help customers achieve their energy efficiency goals. Many customers often lack the budget, time, and expertise to make energy efficiency decisions. Customers need help navigating the highly technical and costly retrofit process, which often discourages the early replacement of energy-intensive systems.

Customers trust PSE as a key resource in these situations, and the Contractor Alliance Network allows PSE to connect customers with pre-screened, independent trade allies committed to helping them make safe, dependable and efficient energy choices that align with PSE's efficiency programs.

² Residential Energy Management and Business Energy Management sectors only. Portfolio Support and Research & Compliance functions and Other Electric Programs may exclude *Target Market*, *Customer Incentives* or *Marketing Plan* sections.

II. RESIDENTIAL ENERGY MANAGEMENT

A. Low Income Weatherization

Schedules E/G 201

The Low Income Weatherization program is included in the Residential Business-to-Business Channel. This is primarily because the majority of customer-facing contact for this organization is through low-income agencies throughout the PSE territory. The program discussion is presented here to maintain the numerical sequence of the Conservation Schedules, as also presented in *Exhibit 1: Savings and Budgets*. The remainder of the Residential Business-to-Business programs (Multifamily Existing and Residential New Construction) are discussed following the Residential Fuel Conversion (Schedule E216) program on page 31.

1. Purpose

The Low Income Weatherization program assists low-income residential customers to improve the energy efficiency of single family residences, multifamily structures and manufactured/mobile homes.

In 2016-2017, the goal of Puget Sound Energy's Low-Income Weatherization Program will be to continue to lessen the energy-cost burden of lower-income customers by improving the energy efficiency of their residences and educating these consumers on routine ways to reduce their energy use and costs.

Program efforts will build on the existing model and extend the partnerships with assistance agencies as well as leverage other PSE programs for lower-income customers to include safety awareness and bill-payment assistance.

2. Description

Key stakeholders are low-income gas and electric customers; county and municipal low-income weatherization agencies in the PSE service area, Washington State Department of Commerce ("Department of Commerce" or "Commerce"), and participating weatherization contractors and suppliers.

For those projects receiving PSE funding combined with other State and Federal funding, income eligibility is determined in accordance with Department of Commerce Policies and Procedures.

Residential Low Income Weatherization provides funding of many cost-effective home weatherization Measures for low-income customers receiving gas and/or electric heat from PSE.

Funds are used for single-family, multi-family and mobile home residences. Some Measures which do not meet standard cost-effectiveness tests may also be approved. Measures funded may include conservation measures that are cost effective consistent with the *Weatherization Manual* and those measures identified through the priority matrix in the *Weatherization Manual*.

In addition, this program provides funding for energy-related repairs and energy education. An energy-related repair is a repair that is necessary (1) to install a weatherization Measure properly, (2) to protect the health and/or safety of the occupants, (3) to address an existing problem that weatherization could aggravate or (4) to protect the integrity of the installed Measure. Examples include but are not limited to:

- Repair roof leaks
- Electrical inspection and repairs
- Mold/mildew remediation
- Rodent, insect and pest extermination
- Bath and kitchen ventilation upgrades
- Furnace or water heater repairs or replacement.

Sources of Low Income Weatherization funding include, but are not limited to, Electric Rider, Gas Tracker, Company funds, BPA credits or other federal or state government programs.

For those funds that must meet a cost effectiveness standard, up to 30 percent **may** be applied to energy-related repairs or to pay the balance of an energy efficiency measure that are necessary to effect the installation of cost-effective Measures. The final percentage allocated will be determined **according to** the overall program cost-effectiveness.

3. Customer Incentives Overview

a. All Structures

Funding for Measures and customer eligibility are outlined in PSE's conservation Tariffs. Funding is disbursed to local agencies. Payments are based on incentives for Measures installed. Local agencies are permitted fixed percentages for administrative costs under the existing tariff.

Under the Matchmaker Agreement with Department of Commerce, PSE's low-income Tariff-based funding may be combined to support a "whole house" approach for structures.

Applicable Low Income Measure category headings include, but are not limited to:

- Building envelope Improvements
- Heating system upgrades
- Water heating upgrades
- Lighting upgrades
- Appliance replacement
- Common area upgrades

Measure incentive eligibility criteria are based on, but not limited to, established, industry-standard cost effectiveness tests including those employed in the *Weatherization Manual*, structure type and its location within the PSE service territory, fuel type (gas or electric), product type and product quantity. A detailed list of Energy Efficiency Services' Measures, Incentives and Eligibility are included in this Biennial Conservation Plan as Exhibit 4.

b. Retrofit-- Multi-Family

Prescriptive incentives will be applied to Measures installed within units of multi-family residences. In addition to this, calculated commercial Measures or measures that are cost effective consistent with the *Weatherization Manual* are made available for common area and residential unit Measures. All calculated incentives will be evaluated using currently accepted PSE commercial engineering calculations or methods consistent with the *Weatherization Manual*.

c. Target Market

Low-income customers including owners and tenants of single family, multi-family, manufactured or mobile homes that meet federal poverty guidelines issued by The Washington State Department of Commerce and natural gas and/or electricity from PSE.

Low Income agencies are contracted with PSE to perform customer income eligibility, manage the installation, and track and report projects to PSE.

d. Marketing and Outreach Plan

The Low Income Weatherization program is a highly prescribed program that relies on its partner housing agencies to deliver its offerings to eligible low-income homeowner participants.

The primary marketing objective is to elevate program awareness to participating customers and end-user opportunity among key housing agencies' administrators.

In 2016-2017 PSE's goal through communication and surveys, is to better understand how this segment of PSE customers prefer to communicate and receive information.

PSE will continue to build on and extend the partnership with assistance agencies. Where appropriate, PSE will seek public forums to be a visible advocate on behalf of lower-income energy customers. In addition, the Energy Efficient Communities team collaborates with the Marketing team and Program Manager and develops and implements outreach strategies to promote PSE's residential and commercial energy efficiency programs and services to eligible low-income homeowner participants, as well as other PSE offerings that benefit this segment.

The Program will continue to work more closely with the PSE Energy Assistance Program on outreach and communication strategies, using merged collateral, and sharing program information. In this way, the Program will be proactive so customers will not be placed in the position to "figure out" PSE assistance program offerings.

The Program will evaluate tools to help customers find program information quickly and easily, such as a web-based zip code locator to connect them with the social service agency in their area. Finally, the Program will explore ways to streamline PSE energy efficiency messaging via cross selling opportunities so customers may see a suite of relevant options available to them through PSE.

Through the use of segmentation tools and community profiling, PSE will provide more customized outreach to populations in need. For example, PSE will explore providing more language translations for program collateral to build program awareness for English-as-a-second language customers. Through customer surveys, the Program will better learn how income eligible customers want to receive information and from that knowledge build relevant awareness tools such as direct mailers, including the PSE brand on agencies materials/tools/websites, and on the ground presence in community centers, churches, etc.

4. Education, Communication & Awareness

Maintaining consistent program communication, awareness and energy efficiency educational elements are complimentary to the success of achieving savings target goals. In 2014-2015 PSE conducted a segmentation study, and in 2016-2017 PSE will use the data gathered to deploy targeted outreach and marketing efforts to maximize awareness of the LIW program in areas that are more likely to include income-eligible customers. Some of PSE's key initiatives to elevate education, communication and awareness may include:

- Weatherization Assistance/HELP joint brochure (multiple languages),
- Landlord program awareness brochure,
- Targeted direct mail pieces,
- Optimizing web page,
- Posters,
- Booth and tabletop display or pull up banner,
- Advertisements,
- Participation in National Weatherization Day,
- Social media content and advertisements,
- Press releases,
- Videos,
- Case studies.

Any additional promotions will be done in close coordination with local agencies.

The outreach strategy for the Low Income Weatherization is to work with customers and business partners by providing customers with information about applicable products and services that PSE provides, and help deliver information to property managers/owners/contractors. This will be done through a variety of outreach mechanisms, including multi-family complex open houses, low income customer EE program awareness campaigns, community events, presentations, and internal PSE employee trainings. The Energy Efficient Communities Team will work with the program team lead and marketing to identify ways to reach multifamily partners in conjunction with other mass marketing strategies developed for Direct to Consumer and Dealer Channel's.

Low Income Customer EE program awareness campaigns will include, but will not be limited to:

- Co-tabling with local agencies- LIW/Energy Assistance at locales such as:
 - Food Banks
 - Social service events
- Provide cross channel promotional opportunities:
 - Direct mail to segmented customer base
- Host internal employee informational sessions:
 - Host internal employee education sessions at local PSE offices and/or within Bellevue/Bothell based departments to build program awareness
- Educational displays:
 - Posters or infographics explaining the B2B Channel services
 - Outreach to local pay stations requesting to host educational displays

a. Partner Marketing with Housing Agencies

The key strategy will be to continue to encourage Housing Agency Administrators to move applications swiftly and smoothly through the approval process, and to identify LIW opportunities to eligible candidates.

This will require a communications program that delivers the current information to them about LIW feature and benefits as well as technical program provisions. There will also be effort to passively deliver collateral through this channel on other single family residential offerings and energy efficiency tips that could be helpful to candidates on the waiting list.

This effort must also allow for peer recognition and results accomplishment to motivate administrators to push program opportunity whenever suitable.

PSE will pursue strategies that include:

- Annual forum,
- Thank you postcards,
- Overview of measures postcard,
- Participation and awareness measurement surveys,
- A-frame PSE and agency co-branded community awareness signs,

- Leave behind collateral,
- Co-branded or PSE logo on agency collateral, ads and awareness tools,
- Optimizing web page,
- Increased collaboration among other low-income programs and services,
- Continuous review and effectiveness assessment.

B. Single Family Existing

Schedules E/G 214

1. Purpose

The Single Family Existing program acquires cost-effective energy savings from existing single-family (less than or equal to four units on a parcel) retrofit Measures and services.

2. Description

Single Family Existing programs implement cost effective, targeted, residential energy savings using a menu of prescriptive and calculated efficiency Measure incentives, including rebates for single family existing structures. Existing single family structures are defined as residential dwellings which include; structures with four or less units that are attached by a contiguous roofline, manufactured or factory built homes permanently affixed to a concrete foundation, and manufactured or factory built homes that are transportable. Single family existing residences exclude structures that are currently under construction. Prescriptive rebates are intended to facilitate participation by customers, contractors, manufacturers, retailers, developers, trade allies, and provide administrative efficiencies for PSE in meeting energy efficiency goals.

Single Family Existing programs are managed in the Direct-to-Consumer (D2C) and Dealer Channels.

Note: Multifamily campuses which have a mixture of existing residential building types, including buildings with four attached residential units or less, are served under the Multi-Family Retrofit Program; schedules E217 & G217.

3. Customer Incentives

Rebates and incentives offered to eligible natural gas and/or electric PSE Single Family Existing customers include a variety of end-use classifications, not limited to:

- Light-Emitting Diode (LED) lighting including A-line, BR-30, indoor fixture, MR-16, and candelabra.
- Consumer Electronics, including but not limited to advanced power strips, and through PSE's partnership with NEEA.

- Appliances—including refrigerators, freezers, clothes washers, heat pump dryers, and through PSE’s partnership with NEEA.
- Retail, online, leave-behind, and engagement LEDs and showerheads.
- Refrigerator and Freezer Decommissioning – both secondary and primary units.
- Clothes Washer Replacement – focus on older inefficient models to encourage early retirement.
- Weatherization, including windows, insulation air and duct sealing.
- Space heating including hydronic systems, high efficiency furnaces, high efficiency boilers, high efficiency fireplaces, heat pumps, and system controls, such as web-enabled thermostats.
- Water heating, including tank water heaters, heat pump water heaters, and efficient showerheads.

Incentive amounts and savings values are regularly reviewed and are based on regionally accepted energy savings estimates and incremental efficiency Measure cost. Incentives may be subject to change in response to revisions in savings estimates, average incremental cost, market conditions, or changes in Federal appliance efficiency standards or State codes.

C. Direct-to-Consumer Channel

The Direct-to-Consumer Channel manages several programs—most of which are consumer-oriented—this includes, but is not limited to; refrigerator decommissioning, showerheads, appliances, electronics, and of course, energy efficient lighting. The Channel focuses on services targeted to a wide variety of retail and manufacturer entities, which includes online and PSE’s own online store, shopPSE (<http://PSE.com/shoppse>). This Channel also collaborates on consumer electronics and select appliances through PSE’s funding relationship with NEEA. The Direct-to-Consumer Channel operates primarily within the structure of Schedule 214; Single Family Existing.

1. Description: Residential Direct-to-Consumer Programs

These programs collaborate with retailers and manufacturers of energy efficient products – such as lamps, light fixtures, showerheads, electronics, and appliances such as, but not limited to, water heaters, primary heating equipment, clothes washers, refrigerators and freezers – to ensure that customers have access to a wide variety of efficient product options. The Direct-to-Consumer Programs provides incentives and promotions for efficient products to PSE’s residential customers through agreements with retailers and/or manufacturers

When advantageous to do so, PSE may purchase energy-efficiency products directly from manufacturers or distributors to resale to customers or provide to retailers for resale. This may occur at either traditional or online stores, including shopPSE. PSE also provides field services to educate retail employees on its products, detail qualifying product, and ensure compliance with PSE agreements.

Highlighted 2016-2017 Programs & Measures:

a. Lighting

As LED market prices decline, PSE has found that the adoption of LED products has increased, while CFL purchases have fallen. The decline in LED market prices means that PSE can continue to decrease LED incentives while still maintaining the same level of funding toward education and marketing of LED technology to further increase adoption to the broader consumer base. Additionally, the decrease in CFL sales and the industry announcement that CFLs will no longer be Energy Star certified in 2017 influenced PSE’s decision to end its CFL program on January 1, 2017. LEDs have eclipsed CFLs in the

marketplace as the leading choice for affordable energy efficient residential lighting.

PSE is adjusting its residential retail lighting program to reflect these changing market conditions. Forecasted sales quantities have been updated to reflect the trend we are seeing in stores. PSE is also updating our savings values for 2017 using RTF methodology and PSE specific data. These adjustments allow PSE's residential retail lighting program to remain current with market trends and allow us to serve our customers with the same great service. To drive process efficiencies and leverage existing market relationships, commercial lighting (Lighting To Go) retail offerings are managed by the Direct to Consumer Channel. Lighting To Go will follow a similar programmatic format to residential lighting, but some additional program details are under the Business Energy Management section, Schedules E262.

b. Refrigerator & Freezer Decommissioning

This program provides customers with a means to safely dispose of their unwanted refrigerators and freezers while receiving an incentive for removing a potentially high-energy usage appliance from service. Decommissioning prevents the product from continued circulation in the secondhand marketplace and is applicable to primary and secondary units. The impact to the environment, by ensuring appliances are disposed of in an environmentally responsible way, is factored into the cost effectiveness of the program as non-energy benefits as quantified by the RTF.

c. Refrigerator Replacement – older inefficient models

d. PSE will discontinue its Refrigerator Replacement measure at the end of 2016. PSE has seen a steady decline in customer participation, and the measure is not cost effective on its own. PSE will continue to offer clothes washer replacement measure. Clothes Washer Replacement – older inefficient models

This measure encourages customers to replace their old, inefficient clothes washer with a basic, efficient model while allowing PSE to remove, decommission and recycle their former unit. PSE will pay for the cost of the new unit, as well as delivery and installation, and for the decommissioning and recycling of the old unit.

e. Heat Pump Dryers

PSE will offer the measure in 2016-2017.

Similar to other heat pump technology the hot, humid air is passed through a heat pump where the cold side condenses the water vapor into a drain pipe and the hot side reheats the air afterwards for re-use. Heat pump dryers can use up to 50% less energy required by traditional dryers.

f. Clothes Washers, Freezers, and Refrigerators

In 2016, PSE incentivized the tiers for clothes washers and refrigerators in an incremental structure; \$25 for Tier 1, \$50 for Tier 2, and \$75 for Tier 3. Customer market data has indicated confusion with the rebate structure. As a result, PSE will offer a single rebate dollar amount on any appliance Energy Star rated or above starting in 2017.

PSE will also continue an in-store rebate model for retail appliances, which is currently being piloted with Sears, as well as, The Home Depot online. After being engaged either through in-store signage or a retail sales associate, customers utilize their smartphone to fill out an online application that verifies they are a PSE electric customer and then sends them a unique barcode that they can utilize at checkout to receive the incentive. The retailer then provides the redeemed barcode or promotional code number back to PSE's third party payment processor so there is record that the customer did complete the transaction. The retailer bills the payment processor and the payment processor bills PSE with all of the backup customer information. Using this process, PSE is able to issue both an instant incentive and still receive the same level of customer information. Customers that do not have a smart phone can still mail-in their rebate application.

g. Home Energy Reports

Home Energy Reports are customized reports mailed directly to PSE customers that help each residential customer better understand their home electric and gas consumption, motivate them to conserve and provide targeted calls to action tailored to help each customer save money and improve energy efficiency.

The initial pilot, launched in the third quarter of 2008, included 40,000 combined gas and electric single family households. With consultation from the CRAG, this program will continue through 2017. In 2014, the Home Energy Reports program was expanded to an additional 100,000 households. This expansion is discussed further under the pilot section of this Exhibit.

h. Web-Enabled Thermostat

i. PSE's web enabled thermostat program will continue for 2017. Adjustments have been made to unit energy savings values to reflect new research on savings from these units. PSE continues to add new qualified manufacturers who meet our product functionality requirements and have the ability to verify customer connectivity. Advanced Power Strips

An Infrared (IR) sensing advanced power strip is installed with a home entertainment system. This device disconnects power to all devices after a set period with no IR signal. Potential delivery methods for this measure may include, but are not limited to: online retail, brick and mortar retail, mail-by request, and leave behind.

j. Showerheads

PSE offers instant incentives to customers through retail stores, targeted emails, engagement and through shopPSE.

The RTF released new savings for showerhead measures in August of 2016. PSE will utilize these numbers to adjust savings claims for the 2017 program year.

h. Faucet Aerators

PSE continues to offer WaterSense® labeled faucets and faucet aerators to customers. Delivery methods for this measure include, but are not limited to: online retail, brick and mortar retail, mail-by request, and leave behind.

A faucet aerator is found at the tip of an indoor water faucet. Aerators create a non-splashing stream, delivering a mixture of water and air. Because the aerator limits the water flow through a faucet, water use is reduced. The reduced water usage translates into reduced energy consumption when heating water.

2. Marketing and Outreach Plan

The objectives for the Direct-to-Consumer Channel's marketing and outreach strategy are to reach a wide and diverse segmentation of customers including customers that may not have heard about or participated in PSE energy-efficiency programs.

Customers will be exposed to PSE and energy efficiency messaging and offers at places they may not expect including door-to-door campaigns, festivals/fairs, brick and mortar retailers, online retailers such as shopPSE, social channels, targeted advertising and more. Common themes incorporated into messaging will include clarity, awareness, options of programs/offers and ease of participation.

To continue driving customer participation and awareness, it will be important to orchestrate a distinct, strong, clear concert of messaging and corresponding community engagement: *use energy efficiency to save money and cut your bills*. This unique messaging will be used around products for which PSE provides instant discounts or rebates, as well as products which PSE recommends based on their general benefit to the customer.

Channel promotions will focus on delivering effective customer value through utilizing market research intelligence, such as propensity modeling. The Energy Efficient Communities team will continue to deliver targeted community engagement focusing on specific channel priorities, including but not limited to: appliance recycling, clothes washer replacement, cross-channel campaigns, appliance recycling charity campaign, as well as any new programs which require effective community engagement. Priorities for these communities can be set using the same propensity modeling, which allows PSE to determine ahead of time which customers are most likely to participate and qualify for certain programs without inundating them with things that they don't want. Targeted uses will include advertising, direct-mail, and store signage.

The most convenient and least expensive of the delivery methods to send targeted messaging to customers is through email. The channel will focus on getting more customer emails that can be matched to a PSE account. In addition to sending specific marketing emails about energy efficiency offerings, emails will also be sent at three specific instances:

- 1) When customers are experiencing unusual usage levels midway through their cycle, an email will be sent to notify them of the abnormality and provide links to energy efficiency programs to help bring their usage back in-line with their monthly expectations.
- 2) When a customer's PSE energy statement is ready, they will receive an email reminder with a usage breakdown summary and links to energy efficiency programs to help them better understand and manage their energy use.

- 3) Seasonally, as equipment needs to be checked or serviced, PSE customers will receive an email providing energy efficiency tips and solutions for seasonal concerns.

The Energy Efficient Communities team will also employ the use of an extensive tracking workbook, with the goal of measuring the outreach efforts. Several types of customer contacts will be logged, providing valuable information about past successes and future program design. The marketing and outreach teams will also work with industry leaders in a given field, including but not limited to experts in: email marketing, search engine optimization, advertising and social outreach. PSE wants to know that what it is doing is working and is delivering impactful customer value.

By fully utilizing its market research capabilities, PSE analyzes research data and gather customer opinions on buying habits that help refine its outreach methods. By utilizing subjective and objective data, the Energy Efficient Communities team selects priority communities. This includes looking at past engagement levels in various municipalities, as well as choosing communities which have not received specific attention in previous years.

In 2017, PSE will specifically look to invest in research to identify opportunities to market and promote its energy efficiency programs and rebates to a multicultural/multilingual audience, which tends to be a harder to reach segmentation.

A highly successful tactic in 2014-15 that will be carried into 2016-17 is multi-channel or cross-marketing with other channel initiatives that target a similar audience. A multi-channel integrated approach allows customers a comprehensive look at the full range of energy efficient offerings.

PSE's partnership with retail and manufacturers remains a vital tactic in increasing awareness of program offers. These partnerships allow PSE to get messaging in front of customers at the point-of-purchase or decision making via custom product packaging and in-store signage/clings on or near rebated products. By collaborating closely with retail and manufacturer partners –both brick-and-mortar and online-- PSE can reach customers when they are in the most likely position to make a purchasing decision and influence them to choose energy efficient products.

Several new media tactics will be entertained as they are applicable to program objectives. These tactics may include sponsored posts on social media channels, social media promotions/contests, unique out-of-home advertising, video and digital,

TV and radio advertising. The marketing reach of all these new tactics can be amplified by the outreach efforts, which will use established relationships with municipalities and trusted community organizations to spread the message even further.

PSE plans to partner with other community leaders/organizations and thought influencers bringing credibility and trust to the PSE brand on both a corporate level and a channel/program level. Partnering with well-respected organizations in its community that customers are passionate about like local sports franchises (Seahawks/Sounders/Mariners) positions PSE as a trusted community member, bringing PSE and energy efficiency into a space customers may not traditionally think of their energy company being.

Top Marketing and Outreach Strategies and Tactics (by program):

a. Lighting

- Clear point-of-purchase materials/custom packaging (online and in store) that drive customers to purchase the PSE-incentivized option.
- Increase awareness of the variety of quality products on the market.
- Increase awareness that discounted light bulb purchased is because of PSE instant rebate.
- Include specific messaging in outreach presentations (city councils, chambers of commerce, home owners associations, home shows, etc.) about the dynamic changes in the LED bulb market and how PSE has helped make this technology more widely-available.
- Increase awareness that LED bulb pricing is more affordable than ever; as there is still a perception that LED bulbs are expensive.
- Engage PSE's customers in-person and online with LED bulbs as an education entry into the most energy-efficient, long-lasting lighting on the market. Online engagement may happen through shopPSE, <http://pse.com/shoppse>.
- Continue to educate customers both directly and through the retail sales associates engaging them within the stores on the best energy-efficiency lighting products on the market.
- Store and online merchandising to make prime store real estate an energy-efficiency destination that would encourage the interaction with products and encouragement of impulse purchases.

- In collaboration with retailers and manufacturers, provide limited-time-offers to leverage rebate and product pricing structure that would be more likely to get customers to buy.

b. Appliances & Consumer Electronics

- Regionally-oriented outreach program, which targets several specific geographic areas through the biennium – concentrating the message and solidifying PSE involvement in local communities.
- Increase awareness of rebate offerings, particularly refrigerators that have limited models on the showroom floor, so that when it comes time to make the critical purchase, customers know all the options available.
- Utilize PSE marketing collateral in prominent public areas and at local community events, driving awareness and program results.
- Marketing activities that center around PSE rebates on the most-efficient appliances on the market, which may include limited-time-offers.
- Promote partnerships and limited-time-offers with independent appliance retailers.
- Utilize community partner social media networks, paper and emailed newsletters, and other citizen-focused communications to inform customers about appliance and consumer electronics special offers.
- Continue to encourage customers to recycle old, inefficient appliances.
- Continue to drive awareness of and participation in free clothes washer replacement program, a valuable program for customers who may be on a budget - belief that the program is “Too good to be true” is a common barrier to participation.
- Make the connection for customers that their electric utility provides appliance recycling.

c. Showerheads

- Communicate a variety of purchasing options to customers and streamline the process with clear point-of-sale materials and improved online functionality through shopPSE and other online retailers.
- Engagement of PSE’s customers with a quality high-efficiency showerhead. This outreach occurs at engagement events throughout its 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. Fulfillment of an engagement showerhead may happen online through shopPSE.

- Work in partnership with city utility districts to offer low-cost/no-cost high-efficiency showerheads through their utility billing process, creating claimable residential gas savings.
- Partner with retailers and manufacturers to provide the best customer value such as, but not limited to; limited-time-offers and merchandising activities.
- Drive awareness of quality shower experience associated with showerheads which can be barrier to adoption for some. High-efficiency showerheads do not mean a low-quality shower.

d. Incremental Marketing Strategies:

- Get customers to the retail stores, both in-person and online, and once there engage them to buy energy-efficiency products that meet PSE's programs. This includes the advertising of PSE's online store, shopPSE, <http://pse.com/shoppse>.
- While shopping, provide customers with a positive interaction with energy-efficiency, even if only for a moment.
- Promote comfort and convenience across all offerings.
- Integrate low income program components wherever possible.
- Collaborate with other events/sponsorships outside of PSE energy efficiency to drive participation and awareness of PSE energy efficiency offerings.
- Cross-channel campaigns and targeted email marketing campaign.

e. Incremental Outreach Strategies:

- Enhance relationships with municipal and community organization partners, positioning them as strong ambassadors of PSE retail offers.
- As social media becomes more of a pay-to-play landscape, place emphasis on community newsletters and billing inserts instead of municipal/organization social media sharing.
- Place Direct-to-Consumer marketing materials in prominent community locations with significant foot traffic to drive awareness.
- Ensure that relevant marketing collateral is distributed at community events.
- Continue collaboration with marketing/communications team to ensure that messaging and timing of outreach activities are consistent.

D. Dealer Channel

1. Purpose

Programs within this channel are delivered to customers mostly through contractors.

2. Description: Dealer Channel Programs

The Dealer Channel's target market constituency consists primarily of resellers and contractors that sell, install, and service HVAC systems, water heating systems, windows and insulation, as standalone measures, or through comprehensive Home Performance activities that may include home energy assessments, audits and all-inclusive home retrofit services. The Dealer Channel operates primarily within the structure of Schedule 214; Single Family Existing.

a. Home Energy Assessments

Home Energy Assessments provide customers with a FREE in-home service performed by PSE qualified independent and contracted Home Energy Assessment Specialists. The program is intended to increase the awareness of customers regarding their home's energy consumption and identify cost-effective ways to use less energy. Additionally, customers benefit from instant energy savings from the direct installation or distribution of leave-behind high-efficiency products to include, but not limited to, light bulbs, showerheads, and faucet aerators.

b. Weatherization

The weatherization program oversees the "shell" of residential structures; installation of windows, insulation, air and duct sealing. There are a wide variety of duct sealing offerings, some directed specifically to mobile homes, while other focus on site-built residences.

c. Space and Water Heating

The program manages incentives and installations of heating and water heating systems, including but not limited to gas furnaces and boilers, heat pumps, hydronic systems, and domestic water heaters.

3. Customer Incentives

Eligibility criteria are based on established cost effective tests. The incentives are effective January 1, 2015. A list of all requirements for incentive eligibility and participation can be found on individual incentive or program application forms.

PSE's Energy Efficiency Services maintains a comprehensive list of approved conservation Measures in its List of Measures, Incentives, and Eligibility. The Company reserves the right to adjust incentives based on market variables.

Applicable Energy Efficiency Incentive Measure category headings include, but are not limited to:

- Weatherization,
- Space Heating,
- Showerheads,
- Water Heating,
- Lighting and Electronics,
- Home Energy Assessments.

a. Target Market

The target market for this program includes, but is not limited to single family property owners or tenants, service contractors, retail partners, efficiency equipment suppliers, distributors and manufacturers.

4. Marketing and Outreach Plan

By working directly with contractors and resellers, the Dealer Channel leverages these partnerships to provide program training and equip trade allies with the information they need to promote awareness of PSE's programs and assist customers with accessing rebates. The relationships ensure an excellent customer experience and service that aligns with PSE's objectives.

The objectives for the Dealer Channel's 2016-17 marketing and outreach strategy are as follows:

- Drive awareness of energy efficiency programs available to customers.
- Drive participation in PSE's energy efficiency programs in order to achieve savings targets and goals.
- Educate customers about energy efficient products and offers through online and self-service options.
- Utilize data analytics to effectively:
 - Target high-use, pre-qualified customers.
 - Deliver outreach campaigns in communities where they are needed most.
 - Identify customer segments who have not previously participated.
 - Determine propensity for participation.
- Drive customer referrals to PSE's Contractor Alliance Network (CAN).
- Integrate PSE's CAN members into marketing, community and outreach initiatives.

Clear and concise messaging that customers have options to choose the best energy-efficient products for their lifestyle will be a priority in 2016 and 2017. To drive customer awareness and participation, it will be important to craft a distinct, strong and clear concert of messaging and corresponding community engagement: *use energy efficiency to save money and cut your bills*. This messaging will be infused into marketing and outreach tactics and campaigns. Targeted message delivery will include advertising, direct mail, email, social media and PR.

The Energy Efficient Communities team will continue to deliver targeted community outreach focusing on specific channel priorities, including but not limited to: Home Energy Assessments, Weatherization, Space and Water Heat, and Fuel Conversion, as well as any new programs or initiatives that require effective community engagement.

With cost effectiveness concerns around gas conservation measures, it will be critical to market the most cost-effective measures as a top priority. Utilizing data analytics and PSE CAN / service provider relations, effective marketing and outreach solutions will become more necessary in 2016-17 than in past biennial periods.

Marketing and outreach tactics and campaigns will be designed with a focus on thoroughly testing tactics, assessing successes, optimizing as needed, and testing again based upon results. This will require investing in consumer psychology and behaviors that include working with experts in the field, both internally and externally.

PSE has to know that what it is doing is working and is truly delivering impactful customer value.

By fully utilizing its market research capabilities, PSE will analyze research data and gather customer opinions on buying habits that will help refine its marketing and outreach methods in order to drive participation. By utilizing subjective and objective data, EEC will select priority communities for 2016–2017. This includes looking at past engagement levels in several municipalities, as well as choosing communities that have not received specific attention in the past. Clarity around general qualifications and ease of doing business with PSE will be a major theme for the Dealer Channel in 2016-2017.

In 2017, PSE will look to invest in research to identify opportunities to market and promote its energy efficiency programs and rebates to a multicultural/multilingual audience.

Integrated contractor outreach and marketing tools will be essential to complete transactions with customers in the “mobile first” era. The marketing team will focus on driving awareness through digital media to promote the use of self-service options such as energy assessments, rebate applications and online material ordering, independent of and in collaboration with the Direct to Consumer team.

Another integral tactic will be multi-channel or cross marketing with the Direct to Consumer channel initiatives and campaigns/promotions that target a similar audience. A multi-channel integrated approach to marketing and outreach gives customers the options they want as well as maximizing PSE’s ability to drive awareness of energy efficiency.

By collaborating closely and co-marketing with manufacturer, distributor and contractor partners, PSE can extend its reach to a larger number of customers who are already in the market to purchase and install energy efficient products. PSE will continue to partner with its network of contractors, manufacturers and distributors to offer customers special discounts and limited time offers on insulation, duct sealing, windows, space heat and water heat equipment.

2016-2017 Top Marketing & Outreach Strategies and Tactics (by program):

a. Home Energy Assessments

- Develop self-service online scheduling platform (service provider supported) and integrate customized PSE EE messaging and offers.
- Utilize customer feedback and testimonials to encourage participation.

- Support CAN / service provider partners with collateral and materials to effectively and efficiently serve and educate customers.
- Provide follow-up resources and exclusive limited time offers for customers interested in efficiency upgrades.
- Continue door-to-door sign-up and email marketing campaigns in communities identified by the Energy Efficient Communities Team and informed by propensity for participation and age of home.

b. Space Heating, Water Heating, Weatherization

- In collaboration with manufacturers, distributors and contractors, provide special discounts and limited time offers to leverage rebate and product pricing structure that would be more likely to get customers to buy.
- Develop down-cycle marketing strategies to encourage even participation rates throughout the year.
- Develop marketing and outreach strategies to bring electric water heater replacement program to market.
- Collaborate with Direct to Consumer channel to cross-promote product and rebate offerings and develop integrated multi-channel marketing and outreach campaigns.

c. Fuel Conversion

- Collaborate with Products and Services group to target natural gas conversion offerings to pre-qualified customers.
- Develop CAN / partner collateral to educate consumers on natural gas rebates and programs.
- Develop door-to-door outreach campaign to build awareness and drive natural gas conversions.

d. Manufactured Home Weatherization

- In collaboration with service partner, provide no-/low-cost weatherization services and products to customers in manufactured homes.
- Develop partner collateral and materials to effectively and efficiently serve and educate customers.
- Targeted engagement to reach customers living in manufactured homes.

2017 Revisions:

Through PSE's existing program RFP released in late 2015 and its subsequent impact and process evaluation, it was determined that continuing to outsource the Manufactured Home Weatherization program was not cost effective. During the first quarter of 2016, PSE transitioned a number of measures, including duct sealing and floor insulation to its CAN partners through a prescriptive rebate structure. In addition, PSE also revised the eligibility criteria of its Home Energy Assessment program to include Manufactured and Mobile Home structures. During 2017, PSE will continue to offer these prescriptive measures through both its CAN partners and Home Energy Assessment service partners.

e. Contractor Alliance Network (CAN)

- Drive customer referrals for all Dealer channel programs to CAN.
- Develop updated suite of marketing collateral and training opportunities for contractors to drive awareness of PSE's energy efficiency rebates and offers.
- Targeted and innovative advertising campaign to promote CAN as a trusted resource of pre-screened, independent trade allies committed to helping customers make safe, dependable and efficient energy choices.

f. Incremental marketing strategies:

- Utilize customer testimonials.
- Integrate partners into the messaging.
- Focus on local and professional services offered through CAN.
- Promote comfort, convenience and options across all offerings.
- Streamline and simplify messaging with clear and easy call to action.
- Develop integrated campaigns and promotions to drive awareness outside of Energy Efficiency and encourage employee participation.

E. Single Family Fuel Conversion

Schedule E216

The Single Family Fuel Conservation program is included in the Dealer Channel suite of offerings, although it is listed in Conservation Schedule 216.

1. Purpose

Residential Energy Management's Fuel Conversion program acquires cost-effective electric energy savings from existing single-family (less than or equal to four units on a parcel) retrofit Measures and services by converting to natural gas customers who use electricity as the primary source for their space heat, water heat, and select appliances.

2. Description

The Company provides incentives for replacing existing electric forced-air or zonal space heating equipment and/or electric water heating equipment with high efficiency natural gas space heating equipment³ and/or high efficiency natural gas domestic water heating equipment.

New for 2016-2017, PSE has added ranges and clothes dryers to the fuel conversion program. Incentives will be provided for replacing existing electric ranges and clothes dryers with the equivalent or better natural gas version of that appliance. For the range to qualify, both the stove top and oven must both be natural gas.

Based on the Measure/product type and market factors, PSE may provide incentives to its customers at different points along the value chain. Market barriers vary dramatically from Measure to Measure; consequently PSE incentives may occur at the manufacturer, distributor, contractor, retailer or consumer level. Incentive amounts are based on regionally accepted energy-saving estimates and incremental efficiency Measure costs. These incentives may be subject to change in response to revisions in savings estimates, average incremental cost or changes in Federal appliance efficiency standards or State codes.

³ As outlined in the Company's Schedule 216, **Section 1, Availability/Eligibility**, the equipment to which the Customer is converting must be "highly efficient natural gas space and/or domestic water heating..."

Training, education and support by PSE for independent contractors, distributors, retailers, showrooms, sales associates, consumers and partnering organizations are foundational to the success of this program.

3. Customer Incentives

Fuel conversion incentives are prescriptive and based upon the Measure type installed and the kWh usage the Measure offsets. Eligibility criteria are based on established cost effective tests and prior electrical usage as primary heating source for space and/or water heating. The incentives are effective January 1, 2016. A list of all requirements for rebate eligibility and participation can be found on individual rebate or program application forms.

Applicable Existing Single Family Premises Measure category headings include, but are not limited to:

- Space Heating,
- Water Heating,
- Appliances.

4. Target Market

The target market for the Fuel Conversion program is existing Single Family Electric Service customers on or near gas mains with specific annual electricity usage.

PSE estimates that approximately 10 percent of the customer base qualifies for the incentive, creating a finite and specialized niche for conversion opportunities. To date, the majority of conversions are water heater installations. Dealers indicate that 50-70 percent of the water heater conversions require relocation of the equipment to meet the efficiency code requirements. PSE incentives assist customers offset these relocation costs. Another opportunity requiring PSE focus is that of construction costs, such as meter installation and street restoration where natural gas lines aren't yet installed or require overhaul.

F. Multifamily Existing

Schedule E/G 217

The Multifamily Existing program is a part of the Residential Business-to-Business channel, along with Low Income Weatherization, (page 5), and Residential New Construction (page 38).

1. Purpose

The objective of the Multifamily Existing program is to increase the installation of cost effective energy efficient Measures into existing multifamily (MF) buildings with PSE natural gas and/or electric service.

2. Description

The Multifamily Existing program is designed to increase the uptake and installation of selected energy efficient Measures in existing multifamily buildings with five or more attached residential dwelling units located in PSE's electric and natural gas service areas. The team works with property owners, managers, trade ally contractors, and tenants to encourage program participation. The program also serves multifamily campuses which have a mixture of building types including buildings with less than five units. Multifamily structures and campuses typically have opportunities for upgrades in the units, common areas, and building envelope. Measures may include windows, insulation, and air sealing enhancements; appliance, lighting, and HVAC upgrades; O&M improvements; behavioral modification; and calculated commercial upgrades such as central boilers and solar pool heaters. This program targets installation of energy efficient measures occurring during planned retrofit and replace upon failure. PSE will update current measures list and incentives as needed.

The program continually researches and develops new and innovative means to achieve cost effective energy savings. Examples may include behavioral based programs such as web-enabled thermostats and Strategic Energy Management (SEM). Web-enabled thermostats empower customers with both knowledge and control of their heating costs through a simple user-interface accessed on their smart phone. SEM provides a holistic approach to multifamily property portfolios by engaging managers, maintenance staff, and residents to achieve energy cost savings through behavioral changes, operational improvements, facility maintenance, and attention to utility accounting.

Through effective customer education and implementation, PSE is continually exploring the impacts of how new technologies and energy management plans can contribute to the quantification of behavioral based energy savings.

3. Customer Incentives

Measure incentive eligibility criteria are based on, but not limited to, established industry standard cost effectiveness tests, structure type, fuel type (gas or electric), product type, and product quantity. A detailed list of Energy Efficiency's Measures, Incentives and Eligibility are included in Exhibit 4.

4. Target Market

The target market includes multifamily property owners, managers, maintenance staff, equipment suppliers, and contractors.

5. Marketing and Outreach Plan

Key marketing and outreach strategies for the Multifamily Existing program work in tandem with the program's business development team to expand and build a prospect network in a changing market. Outreach efforts help to increase program participation with multifamily property owners and property managers, leverage relationships with trade ally contractors, and raise tenant awareness on the value of in-unit energy efficiency upgrades and how tenants play a part.

The Multifamily Existing program promotes and produces "Energy Fairs" to large multifamily communities. These events take place in high-traffic common areas of apartment and condominium communities during the installation of energy efficiency products. Energy Fairs not only help educate customers on the benefits of energy efficiency upgrades, but they also help raise awareness that PSE is a partner in helping communities become more sustainable.

Through the use of segmentation studies and market research, PSE conducts customized outreach to multifamily communities, especially those with the highest savings potential. The program provides translated collateral in multiple languages in order to properly educate English-as-a-second language customers on energy efficiency products and help build program awareness.

The primary promotional strategies include but are not limited to:

a. Industry Events and Membership Collaborations

Industry events are a strong lead generating tool for the program – it's one of the best ways to quickly get face-time with contractors and property owners.

The program partners with several multifamily associations who manage these types of events. The program leverages outreach through various association memberships such as the Washington Multifamily Housing Association (WMFHA) and the Rental Housing Association (RHA). These partnerships broaden the program reach to provide venues where members can collectively engage. The program targets several large-scaled exhibitions that are comprised of multifamily property owners, on-site leasing managers, maintenance personnel, contractors, suppliers and associated professionals. In addition to attending conferences, there are several workshops and presentations held throughout the year that provide additional networking opportunities, learning, recognition and motivation with smaller organizations. The promotional tactics used to support this strategy include:

- Booth & tabletop displays
- Booth materials: brochures, drawings, signage
- Program handbooks: company and program profiles, logo usage and applicable advertisements
- Pre-event advertising (publications, e-news, evites, web)
- Presentation leave behinds
- Post event surveys/debriefs
- Tracking leads generated for ROI

In partnership with the Marketing team, the Energy Efficient Communities team will help develop and implement outreach strategies to promote PSE's residential and commercial energy efficiency programs and services. The outreach strategy for the Multifamily Retrofit program will work with both customers and business partners.

The team will provide tenant customers with information about applicable products and services that PSE provides, and help deliver information to property managers/owners and trade allies. This will be done through a variety of outreach mechanisms, including multifamily complex educational events, program awareness campaigns, community events, presentations, and internal PSE employee trainings.

The Energy Efficient Communities Team will work with the program team leads and Marketing to identify ways to reach Multifamily Retrofit constituents in conjunction with other mass marketing strategies developed for Retail and Dealer channels.

b. Education, Communication & Awareness

Maintaining consistent program communication, awareness and energy efficiency educational elements are complimentary to the success of achieving savings target goals. Some of the key initiatives to elevate education, communication and awareness may include:

- Energy Fairs for residents and community members.
- Awareness and marketing kit for portfolio managers.
- Availability of energy use monitoring devices.
- Quarterly e-Newsletter to property managers and contractors.
- Energy challenges to bolster tenant engagement and encourage behavioral modification.
- Energy efficiency certification/recognition to promote property management participation in PSE programs.
- Developing new materials to highlight the beneficial components of Strategic Energy Management (SEM).
- Dedicated Energy Advisor and/or community outreach representative to capitalize on Direct Install customer engagement opportunities and to help promote related PSE products & services.

c. Collateral Development

To complement the program's business development outreach efforts, promotional materials are designed and produced to effectively communicate key messages and highlight the benefits of the efficiency measures to target audiences. Persuasive collateral is used during direct customer engagement, site visits and event outreach as well as a cross-selling tool for program contractors.

Educational leave behinds are also designed to help tenants understand the functionality as well as the immediate and long-term benefits of installations. The collateral development strategy may include but is not limited to the following materials:

- Executive summaries.
- Direct installation notices in multiple languages.
- Case studies.
- Videos.
- Cross utility interaction.
- Service area maps.
- Third party business cards.
- Customer participation surveys.

d. Advertising Campaigns and Media Relations

To generate program awareness amongst multifamily customers, various advertising campaigns are launched through multiple means or channels to make customers aware about its presence in the market. The program typically uses a bundled approach to highlight measures and program benefits.

The advertising and media relations tactics used may include:

- Print advertisements in trade publications.
- Contractor advertising co-operatives.
- Direct Mail and/or e-blasts.
- Online/Website Development.
- Newsletters.
- Internet advertisements.
- Social media.
- Television.
- Radio.
- PR / Editorial coverage.

e. Overall Multifamily Retrofit Channel outreach strategies include:

- Identify projects and reach contractors before retrofit process begins.
- Host local “Energy Fairs” to enroll condominium customers to programs and to educate apartment tenants to EE efforts taken on by their property manager and what they can do on their own.

- Deliver energy efficiency presentations to various community audiences.
- Host employee brownbag sessions to build employee awareness of energy efficiency programs and services.
- Identify and recognize business partners for their contributions in serving PSE's customers.

G. Residential New Construction

Schedule E215, G215; applicable to single family construction

Schedule E218, G218; applicable to multifamily construction

The following discussion applies to new residential construction, both single-and-multifamily structures. Conservation Schedule terms and conditions, as outlined in the above-noted Schedule numbers, govern the applicability, measure types, funding, analyses and general rules and provisions for each structure classification. Where there are specific requirements, service offerings, measures, incentives, marketing, or outreach applicable to the specific structure type, those are so noted in each of the following sections.

1. Purpose

The Residential New Construction program acquires cost-effective energy savings from single-family new construction (single, duplex, and townhomes) and multifamily new construction projects that increase the installation of energy efficient Measures into new electric & gas heated buildings constructed in the PSE service territory.

In addition to newly constructed single-family structures, covered under terms of Schedule 215 (for both gas and electric service) Residential New Construction will include multifamily structures, per Washington State Energy Code 2012 Edition (effective July 1, 2013). Multifamily units are covered under terms of Schedule 218 (for both gas and electric service). These structures typically have both in-unit and common area energy-savings opportunities. These include, but are not limited to, energy efficient upgrades to building shell, appliances, lighting, HVAC and water heating systems.

Eligible customers for both single-family and multifamily new construction include owners, developers, or agents acting on behalf of a responsible party of service receiving electricity or natural gas through PSE. This program provides financial incentives to the above audience for both natural gas and electric residential and commercial meters. The incentives offered are both prescriptive and calculated.

In the new construction marketplace, high efficiency measures need to be specified and installed during design and construction. Otherwise, it may be up to 30 years before energy efficient changes to the buildings will take place. For measures and incentives that apply to existing multifamily structures, please refer to the Multifamily, Existing program measures in Exhibit 4: Measures, Incentives and Eligibility.

2. Description

Rebates and incentives are offered to eligible natural gas and electric PSE new construction developers, contractors, trade allies and customers (cumulatively, the program refers to these as “partners”) who are constructing new single-family residential structures and multifamily buildings. The program also works with these partners to market energy efficient equipment to their customers. Energy Efficiency encourages the purchase and installation of energy efficient products for their construction projects.

For new residential construction projects, financial incentives are packaged under one grant and are structured to work in accordance with current Business Energy Management programs. PSE provides a single “point of contact” to development teams for all energy efficient measures and/or upgrades. This allows PSE to maximize the energy savings opportunity in each development and reduce multi-program confusion for the customer.

The program includes prescriptive rebates, and/or incentives, and calculated grants. Eligible customers include builders, developers, owners or agents receiving electricity through PSE’s residential schedules 7 (including 17, 27, 37 and 47) and 7A; and commercial schedules 8, 11, 12, 24, 25, 26, and 31; and/or natural gas service through PSE’s residential schedule 23 and commercial schedule 31.

Structures include but are not limited to single-family dwellings, duplexes, apartments, town homes, condominiums, dormitories, affordable housing, low-income housing, workforce housing, and assisted living residences.

There may be any combination of residential and commercial meter mixes in each type of construction. Once the meter type mix is confirmed with the development team, the appropriate PSE programs are identified to serve that development. Incentives include a variety of end-use classifications, not limited to:

- Lighting: Common areas
- Appliances: Clothes washers
- Water Heating: Boilers, condensing water heaters
- Ventilation; in-unit whole-home or common area
- HVAC equipment upgrades

For all of the conservation Measures installed, Energy Efficiency receives measure installation data directly from builders, developers, showrooms and distributors. It is therefore possible to precisely track measure details.

a. Affordable Housing

The Residential New Construction program has learned there is a critical need in the PSE service territory for affordable rental housing. King County has documented in their Consolidated Housing and Community Development Plan for 2010-2014 (updated September 4, 2012) and Housing and Community Development Needs Assessment (Appendix A) that the availability of affordable housing is scarce for households earning between 40 and 60 percent AMI (average median income), severely insufficient for those below 40 percent AMI, and completely insufficient for below 30% AMI.

There is a glaring and extensive need for more living units in this affordable and workforce housing market sector. It is likewise important to help provide those most in need with high levels of energy efficiency and affordable utility costs. Given the current construction boom in multifamily new construction projects now is a strategic and critical time to maximize investment in PSE's communities.

The Residential New Construction team created a higher energy efficiency financial incentive level available to projects that will offer more than 50% of total housing units to those earning 60 percent AMI or lower. In response to this serious affordable housing deficiency and potential void.

3. Customer Incentives

Measure incentive eligibility criteria are based on, but not limited to, established, industry-standard cost effectiveness tests, structure type and location within the PSE service territory, fuel type (gas or electric), product type and product quantity. The incentives are effective January 1, 2016. Energy Efficiency's List of Measures, Incentives and Eligibility are included in the Biennial Conservation Plan as Exhibit 4. PSE may, at its sole discretion, adjust rebates based on market variables.

Incentive amounts and savings values are regularly reviewed by PSE and are based on regionally accepted energy savings estimates and incremental efficiency measure cost. Rebates may be subject to change in response to revisions in savings estimates, average incremental cost or changes in Federal appliance efficiency standards or State codes.

Incentive schedules are identified by heat source. Calculated incentives will be offered based on standard energy efficient calculation practices. Incentives may be paid upon completion of work and submittal of required program documentation.

Field inspections and audits will be conducted at random to ensure quality installations and verify completion of work.

a. Type of rebate/incentive

Qualifying customers receive incentives by submitting a processing form and invoices/receipts, third party verification and certification of an Energy Star® home, or receive an instant discount through participating trade allies. Incentive requests are screened for completeness of customer entries, and where required for submittal of additional documentation. Incentive processing complies with PSE internal audit standards.

4. Target Market

The target market for this program may include but is not limited to single family and multifamily new construction builders, developers, architects, mechanical and electrical engineers, lighting designers, property owners, contractors, retail partners, housing authorities, efficiency equipment suppliers, distributors and manufacturers.

5. Overall Residential New Construction Program Marketing and Outreach Strategies

- Identify projects and reach development teams early in design process.
- Drive traffic to new construction homes shows and demos.
- Deliver energy efficiency presentations to various community audiences.
- Host employee brownbag sessions to build employee awareness of energy efficiency programs and services.
- Identify and recognize business partners for their contributions in serving PSE's customers.

6. Single Family New Construction Marketing and Outreach Plan

The Single Family New Construction program uses a diverse mix of integrated marketing, promotion, and communication strategies, outreach, and tactics to raise customer awareness. The primary objective is to elevate awareness of energy efficient building practices and standards to building partners and help educate their customers (homebuyers) about the benefits of building and living in an energy efficient home.

The program also uses a mix of marketing activities to reach the designers, builders, owners, and developers of new single family homes.

The primary marketing and outreach high-level strategies used to help penetrate the market include the following:

a. Green Building Cooperatives

The Single Family New Construction program's partnership goal with various green building associations is to increase the number of homes certified through Northwest Energy Star® Homes and Built Green programs, and to promote the benefits of purchasing a green certified homes. Green building cooperatives help PSE to extend visibility using less money – has a broader reach than what could be obtained independently. Partners promote PSE's energy efficiency programs, green building, Energy Star Homes, and building practices that result in energy efficient homes. Key partners include but are not limited to: Northwest ENERGY STAR HOMES; Master Builder Associations (King, Snohomish, Pierce, Central, Skagit, Island Counties); and Sustainable Connections.

These programs use a bundled approach to release reoccurring messaging and updates to primary and secondary target audiences. They will also develop a strategy based on the developing market conditions and affordable opportunities in appropriate publications.

In addition, the Energy Efficient Communities team will work with program team lead in a variety of outreach initiatives in 2016-17 to support the Single Family New Construction program, and may include:

- Outreach to the development community.
- Promote new construction programs to municipalities.
- Promote energy efficient new construction at industry events.

b. Education, Communications and Awareness

Maintaining consistent program communication, awareness and energy efficiency educational elements are complimentary to the success of achieving savings target goals. Some of PSE's key initiatives to elevate education, communication and awareness may include:

- Direct-to-builder brochures.
- Direct mail and advertisements.
- Newsletters.

- Online/website development.
- Consumer education: VOICE of MyPSE articles, model home signage, builder cooperatives.
- Cross program positioning: Community Outreach and Education, Gas Growth, REM.
- Other PSE division collaborations: Customer Construction Services and CRMs.

c. Industry Events and Builder Relations

As a lead-generating tool and to increase program awareness with large volumes of industry partners, builders, contractors, suppliers and associated design professionals, the program exhibits at various green building conferences and exhibitions as well as presenting to smaller organizations and workshops. Primary promotional tactics include:

- Development of displays and signage.
- Design and production of collateral materials.
- Pre-event advertising: publications, e-news, evites, web.
- Post event surveys and debriefs.
- Tracking leads generated for ROI.
- Continue to participate in conferences and tradeshow.
- Host or co-host events for customers and contractors with other programs.
- Continue to co-sponsor the MBA at a modest level.

d. Multifamily New Construction Marketing and Outreach Plan

The Multifamily New Construction program uses a diverse mix of integrated marketing, promotion, communication strategies, outreach, and tactics to ensure customer awareness and participation.

The primary objective is to elevate program awareness to building partners and help educate their customers (residents) about the benefits of building and living in and energy efficient home.

The program also uses a mix of marketing and outreach activities to reach the designers, builders, owners, and developers of new multi-unit residential structures.

The primary high-level marketing and outreach strategies used to help penetrate the market include the following for 2016-17:

- Identify projects and reach development teams early in design process.
- Host local open houses to educate apartment tenants to EE efforts taken on by their property manager and what they can do on their own.
- Drive traffic to new construction homes shows and demos.
- Deliver energy efficiency presentations to various community audiences.
- Host employee brownbag sessions to build employee awareness of energy efficiency programs and services.
- Identify and recognize business partners for their contributions in serving PSE's customers.

e. Green Building Cooperatives

Green building cooperatives help PSE to extend visibility using less money – and have a broader reach than what could be obtained independently. Partners promote PSE's energy efficiency programs, green building, Energy Star Homes, and building practices that result in energy efficient multifamily homes. Key partners include but are not limited to: Sustainable Connections; AIA Seattle; and Cascadia Green Building Council.

These programs use a bundled approach to release reoccurring messaging and updates to primary and secondary target audiences. They will also develop a strategy based on the developing market conditions and affordable opportunities in appropriate publications.

f. Education, Communications & Awareness

Maintaining consistent program communication, awareness and energy efficiency educational elements are complimentary to the success of achieving savings target goals.

Some of PSE's key initiatives to elevate education, communication and awareness may include:

- Direct-to-builder brochures.
- Direct mail and advertisements.
- Leave-behind collateral for new residents.
- Newsletters.

- Online/website development.
- Consumer education: VOICE articles, model home signage, builder cooperatives.
- Cross program positioning: Energy Efficient Communities for local outreach and education, Gas Growth, REM.
- Other PSE division collaborations: Customer Construction Services and CRMs.

g. Industry Events and Builder Relations

As a lead-generating tool and to increase program awareness with large volumes of industry partners, builders, contractors, suppliers and associated design professionals, the program exhibits at various green building conferences and exhibitions as well as presenting to smaller organizations and workshops. Primary promotional tactics include:

- Development of displays and signage.
- Design and production of collateral materials.
- Pre-event advertising: publications, e-news, evites, web.
- Post event surveys and debriefs.
- Tracking leads generated for ROI.
- Continue to participate in conferences and tradeshow.
- Host or co-host events for customers and contractors with other programs.

H. Residential Pilots

Schedule E/G 249

Pilot programs and demonstration projects may be undertaken to determine whether certain strategies and Measures are cost-effective in the long run. Pilots are employed to test cost-effective ways to demonstrate market opportunities for energy efficiency.

Pilots may include tests of Measure cost and performance, customer acceptance and delivery methods. In compliance with condition (7)(d), pilots will only claim energy savings that achieve energy savings sufficient to demonstrate cost-effectiveness by passing the TRC test.

1. Residential Individual Energy Report Pilot

a. Purpose

The Residential Energy Management Sector will continue its pilot based on its successful Home Energy Reports. The pilot is testing an expansion of individual energy reports in three classifications:

- Non-Urban Customers,
- High Relative User, Low Frequency,
- Electric-Only.

- Refill

With consultation from the CRAG, this program will continue through 2017.
Program Descriptions

i. Non-Urban Customers

It is PSE's hypothesis that non-urban customers save energy at the same rate as urban customers despite differences in their neighbor distances and more diverse peer groups. The pilot program will be operated with the following guidelines:

- a) Opower and PSE will work jointly to establish selection criteria for dual-fuel customers in a diverse geography of the service territory, particularly a selection of non-urban customers.
- b) PSE and Opower will investigate the minimum population quantity needed to ensure that results are verifiable.

- c) KEMA will perform randomization for these customers to be included.
- d) Opower has enrolled these customers using a staggered rollout, for observation and to receive an average of 6 direct-mailed reports per year and up to 12 email reports per year.

ii. High Relative User, Lower Frequency Customers

It is PSE's hypothesis that this segment of customers who have high pretreatment usage, relative to their home size, will save more energy than those who have lower size-relative pre-treatment usage. Targeting a behavioral program to users who can also receive electronic messaging will allow reduced mailing frequency and costs and yield a higher TRC by delivering most of the long-term savings observed in higher paper-based program designs. The pilot program will be operated with the following guidelines:

- a) Opower and PSE will work jointly to determine which customers to target to ensure maximum saving potential.
- b) PSE and Opower will investigate the minimum population quantity needed to ensure that results are verifiable.
- c) KEMA will perform randomization for these customers to be included.
- d) Opower has enrolled these customers using a staggered rollout, for observation and to receive an average of 5 direct-mailed reports in year 1, 4 direct-mailed reports in years 2+, and up to 12 email reports per year.

iii. Electric-Only Customers

It is PSE's hypothesis that the customer heating type can be determined with enough accuracy to set up a randomized test to quantify energy savings from an electric-only program and to measure cost effectiveness. This pilot program will be operated with the following guidelines:

- a) Opower and PSE will work jointly to determine which customers to target to ensure maximum saving potential.
- b) PSE and Opower will investigate the minimum population quantity needed to ensure that results are verifiable.

iv. Refill Customers

- a) To account for attrition due to customers moving within or outside of PSE's service territory, PSE worked with Opower to create a new segment of customers entitled "Refill". These customers were selected to prioritize electric savings, and do not necessarily meet the criteria established by the three original defined segments. These customers were added to the program mid-2015 and are tracked as an independent segment of customers.

- b) Opower has enrolled these customers, using a staggered rollout, for observation and to receive an average of 6 direct-mailed reports per year and up to 12 email reports per year.

III. BUSINESS ENERGY MANAGEMENT

A. Pilots

Schedule E/G 249

Pilot programs and demonstration projects may be undertaken to determine whether certain strategies and Measures are cost-effective in the long run. Pilots are employed to test cost-effective ways to demonstrate market opportunities for energy efficiency.

Pilots may include tests of Measure cost and performance, customer acceptance and delivery methods. In compliance with condition (7)(d), pilots will only claim energy savings that achieve energy savings sufficient to demonstrate cost-effectiveness by passing the TRC test.

1. Small to Midsize Business Efficiency Pilot

a. Program Update

The Small-to-Midsize (SMB) Pilot program, in partnership with OPower, has ended. The last physical report was mailed to the remaining customer in May 2016. There is no intention to continue the SMB program at the moment. However, PSE is exploring and researching other ways/programs that can be deployed to target SMB customers within our service territory

B. Commercial/Industrial Retrofit

Schedules E250, G250

1. Purpose

The purpose of the Commercial and Industrial Retrofit program is to encourage Puget Sound Energy's existing Commercial and Industrial (C/I) customers to use electricity and natural gas efficiently by installing cost-effective energy-efficient equipment, adopting energy-efficient designs, and incorporating energy-efficient operations at their facilities. In addition, incentives will be available for fuel switch Measures that convert from electric to high-efficiency natural gas while serving the same end use.

2. Description

PSE works with Commercial and Industrial customers to provide incentives for cost-effective energy efficiency upgrades to lighting, equipment, building shell, industrial process, and select O&M improvements. These services are provided on the customer's behalf and, where specified by the customer, will be developed in conjunction with design engineers, contractors, and/or vendors.

PSE conducts site assessments to identify savings opportunities, verify existing equipment and system operations, and makes recommendations to customers. PSE also reviews third-party savings estimates and analyses, and when required performs in-house analyses to validate energy savings. PSE works with financial decision makers at the customer's facility to ensure the customer is aware of cost-savings opportunities, including review of energy saving projections that can help obtain favorable financing rates.

Commercial/industrial retrofit projects commonly include: lighting system upgrades, HVAC equipment upgrades, HVAC controls improvements, commercial refrigeration Measures, and industrial process modifications. Additionally, incentives for existing building commissioning (O&M) improvements are provided through the Comprehensive Building Tune-Up (CBTU) Program.

Upon the customer's decision to proceed with a project, PSE issues a standardized Conservation Grant Agreement and Grant Attachment that establishes terms and conditions for participation in PSE's Custom Grant Program and also explains how the measure will be verified. After the agreement is signed by both parties, the customer is given notice to proceed with the energy efficiency project.

Following completion of the project, PSE verifies the installation and energy savings via an on-site inspection, review of equipment operation and trend log data where necessary, and collection of project invoicing and specifications of installed equipment.

a. Business Lighting Grants

To simplify the customer experience, PSE offers only one Business Lighting grant program. This single program addresses customers' needs by providing custom calculated incentives for lighting and lighting controls measures.

b. Contracted Programs

In addition to Commercial/Industrial Retrofit Custom Grant offerings, PSE contracts with industry experts to develop and implement cost effective programs tailored to the unique needs of target markets. Measure-specific incentives are provided through these contracted programs:

i. Industrial System Optimization Program (ISOP)

The program focuses on operational and maintenance (O&M) Measures to be verified through custom analysis on an individual project or site basis. Incentives are based on actual savings achieved. Customers agree to continue monitoring and verification following implementation to assure persistence of the savings.

ii. Energy Smart Grocer

The program provides audits, technical assistance and Measure-specific financial incentives to grocers who wish to purchase and install energy efficient lighting, refrigeration, HVAC systems and gas efficiency Measures. The program is eligible for both retrofit and New Construction incentives.

3. Customer Incentives

Incentives in effect since January 1, 2016 are:

Site-Specific Basis incentives, or “custom” incentives, rely on generally accepted engineering calculations and Measure costs provided by the customer or the customer’s contractor. Electric and gas Measures may receive maximum incentive grants up to 70 percent of the Measure cost when the grant incentive does not exceed the cost-effectiveness standard, less program administration costs.

Measures where cost exceeds the cost-effectiveness standard will receive grants that are on a declining scale and will be less than 70 percent of the Measure cost.

Generally, electric and gas Measures that have a Simple Payback of less than one year are not eligible for a Site-Specific Basis incentive.

Prescriptive Basis incentives are provided for Commissioning and Optimization of Existing Buildings and for Measures that are eligible for rebates under Schedule 262E/262G, Commercial and Industrial Incentive Program.

The incentive amount for a Measure is the same as that which is available under Schedule 262E/262G, but energy savings may be calculated based on actual Site-Specific conditions.

Performance Basis incentives may be provided where energy savings are determined through direct measurement of energy usage and/or the use of efficiency indicators.

Energy-use monitoring: PSE may provide secure web site access to facility energy-use data for building occupants, free of charge for up to two years. More typically, access will be free of charge for one year to allow the occupant to verify building and/or Measure performance according to energy-use projections. To be eligible, customers must be on a rate schedule with demand (kW) as well as energy (kWh) charges. Compatible metering and remote data retrieval capability must be in place at the customer's facility. PSE is not obligated to replace or upgrade nonconforming meters. Customers are expected to use the monitored information to improve energy efficiency at the facility. Customers will demonstrate annual energy savings potential through energy management operations and maintenance as well as identification of further efficiency Measures and equipment upgrades.

Incentives for short and long payback projects will be adjusted as needed, according to market conditions.

Processing of Incentives: Customers provide PSE with project costs and estimated savings. Customers assume full responsibility for selecting and contracting with third-party service providers. Projects must be approved for funding prior to installation/implementation. A grant agreement will be required.

All Commercial and Industrial Retrofit incentives will be processed using a standard Grant Agreement, listing the Measure description, Measure Life, Measure cost, and Grant Amount. An attachment to the Grant Agreement will list specific Measure details, and will describe the process PSE will use to verify that the Measure is installed and performing efficiently.

The PSE Energy Management Engineer (EME) and the Manager of Business Energy Management oversee all incentives and program operations. EMEs update project changes in the tracking system and review monthly results.

The Manager of Business Energy Management reviews the cost-effectiveness of all efforts. A review of results and refinement of program strategies are conducted annually.

Measure incentive eligibility criteria are based on, but not limited to, established, industry-standard cost effectiveness tests, structure type and its location within the PSE service territory, fuel type (gas or electric), product type and product quantity.

A detailed list of Energy Efficiency Services' Measures, Incentives and Eligibility are included in the 2016-2017 Biennial Conservation Plan as Exhibit 4.

4. Target Market

PSE targets all Commercial and Industrial customers with program offerings and marketing efforts appropriate to given business type, size and operation.

5. Marketing and Outreach Plan

PSE's Commercial Industrial Retrofit Program, which includes Business Lighting and custom grants, primarily relies on the following channels to maintain an abundant quantity of custom retrofit project leads: repeat program participants, internal PSE channels such as Business Services and Energy Efficient Communities, and trade ally relations with contractors, engineering design firms and energy services companies (ESCOs).

During economic downturn, trends have been an increased quantity of smaller projects, likely due to economic challenges faced by building owners and managers. Business

Energy Management (BEM) has responded to this trend with an increased focus on cost-effective programs tailored to the unique needs of target markets.

a. Communications

PSE will communicate about C/I Retrofit program offerings as follows:

- Continue creating collateral to be more awareness-driving than project generation-focused.
- Focus on taking control of your energy.
- Provide information on the web addressing customer needs and more-effectively communicate program offerings.

- Consider web-based applications and webinars/video trainings as self-service/independent learning tools.
- Leverage other PSE customer-facing departments to communicate PSE Efficiency Program information.

b. Coordination with PSE Staff and Departments

Routine communications with internal PSE channels responsible for direct communication with customers and others who influence decisions about energy efficiency, such as public officials, will yield greater program awareness.

- Proactive coordination with Energy Efficient Communities staff.
- Regular meetings and communications with Business Services staff, including Major Accounts Executives and Business Accounts Managers.
- Routine updates to PSE Energy Advisors about programs.
- Collaboration with PSE media outreach and social media teams to publicize significant projects and program offerings.

c. Community Outreach

Energy Efficient Communities staff will develop and implement outreach strategies to promote program offerings as follows:

- Presentations to developer, architecture, and engineering associations and other trade associations to publicize program offerings.
- Leverage relationships with local governments and other entities to gain awareness of new commercial and industrial developments, and connect developers and architects with program offerings.
- Identify business customers whose energy efficiency achievements illustrate results of PSE program participation and highlight their successes at events, in case studies and through media outreach to increase awareness of program offerings.
- Host sessions internally for PSE staff to increase employee awareness of programs, providing increased communication to customers regarding energy efficiency programs.

d. Coordination with Program Providers

PSE Corporate Communications will coordinate all messaging and marketing efforts by contracted third party programs, including:

- Industrial Systems Optimization.

e. Coordination with Trade Allies

PSE will continue to work with contractors, engineers and ESCOs who develop and deliver custom retrofit energy efficiency projects and who communicate with building owners and managers about PSE's programs. Coordination efforts will include the following:

- Participation in meetings to update trade allies on program offerings.
- Providing information about PSE's role in energy efficiency retrofit projects.
- Coordination with trade allies on PSE energy efficiency program messaging.
- Expansion of Contractor Alliance Network (CAN) into the C/I sector of trade allies.
- Leveraging of the Northwest Trade Ally Network for promotion of lighting efficiencies, and trade ally relations with contractors, engineering design firms and energy services companies (ESCOs).

C. Commercial/Industrial New Construction

Schedules E251, G251

1. Purpose

The purpose of the Commercial and Industrial New Construction Program is to influence efficient design, building components and equipment in new buildings by working with customers, developers, tenants, owners, designers and builders of new Commercial and Industrial (C/I) facilities. The program provides incentives for installation of cost-effective energy efficient Measures to achieve savings beyond the applicable Energy Code or industry standard practice where Code requirements do not exist.

2. Description

PSE works with designers and developers of any large or small new Commercial / Industrial facilities, or major remodels, to propose cost-effective energy efficient upgrades that exceed energy codes or standard practice where minimum efficiency requirements are not prescribed by code. Three paths may be followed to qualify for assistance and/or funding for New Construction energy efficiency Measures. New Construction Post-occupancy Commissioning is also offered in addition to the building paths.

The first path is similar to the retrofit program where component Measures are evaluated individually and funding is based upon cost-effectiveness. Under this approach, customers may receive up to 100 percent of the incremental cost over a code-compliant baseline. There is a streamlined process for lighting projects that have a lighting power density valued listed in the applicable code.

The second path is a whole-building approach that utilizes building energy simulation to demonstrate improvement over energy code requirements. PSE will work with designers to incorporate Measures that produce at least 10 percent overall savings beyond applicable energy code, including local jurisdiction amendments. Given the time required for planning and construction, these projects typically take several years to complete.

The third path includes Prescriptive Basis incentives for Measures that are eligible for rebates under Schedule E262/G262, Commercial and Industrial Incentive Program. The incentive amount for a Measure is the same as that which is available under Schedule E262/G262, but energy savings may be calculated based on actual Site-Specific conditions and Code Baseline adjustments, if necessary.

In addition to these paths for New Construction efficiency incentives, PSE makes Energy Smart Grocer program offerings available to new construction projects in the grocery sector, providing expert technical assistance and Measure-specific financial incentives to grocers who wish to purchase and install energy efficient lighting, refrigeration and HVAC systems that exceed Code minimum efficiency requirements or industry standard practice where Code requirements do not exist.

A complete listing of available incentives is provided in Exhibit 4 of the 2016-2017 Biennial Conservation Plan.

Customers assume full responsibility for utilizing their design teams and contractors to provide information to PSE for evaluation of grant funding. Projects must be approved for funding prior to installation/implementation to be eligible.

3. Customer Incentives

Customers provide PSE with project scope, costs and estimated savings. Customers assume full responsibility for selecting and contracting with third-party service providers. A grant agreement or signed prescriptive Measure rebate application will be required.

Component Measure incentives: For energy-efficient Measures with a simple customer payback greater than one year, PSE provides grants toward the incremental installed cost of the Measure. Maximum grants will be based on the Company's cost-effectiveness criteria. Electric and gas Measures may receive incentive grants up to 100 percent of the incremental Measure cost where the grant incentive does not exceed the cost-effectiveness standard less program administration costs. Measures that exceed the cost-effectiveness standard will receive grants that are on a declining scale and will be less than 100 percent of the Measure Cost. In instances where project first-costs, site conditions, or operational parameters lead to a customer fuel choice that would offset gains from implemented efficiency Measures, incentives for fuel switching may be provided; however, choices that totally eliminate the need to provide an energy source to the site are not eligible.

Whole Building Approach incentives: PSE provides incentive for projects designed and built to be at least 10 percent more energy efficient than a Code baseline building built under the applicable Energy Code. Under the *energy model whole building approach*, PSE will offer an increasing incentive amount for efficient designs that exceed the Energy Code baseline by 10 percent, prorated to a maximum incentive for buildings that exceed the Code baseline by 30 percent or more. The *energy model whole building approach* incentive, based on percent savings, may be reduced if it does not meet the Cost Effectiveness Standard.

Eligibility for Whole Building incentives: Whole Building Incentives are designed for buildings which will receive electric service from PSE and/or natural gas service from PSE.

Projects using multiple energy sources, but to be served with electricity from PSE must demonstrate that the electricity-efficiency as well as the whole-building efficiency is improved by a minimum of 10 percent to qualify for an incentive. In instances where project first-costs, site conditions, or operational parameters lead to a customer fuel choice that would offset gains from implemented efficiency Measures, incentives for fuel switching may be provided; however, choices that totally eliminate the need to provide an energy source to the site are not eligible.

Prescriptive Basis Incentives: Rebates for equipment listed under the electric/gas Commercial and Industrial Rebate Incentive Program are available for new construction except when required by the applicable Energy Code. Other Prescriptive Basis Incentives are not available within the Schedule 251 program. When a rebated equipment item has an energy interaction with Measures proposed under the *whole building approach* or the *component approach*, *the energy savings for the rebated equipment will be removed from the whole building energy calculations or the component approach energy savings calculation.*

Post Occupancy Building Commissioning: If the customer engages the services of a third party commissioning agent for post occupancy building commissioning, who is independent of the design and construction team, then the customer may be eligible for an incentive. To qualify for this incentive, post-occupancy commissioning will start approximately 9 months after the warranty period starts and complete within an 18 month time period of occupancy. Post Occupancy Commissioning will focus on optimization of building energy systems including, but not limited to: lighting, HVAC, and building controls.

PSE will consider the Measure cost as that portion of the commissioning agent services that will impact energy efficiency on the project. The savings shall be assumed to be a percentage of the building's estimated annual energy use. This percentage will be based on studies of the energy savings impact of commissioning.

The commissioning agent will utilize the building's energy consumption data from PSE as well as any building system control trends and point/system energy monitoring, to assist in analyzing the building's energy use and to support the energy optimization activities.

The commissioning agent shall prepare (or update if one already exists) a Facility Guide which describes the major energy using building systems (HVAC, lighting, domestic hot water, etc.), including control sequences, operating set points, schedules, and procedures for testing and verifying proper and efficient operation of the equipment and controls. As part of this post occupancy service, the Commissioning Agent will provide all deliverables specified in the Program Requirements (for example, On-Going Commissioning Plan, On-Going Training Plan, Facility Guide, Investigation Details/Cx Report, etc). The owner's operation and maintenance staff will be trained on how to monitor energy use and efficiently operate the building's systems.

Energy-use monitoring: Upon occupancy, the Company may provide secure web site access to facility energy-use data for building occupant, free of charge for up to two years. More typically, access will be free of charge for two years to allow the occupant to verify building and/or Measure performance according to energy-use projections. To be eligible, customers must be on a rate schedule with demand (kW) as well as energy (kWh) charges.

Compatible metering and remote data retrieval capability must be in place at the customer's facility. PSE is not obligated to replace or upgrade nonconforming meters.

Customers should use the monitored information to improve energy efficiency at the facility. Customers will demonstrate annual energy savings potential through energy management operations and maintenance as well as identification of further efficiency Measures and equipment upgrades.

Energy Smart Grocer: This third party contracted program provides expert technical assistance and Measure-specific financial incentives to grocers who wish to purchase and install energy efficient lighting, refrigeration and HVAC systems that exceed Code minimum efficiency requirements or industry standard practice where Code requirements do not exist.

Measure incentive eligibility criteria are based on, but not limited to, established, industry-standard cost effectiveness tests, structure type and its location within the PSE service territory, fuel type (gas or electric), product type and product quantity. A detailed list of Energy Efficiency Services' Measures, Incentives and Eligibility are included as an Attachment to the 2015 Annual Conservation Plan as Exhibit 4.

4. Target Market

Owners and developers of commercial or industrial facilities to be served by PSE with electricity or natural gas are eligible for new construction incentives.

Also targeted are market actors, including but not limited to, owner's representatives, trade allies, development organizations, property management companies, and financing organizations.

5. Marketing and Outreach Plan

PSE's program for commercial new construction will remain an incentive for building designers and developers to include energy-efficiency measures that are above and beyond that which is required by the building code or industry standard practice.

In order to reach the right audience at early stages, marketing and outreach teams will explore a diverse set of messaging and tactics to reach architects, municipalities, developers and engineers, respectively.

Market activity for new construction is expected to increase during the 2016-2017 program period yielding new project leads. Due to long lead time for new construction project development, new leads for major projects during 2016-2017 are not likely to contribute energy savings until the 2018-2019 program period.

a. Communications

- Continue creating collateral to reflect customer needs for greater comprehensive understanding of energy efficiency program offerings.
- Revamp content on PSE.com to be more user-friendly, and mobile optimized.
- Update standardized content for public presentations.

- Develop mini-case studies that include new construction commissioning and likely rebates or components. Group multiple case studies together by vertical for a more comprehensive snapshot for similar businesses and industries.
 - Target industries: hospitals, office buildings, national retail chains
- Incorporate messaging around other services PSE provides for new construction projects beyond incentives for improved customer service and greater participation.
- Target communications toward multi-family new construction projects, which are now coming under this program, along with the commercial and multi-family incentives which will be aligned for consistency and simplicity.

b. Community Outreach

Energy Efficient Communities staff will develop and implement outreach strategies to promote program offerings as follows:

- Presentations to Chambers of Commerce, Business, Industry and Agriculture and other trade associations to publicize program offerings.
- Leverage relationships with local governments and other entities to gain awareness of new commercial and industrial developments, and connect developers with program offerings.
- Identify business customers whose energy efficiency achievements illustrate results of PSE program participation and highlight their successes at events, in case studies and through media outreach to increase awareness of program offerings.

D. Resource Conservation Management

Schedules E/G 253

1. Purpose

The purpose of the Resource Conservation Management program is to achieve customer cost reductions for major resource utility bills through behavioral changes, operational improvements, facility maintenance, and attention to utility accounting. Savings result from changes in practices and do not require major investments in equipment.

2. Description

PSE offers Resource Conservation Management Services (RCM) to any school district, public-sector government agency, and Commercial or Industrial (C/I) customer with a minimum portfolio baseload to meet cost-effective thresholds. The RCM program targets larger customers with multiple facilities such that the cost of implementation can be recovered through savings achieved. Schedule 448, 449, 458, and 459 customers may utilize their Schedule 258 funding allocation for Resource Conservation Manager Services (RCM).

Customers qualify for the RCM program based on their annual PSE energy purchases. A typical customer baseline for maximum program funding is 20,000,000 kWh for electric only or 2,700,000 therms for gas-only service from PSE. Funding levels are prorated based on the amount of staff a customer would need to allocate in order to achieve cost-effective savings from RCM efforts. At a minimum, the customer needs to use 1,000,000 kWh or 135,000 Therms, or the equivalent to participate in the program.

An RCM customer employs, contracts, or designates existing staff to implement RCM responsibilities, including accounting for resource consumption, assessing facilities, recommending actions, monitoring progress, calculating savings and communicating program information to organization stakeholders.

Monetary grants include a "start-up" grant for completion of deliverables associated with building the program foundation. The start-up deliverables include identifying an RCM, setting up an energy-accounting database, writing a company resource management plan, and completing facility action plans. Once start-up deliverables are complete, the customer may qualify for "performance grants" based on achieving energy savings associated with RCM practices and "target grants" for meeting or exceeding pre-established energy-reduction targets.

The RCM agreement is valid for three years. Over this time, PSE anticipates a 10-12 percent reduction in overall energy use. Savings are calculated using industry standard practices and energy accounting methodologies. Reported annual savings are a variance from a fixed baseline. PSE may elect to renew a customer's RCM agreement in three-year increments to provide continued support and additional performance incentives.

Puget Sound Energy's RCM support program is comprised of a "menu" of services, which can be tailored to meet the specific needs of the customer. Typical RCM services include, but are not limited to, the following assistance and support:

a. Program Start Up

- Designing and implementing an RCM program.
- Hiring or contracting a Resource Conservation Manager.
- Developing baselines, policies and guidelines, and facility action plans.

b. Resource Accounting Software

- Purchase and/or implementation of resource accounting software.
- Audits of existing databases to review for inclusion of all facilities, accounts, meters, etc., sufficient facility details, missing data, and overall data integrity.

c. Technical Assistance

- On-site walk-through audits to train customer staff to identify waste and opportunities for improved efficiency.
- Analysis and reporting of savings relative to established baseline.

d. Education & Training

- Training in fundamental concepts for designated RCM and support personnel such as custodial, maintenance, and facilities staff.
- Educational materials for classroom or building occupant use including checklists, fact-sheets, and calculators.
- Training stipend to support professional development in Building Operation or Energy Management.

e. Energy Data Services

- Historical and on-going monthly PSE billing data and access to resource accounting software.
- Energy Interval Services for internet viewing of facility gas and electric interval meter data.

f. Cash Incentives

- "Start-up" incentive intended to share the cost of program start-up that is paid upon satisfactory completion of deliverables.
- Performance grants for customers who achieve energy savings after completing their deliverables.
- Target grants for customers who achieve a pre-established targeted amount of energy savings after completing their deliverables.

The RCM program has also assisted customers in establishing Energy Star Benchmarks for their facilities using EPA's Portfolio Manager. PSE will continue to help customers to identify potential targets, improve energy efficiency to meet award qualifications, coordinate the application and inspection process, and submit material to EPA for Energy Star awards.

Additionally, access to energy accounting software has allowed PSE RCM customers to facilitate greenhouse gas accounting and other climate change and sustainability initiatives. The value of this service routinely exceeds those stated in the RCM program scope of work.

PSE continues to explore ways to make the RCM program cost-effective for smaller customers. PSE efforts will continue to work with RCM consultants, customers, and other support agencies to develop this market.

3. Customer Incentives

PSE continues to develop creative incentive options to increase RCM support for a variety of customer segments. The RCM program incentives are as follows:

- *Resource Accounting Software* – PSE will provide access to resource accounting software populated with PSE data and able to incorporate other customer data.
- *Start-Up Incentive* – For qualifying organizations, PSE will provide an incentive to help get the program started with initial set-up of utility database and program organization, provided the customer completes the database set-up, develops a resource management plan and outlines facility action plans for their buildings. Customers will receive PSE support tailored to their needs, including staff training, technical assistance, interval metering, and other services.
- *Performance-Based Incentives* – PSE may provide cash incentives to customers who achieve energy savings relating to occupant behavioral practices and improvements in operational and maintenance (O&M) efforts. If customers meet or exceed energy savings targets, PSE will offer a target incentive to the customer and an increased performance incentive for additional savings. Energy-savings targets will be based on a typical 5 percent reduction from a 12-month baseline and actual savings will be calculated and verified by PSE. Incentive amounts will meet the current commercial and industrial program cost-effective criteria.

4. Marketing and Outreach Plan

PSE's Resource Conservation Manager (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 blurs the distinction between promotional marketing and customer communications. An integrated approach is required to support this program.

Ongoing communications, public relations and RCM training are critical to convey the value and integrity of PSE's program to new and existing customers.

Changes to the program, including payout structure and eligibility thresholds need to be emphasized, particularly to potential customers as PSE is focused on growing customer participants in the near term.

a. Program Communications to Existing Customers

Support the RCM program with development of information and training materials for customers.

- Recognize outstanding customers with awards and designations.
- Update collateral and web pages to be more customer-friendly.
- Continue to promote and enhance tools to support ownership of process, making them easy for customers to use and implement.
- Support for the RCM annual meeting with displays and handouts as needed.
- Establish resources and protocol for webinar trainings.

b. Marketing Communications to Existing and Potential Customers

Provide marketing materials including brochures, web updates and standard presentation materials to communicate about the RCM program.

- Continue to update marketing materials to incorporate program changes required.
- Continue to develop case studies to demonstrate an array of RCM success stories and feature these businesses in monthly newsletters.
- Implement webinars to add value to existing membership while appealing to potential customers.

c. Internal PSE Communications

Communicate key messages about the RCM program to audiences inside of PSE that serve as channels to customers and other stakeholders.

- Provide a conduit for communicating critical updates or program information to the EE Communities and Business Services groups.
- Review communications developed by EE Communities.

d. Publicity

- Work with media outreach and social media teams to publicize successful projects.
- Work with media outreach team to develop articles about RCMs and their accomplishments.

e. Community Outreach

Energy Efficient Communities staff will develop and implement outreach strategies to promote enrollment in the RCM program:

- Presentations to Chambers of Commerce, Large Businesses, and Municipalities to encourage program participation
- Leverage relationships with local governments and other entities to gain awareness of program offerings.
- Identify business customers whose energy efficiency achievements illustrate results of PSE program participation and highlight their successes at events, in case studies and through media outreach to increase awareness of program offerings.

E. Large Power User/Self Directed

Schedule E258

1. Purpose

The purpose of this program is to acquire cost-effective energy savings from large Commercial and Industrial (C/I) customers by providing incentives that support self-directed energy efficiency projects that the customers themselves propose.

2. Description

This program solicits electric energy efficiency upgrades through a Request for Proposal (RFP) process. C/I customers receiving electric service under Schedule 40, 46, 49, 448, 449, 458, or 459 receive a funding allocation based on their electric usage and are responsible for proposing cost-effective project(s) to utilize their allocation. This is classified as the non-competitive phase.

Proposals are evaluated by PSE Engineering Staff for technical soundness, cost-effectiveness and compliance with energy code and tariff requirements. Customers sign a standard PSE Conservation Grant Agreement, defining project cost, PSE incentive amount, and verification requirements prior to installation of project Measures.

The Large Power User Self-Directed program is implemented in cycles, with the current program cycle spanning January 1, 2015 to December 31, 2018. Customers are given until March 31, 2017 to propose projects that utilize their incentive allocations under the non-competitive phase. Customers not designating projects that fully utilize their allocation forfeit their remaining balance to a competitive phase, in which remaining funds are available to all program participants via competitive bid.

In the Competitive Phase, eligible customers respond to an RFP in order to obtain remaining incentive funding that was not claimed during the non-competitive phase. In this phase, eligible customers may have access to funds beyond their original allocation. The competitive phase RFP will be issued May 15, 2017, with the submittal deadline being July 17, 2017. Received proposals will be ranked based on cost-effectiveness and other criteria specified in the RFP. Competitive funding will be awarded, in order of project ranking, until all funds are allocated to projects.

3. Customer Incentives Overview

The incentive budget for eligible customers will be the Electric Conservation Rider revenues less deductions made for the Company's administrative program costs (7½ percent) and for the Northwest Energy Efficiency Alliance (NEEA) budget line item (10 percent).

The total Electric Conservation Rider revenue amount and customer allocation will be determined by the Company's State Regulatory and Cost of Service Department.

Energy efficiency measures are subject to the Company's Total Resource Cost Test to determine the grant amount to be paid. The incentive amount is up to \$0.50 per annual kWh savings, subject to PSE Cost Effectiveness Standards.

Customers receiving service under Schedules 448, 449, 458 or 459 only receive incentives through the Schedule 258 program and cannot receive funding from other programs.

Measure incentive eligibility criteria are based on, but not limited to, established, industry-standard cost effectiveness tests, structure type and its location within PSE service territory, product type and product quantity. A detailed list of Energy Efficiency Measures, Incentives and Eligibility are available as Exhibit 4 of the 2016-2017 Biennial Conservation Plan.

4. Target Market

Commercial and industrial customers receiving electric service under Schedule 40, 46, 49, 448, 449, 458 or 459 are eligible to participate in this program.

5. Marketing and Outreach Plan

Effort will be made to ensure that eligible customers have every opportunity to take advantage of the incentive allocation available to them. If it becomes evident early in the program duration that some customers are having difficulty initiating the program process, the Company will offer to provide extra assistance to identify projects and perform any required follow-through.

F. Energy Efficient Technology Evaluation

Schedules E/G 261

1. Technology Evaluation Overview

The purpose of Energy Efficiency Technology Evaluation is to identify new, energy efficient technologies and products for PSE program offerings. 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.

It is relatively simple to determine whether new, commercially available technologies are suitable, as long as generally accepted engineering calculations can be used, and manufacturers can provide reliable data. For example, vendors frequently approach PSE with new, improved products, claimed to save more energy than their older models, or their competition. Usually these proposals are evaluated by the Energy Management Engineer who is managing the project, who then shares his/her experience with others in the group.

Some technologies are not so simple to evaluate. Those that are truly new typically have little experiential history, or there is no generally accepted method to calculate the performance. Clearly, it would be risky to broadly offer incentives through PSE’s programs - risky with regard to uncertain savings and risky for its customers due to unforeseen product issues. If the potential savings look significant, PSE may try the technology on a limited quantity of projects, especially if it is working with a customer who understands the risks and would like to be an “early adopter.” Sometimes the most prudent approach is to monitor the progress of the technology, especially if the savings potential appears limited. PSE’s effort is not intended for basic research, or product development, but to identify technologies that are available and suitable for its programs.

The most challenging situations arise when vendors propose products that are “too good to be true.” Often their savings claims are supported by testimonials from satisfied customers, with little or no reliable test data. Many technologies, such as transient voltage suppressors, power factor correction devices and paint with high R-Value, have been known for years to save little or no energy, but the vendor may insist their product is different, even though it may only have a different name on the box.

Fortunately, PSE has experience with many of these products, or can readily find others who have had experience. It is important, however, to distinguish between inaccurate claims and those that might truly be the new emerging technology that deserves attention.

G. Commercial Rebates

Schedules E/G 262

1. Purpose

PSE offers fixed incentives for select, commonly applied Measures to commercial and industrial customers. These rebates have been developed for measures in which energy savings can be standardized over a wide variety of applications, and where a competitive market pricing structure exists to ensure cost-effectiveness.

2. Description

The following Measure categories are managed in-house by PSE Staff:

- Commercial HVAC (retrofit, demand control ventilation and advanced rooftop controls),
- Commercial Clothes Washers,
- Commercial Laundry Water Heating,
- Commercial Kitchen Equipment,
- Commercial Retail Lighting – Lighting To Go.

PSE contracts with industry experts to implement cost effective Measures tailored to the unique needs of target markets. The following Measure categories are offered through contracted programs:

- Premium HVAC Service,
- Direct Install Measures (Lighting, Refrigeration, Plug Load, Basic HVAC and Water Saving) for Small Businesses, Lodging and Small Agriculture customers.

PSE Program Staff develops program design, monitors program performance, results, and trends. Programs are coordinated closely with the electric and gas Commercial and Industrial Retrofit Program.

Program refinements and cost-effectiveness are reviewed with Engineering Staff, the Evaluation Team, and the Manager of Business Energy Management as necessary on an ongoing and adaptive basis. Incentive Measures, marketing and the fulfillment process may be modified, as needed, to respond to developments in technology, market conditions, customer acceptance and/or changes in supplier/contractor delivery and pricing.

3. Customer Incentives

Most incentives are a flat dollar amount, usually for a “Measure” or “device” that is a “stand alone” unit. Customers can generally select from qualifying models (for instance, washing machines). Some incentives are a flat amount per “unit size” of the measure, where unit size may be “per ton” or “per horsepower.” In some cases, incentives may be tied to square feet of conditioned space because energy savings depend on the size of the building more heavily than the size of the equipment.

A list of all requirements for eligibility and participation can be found on individual program application forms or participation agreements.

Most incentives are paid directly to the customer, but may be assigned by the customer to the contractor. For some measures, the incentive can be deducted from the sales price at the point of sale, in which case the participating vendor may be eligible for an additional sales incentive.

Measure incentive eligibility criteria are based on, but not limited to, established, industry-standard cost effectiveness tests, structure type and its location within PSE service territory, fuel type (gas or electric), product type and product quantity. A detailed list of Energy Efficiency Service Measures, Incentives and Eligibility are included as an Attachment to this 2015 Annual Conservation Plan as Exhibit 4.

4. Target Market

Rebate Measures are targeted to appropriate commercial markets, including but not limited to: Large Office, Small Office, Large Retail, Small and Specialty Retail, Restaurants, Commercial Laundries, Hotels/Lodging, Groceries, Convenience Stores, Hospitals, HealthCare/ Assisted Living, Schools, Property Management, farms and agricultural businesses.

Schedule 448, 449, 458, and 459 customers may utilize their Schedule 258 funding allocation for Measures and incentive amounts offered under this program.

Multifamily related businesses or those with dwelling units are served under the Multifamily Retrofit programs, Schedules E217 and G217.

In the rare instance that customers operate a business on residential rate schedules (for instance, out of the home or garage) PSE will offer the appropriate measures to them specifically tied to their type of business providing that the customer is able to show proof of current business license.

5. Marketing and Outreach Plan

PSE's Commercial Rebates Program will be proactive in using a mix of marketing and communications activities to reach the decision makers and influencers in the following key business sectors, as well as maintain current and accurate promotional information for all Commercial Rebates incentives.

a. Commercial Kitchen & Laundry

To promote commercial kitchen and laundry rebates to restaurants and other owners/managers of commercial kitchens (school cafeterias, corporate cafeterias, church kitchens, etc.), and laundry operations, marketing activities will include:

- Develop targeted marketing strategy to drive awareness of and increase participation in PSE's commercial kitchen and laundry.
- Develop and deliver marketing and outreach strategy to target lodging/hospitality industry and laundry customers in communities based on propensity for participation.
- Identify opportunities to cross-promote commercial kitchen/laundry programs to customers who have already participated in other commercial efficiency programs.
- Collaborate with restaurant supply distributors to co-promote commercial kitchen rebates and incentives.
- Continue involvement in multi-channel initiatives and campaigns/promotions.
- Collaborate with SBDI program to cross-promote commercial kitchen and laundry programs and services to small business customers.

b. Commercial Retail Lighting – Lighting To Go

Following a format that is similar to residential lighting, PSE will continue offering commercial customers retail lighting offerings through the Lighting To Go program. The program focuses on point of sale and prescriptive lighting discounts, which enhance the customer experience in lighting incentive programs to increase uptake due to the ease of participation.

Under this format, paperwork is reduced for the vendor partner to align more with residential lighting. Some customer data will still be required by the vendor partners at point of purchase so that PSE can send a thank you to the end use commercial customer. Actual installs will not be verified.

Savings, incentives, and quantities have been updated for 2017 to reflect changing market conditions, including the decline in LED pricing, shifting baselines, and customer uptake.

This program is exclusively LED screw-in lamps and plug-and-play lamps like TLEDs (Tubular LEDs). The program is limited to these LED types in order to eliminate any potential risk of duplicate savings from other PSE lighting programs.

Promotional efforts will include:

- Development and continued disbursement of point of purchase (POP) signage for participating instant rebate vendors, supported by professional field service staff.
- Development of marketing collateral that provides increased awareness of PSE Retail Lighting program incentives, coordinated closely with other PSE Retail offerings.

c. Premium HVAC

PSE's Premium Service program is promoted through its Contractor Alliance Network Partners and directly to its end use customers through several channels including

- PSE will provide a series of contractor and trade partner trainings throughout its service territory
- Direct outreach to large property management firms. These customers control and maintain large numbers of eligible units.
- Targeted end use customer marketing through direct mail/email campaigns
- Participate in all relevant industry trade shows and other opportunities to connect face to face with target customers and contractors

d. Commercial HVAC

To promote commercial HVAC rebates to targeted commercial owners and building operators, marketing activities will include:

- Develop targeted marketing strategy to drive awareness of and increase participation in PSE's commercial HVAC programs and services.

- Identify opportunities to cross-promote commercial HVAC programs to customers who have already participated in other commercial efficiency programs.
- Collaborate with manufacturers, distributors and contractors to co-promote commercial HVAC rebates and incentives.
- Continue involvement in multi-channel initiatives and campaigns/promotions.
- Collaborate with Direct Install programs to cross-promote commercial HVAC programs and services to small business customers.

e. Direct Install Programs

To promote Small Business, Lodging and Agriculture rebates and services to targeted commercial owners, building operators, and tenants, marketing activities will include:

- Develop targeted marketing and PR strategy to drive awareness of PSE's direct install energy efficiency programs and cross-promote other commercial programs to business community.
- Coordinate marketing and promotional efforts to support community blitzes.
- Develop enhanced city engagement strategy to further integrate blitzes in communities and with city officials and chambers of commerce.
- Collaborate with retailers in blitz communities to provide exclusive efficiency offers for commercial and residential customers.
- Cross-promote product and rebate offerings to residential customers in blitz communities.

f. Community Outreach

Energy Efficient Communities staff will develop and implement outreach strategies to promote program offerings as follows:

- Presentations to Chambers of Commerce, Visitors and Convention Bureaus, restaurant and hospitality associations and other trade associations to publicize program offerings.

- Partner with Municipalities, Businesses Services to target small to mid-size business in select communities to deliver Small Business Door to Door Blitzes.
- Leverage relationships with local governments and other entities to gain awareness of new commercial and industrial developments, and connect developers with program offerings.
- Identify business customers whose energy efficiency achievements illustrate results of PSE program participation and highlight their successes at events, in case studies and through media outreach to increase awareness of program offerings.

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IV. REGIONAL PROGRAMS

A. Northwest Energy Efficiency Alliance

Schedule E254

1. Description

NEEA is a non-profit organization working to accelerate the innovation and adoption of energy-efficient products, services and practices in the Northwest. As a partner with NEEA, Puget Sound Energy contributes funding for regional energy efficiency initiatives, actively participates on NEEA's Board of Directors and advisory committees, and supports various related initiatives in the Puget Sound Energy service area.

The NEEA 2015-2019 Business Plan, adopted in 2014, focuses on creating lasting change in energy efficiency in the Northwest through strong partnerships with the region's utilities and market actors. The 2015-2019 business plan was developed through a participatory year-long strategic planning process with the NEEA Board and region as a whole. The Business Plan provides for some flexibility, allowing funders to conduct some market transformation activities themselves, and has a five-year total regional savings goal of at least 145 average megawatts (aMW).⁴ Further information about NEEA's history, structure, initiatives and press is available on [NEEA's website](#).

a. Regional Gas Market Transformation

The NEEA Board approved an operating budget of \$169 million in funding for 2015 – 2019 market transformation initiatives from Northwest utilities including the Bonneville Power Administration (BPA) (on behalf of more than 130 utilities), Puget Sound Energy, Energy Trust of Oregon, Idaho Power, Avista Corporation, PacifiCorp, Seattle City Light, Tacoma Power, Snohomish County PUD and others.

In late 2014, the NEEA Board approved the formation of a regional gas market transformation Collaborative. Funded by the largest gas utilities in the Northwest Region, NEEA will lead the effort to accelerate the adoption of leading-edge gas technologies, with the expected results of achieving increased gas conservation in the long-term.

⁴ Please see NEEA's 2015-2019 Business Plan at: <http://neea.org/docs/default-source/default-document-library/neea-2015-19-business-plan---board-approved.pdf?sfvrsn=2>

The five-year (2015-2019) budget is \$18.3 million, which will enable NEEA to coordinate the launch and implementation of five measures over that timeframe.

Some of the measures: gas-fired heat pump water heaters, combined space & water heat, rooftop HVAC, and gas clothes dryers, are in the formative stages of their development and are expected to achieve cost-effective savings in the long-term. Others, such as high-efficiency gas fireplaces, are expected to produce cost-effective savings in the nearer term. The overall portfolio is expected to realize lower long-term avoided costs than current gas measures.

B. Production and Distribution Efficiency

Schedule E292

1. Purpose

The purpose of the Production and Distribution Efficiency program is to evaluate and implement energy conservation Measures within PSE's own generation and distribution facilities.

2. Description

The Production and Distribution Efficiency program involves implementing energy conservation Measures within PSE's own production and distribution facilities that prove cost-effective, reliable and feasible.

Within production facilities, conservation Measures reduce ancillary loads at the site and exclude efficiency improvements made to the generating equipment itself. These Measures may include, but are not limited to, lighting upgrades, variable speed drives and compressor upgrades.

For transmission and distribution (T&D) efficiency, improvements are implemented at PSE's electric substations. These improvements can involve reducing the energy use within the substation itself and the distribution of energy from it. They can range from on-site Measures like lighting and heat pumps to system Measures like phase balancing and conservation voltage reduction (CVR) (also referred to as voltage optimization (VO)).

This program requires coordination between the Energy Efficiency Program Manager and Staff in other PSE departments to collect project specific details for program tracking and reporting.

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V. PORTFOLIO SUPPORT

A. Customer Engagement and Education

1. Purpose

This activity grouping is made up of functions and services designed to drive PSE customer to take action, and engage in energy efficiency initiatives. This group provides customers with information, tools and resources that enable easy enrollment in a number of PSE efficiency offerings. The services address the full spectrum of Energy Efficiency's benefits, and the Customer Engagement and Education Staff often provide the customer's first impression of the Energy Efficiency department.

2. Energy Advisors

The Energy Advisor Department is a unique, customer solution operation. This expert group brings efficiency into PSE's customer homes by guiding them in changing behaviors, understanding their energy use, and assisting them in using PSE's programs that are best for the customer's individual circumstances. Energy Advisors also promote and explain PSE's renewable energy programs, community challengers, available promotions and tax incentives. The Energy Advisors assist customers with these services over the phone, email, and in person.

Unlike transaction-based customer care departments, the Energy Advisors provide expertise and deliver solutions tailor-made for customers' homes. The Energy Advisors perform research, conduct analyses, provide resolution, and respond to customer inquiries. They follow-up on requests related to energy efficiency and conservation that inform customers, make suggestions on how customers can reduce their energy use. They represent PSE in an effort to promote and cross-market energy-efficiency products and services by presenting and providing educational materials to employees, organizations and community groups.

Energy Advisors receive training and instruction in departmental procedures, current programs, building science, and customer service. They are expected to use good judgment in independently responding to recurring customer issues and/or complaints. Unique, difficult or unusual customer service issues are referred to Senior Energy Advisors.

Individual Energy Advisors are also located in several PSE Business Offices throughout PSE's service territory to provide direct support for energy-efficiency questions.

Customers have access to speak directly to an Energy Advisor through a toll-free number, **1-800-562-1482**, Monday through Friday, 8am to 5pm.

3. Events

The Energy Efficiency department participates in community, local, and regional events throughout the year, including home shows, trade shows, seminars, corporate events and community events. The event audience consists of general public, businesses, builder/contractors, multifamily property owners, city leaders, home owner associations, and students/teachers. PSE maintains a presence at these venues to promote its residential and commercial energy efficiency programs in addition to the other communication methods PSE uses to educate customers about its offerings. This provides unique opportunities for Energy Efficiency Staff to interact directly with customers and discuss a variety of products, programs and services that the department offers. Energy Efficiency Staff will also match customer interests and needs with Energy Efficiency programs, as well as bring back customer feedback.

The event strategy team provides specific criteria for event participation that matches overall business and strategy of the programs supporting Energy Efficiency programs with emphasis on presence, affiliation, and relevance. Each event holds a particular value to stakeholders and relates to objectives of PSE Energy Efficiency programs.

The Events team organizes events using an event management data system to improve communication and customer experience. The team assesses event requests and reviews event opportunities in advance with a focus on tactical planning for and vetting events. PSE proactively seeks new audiences to deliver energy efficiency services, using available demographic data to identify harder to reach communities.

PSE employs a third-party vendor to augment its dedicated events staffing to ensure the maximum energy-efficiency exposure. The goal of this is to increase awareness and uptake of PSE EE programs, drive energy savings and reach a broad and diverse audience base through door-to-door, open houses, and community events.

4. Energy Efficiency Brochures

PSE provides brochures and how-to guides on numerous energy efficiency opportunities, including low-cost equipment, weatherization measures, major weatherization improvements, and equipment upgrades. This information includes investment and savings estimates where appropriate.

The brochures provided as part of this program are general energy efficiency in nature, whereas program-specific (for example, business programs, residential heat pumps, or mobile home duct sealing), are budgeted within those specific programs. These brochures are available to customers in paper form and online at the PSE website. Where required by tariff, brochures are included as bill inserts.

5. Education

Schedules E202, G202

The Energy Efficiency Education program provides opportunities to broaden knowledge of conservation and renewable energy, and increase participation in efficiency programs.

PSE's energy education provides a forum for positive customer and community interaction and involvement that will inform, inspire, and empower with the understanding that individual choices do make a difference.

a. Description

At this time, there are no solidified plans for the Education program in 2016/17, but as opportunities arise, the Energy Efficient Communities team will deliver them through their engagement with the community. The current Independent Colleges of Washington program budget has been moved over to the EE Communities budget.

b. Education Tactics

Continue long standing relationship with Independent Colleges of Washington where students engage in energy efficiency research projects related to improvement in power and energy use.

The Energy Education program also includes an education team who will be focusing on engaging PSE employees to increase their knowledge of energy efficiency programs and products and services through training workshops, presentations at team meetings, and other tactics. By providing employees education on PSE's energy efficiency programs they will be able to provide that information to customers they are working with on a daily basis and therefore increase customers' awareness of its energy efficiency programs.

B. Electronic Media and Tools

1. Purpose

The Electronic Media and Tools group implements services and activities that focus on PSE customer access to Energy Efficiency programs, via the internet or other forms of electronic media.

2. Description

This Electronic Media and Tools team is made up of Customer Digital Experience and Market Integration, which are detailed in the following paragraphs. The Automated Benchmarking System is discussed in the following section.

3. Customer Digital Experience

a. Purpose

PSE's customers expect to receive information and interact with PSE online in the same sophisticated ways they do with other companies. Customer Digital Experience is designed to support the development and maintenance of tools that simplify the energy-efficiency educational process, providing interactive, engaging experiences that drive PSE's customers to manage and lower their energy usage.

b. Description

Customer Digital Experience and Market Integration are designed to significantly improve Energy Efficiency's ability to communicate the "how and why" of energy efficiency, using new technologies and engaging interactive methods.

Customer Digital Experience consists of the initiative to make PSE's energy-efficiency web tools effective in delivering electricity and gas savings. Research has shown that PSE customers are more web-savvy than average and have high expectations when doing business on the web.

Customer Digital Experience also supports interactive content development, e-newsletters and other miscellaneous software applications, including online form, database and web hosting services.

These newly-enhanced tools, implemented in 2014 and regularly improved and updated, help customers understand the specifics behind their energy usage, show neighbor comparisons (residential customers),⁵ notify customers of higher than usual usage, and provide new ways to encourage efficient behaviors, by suggesting personalized tips, tools, ideas and checklists, based on a customer's automated energy usage profile and self-assessment information.

Customer Digital Experience also supports interactive content development, e-newsletters and the fees for other miscellaneous software applications, such as online form, database and web hosting services, and includes purchases made through shopPSE, funded by the Residential Energy Management Direct-to-Consumer Channel (<http://PSE.com/shoppse>).

4. Market Integration

Market Integration consists of salary costs of employees working on energy-efficiency marketing platform development and maintenance. This budget category is designed to increase the transparency of the work done on energy-efficiency marketing-related items. This includes the enhancement of online energy-efficiency tools and features, as well as traditional marketing executions that center on promotional channels used across all programs (that is, events, collateral and websites).

⁵ Specific customer details; addresses, names, account information, etc. is rigorously protected. Instead, only general, non-specific comparisons will be provided.

C. Automated Benchmarking System

1. Purpose

This website, called *MyData* and launched in the autumn of 2013, provides building owners an easy to use, self-service portal that will allow users to set up automated monthly reporting of their building's usage.

2. Description

MyData is a free web-based tool offered by PSE that allows building owners, managers and operators to track and assess energy consumption of their buildings. By registering your property, you will be a part of what is becoming an industry standard and will receive quick and accurate data on a monthly basis for your entire building. This tool will enable you to track energy usage for a portfolio of buildings, track the results of energy efficiency projects, develop Energy Star ratings and comply with state regulations including required reporting in the [City of Seattle](#) via Energy Star Portfolio Manager.

3. Target Market

Approximately 75 percent of the whole-building energy usage requests PSE receives come from building owners (or their contractors) that are tracking their energy usage or tracking the results of energy efficiency projects.

D. Rebates Processing

1. Purpose

Rebates Processing functions include intake, qualification, payment and customer service, as well as process improvement in the customer experience. Improvements include, but are not limited to, redesigning rebate forms for clear instructions and qualifying criteria, analyzing rejection reasons for the root cause of non-qualified rebates, and simplifying the application process for customers.

2. Description

The Rebates Processing budget is predominantly labor and includes training, planning and development costs projected by Rebate Processing staff.

Rebates Processing roles include:

- Intake, qualifying, data entry, and incentive payment processing;
- Communicating with customers regarding the rebate submittal, including status and payment;
- Collaborating with the Energy Advisors to provide a seamless and efficient customer experience;
- Demonstrating best practices and continuous improvement;
- Coordinating timely customer payment with PSE Accounts Payable.

3. Target Markets

Rebates Processing staff are integral to PSE's Residential and Business Energy Management groups' energy savings and target needs.

E. Programs Support

1. Purpose

Programs Support functions include data management, tracking and reporting services provided by Data and Systems Services staff, as well as research, planning, and development work by Program Development staff, all supporting implementation of Residential and Business Energy Management customer programs.

In addition to mainstream *energy* management development work, customer load (or *capacity*) management assessment, planning, and development interests are included in the Programs Support budget.

2. Description

The Programs Support budget is predominantly labor and includes training, planning and development costs projected by Programs Support staff.

Data and Systems Services roles include:

- Planning, development, support, and enhancement of EE systems and tools (including the department's new DSM system (DSMc) for managing and tracking energy efficiency programs, projects and measures);
- Management of reporting, forecasting, and business performance metrics;
- Conducting analytics by understanding and presenting program data as meaningful knowledge and insights.

Program Development roles include:

- Internal and external research, planning and development;
- Biennial and strategic program planning support;
- Customer experience – EE program participation surveys;
- Customer load control / ancillary services assessment;
- Coordination with regional organizations including NEEA and RTF;
- Holistic assessment of Measurement & Verification protocols;
- Developing and managing IRP and related DSR bidding activities;
- Programs Cost-Effectiveness;
- Trade ally support; and
- Best practices and continuous improvement.

A market study assessing the potential for automated dispatchable customer load control was completed in early 2015. Results from the assessment study may be included in the 2015 IRP. Pending assessment study reviews, stakeholder interests, business case, and related approvals, Program Development resources may be applied toward a pilot in this biennium.

3. Target Markets

Programs Support staff serve PSE's Residential and Business Energy Management groups' data and systems services, planning, and development needs.

F. Energy Efficient Communities

1. Purpose

Energy Efficient Communities (EEC) is a program-support channel to deliver Energy Efficiency program information directly to residential and commercial customers and through partnerships with community organizations and municipalities. The program works to leverage community resources to connect with, educate and move customers to Energy Efficiency program participation.

2. Description

Puget Sound Energy's Energy Efficient Communities channel works to generate participation in PSE's Energy Efficiency programs through direct-to-customer outreach and through partnerships. The team works to discover locally-appropriate ways of engaging with customers by leveraging PSE's resources, community knowledge and partner support.

The EEC team works closely with the Energy Efficiency programs to determine whether a broader partnership with a community organization or a more targeted, direct-to-customer approach is needed, such as a door-to-door initiative. As an outreach team for both residential and commercial programs, the EEC team also works on cross-program promotion, where appropriate.

3. Target Markets

PSE's Energy Efficient Communities channel has staff located in regional offices to provide an improved connection to the multiple community stakeholders that Energy Efficiency serves throughout the service area. These partnerships provide opportunities to connect directly and indirectly with the residential and commercial markets. This model also helps the staff members learn about the customers in the communities in order to design outreach strategies to encourage program participation. The team centrally plans their general outreach initiatives as a group, but each team member customizes that outreach for their community.

Energy Efficient Communities works closely with the Energy Efficiency program teams to reach out to the underserved markets to deliver consistent programs throughout the service area. The team works to find areas with lower program participation to directly target engagement with customers. They provide leads for the small business programs through partnerships with cities and community groups, through designing door to door engagements as well as through presentations to the small business community.

They also assist in the design of large scale residential customer outreach initiatives to ensure programs are brought to a variety of customer segments. Door to door initiatives and partnering with community entities provide the opportunity to engage with more customers about the benefits of the Energy Efficiency programs.

The EEC team delivers a robust employee engagement and awareness plan to educate PSE employees on the Energy Efficiency programs to ensure they are incorporating the information into their work with customers. These opportunities leverage other PSE work that is occurring with customers, and therefore improves the customer experience and increases program participation.

G. Trade Ally Support

1. Purpose

Trade Ally Support manages PSE membership costs in Energy Efficiency (EE) trade associations. These organizations stand apart from other trade memberships managed in individual Energy Efficiency programs in that they provide comparatively broad-based EE research, training and/or implementation support services.

Trade Ally Support organizations provide education, information and related services for:

- The adoption or expansion of energy-efficiency products, services, and practices; and
- Conducting research toward the development of new, or improved validation or delivery of existing conservation measures, programs and services.

2. Description

The Trade Ally Support line item budgets and tracks only annual membership dues or Energy Efficiency services subscriptions PSE pays to broad-based industry trade and research organizations who perform and support ongoing development and implementation of Residential and Business Energy Management programs. PSE participates in and utilizes the services of many such organizations to support delivery, management, and promotion of energy efficiency services. Utility, customer, and service provider benefits primarily include education and information exchange on end-use technologies, energy legislation, efficiency services, and related industry trends.

Other Trade Ally expenses not related to dues, for example conference attendance by PSE Energy Efficiency staff, are budgeted and tracked with the pertinent efficiency program(s) receiving the benefit.

3. Target Market

Organization memberships budgeted in Trade Ally Support for the 2016-2017 biennium include (but may not be limited to):

- Association of Energy Service Professionals (AESP)
- Building Owners & Managers Association (BOMA) of Seattle & King County,
- Consortium for Energy Efficiency (CEE),
- E Source
- Electric League of the Pacific Northwest,
- Energy Solutions Center (ESC), and
- Northwest Energy Efficiency Council (NEEC).

VI. RESEARCH & COMPLIANCE

A. Conservation Supply Curves

1. Objectives

The purpose of the Conservation Supply Curve function is to complete a Conservation Potential Assessment for the company's Integrated Resource Plan (IRP). The Conservation Potential Assessment identifies the amount of energy savings potential that is technically and economically achievable over the 20-year planning horizon of PSE's IRP. The IRP, which is filed every two years, is the basis for PSE's electric and gas energy resource acquisition strategy, as well as the targets for its energy efficiency programs. The IRP analysis is also used to derive the ten-year conservation potential as required by WAC 480-109-100(2), to comply with the Washington Energy Independence Act (often referred to as I-937).

2. Description

PSE's next IRP and Conservation Potential Assessment are due in 2017. The Company will conduct an assessment of the long-term market potential for electric and natural gas energy savings from energy efficiency and other demand-side resources, covering the twenty year period 2018-2037. PSE anticipates continued use of a consultant to perform the analysis. The budget includes costs to complete the conservation potential assessment and incorporate the results of that assessment in the resource portfolio analysis. This analysis will be a key component for establishing program savings targets for 2018-2019.

B. Strategic Planning

1. Objectives

The Strategic Planning function conducts a variety of research studies and analyses to support regulatory compliance proceedings and other strategic initiatives.

2. Description

The Strategic Planning function is responsible for providing support and guidance to a variety of regulatory and other strategic initiatives. Responsibilities include regulatory compliance filings, federal and state legislative review, policy analysis, or other strategic efforts related to energy efficiency.

C. Market Research

1. Objectives

Market Research conducts a variety of research studies and analyses to support program design, marketing strategies, and development of effective program promotion and customer communications for energy efficiency.

2. Description

The focus of the Market Research function is on acquiring information about customers that is relevant for the development of energy-efficiency programs, educational materials, and promotional campaigns that will be effective in encouraging program participation.

Through various techniques such as surveys, focus groups, and analysis of existing databases, Market Research provides understanding of customer perceptions, motivations and barriers to adoption of energy-efficient applications and behavior, as well as tracking customer awareness of program offerings and satisfaction with non-program specific education and information services. Market Research is also called upon for analysis of localized characteristics, attitudes, behavior, and energy usage trends, necessitating more geographically targeted research. Market Research expenses are driven by the customized nature of the work and the large sample sizes required in quantitative studies for results to be valid for multiple market segments and geographic areas.

The Market Research Staff works closely with Program Implementation, Marketing, Energy Efficient Communities, and Program Evaluation Staff to identify research needs that support the effective development, delivery, and evaluation of energy efficiency programs. These research needs are then coordinated and leveraged to result in a slate of research projects that are responsive to internal client needs, eliminate duplication of effort, and are cost-efficient.

PSE's conservation market research activities are divided into two basic components:

Baseline Research with Broad Applications: This type of research provides foundational information about PSE customers that will be a common source of knowledge for the general planning and design of all energy efficiency programs and promotional campaigns.

Application-Specific Research: This research is focused on specific programs or promotional initiatives. It includes research that supports specific energy efficiency program promotion and communications campaigns, such as message testing, target markets, and campaign effectiveness studies. Other research efforts will be focused on tracking customer satisfaction with information services, such as the Energy Advisors. Finally, research may be conducted to provide customer input on the design and implementation of specific programs, primarily using qualitative methods such as focus groups.

Market Research has made greater use of online research tools and secondary data sources, which helps to control costs. In particular, PSE utilizes an online residential research panel of approximately 3,000 customers as a very economical survey tool, as well as purchasing existing demographic data from third-party providers, rather than conducting original research to collect this information. In the 2016-17 biennium Market Research will build propensity models to refine targeted marketing of energy efficiency programs. Market Research will also focus on standardizing survey efforts across energy efficiency offerings to better gauge customer acceptance and program performance levels.

D. Verification Team

1. Description

As the “V” in EM&V, PSE’s Verification Team performs on-site inspections and confirmations of randomly-selected participating homes and businesses to assure energy efficiency measures are properly installed. Combined with other Evaluation and Measurement functions, the Verification Team seeks to secure both confidence in claimed energy savings and improvements in program quality.

The “Measurement & Verification: Policies, Guidelines, Protocols & Processes” document introduces M&V protocols to be used across the Energy Efficiency functions.

2. Measurement & Verification (M&V)

M&V is the process of determining and validating savings, where equipment energy usage may be measured and equipment installations verified. Energy Efficiency M&V policies include:

- Every Energy Efficiency measure and/or program has objective and documented analysis describing kWh and/or therm savings (ref. PSE Measure Metrics database). The Verification Team provides on-site independent checks of measure installations for measures and/or programs.
- Energy Efficiency program planning, implementation, verification and evaluation teams are engaged in on-going quality assurance, quality control, analysis and reporting of measure/program activities.
- All methods are documented and subject to review to increase quality and reliability.

3. Verification Team Guidelines

PSE created the “Measurement & Verification: Policies, Guidelines, Protocols & Processes” document in response to Condition (6)(f)(ii):

“Measurement & Verification – PSE shall provide detailed descriptions of its measurement & verification (M&V) policies, protocols, guidelines, and processes to the CRAG [Conservation Resources Advisory Group] for review and advice. Additionally, PSE shall provide to the CRAG an estimate of the costs associated with the detailed M&V plan and PSE will maintain activities at levels that are at least commensurate with regional peers.”⁶

The document provides detailed descriptions of PSE M&V policies, protocols, guidelines and processes.

Verification of energy efficiency installations: This is conducted in multiple venues through review of documentation, surveys and on-site inspections. To ensure the accuracy of program and measure savings claims, verification activities encompass many different steps, including invoice and calculation reviews, on-site inspections and phone verifications among others.

Verification of energy savings: Energy Efficiency programs have documented procedures in place to fully verify measure savings. Verification procedures described in the Verification Manual vary depending on measure, participant, or program type. Practices documented in the Verification Manual detail expectations for all stakeholders including Program Implementation Staff, program participants and installation contractors. The processes most reflective of day to day functions of the Verification Team are the pre and post-installation inspections described in the Manual.

⁶ Agreed Conditions for Approval of Puget Sound Energy, Inc.’s 2010-2011 Biennial Electric Conservation Targets under RCW 19.285, Docket No. UE-100177.

E. Program Evaluation

1. Description

PSE Evaluation Staff are committed to the evaluation of energy savings and the continual improvement of energy-efficiency service delivery to customers. PSE program implementation teams work together with the Evaluation team to inform the development of evaluation scopes of work. The Evaluation Team then develops and maintains a strategic evaluation plan, in accordance with the guiding Evaluation Framework, ensuring that all programs receive review on a four-year cyclic basis. In prioritizing programs for evaluation, PSE also considers the level of energy savings, significant program changes and whether a program is new or never been evaluated before. Adjustments to the evaluation plan may be made during the biennium, with CRAG review and advice.

Residential Programs to be evaluated in 2016-2017 include:

- Low Income Weatherization
- Residential Retrofit
- Residential Retail Channel
- Home Energy Reports
- Residential New Construction

Nonresidential Programs to be evaluated in 2016-2017 include:

- Nonresidential Rebates
- Nonresidential New Construction
- Resource Conservation Manager
- Industrial System Optimization Program
- Small and Medium Business
- Bellevue Urban Smart
- Conservation Voltage Reduction

For additional information on planned evaluation activity, please refer to the Evaluation Plan (Exhibit 6 of the 2016-2017 Biennial Conservation Plan).

Through the Evaluation Report Response (ERR), the Program and Evaluation Teams ensure that evaluation results are implemented in the program. The Program Team completes the ERR, indicating what actions will be taken in response to evaluation findings and recommendations. This ensures a closed-loop system with Evaluation findings and Implementation reactions and adjustments being documented in the Source of Savings database.

PSE frequently shares the results of its evaluations with the RTF to ensure continuous improvement of measure energy savings values that are widely used in the region. In addition, PSE monitors the Regional Technical Forum (RTF), NEEA, and the Northwest Research Group (NWRG), as well as directly reaching out to neighboring utilities, for opportunities to collaborate on common evaluation needs.

VII. OTHER ELECTRIC PROGRAMS

A. Net Metering

Schedule E150

1. Purpose

PSE's Net Metering program provides interconnection services for qualifying customer-generators in accordance with State legislation enacted into law in February 11, 1999 and amended June 8, 2000 (see RCW 80.60).

2. Description

PSE provides interconnection services to qualifying Customer-generators who operate fuel cells, hydroelectric, solar, wind, or biogas generators of no more than 100 kW. Service under this schedule is limited to a total of 11.2 MW of cumulative nameplate generating capacity, of which no less than 5.6 MW of cumulative nameplate generating capacity shall be attributable to renewable energy net metering systems that use as a fuel either solar, wind, hydroelectric power, or biogas from animal waste. In 2014, this cap moved to 22.4 MW. Customer generation can be used to offset part or all of the Customer-generator's electricity use under Schedules 7 through 49 of Electric Tariff G.

At the time a customer enrolls in the Net Metering program, they are also provided the necessary information to receive annual benefits from the Production Metering, or Renewable Energy Advantage Program (REAP) , which is the state's performance based incentive described in Schedule 151.

3. Target Market

All customers who are within the Company's service territory and receive electric service under terms of the Company's electric Tariff G.

4. Customer Incentives

No direct customer incentives are provided under this tariff. Energy produced by Customer-generator systems directly reduces energy used in the home or business from the grid. When energy generated exceeds home or business electrical loads, the excess energy flowing to PSE is metered and credited to the customer at the retail rate for future use. The program's year runs May 1 to April 30 of the following year. There is currently no set end date. Any excess credit each month is rolled forward to the following month; however, when the new program year begins May 1, the credit is reset to zero.

B. Production Metering

Schedule 151

1. Purpose

PSE's Renewable Energy Advantage Program provides qualifying Customer-generators with production payments in accordance with State legislation SB 6658 as PSE receives tax credits for renewable production payments, as outlined in RCW 82.16.

2. Description

Production Metering is operated in conjunction with, and in addition to, the Net Metering program. At the time a customer enrolls in the Net Metering program, they are also provided the necessary information to receive annual benefits from Production Metering when enrolling with a qualifying renewable energy technology. The annual payment amount is based on requirements outlined in WAC 458-20-273.

3. Target Market

All qualified net metered customers, under terms of Schedule 150 and all qualifying Schedule 91 customers.

4. Customer Incentives

Once a year customers are paid for all power generated up to the \$5,000.00 cap per the State's Renewable Energy Cost Recovery Program. This payment ranges from \$0.12 to \$1.08 per kWh generated per state law. PSE currently identifies the annual production total and provides the annual application and payment to the customer.

Consistent with WAC requirements enumerated in part 458-20-273(501), PSE must prorate payments to accommodate new customer-generators once the payment cap is reached.

5. Marketing Plan

When customers interconnect for net metering they are also encouraged to participate in the production metering program. PSE notifies the customer and assists them with the annual paperwork process that is required by the state to receive a payment. PSE has a brochure for Customer Renewables used at various events.

The Energy Advisors provide basic information to customers calling to inquire about renewable energy generation. Information on net metering is also accessible from the Savings & Energy Center navigation header at pse.com, or by going directly to PSE.com/renewables.

Renewable energy businesses and organizations such as Solar Washington and Washington State University Energy Programs normally make customers aware of the new metering program when they inquire about renewable energy generators.

C. Electric Vehicle Charger Incentive

Schedule 195

1. Purpose

PSE's Electric Vehicle Charger Incentive program ("EVCI") is a pilot program to study charging use in PSE's electric service territory. The program collects data on charging behavior and patterns for PSE electric customer charging their electric vehicles at home, and compares this information against PSE's other load shapes and resources. Customers driving electric vehicles are provided a \$500 incentive towards the purchase of a Level 2 charger for their home as an incentive to participate in the program and use Level 2 charging, which is more energy efficient than Level 1 charging.

2. Description

There are currently approximately 5,000 electric vehicles registered to PSE's electric service territory, most of which have been registered in the past two years. Some customers are known to be using Level 1 charging, which is a wall outlet, while others are using Level 2 charging at home, which uses specific charging equipment that can use between 3 and 19 kW of power. There is currently no method to monitor where these vehicles charge nor the shape of the load they add to the system, including any impact on peak loads.

EVCI will monitor the electric use of customers with electric vehicles to determine the amount of load and load shape that electric vehicles place on PSE's system, compare these loads to PSE's other loads and resources, and identify impacts to peak load on the system, and identify possible peak mitigation methods. Data collection will occur using multiple sources including PSE's existing meter system, both with and without hourly or sub-hourly energy monitoring, and pilot installations of "smart chargers", and other end-use monitoring methods. Customers are incented to participate in the program and to use Level 2 charging, which is more efficient than Level 1 charging. The program will also target including Level 1 charging in the data collection effort.

3. Target Market

Electric vehicle drivers who live in PSE's electric service territory and have their residence as their principle charging location.

4. Customer Incentives

The program offers \$500.00 per charger installed at the customer's residence, which must also be their primary charging location. The program is capped at 5,000 participants.

5. Marketing Plan

Customer purchase electric vehicle charging equipment through automotive dealers, charging equipment manufacturers, installers, and local and national retailers. PSE will market at the point of sale with automotive dealers, and potentially with equipment manufacturers and installers and retailers. PSE will also use online advertising and outreach at electric vehicle related events to inform customers of the program.

D. Commercial/Industrial Load Control

Schedule E271

1. 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 group as summarized above.

2. Next Steps

PSE is continuing research, planning, and development of customer load/capacity management interests as summarized in Programs Support above. This includes assessing the potential for Ancillary Services (energy imbalance, operating reserves, or other capacity value)-based automated load control for interested and suitable customers. Program Development staff will continue budgeting, tracking and reporting related research and development *planning* costs. Future load control *program* costs as pertinent may be directed to Schedule E271.

VIII. GLOSSARY OF COMMONLY USED ACRONYMS AND TERMS

Unless otherwise noted in a specific Conservation Schedule, the following commonly-used terms, used throughout this document have the below noted meanings:

AIA	American Institute of Architect
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BOMA	Building Owners and Managers Association
BPA	Bonneville Power Administration
CHP	Combined Heat & Power
CMS	Customer Management System
Cost Element	Also referred to as account numbers. Cost element groups typically include; labor, overhead, employee expenses, miscellaneous expenses, materials, etc.
CRAG	Conservation Resource Advisory Group
CS/EE	Customer Solutions/Energy Efficiency. This was the new name assigned to EES (Energy Efficiency Services) at the beginning of 2012.
DDC	Design Development and Construction
DHW	Domestic Hot Water
Direct Install Measure	A conservation Measure that is installed by a PSE representative—rather than a PSE customer—into a qualifying structure.
ECM	Electronically Commutated Motor

Definitions and Acronyms, continued

HID	High Intensity Discharge (related to lighting)
HVAC	Heating, Ventilation and Air Conditioning
IRP	Integrated Resource Plan. PSE's two-year view of 20-year resource needs and how the Company will meet those needs.
kWh	Kilowatt Hour
MBA	Master Builders' Association
NEMA	National Electrical Manufacturers Association
O&M	Operations and Maintenance
Order Number	An eight-digit accounting number, used to track expenditures. FERC rules require that expenditures associated with energy conservation begin with a 1823nnnn (where "n" is another number). This is the most detailed view of accounting for a program's expenditures. Within an order number, cost elements account for the specifics of those expenditures, as explained above.
TRC	Total Resource Cost
UC	Utility Cost
ULI	Urban Land Institute
USGBC	U.S. Green Building Council
WAMOA	Washington Association of Maintenance and Operations Administrators

Energy Efficiency

Exhibit 4

Measures, Incentives & Eligibility

January, 2017



PUGET
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I. GENERAL GUIDELINES FOR MEASURES, INCENTIVES AND ELIGIBILITY

1. Definitions and terms used throughout this document are governed by the Company's Electric Tariff G and Natural Gas Tariff. Where there is a conflict, the Tariff definition shall prevail.
2. Specific terms and conditions are found on the applicable incentive forms, grant documents, rebate application forms and similar documents available from the Company. Some measures noted in this document apply only to a particular customer type or structure type. Some structure types do not have individual measure/incentives available; rather, an incentive may be applied to the entire qualifying structure. Please thoroughly read the incentive terms and conditions before investing in an energy efficiency measure.
3. Some incentive payments noted in this document may be divided in a manner consistent with the Company's program objectives. In some cases, this division may be between the qualifying party or parties receiving the measure. For example, an installing contractor may receive a portion of an indicated incentive amount, with the end-use customer receiving the balance of the indicated amount. Qualifying parties may include, but are not limited to, manufacturers, retailers, distributors, owners of structures, tenants, customers, general contractors, verifiers, approved Washington State Agencies or similar entities.
4. The term **Maximum Amount**, noted in some programs, represents the total amount of funding available per indicated measure, household, dwelling unit, eligible party or parties or structure. Incentive amounts may vary, depending on market conditions, funding availability, energy efficiency level of the installed product(s) or measure, eligibility of the party installing the measure or other similar conditions.
5. At the Company's discretion, and based on changing market conditions, cost-effectiveness and program objectives, incentive amounts may vary from the indicated Maximum Incentive Amount from time to time. The Company may implement limited-time offers, special performance incentives for field forces (sometimes referred to as SPIFFs or SPIFs), temporary promotions, purchasing of products directly for resale, or other adjustments to incentives.

These adjustments will continue to be based on regionally-accepted energy savings estimates and incremental efficiency measure costs. These adjustments may be noted on the PSE.com website, press releases, advertisements, or other media. It is always a good idea to consult an energy advisor at 1 800 562-1482 if you have questions.

6. The Company's energy advisors are available to answer specific energy-efficiency questions, Monday through Friday, 8am to 5pm. Many rebate forms and additional program information are also available via the Company's website:

<http://pse.com/savingsandenergycenter/Pages/default.aspx>

7. Many of the indicated measures require the services of or installation by a professional contractor. Before engaging a contractor, it is important to understand the terms and conditions of the measures for which you may apply and ensure that the contractor meets the Company's qualifying standards.

Generally, contractor qualifications include, but are not limited to:

- Licensed, bonded and insured in the State of Washington.
 - Willing to comply with training and inspection by the Company.
8. Some of the indicated measures have very specific requirements that must be satisfied in order to qualify for the indicated incentive. These include, but are not limited to: structural measures (insulation, windows, etc.), HVAC applications (heat pumps, air handlers, etc.), plumbing fixtures (water heaters, boilers, etc.) and so on. Qualifications listed in this document as a part of the measure description are of a general nature only, and are intended to provide an overview for the customer. Additional information is available on PSE.com, via an energy advisor (1-800-562-1482) and is provided in the incentive application form.

Prior to committing to a potentially large investment, (a heat pump, water heater, windows, insulation, etc.) **it is recommended that customers visit PSE.com or call an energy advisor** to obtain the complete list of qualifications for the measure being considered.

9. Customers, eligible parties, owners or tenants with applicable owner permission assume all liabilities associated with contracting, work performance, ensuring applicable permits are obtained and paying independent contractors. The Company may provide contractor referral services for measures.
10. General terms and requirements for incentive qualification include, but are not limited to:
 - Original purchase receipt or invoice, indicating the date of purchase,
 - Address (the physical location) of where the measure is being installed,
 - Name of person(s) business or entity name claiming the incentive,
 - The structure must be receiving (or will be receiving in the case of new construction) electric service or bundled natural gas service from the Company. Certain service types may be ineligible for conservation rebates, grants, or remuneration. Please consult with the specific terms and conditions of the measure about which you are interested, consult PSE.com, call an energy advisor (1-800-562-1482), or review the incentive application form.

II. INFORMATION-ORIENTED SERVICES

The following services apply in most cases to both Residential and Business customers. Although specific rebates or financial incentives aren't elements of the following services, these services provide energy management tools and access to programs outlined in this Energy Efficiency List of Measures, Incentives, and Eligibility. This brief description provides an overview of the information-oriented resources available to customers.

PSE's Energy Efficiency department offers several different communications avenues that complement each other to provide information about customer programs and efficiency improvements tailored to customers' interests and energy-use concerns.

A. Energy Advisors

Energy Advisors research, analyze, resolve and respond to customer inquiries, issues and requests related to energy efficiency and conservation; and promote and explain energy efficiency and renewable programs and their advantages. They represent the Company in an effort to promote and cross-market products and services by presenting and providing educational materials to employees, organizations and community groups. Energy Advisors work in a team environment and must be able to rapidly adapt to changes in services and programs. Energy Advisors receive training and instruction in departmental procedures and are expected to use good judgment in independently responding to recurring customer issues and/or complaints. Unique, difficult, or unusual customer service issues are referred to the Senior Energy Advisor. Through a toll-free number, 1-800-562-1482, Monday through Friday, 8am to 5pm, customers have access to speak directly to an Energy Advisor.

B. Events

PSE participates in trade shows, community events, and homeowner/trade ally associations' venues that provide opportunities, such as seminars and workshops, to attract PSE residential and business customers to the features and benefits of energy efficiency programs.

C. Energy Efficiency Brochures/Collateral

PSE provides brochures and how-to guides on various energy efficiency opportunities, including behavioral measures, low-cost equipment, weatherization measures and improvements, and equipment upgrades. This information includes guidelines and savings estimates where appropriate. PSE brochures are available to customers in paper form and online at the PSE Web site. Brochures can be mailed to customers and are also distributed at numerous customer events, Home shows and trade shows throughout the year.

D. Energy Education

Education is a key component in furthering consumer energy efficiency and renewable energy awareness so customers are adequately informed to make wise energy decisions. Education programs broaden customer knowledge of conservation and renewable energy, and increases participation in efficiency programs. PSE's energy education programs inform, inspire, and empower with the understanding that individual choices do make a difference.

The programs create a forum to provide information to leaders and educators who can leverage the knowledge to a greater audience. The programs also tie directly to the company's existing energy efficiency opportunities, active resource conservation efforts, and commitment to the community channel. A variety of curricula are available for downloading from the PSE.com website:

<http://pse.com/savingsandenergycenter/ForSchools/Pages/default.aspx>

Additional information about how to participate in Education Programs is available through the Company's toll-free number: 1 800 562-1482.

E. On-Line Tools & Customer Management System

PSE's web site, PSE.com is available with information about energy efficiency and provides energy management tools to residential and business customers.

PSE offers customers energy efficiency products online for free and for retail purchases at shop.pse.com.

PSE's Customer Management System (CMS) is a database management system used to support delivery and results tracking of energy efficiency programs and services. Tracking customer program participation as well as tracking and evaluating the efficiency and effectiveness of promotions and implementation are key components of CMS.

F. Electronic Newsletters

“Energy at Home” is a quarterly e-newsletter promoting energy efficiency to customers who elect to subscribe using an e-mail address. This free service contains articles about energy efficiency, timely seasonal tips, and links to PSE program information and rebates for energy efficient products. A similar quarterly “Energy in Business” e-newsletter features case studies of energy efficiency projects at PSE customer sites, as well as announcements of upcoming training opportunities. The Energy Education Newsletter is a quarterly e-newsletter offering student, teachers and sponsors on expanded ways to learn and take action on energy conservation tips, environmental events, student activities, and upcoming energy efficiency projects.

III. RESIDENTIAL MEASURES, INCENTIVES AND ELIGIBILITY

A. Residential Low Income Weatherization

Schedule 201 (Electric and Natural Gas)

1. Eligibility

a. Customers

Low-income customers, including owners and tenants of single family, multifamily, and mobile homes that meet federal poverty guidelines issued by The Washington State Department of Commerce and receive natural gas and/or electricity from PSE. Low Income agencies are contracted with PSE to perform customer income eligibility, manage the installation and track, and report project data to PSE.

b. Structures

Measures apply to existing single-family, multifamily and mobile home structures.

2. Funding Categories

Single Family, Multifamily, and Mobile Home structure improvements, as detailed below, include the following improvement categories:

- Building envelope Improvements
- Heating system upgrades
- Water heating upgrades
- Lighting upgrades
- Appliance replacement
- Common are upgrades

The majority of measure funding falls into three categories: paid per *square or linear foot* (attic insulation, for instance), per *measure* (for example, a CFL bulb), per *structure* (for example, one furnace, or water heater per home).



3. Incentives

Low Income Weatherization incentives are classified in three types; payments made to agencies on a square-foot basis, payments made per measure and payments per structure. Any limitations and qualifications are noted in the following tables.

4. Electric Funding

a. Per-Structure Basis

Measures	Maximum Payment Amount		
	Single Family	Multifamily	Mobile Home
Electronic Thermostats (Replacement of bi-metal thermostats with electronic thermostats. Line voltage thermostats only.)	\$202.50 \$67.50	\$67.50	-\$67.50
Duct Sealing with other measures (unconditioned spaces)	\$500.00	-	\$500.00
Water Heater Pipe Insulation (3 feet, or more, with minimum thermal value of R-3)	\$20.00	\$20.00	\$20.00
Refrigerator Replacement (<i>In accordance with US DOE protocol and Commerce requirements</i>)	\$545.00	\$545.00	\$545.00
Heat Pump Water Heater Tier 1	\$900.00	\$900.00	\$900.00
Heat Pump Water Heater Tier 2	\$1,369.00	\$1,369.00	\$1,369.00
Ductless Heat Pump (AHRI certified, inverter technology, minimum 1.0 ton)	\$3,407.00	-	\$3,407.00
Energy Star Whole House Fan	\$50.00	\$50.00	\$50.00

b. Per square-foot basis

Measures	Description			Maximum Payment Amount	
Air Sealing MF Structures	Dense Pack Walls and Rim Joists			\$2.41 per sq. ft.	
	Attic and/or Crawl Space			\$0.57 per sq. ft.	
	Door Kits			\$100.00	
	Recessed Can Covers			\$40.00	
	Energy Star® Bathroom Fans (DC Motor)			\$250.00	
	Bathroom Fan Timers			\$50.00	
Air Sealing (Per CFM50 Reduction)	-	-	\$1.00	-	\$1.00
Ceiling Insulation	0	19	-	\$2.21	\$1.10
	0	30	-	-	\$1.25
	0	38	\$2.43	\$2.43	-
	44	30	-	-	\$1.25
	11	38	\$1.95	\$1.95	-
	19	38	\$1.35	\$1.35	-
	0	49	\$2.43	\$2.43	-
	11	49	\$1.95	-	-
	19	49	\$1.95	-	-
Duct Insulation	0	11	\$6.46	\$6.46	-
Floor Insulation	0	11	\$6.46	\$6.46	-
	0	19	\$1.87	\$1.87	-
	0	22	-	-	\$1.50
	0	30	\$2.20	\$2.20	\$2.46
	11	22	-	-	\$1.25
	11	30		\$1.13	-

Per square-foot basis, continued

Measures	R-Existing	R-New	Maximum Payment Amount		
			Single Family	Multifamily	Mobile Home
Wall Insulation	0	11	\$2.75	\$2.75	\$2.75
Windows	Single pane	U-value 0.30	\$13.00	\$16.20	\$12.00
	Double pane	U-value 0.30	\$10.00	\$6.00	\$10.00
	Single pane	U-value 0.25	\$18.00	\$18.00	-
	Double pane	U-value 0.25	\$8.00	\$8.00	-

c. Per-Measure Basis

Measures	Maximum Payment Amount		
	Single Family	Multifamily	Mobile Home
Energy Star LED A-Lamp	\$15.00	\$15.00	\$15.00
Energy Star LED BR-30 Lamp	\$15.00	\$15.00	-
Energy Star LED Candelabra Lamp	\$15.00	\$15.00	-
Energy Star Globe	\$15.00	\$15.00	\$15.00
Energy Star T-8	-	\$15.00	-
LED Fixture	\$40.00	\$40.00	\$40.00
Advanced Power Strip, Direct Install	\$55.00	\$55.00	\$55.00
Energy-efficient Shower Head	\$40.50	\$40.50	\$40.50
Faucet Aerator, 1.5 GPM	\$2.10	\$2.10	\$2.10

5. Offerings Unique to Structure Type

a. Multi Family, Existing

- Common Area Upgrades, calculated incentive
 - Lighting
 - Heating Upgrade
 - Solar Pool Heater
 - Solar Water Heater
 - Solar Space Heat

b. Single Family, Multi Family, Mobile Home

- Savings to Investment Ration (SIR) Measure Upgrades, calculated incentive *

* Conservation measures that are cost effective consistent with the *Weatherization Manual*

6. Natural Gas Funding

a. Per Structure-Basis Savings

Measure	Maximum Payment Amount		
	Single Family	Multifamily	Mobile Home
Duct Sealing (unconditioned spaces)	\$350.00	-	\$350.00
Water Heater Pipe Insulation (3 feet with minimum thermal value of R-3)	\$5.50	\$5.50	\$5.50
Energy Star® qualified Gas Furnace or equivalent	\$692.00	\$603.00	-
Integrated Space & Water Heating	\$1,526.00	\$1,144.00	-
Structure Sealing (Per CFM ₅₀ Reduction)	\$0.40	-	\$0.40



b. Per Square-Foot Basis

Measures	R-Existing	R-New	Maximum Payment Amount		
			Single Family	Multifamily	Mobile Home
Ceiling Insulation	0	30	-	-	\$0.70
	0	38	\$0.95	\$0.95	-
	11	38	\$0.70	\$0.70	-
	0	49	\$0.95	\$0.95	
	11	49	\$0.70		
	19	49	\$0.70		
Duct Insulation	0	11	\$2.50	\$2.50	-
Floor Insulation	0	22	-	-	\$0.70
	0	30	\$0.85	\$0.85	\$0.80
Wall Insulation	0	11	\$0.85	\$0.85	\$0.80

c. Per-Measure Basis

Measure	Maximum Payment Amount		
	Single Family	Multifamily	Mobile Home
Energy-efficient Shower Head	\$25.00	\$25.00	\$25.00
Faucet Aerator, 1.5 GPM	\$2.00	\$2.00	\$2.00

7. Offerings Unique to Structure Type

a. *Multi Family, Existing*

- Common Area Upgrades, calculated incentive¹
 - Heating Upgrade
 - Solar Pool Heater
 - Solar Water Heater
 - Solar Space Heat

8. Energy-Related Repairs Funding

a. *All Structures & Fuel Types*

Measures

Health and Safety Repairs (including, but not limited to):

- Electrical safety inspection and repairs
- Extermination of pests, insects or rodents
- Mold/mildew abatement
- Installation of carbon monoxide monitors in homes with natural gas

Weatherization-Related Repairs (including, but not limited to):

- Roof repair
- Plumbing repair
- Mobile home skirt repair
- Ground Cover

Ventilation

- Installation of bathroom and kitchen ventilation fans
- Crawlspace and attic ventilation

¹ Incentives will be evaluated using currently accepted PSE commercial engineering calculations. Based on cost and savings analysis, project payment based on PSE Cost Effective Standards.

Furnace/Water Heater Repair, Maintenance, or Replacement

Energy Education

- In-unit and group consultations
- :Leave-behind information in units and homes

B. Single Family Existing

Schedule 214 (Electric and Natural Gas)

1. Eligibility

A manufacturer, retailer, distributor, equipment supplier, contractor or agent acting on behalf of responsible party of service, the customer or tenant with applicable owner authorization, of an existing single-family structure receiving electricity or natural gas through a PSE residential Schedule; Rates 7 (including 17, 27, 37 and 47), 8, 11 and 12.

Single Family Residences include structures with four or less single-family units that are attached by a contiguous roofline and manufactured or factory built homes (permanently sited). Single Family Residences that are within a multi-family campus as defined in electric and gas Schedules 217 and 218 of this Tariff, and structures under construction are ineligible for this program.

Selected PSE-approved contractors, vendors, or partners may be eligible for compensation to provide direct installation of specified measures—as a part of installation of a related measure. (For example, installing one or more Energy Star® CFL bulbs during an HVAC installation), as a part of a pilot program, a limited-time offering, or other circumstances determined by PSE.

One way that PSE advances the educational value of conservation and energy efficient program participation is to provide complimentary engagement LED bulbs, energy-efficient showerheads, faucet aerators, and/or advanced power strips as a part of home shows, community events, retail promotions or other conservation-focused events. PSE also provides numerous consumer products—LED bulbs, showerheads, and advanced power strips for instance—for sale at Shop PSE:

<https://shop.pse.com/>

Pricing may be different than the incentive amounts noted in the following measure tables.



2. Incentives

a. Natural Gas Service

Category	Measure	Maximum Incentive Amount Each
Assessment	Home Energy Assessment	Direct install, leave-behind, mail-by-request No charge to eligible customers
	Home Energy Assessment – Manufactured Home	Direct install and leave-behind. No cost to eligible customers
Heating	Energy Star® qualified Gas Furnace, 95% AFUE	\$350.00
	Energy Star® qualified Boilers (greater than or equal to 95% AFUE)	\$350.00
	Integrated Space/Water Heating Systems with Energy Star® Tankless or Energy Star® Boiler	\$800.00
	High Efficiency Natural Gas Fireplace	\$200.00
	Web-Enabled Thermostat Management System	\$150.00
Manufactured Homes	Floor Insulation R-0 to R-22 – Manufactured Home	Up to \$600.00/dwelling unit
	Prescriptive Duct Sealing – Single Wide – Manufactured Home	Up to \$200.00/dwelling unit
	Prescriptive Duct Sealing – Double/Triple Wide – Manufactured Home	Up to \$400.00/dwelling unit
	Upgrade single-pane with wood or metal frame windows to a 0.30 U-factor or better – Manufactured Home	\$50.00 per window, up to \$750.00 per structure
Reporting	Home Energy Reports / Individual Energy Reports	Direct mail to program participants. No cost to customers.
Water Heating	2.0 gallon per minute or less showerhead and ShowerStart Adaptor	\$20.00
	2.0 gallon per minute or less showerhead	Leave behind/Mail-by-request/Direct install/Engagement No cost to eligible customers.
	Faucet Aerator 1.5 gallon per minute or less	\$2.50
	Low-Flow Faucets 1.5 gallon per minute or less	\$20.00
	Faucet Aerator 1.5 gallon per minute or less	Leave behind/Mail-by-request/Direct install/Engagement No cost to eligible customers.

Gas measures, continued

Category	Measure	Maximum Incentive Amount Each
Weatherization	Whole-House Air Sealing	Up to \$350.00/dwelling unit
	Prescriptive duct sealing and Insulation	Up to \$400.00/dwelling unit
	Prescriptive Duct Sealing Only	Up to \$300.00/dwelling unit
	Prescriptive air sealing – attic and crawl space	Up to \$200.00/dwelling unit
	Attic Insulation (R-0 to R-49)	Up to \$600.00/dwelling unit
	Attic Insulation (R-11 to R-49)	Up to \$600.00/dwelling unit
	Floor Insulation (R-0 to R-30)	Up to \$200.00/dwelling unit
	Wall Insulation (R-0 to R-13)	Up to \$400.00/dwelling unit
	Home Performance with Energy Star Rebate	Up to \$400.00
Windows	Upgrade single-pane with wood or metal frame windows to a 0.30 U-factor or better.	\$50.00 per window, up to \$750.00 per structure

Specific requirements for gas incentives

- Some structural, HVAC and water heat measures require qualified contractor installation in order to be eligible for the indicated incentive.



b. Electric Service

Category	Measure	Maximum Incentive Amount Each
Appliances	Energy Star® Clothes Washer (Energy Star® qualified Washing machine greater than 2.38 IMEF).	\$200.00
	Energy Star® Heat Pump Clothes Dryer (Energy Star® qualified heat pump dryers)	\$300.00
	Refrigerator or freezer Decommissioning (working condition, greater than or equal to 10 cubic feet.)	Free pick-up and recycling for eligible customers. Plus \$50.00 to eligible customers.
	Energy Star® Refrigerator (greater than or equal to 7.75 cubic feet)	\$200.00
	Energy Star® Freezer (10% more energy efficient than minimum federal government standard, greater than or equal to 7.75 cubic feet)	\$50.00
	Clothes Washer Replacement (Energy Star® qualified model delivered and installed; old clothes washer hauled away and decommissioned)	No cost to eligible customers
Assessment	Home Energy Assessment	Direct install and leave-behind. No cost to eligible customers
	Home Energy Assessment – Manufactured Home	Direct install and leave-behind. No cost to eligible customers

Electric Service, continued

Category	Measure	Maximum Incentive Amount Each	
Heating	Web-Enabled Thermostat Management System	\$150.00	
	Heat Pumps	Tier 2 = 9.0 HSPF, 14 SEER	\$350.00
		Tier 3 = 10.0 HSPF, 16 SEER	\$800.00
		Ductless Heat Pumps using inverter technology	\$1,200.00
		Ductless Heat Pumps in Manufactured Homes	\$1,200.00
		Energy Star® Geothermal Heat Pump	\$1,500.00
		Forced-air-furnace to Heat Pump Conversion (greater than or equal to 8.5 HSPF, 14 SEER)	\$1,500.00
		Forced-air furnace to Heat Pump Conversion (Manufactured Homes)	Up to \$2,500.00
		Heat Pump Sizing & Lock out Controls	\$300.00
Lighting	CFL bulb recycling	Free to customers at select business locations	
	Energy Star® Criteria TLED Fixture	\$5.00	
	LED Bulbs including A-Line, Reflector, TLED, MR-16, Candelabra, Globe and other specialty LED bulbs	\$7.00	
	Energy Star® criteria LED Indoor Fixture	\$10.00	
	Energy Star® criteria LED Outdoor Fixture	\$15.00	
	LED Bulbs	Leave behind/Mail-by-Request/Direct install/Engagement. No cost to eligible customers.	
		\$	
Plug Load	Advanced Power Strip	Any of the following: 1) \$Up to \$45 each 2) Available for purchase on shop.pse.com 3) Leave behind/Mail-by-Request/Direct install/Engagement. No cost to eligible customers.	



Reporting	Home Energy Reports / Individual Energy Reports	Direct mail to program participants. No cost to customers.

Electric Service, continued

Category	Measure	Maximum Incentive Amount Each
Water Heating	2.0 gallon per minute or less showerhead and ShowerStart Adaptor	\$20.00
	2.0 gallon per minute or less showerhead	Leave behind/Mail-by-Request/Direct install/Engagement. No cost to eligible customers.
	Faucet Aerator 1.5 gallon per minute or less	Leave behind/Mail-by-Request/Direct install/Engagement. No cost to eligible customers.
	Faucet Aerator 1.5 gallon per minute or less	\$2.50
	Low Flow Faucets 1.5 gallon per minute or less	\$20.00
	High Efficiency Electric Water Heater (greater than or equal to .95 EF)	\$50.00
	NEEA Northern Climate Specs Heat Pump Water Heater - Tier 1	Up to \$500.00
	NEEA Northern Climate Specs Heat Pump Water Heater - Tier 2	Up to \$800.00
	NEEA Northern Climate Specs Heat Pump Water Heater – Tier 3 or equal to .95 EF)	Up to \$800.00

Electric Service, continued

Category	Measure	Maximum Incentive Amount Each
Weatherization	Attic Insulation (R-0 to R-49)	Up to \$600.00 per dwelling unit
	Attic Insulation (R-11 to R-49)	Up to \$600.00 per dwelling unit
	Floor Insulation (R-0 to R-30)	Up to \$200.00 per dwelling unit
	Wall Insulation (R-0 to R-13)	Up to \$400.00 per dwelling unit
	Whole House Air Sealing	Up to \$350.00 per dwelling unit
	Prescriptive Air Sealing – attic and crawl space	Up to \$200.00 per dwelling unit
	Prescriptive Duct Sealing and Insulation	Up to \$400.00 per dwelling unit
	Prescriptive Duct Sealing Only	Up to \$300.00/dwelling unit
	Energy Star Whole House Ventilation	Up to \$150.00 per unit
	Home Performance with Energy Star Rebate	Up to \$400.00 per dwelling unit
	Floor Insulation R-0 to R-22 – Manufactured Home	Up to \$600.00/dwelling unit
	Prescriptive Duct Sealing – Single Wide – Manufactured Home	Up to \$200.00/dwelling unit
	Prescriptive Duct Sealing – Double/Triple Wide – Manufactured Home	Up to \$400.00/dwelling unit



Electric Service, continued

Category	Measure	Maximum Incentive Amount Each
Windows	Upgrade single-pane with wood or metal frame windows to a 0.30 U-factor or better – Manufactured Home	\$50.00 per window, up to \$750.00 per structure
	Upgrade single-pane wood or metal frame windows to a 0.30 U-factor or better.	\$50.00 per window, up to \$750.00 per structure

Specific requirements for above incentives

- Some structural, HVAC and water heat measures require qualified contractor installation in order to be eligible for the indicated incentive.

C. Residential Fuel Conversion

Schedule 216 (Electric only)

1. Eligibility

A customer or tenant with applicable owner authorization, of an existing single-family structure receiving electricity through a PSE residential Schedule; Rates 7 (including 17, 27, 37, and 47), 8, 11, and 12.

Single Family Residences include structures with four or less single-family units that are attached by a contiguous roofline and manufactured or factory built homes (mobile and permanently sited). Single Family Residences that are within a multi-family campus as defined in Schedules 217 and 218 of this Tariff and structures under construction, are ineligible for this program. Residential units must be using electricity (provided under terms of an above-mentioned PSE Schedule) as its current primary source of space heating and/or water heating.

Incentives will be provided to qualifying customers for the conversion to natural gas from any eligible electric space heating and/or water heating systems.

Minimum amounts of prior electric energy usage may be required to qualify for the rebate incentive. Minimum requirements can be found in the individual rebate or program application form.

Eligible electric equipment must be converted to eligible highly efficient natural gas equipment listed below to qualify for incentives.

2. Incentives

a. Conversion from Electric Service to Natural Gas Service

Category	Measure	Maximum Incentive Amount Each
Appliances	Natural Gas Dryer	Up to \$500 per dwelling unit
	Natural Gas Range	Up to \$200 per dwelling unit
Space Heating Only	Natural Gas Space Heating Only -BB	Up to \$2,600 per dwelling unit
	Natural Gas Space Heating Only -FAF	Up to \$2,000 per dwelling unit
Space and Water Heating	Natural Gas Water and Space Heating - BB	up to \$3,550 per dwelling unit
	Natural Gas Water and Space Heating - FAF	Up to \$2,950 per dwelling unit
Water Heating Only	Natural Gas Water Heating Only - Tank	Up to \$950 per dwelling unit
	Natural Gas Water Heating Only - Tankless	Up to \$950 per dwelling unit

Specific requirements for Fuel Conversion incentives

- Some measures require qualified contractor installation in order to be eligible for the indicated incentive.

D. Residential New Construction

Schedules E215 (Single Family New Construction) and E/G 218 (Multifamily New Construction)

1. Eligibility

Eligible customers include the owner, developer, builder/owners or agent acting on behalf of responsible party of service receiving electricity through PSE's residential schedules 7 (including 17, 27, 37 and 47) and 7A, 8, 11 and 12, or commercial Schedules 8, 11, 12, 24, 25, 26, and 31; and/or natural gas service through PSE's residential Schedule 23 or commercial Schedule 31.

All new construction buildings that are in a stage of construction which are not yet completed or ready for occupancy will be served by residential or commercial incentives. Incentives also apply for new additions to structures and complexes along with renovations that change the occupancy use to residential use. Relevant measures will apply only to the newly constructed and/or substantially renovated portion of the structure.

Structures include all Group R Occupancy and other occupancies as outlined in the International Energy Conservation Code of the State of Washington, also known as the Washington State Energy Code (WSEC). These include, but are not limited to: single-family, duplexes, apartments, town homes, condominiums, senior living residences, dormitories, and mixed-use. The program also serves multifamily campuses which have a mixture of building types and residential developments.

For measures that apply to existing structures, please refer to the Multifamily, Existing program measures or Single Family, Existing program measures.

2. Incentives

a. Natural Gas Service

All buildings with five or more units.

Category	Measure	Maximum Incentive Amount Each
HVAC	Condensing Boiler: Space Heat	\$5.00 per therm
	Condensing Boiler: Service Water Heating	\$5.00 per therm
	Solar Thermal	\$5.00 per therm
	Condensing Water Heater: Service Water Heating	\$5.00 per therm
Water Heat	1.75 GPM Max Electric water heat	\$15.00
	1.50 GPM Max Electric water heat	\$25.00
Whole Building	Target EUI and Actual Use	\$5.00 per therm

Affordable Projects with minimum 50% of all units available to 60% AMI and lower.

Category	Measure	Maximum Incentive Amount Each
HVAC	Condensing Boiler: Space Heat	\$8.85 per therm
	Condensing Boiler: Service Water Heating	\$4.80 per therm
	Solar Thermal	\$5.90 per therm
	Condensing Water Heater: Service Water Heating	\$2.45 per therm
Water Heat	1.75 GPM Max Electric water heat	\$20.00
	1.50 GPM Max Electric water heat	\$30.00
Whole Building	Target EUI and Actual Use	\$5.40 per therm

b. Electric Service

All buildings with five or more units.

Category	Measure	Maximum Incentive Amount Each
Appliances	Energy Star® Clothes Washer MEF 2.4 or higher	\$75.00
Lighting Power Density Reduction	Calculated measure, based on kWh savings	\$0.20 per kWh
Water Heat	Showerhead, 1.75 GPM Max Electric water heat	\$15.00
	Showerhead, 1.50 GPM Max Electric water heat	\$25.00
Whole Building	Target EUI and Actual Use	\$0.30 per kWh

Affordable Projects with minimum 50% of all units available to 60% AMI and lower.

Category	Measure	Maximum Incentive Amount Each
Appliances	Energy Star® Clothes Washer MEF 2.4 or higher	\$75.00
Lighting Power Density Reduction	Calculated measure, based on kWh savings	\$0.20 per kWh
Water Heat	Showerhead, 1.75 GPM Max Electric water heat	\$20.00
	Showerhead, 1.50 GPM Max Electric water heat	\$30.00
Whole Building	Target EUI and Actual Use	\$0.55 per kWh

E. Multifamily Existing

Schedule 217 (Electric and Gas)

1. Eligibility

An owner, developer, contractor, equipment supplier or agent acting on behalf of responsible party of service, or the customer of service of an existing multiple-family structure receiving electricity or natural gas through a PSE residential Schedule 7 (including 17, 27, 37 and 47) and 7A, or commercial Schedules 8, 11, 12, 24 and 25 and/or natural gas service under residential Schedule 23 or commercial Schedule 31 or 41.

Existing multifamily structures exclude those which were recently constructed or are in the construction process.

Structures include, but are not limited to: apartments, town homes, condominium residences, and similar structures with five or more attached dwelling units. The program also serves multifamily Campuses² which have a mixture of building types including buildings with less than five units. Single Family buildings³ within a campus may also be eligible to receive measures listed in the Single Family Existing, Schedule 214 chapter, beginning on page 16, and the Residential Fuel Conversion, Schedule 216 chapter, beginning on page 24.

The Multifamily Retrofit program also provides custom measures affecting commercial Schedules, where savings and incentives are calculated by a PSE Energy Management Engineer on a per-structure or per-project basis. Further details of incentive requirements can be found in this publication starting on page 29.

Multifamily measures not listed may be individually considered for incentives, based on overall cost effectiveness and energy efficiency.

² Campuses are defined in Electric and Gas Conservation Schedule 217 in the Availability Section.

³ Single Family structures are discussed in the Eligibility section on page 16.

Selected PSE-approved contractors or vendors may be eligible for compensation to provide installation of specified measures—as a part of installation of a related measure. (For example, installing one or more Energy Star® CFL bulbs during an HVAC installation), as a part of a pilot program, a limited-time offering, or other circumstances determined by PSE.

2. Incentives

a. Natural Gas Service

Category	Measure	Maximum Incentive Amount Each
Building Envelope	Attic Insulation R-0 to R-38	\$0.75 per sq. ft.
	Attic Insulation R-11 to R-38	\$0.75 per sq. ft.
	Wall Insulation R-0 to R-11	\$0.75 per sq. ft.
	Floor Insulation R-0 to R-30	\$0.75 per sq. ft.
	Single-pane Windows to U-value 0.30 or lower	\$7.00 per sq. ft.
	Single-pane Windows to U-value 0.22 or lower	\$9.00 per sq. ft.
HVAC	Replace Existing Space Heat Boiler	Calculated incentive
	Replace Existing Domestic Water Boiler	Calculated incentive
	Integrated Space/Water Heating Systems with Energy Star® Tankless or Energy Star® Boiler (In-Unit)	\$800.00
	High Efficiency Natural Gas Fireplace (In-Unit)	\$200.00
	Energy Star® qualified Boilers (In-Unit)	\$350.00
	Energy Star® qualified Gas Furnace, 95% AFUE (In-Unit)	\$350.00
	Variable Speed Drive	Calculated incentive
O&M and Behavioral	Comprehensive Building Tune-up	Calculated
	Strategic Energy Management	No charge to eligible customers
Pool Heaters	Solar Pool Heater	Calculated incentive
	Pool Boiler	Calculated incentive



Natural Gas Service Measures, continued

Category	Measure	Maximum Incentive Amount Each
Water Heat	Direct Install 1.5 Gallon Per Minute or less Shower Heads	Direct Install No charge to eligible customers.
	Direct Install 1.5 Gallon Per Minute or less Shower Head with Integrated Thermostatic Restrictor Valve	Direct Install No charge to eligible customers.
	Direct Install Thermostatic Restrictor Shower Head Adaptor	Direct Install No charge to eligible customers.
	Direct Install 1.5 Gallon Per Minute or less Faucet Aerators	Direct Install No charge to eligible customers.

Specific requirements for gas incentives

- A signed Multifamily Incentive Application must be authorized by PSE prior to installation of upgrades (unless otherwise approved by PSE),
- Customer must meet all requirements outlined in the most current PSE Multi-family Retrofit Program Guidelines to participate and receive incentives,
- A Multifamily Payment Request must be authorized by PSE in order to execute incentive payment,
- All calculated incentives will be evaluated using currently accepted PSE commercial engineering calculations,
- All installed measures and incentives require installation by a qualified contractor.

b. Electric Service

Category	Measure	Maximum Incentive Amount Each
Air Sealing	Dense Pack Walls and Rim Joists	\$2.00 per sq. ft.
	Attic and/or Crawl Space	\$0.75 per sq. ft.
	Door Kits	\$100.00
	Recessed Can Covers	\$40.00
	Energy Star® Bathroom Fans (DC Motor)	\$200.00
	Bathroom Fan Timers	\$50.00
	Energy Star Doors	\$150.00
Appliances	Energy Star® or equivalent CEE Tier 3 Clothes Washer MEF 2.40 or Greater	\$50.00
	Directly Installed Clothes Washer Replacement (Pre-existing model must be 1997 or earlier)	No charge to eligible customers
	Energy Star Clothes Dryer (Ventless)	\$100.00
	Energy Star Clothes Dryer (Vented)	\$50.00
	Energy Star® or equivalent CEE Tier 3 Refrigerator	\$50.00
	Refrigerator or Freezer Decommissioning	\$25.00
	Directly Installed Tier 2 Advanced Power Strips	No charge to eligible customers
Common Area	Common Area Lighting	Calculated incentive
	Parking Garage CO Sensor	Calculated Incentive
HVAC	Energy Star® Whole House Ventilation	\$50.00
	Energy or Heat Recovery Ventilation (EVR/HVR)	Calculated Incentive
	Ductless Heat Pump	\$1,200.00
	Variable Speed Drive	Calculated Incentive



Electric Measures, continued

Category	Measure	Maximum Incentive Amount Each
Insulation	Attic Insulation R-0 to R-38	\$0.75 per sq. ft.
	Attic Insulation R-11 to R-38	\$0.75 per sq. ft.
	Attic Insulation R-19 to R-38	\$0.75 per sq. ft.
	Floor insulation R-0 to R-30	\$0.75 per sq. ft.
	Floor Insulation R-11 to R-30	\$0.75 per sq. ft.
	Wall insulation R-0 to R-11	\$0.75 per sq. ft.
Lighting	Tenant-controlled Energy Star® or equivalent LED Fixtures	\$25.00 per fixture
	Tenant-controlled Energy Star® or equivalent LED Bulbs (directly installed)	No charge to eligible customers
	Tenant-controlled HPT8 LED upgrade (kitchens and garages only)	\$25.00 per fixture
O&M and Behavioral	Comprehensive Building Tune-up	Calculated
	Strategic Energy Management	No charge to eligible customers
Pool Heat	Solar or Heat Pump Pool Heater upgrade	Calculated incentive
Water Heat	Directly Installed 1.5 Gallon Per Minute (GPM) or less shower heads	No charge to eligible customers
	Directly Installed 1.5 Gallon Per Minute Thermostatic Flow Restrictor Showerhead	No charge to eligible customers
	Directly Installed Thermostatic Flow Restrictor Showerhead Adaptor	No charge to eligible customers
	Directly Installed 1.5 Gallon Per Minute or less Faucet Aerators	No charge to eligible customers
	Heat Pump Water Heater NEEA-NW Climate Tier 1 or Tier 2 Certified Product	\$500.00 - \$800.00
	Directly Installed Water Heater Pipe Wrap; R3 value minimum 3 feet.	No charge to eligible customers

Electric Measures, continued

Category	Measure	Maximum Incentive Amount Each
Windows	Single-Pane Windows to U value 0.30 or less	\$7.00 per sq. ft.
	Single-Pane Windows to U value 0.22 or less	\$9.00 per sq. ft.
	Double -Pane Windows to U value 0.30 or less	\$5.00 per sq. ft.
	Double-Pane Windows to U value 0.22 or less	\$7.00 per sq. ft.

Specific requirements for above incentives

- A signed Multifamily Incentive Application must be authorized by PSE prior to installation of upgrades (unless otherwise approved by PSE),
- Customer must meet all requirements outlined in the most current 2016 PSE Multifamily Retrofit Program Guidelines to participate and receive incentives,
- A Multifamily Payment Request must be authorized by PSE in order to execute incentive payment,
- All calculated incentives will be evaluated using currently accepted PSE commercial engineering calculations,
- All installed measures and incentives require installation by a qualified contractor.
- Air sealing measures in specific must be installed by a PSE certified Multifamily air sealing contractor.

IV. BUSINESS MEASURES, INCENTIVES AND ELIGIBILITY

A. Commercial and Industrial Retrofit

Schedule 250 (Electric and Gas)

1. Eligibility

All Commercial and/or Industrial customers receiving electricity or bundled natural gas service from PSE are eligible. Schedule 448, 449, 458, and 459 customers may utilize their Schedule 258 funding allocation for measures offered under this Retrofit program and its related contracted programs. Projects must be approved for funding prior to installation/implementation.

Commercial and Industrial Retrofit incentives are calculated on an individual basis. They take the form of a grant, which is provided upon completion and verification of the project.

2. Measures and Incentives

The Retrofit program is a custom incentive program. It is not limited to any measure type or market segment. It is intended to provide the customer flexibility in developing projects that will result in energy savings.



Available Grants include, but are not limited to:

Measures	Incentive	Eligibility
Grants for Business Lighting	Based on cost and savings analysis, pay the lesser of 70% of the project cost or \$0.20 per annual kWh savings, subject to PSE Cost-Effective Standards.	Lighting measures
Grants for Non-Lighting Measures	Based on cost and savings analysis, pay the lesser of 70% of the project cost or \$0.30 per annual kWh savings (\$5.00 per annual therm savings), subject to PSE Cost-Effective Standards.	Non-Lighting measures
Grants for Advanced Rooftop Controls (ARC)	Based on \$225/ton for PSE electric equipment and an additional \$50/ton for PSE gas equipment.	Existing, single-zone units that are less than 15 years old, have a cooling capacity greater than 5 tons, and a supply fan greater than 1 HP. Projects that don't meet the eligibility requirements may pursue a non-lighting grant.
Post-Occupancy Commissioning	See table and information that follows	Depends on services provided by PSE. See table and information that follows
Comprehensive Building Tune-Up (CBTU) Incentive	See table and information that follows	Depends on services provided by PSE. See table and information that follows
Major HVAC Controls Upgrade	See table and information that follows	Depends on services provided by PSE. See table and information that follows

Retail wheeling customers may utilize their Schedule 258 Large Power User Self-Directed Program incentive allocation.

Measure: Post-Occupancy Commissioning

For buildings that have been occupied between 6 months and 18 months, incentives are designed to cover up to 75 percent of the post-occupancy commissioning costs, as well as to provide the owner a full list of cost-effective energy savings opportunities.

Post-Occupancy Commissioning Program Incentives

Description	Incentive Details	Maximum Incentive Building's Utility Services		
		PSE all services	PSE Electricity only (other gas)	PSE gas only
Base Incentive for Commissioning (CX)	Incentive Cap	75% of Commissioning (CX) Provider Costs		
	CX Process: (Investigation, Verification, Systems Manual, Training)	\$0.35/sf	\$0.25/sf	\$0.15/sf

Eligibility for incentives, all building fuel types, requires independent commissioning.

Measure: Comprehensive Building Tune-Up (CBTU) Program

For existing building commissioning, (buildings older than 18 months) incentives are designed to cover up to 100 percent of the commissioning costs, as well as to provide the owner a full list of cost-effective energy savings opportunities. The owner is required to commit up to a pre-set dollar amount to implement operational improvements with a less than or equal to two year payback as well as provide up to 50 hours of Operations and Maintenance (O&M) staff time for participation in the process, including training.

Incentives are paid in three phases. An assessment paid once the assessment is completed, base Incentive paid after a Commissioning is completed, and a performance bonus Incentive is paid after first-year savings requirements are met and the owner documents that savings improvements are still in place. If the assessment indicates the building is an inappropriate candidate for Commissioning, only the assessment incentive will be paid.

If there is no metering at the building level, the customer may also be eligible for an incentive for sub-metering to assist the owner in monitoring building energy usage.

CBTU Program Incentives

Description	Incentive Details	Maximum Incentive Building's Utility Services		
		PSE all services	PSE Electricity only (other gas)	PSE gas only
Base Incentive for Commissioning (CX)	Incentive Cap	75% of Commissioning (CX) Provider Costs		
	Assessment (Minimum Grant)	\$5,000	\$4,000	\$2,000
	Remaining CX Process: (Investigation, Verification, Systems Manual, Training)	\$0.35/sf	\$0.25/sf	\$0.15/sf
Owner Commitment	Cost of Improvements (Maximum)	\$0.15/sf	\$0.10/sf	\$0.10/sf
	Required Improvements	Improvements with \leq 2 year payback.		
	Implementation Time Frame	Within 6 months of Investigation		
	Senior O&M Staff Time	50 hours to participate in process and training		
One Year Performance Bonus Incentive	Incentive Cap	100% of Total Cost (CX Provider + Implementation)		
	Incentive for Electric Savings	\$0.05/kWh	\$0.05/kWh	N/A
	Incentive for Electric Savings	\$0.05/kWh	\$0.05/kWh	N/A
	Incentive for Gas Savings	\$0.80/therm	N/A	\$0.80/therm
	Required Building Savings	8%	8%	11%
	Required documentation	Evidence that improvements are still in place.		
Sub-metering Incentive	Eligible for incentive if no metering is present at the building level	Pay up to \$3,000 per building to install sub- metering.		



Measure: Major HVAC Controls Upgrade

Major HVAC controls upgrade incentives can cover up to 50% of the total applicable project cost depending on verified energy saving from the project. Major HVAC controls upgrades involve adding and/or modifying 3 or more significant energy saving control sequences as well as other major upgrades such as new controllers and a new web-based graphical user interface.

Incentives are provided in 2 phases: a base incentive paid at the end of the installation and a performance incentive paid after almost a full year of actual operation. The performance incentive is based on verified savings at the whole building level. The incentive level varies depending on the services provided by PSE. See the table below.

The project must meet PSE prescribed requirements for the controls sequences and features and the system must undergo testing to verify proper installation and operation. The project must also include customer training and a facility guide designed to help the operator maintain the facility energy efficiency performance over time.

If there is no energy metering at the building level, the customer may also be eligible for an incentive for sub-metering to assist in determining the actual building performance. Whole building sub-metering incentive follows the same guidelines as the sub-metering incentive in the CBTU program.

HVAC Controls Upgrade Incentive		
Incentive Description	PSE Electric (or combined Electric & Natural Gas Service)	PSE Natural Gas Service Only
Maximum Total Incentive = Base + Performance	50 percent of total project cost	25 percent of total project cost
Base Incentive (Based on 5 percent whole building savings*)	\$0.30 per kilowatt-hour (kWh) saved (+ \$4.70 per therm saved)	\$4.70 per therm saved
Maximum Base Incentive	35 percent of cost	15 percent of cost
Performance Incentive (Based on first year whole building savings)	Based on actual percentage of whole building savings greater than six percent	\$4.70 per therm saved

**Whole building energy use may exclude large non-HVAC uncontrollable/process loads like data centers. Whole Building Metering: If there is no energy metering at the building level, the customer may also be eligible for an incentive of up to \$3,000 for sub-metering to assist in determining the actual building performance.*

B. Industrial System Optimization Program (ISOP)

1. Eligibility

Industrial customers receiving electric service from PSE are eligible for this program.

2. Measures

The objective of the Industrial System Optimization Program (ISOP) is to identify, evaluate, and implement projects in industrial customer facilities to improve operational energy efficiency. The focus is on energy intensive systems such as refrigeration, compressed air, pumping, fans, and blowers. This is a Performance Basis program that determines savings based on actual verified electric savings from implemented measures.

Strategy Energy Management (SEM) pilot is included in this program cycle to evaluate the effectiveness of SEM in energy efficiency in industrial sector. Four (4) customers will be selected to implement the measure. SEM emphasizes on long term energy management practices. SEM is customer driven with coaching from consultants while ISOP is led by consultants with participation from customer. Both are focused on operational efficiency improvement.

Operational efficiency improvement measures reduce the energy consumption of a system, process, and entire plant without significant capital investment. The measure focuses on the operation changes instead of equipment or system retrofit.

Examples of the operational efficiency improvement measures include control sequence modification and set-point adjustment for refrigeration systems, compressed air leak detection and repair, compressed air shut-off valves at workstations, modulation of fan or blower speeds based on demand, and controls, modification, or installation of timers to shut off pumps when not required for the operation.

3. Incentives

The customer incentive is to cover a portion of the optional cost the customer incurs to purchase and install a PTS (performance tracking system) and the direct operational efficiency improvement incentive based on verified energy savings.



Measures	Incentive	Eligibility
Operational Efficiency Improvement and Performance Tracking Systems (PTS)	The Lesser of: 1) \$0.05 times verified kWh saved; or 2) 70% of Action Item Cost + PTS Cost (optional). Based on cost and savings analysis, and subject to PSE Cost-Effective standards.	Based on verified savings and End User purchases and installs, PSE approves of optional PTS.

Energy Smart Grocer (ESG) Eligibility

Grocery stores and convenience stores with commercial refrigeration equipment are eligible for this program. This program may offer incentives under the C&I Retrofit Schedule 250 program or the New Construction Schedule 251 program.

Measures

Typical measures eligible under this program include refrigeration controls, case lighting retrofits, strip curtains, gaskets, auto-closers, and electronically commutated motors. For a complete list of eligible measures, see the Energy Smart Grocer program website for PSE at: http://energysmartonline.org/utilities/pse_index.html.

Incentives

Incentives for this program may be based on refrigeration system tonnage, nominal compressor horsepower, lineal feet of refrigerated cases, square footage of walk-in door openings, or quantities of equipment installed. Incentives are subject to PSE Cost-Effective Standards. For a complete list of incentives offered to customers under this program, see the Energy Smart Grocer program

C. Commercial and Industrial New Construction

Schedule 251 (Electric and Natural Gas)

1. Eligibility

Any Customer, owner or tenant with appropriate owner consent, of a new construction commercial, industrial, multi-family, or mixed-end-use facility or outdoor lighting which will receive natural gas service from the Company, and/or electric service under Schedules 7A, 24, 25, 26, 31, 35, 40, 43, 46, 49, 50, 51, 52, 53, 54, 55, 57, 58, 448, 449, 458, 459 (or their equivalent) of Electric Tariff G of the Company.

Customer must currently be or plan to be a PSE business electric and/or natural gas customer, and the new business site must be within PSE's electric and/or natural gas service areas.

Customer must be pre-approved by PSE prior to the installation of all energy efficiency improvement measures.

2. Incentives

There are three incentive paths for New Construction projects. The paths are intended to provide customers flexibility in meeting their project needs. A commissioning incentive may be used in combination with any of these paths.



Path	Incentive	Eligibility
Energy Model Whole Building	\$0.30 per annual kWh savings and 5.00 per annual therm savings compared to code-baseline or standard practice system. Incremental cost to be the same as the incentive amount.	Facilities must be more than 50,000 sq. ft. and involve multiple measures, as determined by PSE. Facilities less than 50,000 sq. ft may qualify with PSE approval. Facility must use 10% less energy than applicable energy code.
Component Approach	<p><u>Lighting</u>: lesser of 100% of the incremental cost or \$0.20 per annual kWh savings compared to code-baseline or standard practice system, subject to PSE Cost-Effective Standards. Incremental cost to be the same as \$0.20 per annual kWh for projects with a code baseline that uses lighting power density (LPD).</p> <p><u>Non-lighting</u>: lesser of 100% of the incremental cost or \$0.30 per annual kWh savings, subject to PSE Cost-Effective Standards.</p> <p><u>Natural gas</u>: lesser of 100% of the incremental cost or \$5.00 per annual therm savings, subject to PSE Cost-Effective Standards.</p>	For lighting, proposed system must have 10% less lighting power density than applicable energy code.
Rebates Measure	See eligible measures list under Commercial & Industrial Incentives section.	

Incentives, based on square foot of conditioned space, are available for projects utilizing an independent commissioning agent or post-occupancy commissioning:

Description	Incentive Details	Maximum Incentive Building's Utility Services		
		PSE all services	PSE Electricity only (other gas)	PSE gas only
Base Incentive for Commissioning (CX)	Incentive Cap	100% of Commissioning (CX) Provider Costs		
	Remaining CX Process: (Investigation, Verification, Systems Manual, Training)	\$0.35/sf	\$0.25/sf	\$0.15/sf
Owner Commitment	Senior O&M Staff Time	50 hours to participate in process and training		

Eligibility for incentives, all building fuel types, requires independent commissioning.

D. Resource Conservation Management Incentives

Schedule 253 (Electric and Natural Gas)

1. Eligibility

Any school district, public-sector government agency and commercial or industrial (C/I) customer with facilities receiving electric service under Electric Tariff G from PSE is eligible. Schedule 448, 449, 458, and 459 customers may utilize their Schedule 258 funding allocation for Resource Conservation Management (RCM) Incentives.

Customer eligibility is determined by PSE energy base load and potential savings. A typical customer baseline for maximum program funding is 20,000,000 kWh for electric only or 2,700,000 therms for gas-only service from PSE. Funding levels are prorated based on the amount of staff a customer would need to allocate in order to achieve cost-effective savings from RCM efforts. At a minimum, the customer needs to use 1,000,000 kWh or 135,000 Therms, or the equivalent to participate in the program.

2. General Description of Program Offerings

Resource Conservation Management (RCM)

The table below summarizes the Grant and Services package for the RCM program. A description of each menu item follows providing details of the service and required deliverables. The grant measures are allocated to the year in which PSE expects them to be paid; the actual timing will vary based on the customer's completion of deliverables.

RCM Direct Customer Incentive Table – Figures based on maximum funding amount.

Program Element		Formula / Notes	Measure Cost	Incentive
Year One	Training Allowance	Training stipend for participation in BOC level 1 & 2 training or other accredited training if desired, subject to approval by PSE. Measure cost is PSE discounted tuition.	\$2,000	\$2,000
	Start-Up Incentives	Start-up incentive provided to customers that submit required first year deliverables within first year of grant. Measure cost is 100% of incentive amount.	\$10,000	\$10,000
	Performance Incentive	<p>Performance incentive of \$0.02/kWh and \$0.15/therm of savings up to PSE defined performance target (typically 3% of baseline). If a customer exceeds the target, the performance incentive increases to \$0.035/kWh and \$0.25/therm for each additional unit of energy savings over the target up to 70% of the measure cost.</p> <p>In this table, an example performance incentive of \$12,000 is shown for a customer that saved 600,000 kWh, or 3% of 20,000,000 kWh baseline. The measure cost is equal to 100% of deemed customer annual program cost, minus the start-up and bonus incentive amount.</p>	\$80,000	\$56,000 maximum
	Target Incentive	Target incentive if customer meets or exceeds PSE defined performance target (typically 3% of baseline). Measure cost is 100% of incentive amount.	\$10,000	\$10,000

Direct Incentives, continued

Program Element		Formula / Notes	Measure Cost	Incentive
Year Two and Three	Training Allowance	Training stipend for participation in BOC level 1 & 2 training or other accredited training if desired, subject to approval by PSE. Measure cost is PSE discounted tuition.	\$2,000	\$2,000
	Performance Incentive	Performance incentive of \$0.02/kWh and \$0.15/therm of savings, up to PSE defined performance target (typically 5% of baseline). If a customer exceeds the target, the performance incentive increases to \$0.035/kWh and \$0.25/therm for each additional unit of energy savings over the target up to 70% of the measure cost. In this table, an example performance incentive of \$20,000 is shown for a customer that saved 1,000,000 kWh, or 5% of their 20,000,000 kWh baseline. The measure cost is equal to 100% of deemed customer annual program cost, minus the bonus incentive amount.	\$80,000	\$56,000 maximum
	Target Incentive	Target incentive if customer meets or exceeds PSE defined performance target (typically 5% of baseline). Measure cost is 100% of incentive amount.	\$20,000	\$20,000
Total Incentives for Initial Three-Year Agreement			\$306,000	\$234,000 maximum

3. RCM Direct Customer Incentive Descriptions

a. Start-Up Incentive

This is a one-time incentive that pays for 10 percent of the time spent on establishing an RCM program during the first year. The actual grant amount will be determined by the customer's PSE energy consumption. Start-up incentives may be prorated for smaller or larger organizations down to \$5000 for customers meeting minimum load requirements.

The start-up incentive will be paid provided the customer completes the following deliverables:

- i. Populate and maintain a Utility Manager Resource Accounting Database (or PSE approved equivalent)
- ii. Hire an RCM or dedicate staff time to RCM activities
- iii. Complete a Resource Management Plan
- iv. Complete Facility Action Plans (or PSE approved equivalent) for all buildings

These deliverables are outlined in a scope of work and are estimated to be completed in the first six to nine months of the agreement. The incentive may be paid at the end of the first six months provided the scope of work has been completed.

b. Performance Incentive

Once the customer has completed start-up deliverables outlined in item 1, they will be eligible to receive additional cash incentives for achieving energy savings. Only savings achieved relative to occupant and behavioral practices and improvements in operation and maintenance (O&M) practices will be considered for the performance grant. To determine performance grant savings, energy usage will be adjusted for PSE incentivized facility upgrades (ECMs), weather, and other major facility changes.

c. Target Incentive

If the customer meets or exceeds their first year target (typically 3 percent), they can receive a target incentive. Note that unlike the performance incentive, savings associated with facility upgrades (ECMs) incentivized through other PSE programs can be attributed to the target incentive. The customer can also receive a target incentive if they meet or exceed their second or third year target (typically 5 percent).

d. Training Stipend

PSE will provide a training stipend to be used by the RCM(s) or equivalent employed by each customer. The training budget is based on a negotiated PSE-RCM discounted tuition for the Building Operator Certification (BOC) program. The stipend can be applied to any other equivalent, credentialed RCM-related training course with prior PSE approval only. Tuition allotment will be prorated based on customer baseline usage.

The RCM will be responsible for initial payment and registration and any course-related materials and/or supplies. Travel or other ancillary costs will not be reimbursed. Upon completion of the training course, the RCM shall submit to PSE their final coursework and certificate of completion along with an invoice requesting reimbursement. PSE will review the submittal for successful completion of the training program, and upon approval, will make payment to the customer up to the amount of the training cost or stipend outlined in this grant.

e. Renewal Grants

For customers who have reached the end of their initial 3-year RCM agreement, PSE will offer a Renewal contract for an additional three (3) year term. The Renewal contract will include a training stipend, performance incentive, target incentive, continued technical support, and access to the RCM program's value-added services. Similar to the initial agreement, customers will be given targets (typically 5 percent reduction) for each year of the renewal agreement.

4. RCM Value-Added Service Descriptions

There are a number of support activities that PSE provides to each RCM customer as a part of their RCM agreement. While these program elements do not relate to a cash incentive, they are specific project-oriented tasks that relate to a value of service that can be quantified for each customer based on their organization profile. A description of each major service is provided below.

a. Resource Management Software

PSE will provide the customer with access to resource management software. The software will include facility information and PSE accounts, and will be populated with historical PSE billing data.

Once the customer is trained on the software, the customer is expected to complete the setup with organization structure, building information, utility companies, and account numbers for electricity, gas, water, wastewater, and solid waste accounts.

b. Resource Management Software Set Up

PSE staff will work with the customer to develop a comprehensive list of the customer's PSE gas and electric accounts and align them to the correct facility. Once this list is developed, PSE will complete the initial setup of resource management software with the customer's facilities and PSE accounts and meters. This web-based software tool will provide access to historical PSE data for each customer's electric and/or gas accounts.

c. Energy Interval Service

PSE's Energy Interval Service is an internet-based energy information and management tool that helps customers see and interpret utility-use patterns using interval data from gas and electric revenue meters. The system provides timely access to meter and cost data any time of day, seven days a week through the resource accounting software.

The value of this service is the enablement of customers to identify how much, how often, and when power or gas is used at given intervals of time. Data is typically available for viewing the following day after use. PSE will provide the customer with access to the interval data system for all qualifying meters.

d. Annual Savings Analysis

PSE will work with the customer to calculate O&M energy savings after each 12-month period of their RCM contract. Adjustments will be made for major capital improvements, change in use, weather, and other factors that may have had a significant impact to facility energy use.

e. NEEA Conduit Website Access

PSE will provide access to a private group, “Puget Sound Energy RCM Group,” on Northwest Energy Efficiency Alliance (NEEA)’s Conduit website. This group is an online technical support and materials center that has been developed to help RCMs with their program implementation. The group hosts PSE program materials that have been developed for implementation and reference and allows for RCMs to communicate with each other in a chat room style setting.

f. Three-for-Free Technical Audits

For each customer qualifying for full funding, PSE will provide an initial three (3) facility audits to jump-start customers on the process of completing Facility Action Plans. The site visits will act as both training and technical assistance such that through this process, and along with the RCM training series, each RCM will gain the knowledge necessary to perform their own detailed facility audits. During these first walkthroughs, the RCM will learn how to gather the information necessary to complete the second deliverable of the Start-up Grant, their Facility Action Plans. The number of site visits will be prorated based on the baseline usage.

g. RCM Training Series

To support customers’ resource conservation efforts, PSE has designed a series of courses to help customers learn more about building energy, resource consuming systems, and the tools that will help customers be effective in their role as resource conservation managers. There are core classes offered, as well as a number of advanced and specialized courses. Most training classes are scheduled to be held at the Bellevue PSE campus, but may be customized for and offered at customer’s facilities. Webinars may also be available.

E. Commercial and Industrial Large Power User Self-Directed

Schedule 258 (Electric only)

1. Eligibility

Customers receiving electrical service from the Company under Schedules 40, 46, 49, 448, 449, 458 or 459 (or their equivalent) of Electric Tariff G with cost-effective electric energy efficiency projects are eligible to respond to the Company's Requests for Proposals (RFPs). Schedule 258 and the RFPs outline all project funding criteria.

Incentives are calculated on an individual basis. They take the form of a grant, which is provided upon completion and verification of the project.

2. Incentives

The program is a custom incentive program. It is not limited to any measure type or markets. It is intended to provide the customer flexibility in developing projects that will result in energy savings.

The incentive amount is up to \$0.50 per annual kWh savings subject to PSE cost effectiveness standards.

Measure categories include, but are not limited to:

Category	Includes
HVAC and Refrigeration	HVAC – unitary
	HVAC – central
	Heat Recovery Systems
	Chillers
	Economizers
	VAV Boxes
Commissioning and Optimization	Commissioning/Optimization of energy systems
Process Efficiency Improvements	Refrigeration Systems
	Motor and Drive Systems
	Fan, Compressor and Pump Systems or Stations
	High Efficiency Motors
	Other Process Modifications
Building Thermal Improvements	Roof and Ceiling Insulation
	Exterior Roof Insulation
	Wall Insulation
	Insulated Windows
	Duct Insulation
Existing Building Insulation Controls	Energy Management Systems
	Lighting Control Systems
	Process and Other Efficiency
	Control Systems
Lighting Improvements	Fluorescent Luminaires
	LED Luminaires
Water Heating Improvements	Water Heaters
	Piping Insulation
	Low Flow Devices
Resource Conservation Management (RCM)	

F. Commercial and Industrial Incentives

Schedule 262 (Electric and Gas)

1. Eligibility

All Commercial and/or Industrial customers receiving electricity or bundled natural gas service from PSE are eligible. Schedule 448, 449, 458, and 459 customers may utilize their Schedule 258 funding allocation for measures offered under this program.

Multifamily-related businesses or those with dwelling units will be referred to the Multifamily Program.

In the rare instances that customers operate a business on residential rate schedules (for instance, out of the home or garage) PSE will offer the appropriate measures to them specifically tied to their type of business providing that the customer is able to show proof of business license, pending individual approval by PSE staff

2. Incentives

a. Commercial Clothes Washers

Customer will receive a rebate based on the energy source for the water heating and/or the energy source fueling the accompanying dryer heat. When the energy for water heating and dryer heating is different, PSE will pay the eligible customer the rebate amount that corresponds to the component of the equipment using energy provided by PSE.

Measure	Maximum Incentive Amount	Eligibility
High-Efficiency Clothes Washers	Up to \$200.00 per unit	Energy Star® qualified

b. Dishwashers

Customers will receive a rebate based on dishwasher type and the energy source for water heating and/or a booster heater as outlined by the table below when an Energy Star® Qualified model is purchased. Some leased equipment may also qualify when the lease result in the customer owning the equipment at the end of the lease period.

When the energy for water heating and the booster is different, PSE will pay the eligible customer the rebate amount that corresponds to the component of the equipment using energy provided by PSE.

In applicable instances, PSE will coordinate with the utility that provides the energy for the opposite energy use (for instance, in Snohomish County, PSE provides the natural gas and Snohomish County PUD provides the electricity) and the water utility for consideration of potential incentives when those utilities have corresponding rebates.

- *Sales Performance Incentive Funds (SPIFs) are offered through PSE's Commercial Kitchen Point of Sale program for each type of equipment, and range from \$30 to \$50 per unit sold. For the most part, these sales incentives are given to individual salespeople who sell qualified commercial kitchen equipment to commercial customers installing in a PSE service area and assist the customer with the paperwork process. There may be instances where the company (retailer, reseller, etc.) receives the SPIF. SPIFs are offered to encourage salespeople to offer PSE's rebates at the point of sale.*

Commercial Dishwasher Rebates

E=electric, G=gas

Type	Water Heater Type	Booster Type	Electric Rebate	Gas Rebate	Possible Total Rebate
Under Counter, Low Temp	E	-	\$150		\$150
Under Counter, Low Temp	G	-		\$150	\$150
Under Counter, High Temp	E	E	\$150		\$150
Under Counter, High Temp	G	E	\$150		\$150
Under Counter, High Temp	E	G	\$150		\$150
Under Counter, High Temp	G	G	\$100	\$50	\$150
Door Type, Low Temp	E	-	\$750		\$750
Door Type, Low Temp	G	-		\$750	\$750
Door Type, High Temp	E	E	\$750		\$750
Door Type, High Temp	G	E	\$500	\$250	\$750
Door Type, High Temp	E	G	\$500	\$250	\$750
Door Type, High Temp	G	G		\$750	\$750
Single Tank Conveyor, Low Temp	E	-	\$1,000		\$1,000
Single Tank Conveyor, Low Temp	G	-		\$1,000	\$1,000
Single Tank Conveyor, High Temp	E	E	\$1,000		\$1,000
Single Tank Conveyor, High Temp	G	E	\$750	\$250	\$1,000
Single Tank Conveyor, High Temp	E	G	\$750	\$250	\$1,000
Single Tank Conveyor, High Temp	G	G		\$1,000	\$1,000

Commercial dishwasher rebates, continued

E=electric, G=gas

Type	Water Heater Type	Booster Type	Electric Rebate	Gas Rebate	Possible Total Rebate
Multi Tank Conveyor, Low Temp	E	-	\$1,500	-	\$1,500
Multi Tank Conveyor, Low Temp	G	-	-	\$1,500	\$1,500
Multi Tank Conveyor, High Temp	E	E	\$1,500	-	\$1,500
Multi Tank Conveyor, High Temp	G	E	\$1,000	\$500	\$1,500
Multi Tank Conveyor, High Temp	E	G	\$1,000	\$500	\$1,500
Multi Tank Conveyor, High Temp	G	G	-	\$1,500	\$1,500

c. Cooking Equipment

Measure		Maximum Incentive Amount	Eligibility
Hot Food Holding Cabinets	Electric Hot Food Holding Cabinet - Small Size ($0 < V < 13$ ft ³)	\$150.00/unit	Energy Star® V2.0 Qualified
	Electric Hot Food Holding Cabinet – Medium Size ($13 \leq V < 28$)	\$500.00/unit	
	Electric Hot Food Holding Cabinet – Large Size ($V \geq 28$)	\$750.00/unit	
Steamers	10 pans or larger (electric & gas)	\$950.00/unit	Energy Star® V1.2 Qualified
	6 pans (electric & gas)	\$550.00/unit	
	5 pans (electric & gas)	\$450.00/unit	
	4 pans (electric & gas)	\$350.00/unit	
	3 pans (electric & gas)	\$250.00/unit	

Cooking Equipment, Continued

Measure		Maximum Incentive Amount	Eligibility	
Deep Fat Fryers	Standard Vat – electric	\$1,000.00/ unit	Energy Star® V2.0 Qualified	
	Large Vat - electric	\$400.00/unit		
	Standard Vat – gas	\$1000.00/unit		
	Large Vat – gas	\$500/unit		
Ovens	Convection	Commercial Natural Gas or Electric Convection Ovens	A list, based on the Food Service Technology Center (FSTC) will be made available to commercial kitchen equipment dealers and will be posted on the Company's website.	
		\$450.00/Half-size unit (gas)		
		\$500.00/Half-size unit (electric)		
	Combination, Gas	Natural Gas Combination Oven <15 pans		\$1,000.00/unit
		Natural Gas Combination Oven 15-28 pans		\$1,500.00/unit
		Natural Gas Combination Oven >28 pans		\$7,000.00/unit
	Combination, Electric	Electric Combination Oven <15 pans		\$2,500.00/unit
		Electric Combination Oven 15-28 pans		\$3,000.00/unit
		Electric Combination Oven >28 pans		\$7,000.00/unit
	Deck/Rack, Electric or Gas	Electric Deck Oven, any size		\$1,500.00/unit
Natural Gas Single-Rack Oven		\$1,500.00/unit		
Natural Gas-Double-Rack Oven		\$1,000.00/unit		

Cooking Equipment, Continued

Measure		Maximum Incentive Amount	Eligibility
Griddles, Electric	Electric Griddle – 2 linear feet of cook space	\$200.00/unit	Energy Star® V1.2 Qualified
	Electric Griddle – 3 linear feet of cook space	\$300.00/unit	
	Electric Griddle – 4 linear feet of cook space	\$400.00/unit	
	Electric Griddle – 5 linear feet of cook space	\$500.00/unit	
	Electric Griddle – 6 linear feet of cook space	\$600.00/unit	
Griddles, Gas	Gas Griddle – 2 linear feet of cook space	\$900.00/unit	Energy Star® V1.2 Qualified
	Gas Griddle – 3 linear feet of cook space	\$1,300.00/unit	
	Gas Griddle – 4 linear feet of cook space	\$1,400.00/unit	
	Gas Griddle – 5 linear feet of cook space	\$1,500.00/unit	
	Gas Griddle – 6 linear feet of cook space	\$1,600.00/unit	

d. HVAC Retrofit

Measure		Rebate Per Ton		Eligibility / Notes	
		Retrofit System	CEE Tier I	CEE Tier II	
Existing System	Heat Pump	Heat Pump	\$100.00	\$150.00	All existing equipment is required to be removed or disabled. PSE customers using an operational heating and/or cooling system to provide conditioned air to an eligible facility are eligible for this rebate
		Gas Pack	\$500.00	\$550.00	
	Electric/ Electric	Heat Pump	\$500.00	\$550.00	
		Gas Pack	\$500.00	\$550.00	
	Gas/ Electric	Gas/Electric	\$100.00	\$150.00	All equipment must meet CEE Tier I or better qualifications.

e. Premium HVAC Service

Measure	Maximum Incentive Amount	Eligibility
Premium HVAC Service	<p>Four Incentive categories: Fast Food Restaurant, Big Box Retail, Small Office and High Equipment Load Extended Hours Small Commercial Building. Each with an incremental variety of service offerings, ranging from</p> <p>\$360.00 to \$1,925.00 per unit,</p> <p>depending on system size; 4 tons to 20 tons and over 20 tons.</p> <p><i>*Some incentive packages are provided concurrently, while some are in addition to others.</i></p>	Based on the level of Premium Services and amount of equipment repair or replacement required at the site.

Note: No minimum tonnage requirements for spaces adding demand control ventilation to existing HVAC units.



Customers receive discounted premium service of their existing Rooftop HVAC systems through a participating CAN network commercial HVAC contractor.

Package	Measure		Rebate	Description
A	Basic Diagnostic		\$360	Basic Diagnostic services and repair unit
B	Enable Morning Warm up		\$125	Enable warm up on unit to pre-condition space
C	Replace T-Stat		\$300	Install and Program New Wi-Fi Enabled Thermostat
D	New economizer Controller		\$200	Replace existing analog controller with digital controller or OEM controller
E	Demand Control Ventilation		\$940	Install DCV, includes CO2 sensors and ADEC (Advanced Digital Economizer Controller)**
F	New Sensor Installed		\$50	Install and HVAC system sensor including MAS, OAS, RAS. Ect.
Rebate Payment for +20 ton units is \$450 per unit *DCV (OR) New Economizer Controller on a single unit not both				** BMS/EMS is considered ADEC

f. Lighting

Customers may receive incentives for energy efficient lighting upgrades by purchasing efficient lighting products from approved vendors that provide incentives at point of sale.

Measure		Maximum Incentive Amount	Eligibility
LED Exit Signs	New LED Exit Sign Retrofit	\$25.00 per fixture	Complete removal and replacement of the entire exit sign, including its components and enclosure. Input power demand 5 Watts or less per sign. Manufacturer warranty for defects in materials and manufacturing for 5 years from date of purchase.
LED Lamps	Decorative Lamps	\$4.00	All LED lamps must be listed on the Energy Star® or Lighting Design Lab Qualified Lamp list. All LED fixtures must be listed on the Energy Star®, Lighting Design Lab, or Design Lab Consortium Qualified Fixtures Lists.
	Omnidirectional Lamps	\$4.00	
	MR16 Lamps	\$6.00	
	Directional Lamps (PAR/R/BR20, PAR/R/BR30, PAR/R/BR38/40) and Screw-in Recessed Can Retrofit Kits	\$8.00	
	Hard Wire Recessed Can Retrofit Kits	\$15.00	
Linear Lamps	T12 to T8 or TLED	\$6.00per lamp	Based on a lamp-for-lamp exchange.
	Retrofit to TLED (Tubular LED)	\$6.00 per lamp	Based on a lamp-for-lamp exchange.

- *Equivalent point of sale rebates are also available through select vendors for LED lamps and downlighting applications.*

It is important to note that new LED Exit Sign is also included in the Business Lighting program offering.

This program is also offered as part of PSE's Commercial/Industrial Retrofit (Schedule 250) and Commercial/Industrial New Construction (Schedule 251) programs.



Calculated Lighting Measures

Please note: Calculated lighting measures are processed as a part of custom measures at \$0.20/kWh up to a cap of 70% of the measure cost.

g. Refrigeration

Beverage Cooler Controllers

Measure	Maximum Incentive Amount	Eligibility
Refrigerated beverage cooler controllers	Installed at the customer's site at no charge.	Any non-hardwired commercially used cooler not containing perishable items and will not contain them in the future. Must be part of the direct installation program.

Ice Makers

Ice Harvest Rate (pounds of ice per day)	Incentive Amount	Eligibility
Cube or Nugget units, less than 1,000 lbs/day	\$200.00 per unit	Energy Star® qualified and/or CEE Tier 2 qualified.
Cube or Nugget units, greater or equal to 1,000 lbs/day	\$500.00 per unit	
Flake Units, less than 1,000 lbs/day	\$200.00 per unit	
Flake Units, greater than or equal to 1,000 lbs/day	\$500.00 per unit	

h. Water; Heat & Management

Measure	Maximum Incentive Amount	Eligibility
Pre-rinse spray heads 0.65 gallons per minute	Installed at the customer's site at no charge.	Hot water applications only. Food service entities that use PSE electricity or natural gas to heat water.
Aerators 0.5 gallons per minute	Installed at the customer's site at no charge.	Available only where there are hot water applications for customers who use PSE electricity or natural gas to heat water.
Showerheads 1.5 gallons per minute	Installed at the customer's site at no charge.	Available only where there are hot water applications for customers who use PSE electricity or natural gas to heat water.
Heated Dish Well \leq 1 GPH	\$850.00 per unit, gas and electric	Available only where there are hot water applications for customers who use PSE electricity or natural gas to heat water.
Natural Gas High-Efficiency Water Heaters and Boilers in Full-Service Restaurants	Water Heaters: \$800.00 per unit	Energy Star® qualified and unit load must serve a commercial dishwasher in facility.
	Boilers: \$1,500.00 per unit	Boiler thermal efficiency must be equal to or greater than 92% and unit load must serve a commercial dishwasher in facility.
Natural gas water heaters serving Commercial Laundromats	\$800.00 per unit	Energy Star® qualified.
	\$1,500.00 per unit	Boiler thermal efficiency must be equal to or greater than 92%

3. Direct-Install Programs

a. Eligibility

Qualifying Puget Sound Energy customers for these programs are dependent upon the contracted intent of each and include; Small Business Direct Install, Lodging Direct Install, and Small Agricultural Direct Install.

For Small Business Direct Install, qualifying customers are owners, customers and tenants, with appropriate owner consent, of small to mid-sized business structure receiving electricity through PSE commercial Rate Schedule 24, 25 under 10,000 square feet and 31G. .

Common area facilities supported by commercial meters in multifamily buildings, as defined in electric and gas Schedules 217 and 218 of this Tariff;; and structures under construction, as defined in electric and gas Schedules 250, are ineligible for this program.

For Lodging Direct Install, qualifying customers are customers who operate hotels, motels, Bed and Breakfasts, or like establishments with similar characteristics.

For Small Agricultural Direct Install, qualifying customer own or operate greenhouses, dairies, livestock production, nurseries, crop farms, food processors, and the like, billing less than 350 kW demand or on gas rate schedule 31.

b. Measures

Measures installed under these programs are delivered to customers by a third party contractor and/or a PSE employee. Equipment used in the Direct-Install programs must meet requirements as identified in the following tables.

Measure categories include, but are not limited to those in the following tables:

Direct Install Electric Measures

Measure	Eligibility
Aerators	Rated at 0.5 gpm to be installed in hot water applications only. For customers who use electricity to heat water.
Anti-Sweat Heater Controls	Must install a device that reduces the energy consumption of the anti-sweat heaters by at least 50% for the glass door (if applicable) and door frame. Technologies that reduce energy consumption of anti-sweat heaters based on sensing humidity only. Does not apply to doors equipped with low/no anti-sweat heat.
Auto Door Closers	For reach-in cases, customers shall install new auto door closers which should be applied to the glass door of reach-in case. The reach-in door must have a minimum perimeter of 15 feet. For walk-in cases, the auto-closer should be applied to the main insulated solid door of a walk-in freezer or cooler. The auto closer must be able to firmly close the main door of the walk-in whenever it is closed to within one inch of full closure.
ECM	Electronically commutated motors (ECMs) will replace shaded pole (SP) motors for display case and walk-in evaporator fans. PSE customers shall purchase and install the ECMs or have ECMs installed by PSE's SBDI program. The customer is responsible to ensure any applicable Energy Code requirements are met.

Electric Measures, continued

Measure	Eligibility
Gaskets	Must replace a worn or damaged gasket on a reach-in glass door of a low or medium temperature display case, walk-in freezer and/or walk-in cooler. Gasket is considered "damaged" if a hand can be placed through a gasket and the frame, and a tear is 6" and greater. Replacement gaskets must meet the manufacturer's specifications regarding dimensions, materials, attachment method, style, compression, and magnetism.
HID Retrofits	LED fixtures installed under this rebate must be qualified under one of the following programs: Energy Star, DesignLights Consortium, or the Lighting Design Lab. Each exterior fixture installed will have a photocell.
In-Room Occupancy Sensors (Lodging)	Lodging Customers shall install either stand-alone guest room HVAC occupancy controls with automatic, unoccupied setback capabilities or a networked guestroom control with similar capabilities. Unoccupied set points must be a minimum of 5 degrees F from the occupied set point.
Integral LED	LED lamps installed under this rebate must be qualified under one of the following programs: Energy Star, DesignLights Consortium, or the Lighting Design Lab.
LED Canopy Lighting	LED fixtures installed under this rebate must be qualified under one of the following programs: Energy Star, DesignLights Consortium, or the Lighting Design Lab. Each fixture installed will have a photocell. To align with PSE's other commercial lighting program, the following specifications also apply: Must replace existing 320w or 400w HID fixture with a LED fixture; the fixtures must be hardwired to prevent the future installation of less-efficient lamps; LED lights must have minimum CRI of 80 and provide a minimum of 70% of initial lumens at 50,000 hrs; Manufacturer's warranty must be a minimum of five years.
LED Exit Sign	LED Exit Signs must use 5 Watts or less and have a 5 year Manufacturer's Warranty.
LED Open Sign	Installed signs must have an efficiency (lumens/Watt) of 80 or greater, must be complete new LED fixtures, and LED Replacement signs will operate at a maximum of 11-watts when on, and draw zero measureable watts when off.
Night Covers	A night cover applied to open-type refrigerator and freezer display cases in vertical, semi-vertical, and horizontal displays. The night cover must be in place at least six hours in a 24-hour period.
Occupancy Sensors	Must allow for both infrared (IR) and sonic detection

Electric Measures, continued

Measure	Eligibility
Packaged Terminal Heat Pump	New packaged Terminal Heat pumps must meet or exceed current Washington state energy code by a minimum of 10%.
Pre Rinse Spray Valve	Rated at 0.65 gpm to be installed in hot water applications only
Refrigerated Case Lighting	Must consume between 4.0 and 7.5 W of electricity per lineal foot and listed on either the Lighting Design Laboratory or the Design Lights Consortium qualified lists for linear LED lamps. Fixtures must be hardwired.
Retrofit to T8	Baseline savings will be based on the existing T12 lamp wattage and replacement T8 lamp wattage. Ballast must be NEMA Premium or CEE listed; Low Light Output – ballast factor < 0.78 (LLO); High Light Output – ballast factor <1.15 (HLO). Lamp must be ENERGYSTAR, Design Lights Consortium, or Lighting Design Lab Listed.
Retrofit to TLED	Baseline savings will be based on the existing T12 or T8 lamp wattage and replacement using a 14W TLED lamp. For Direct Install, existing ballast must be replaced with a NEMA Premium or CEE listed; Low Light Output – ballast factor < 0.78 (LLO); High Light Output – ballast factor <1.15 (HLO). Lamp must be ENERGYSTAR, Design Lights Consortium, or Lighting Design Lab Listed.
Showerheads	Must replace existing showerhead (assumed 2.5 GPM) with a 1.5 GPM showerhead.
Smart Strips	Must be UL listed, Installed in Workplace setting. Measure does not include timer strips. May be load or activity sensing.
Strip Curtains	Strip curtains, made generally of clear PVC strips, must be nominally between 4' to 8' wide and between 0.060" to 0.080" thick and clear enough to allow for see-through visibility. This measure consists of new strip curtains installed on doorways of refrigerated freezer or cooler boxes. This measure is NOT eligible for display cases or for replacing existing strip curtains.

Direct Install Natural Gas Measures

Measure	Eligibility
Pre-rinse sprayers - gas heated hot water	Rated at 0.65 gpm to be installed in hot water applications only. Food service entities that use gas to heat water.
Aerator - gas heated hot water	Rated at 0.5 gpm to be installed in hot water applications only. For customers who use gas to heat water.
Super Low Flow Showerhead - gas heated hot water	1.5 GPM showerhead to replace a typical 2.5 GPM showerhead.
Web Enabled Thermostats	<ol style="list-style-type: none"> 1) Must be connected and able to be accessed remotely 2) Must be able to maintain settings during power failure. 3) Must allow seven-day programming, temporary manual override and manual selection for fan operation.
In Room Occupancy Sensors	Hospitality Customers shall install either stand-alone guest room HVAC occupancy controls with automatic, unoccupied setback capabilities or a networked guestroom control with similar capabilities. Unoccupied set points must be a minimum of 5 degrees F from the occupied set point.

c. Incentives

Measures are installed at the customer’s site directly by the third party implementer and/or a qualified Contractor Alliance Network representative. Complex measures will require a co-pay by the customer. Incentives payments for measures with a co-pay will be in alignment with the Business Lighting rebate program. Incentives are paid to the contractor, and are not intended to be a direct-to-customer rebate.

V. REGIONAL EFFICIENCY PROGRAMS

A. Northwest Energy Efficiency Alliance (NEEA)

Schedule 254 (Electric only)

The majority of NEEA programs, measures and initiatives are intended to influence the marketplace as a whole are rarely are targeted to consumers. Rather, NEEA intends to influence utilities, manufacturers, distributors, retailers, builders, property management firms,

Whether directly or indirectly, NEEA sponsors programs and initiatives including but not limited to the following categories:

Residential

- New Home Construction
- Consumer Products
- Lighting
- Appliances

Commercial

- Energy-efficient design
- Appliance Controls
- Energy Management
- Energy Codes and Standards

Industrial

- Energy Management
- Regional Technical Solutions
- Sector-wide efficiency Initiatives

Emerging Technologies

- Residential HVAC
- Regional Collaboration among Utilities

With the exception of this sentence, PSE intentionally left this page blank.

VI. OTHER ELECTRIC PROGRAMS

A. Net Metering

Schedule 150 (Electric only)

1. Eligibility

Customer-Generators who operate fuel cells or produce electricity and used and useful thermal energy from a common fuel source or who generate electricity using hydroelectric, solar, or wind energy or biogas from animal waste as fuel, with a total capacity of no more than 100 kilowatts (kW) and the generation is located on their own premises. Such generator must operate in parallel with PSE's transmission and distribution facilities. Detailed availability is outlined in PSE's Schedule 150.

B. Renewable Energy Advantage Program

Schedule 150 & 151 (Electric only)

1. Eligibility

Customer-Generators who receive electric service from the Company and operate a qualifying Generation System on their Premises. Where the Generation System will be interconnected with the Company's distribution system such interconnection shall be under the provisions of a separate interconnection (net metering) agreement. If the Generation System is interconnected with the Company's transmission or distribution system, service under this schedule is not available except during the effectiveness of an interconnection agreement between the Customer-Generator and the Company.

The Customer-Generator must own the real property on which the Generation System is located.

Generation Systems that operate on real property where the Company provides Electric Service, but the Generation System is not interconnected to the Company's distribution system are also eligible. Generation Systems installed on real property that are not and will never be served by the Company are not eligible for service under this schedule.

Detailed eligibility requirements are enumerated in PSE's Schedule 151.

2. Annual Payments

Customer-Generated Power	Base Rate	Payment Factor	Price per kWh
Solar modules and inverter manufactured in Washington state	\$0.15	3.6	\$0.54
Solar modules manufactured in Washington state	\$0.15	2.4	\$0.36
Solar or wind generating equipment with an inverter manufactured in Washington state	\$0.15	1.2	\$0.18
Anaerobic digester or other solar equipment without components manufactured in Washington state	\$0.15	1.0	\$0.15
Wind generator equipped with blades manufactured in Washington state	\$0.15	1.0	\$0.15

Incentive payments will be made once annually and are computed using the price per kWh from the above table, multiplied by the total kWh generated during the payment period. The payment period is from July 1 of one year through June 30 of the next year. The aggregate payment amount is capped according to requirements enumerated in WAC 458-20-273(501)(a) and (701). Once the cap is reached, PSE will proportionately reduce individual payments as new renewable generating systems are added.

(501) **How is an incentive payment computed?** The computation for the incentive payment involves a base rate that is multiplied by an economic development factor determined by the amount of the system's manufacture in Washington state to determine the incentive payment rate. The incentive payment rate is then multiplied by the system's gross kilowatt-hours generated to determine the incentive payment.

- (a) **Determining the base rate.** The first step in computing the incentive payment is to determine the correct base rate to apply, specifically:
- Fifteen cents per economic development kilowatt-hour; or
 - Thirty cents per economic development kilowatt-hour for community solar projects.

If requests for incentive payments exceed the amount of funds available for credit to the participating light and power business, the incentive payments must be reduced proportionately

(701) **Does the department of revenue consider the incentive payment gross income subject to Washington state taxation?** The answer will depend on whether the electricity is generated by a singly owned system or a community solar system.

Hybrid systems, such as a combination of solar and wind, will be paid at the lowest price per kWh, unless each distinct part of the system is separately metered.

If a Customer-Generator adds a new portion to the existing system (For instance, a new 1 kW array of solar panels manufactured in Washington), the lower payment factor will apply, unless the new portion of the system is separately metered.

VII. MEASURE LIFE CALCULATIONS

A. Residential Programs

Measure/Incentive/Initiative	Maximum Measure Life, Years
Boilers, Energy Star®	20
CFL Lamp, Energy Star® qualified, any exterior application	4
CFL Fixture Energy Star® qualified, any exterior or interior application	15
CFL Lamp, Energy Star® any interior application	5
Clothes Washers, Energy Star®	14
Clothes Dryers, Energy Star® Heat Pump	12
Compact Fluorescent Light (CFL) Bulb Energy Star® qualified, any interior application	5
Dishwashers, Energy Star®	9
Duct leakage testing and duct sealing	20
Duct Sealing	20
Freezers	20
Fireplace, High Efficiency, Natural Gas	25
Fuel Conversion—Space and Water Heat	30
Furnace, Energy Star® Natural Gas	18
Heat Pump – ductless using inverter technology	20
Heat Pump – Energy Star® qualified (air-source, split systems)	18
Heat Pump – Geothermal, Energy Star®	30
Heat pump replacement for an electric furnace	18
HomePrint Audit	3
Insulation, Attic (R-11 or less to R-38)	30
Insulation, Duct (R-0 to R-11)	30
Insulation, Floor (R-11 or less to minimum R-19, up to R-30)	30
Insulation, Wall (R-0 to R-13)	30
Light socket, CFL conversion assembly	15
Manufactured Home, Energy Star® certified	30
Multifamily Lighting measures (including lighting reduction)	12



Residential Programs, continued

Measure/Incentive/Initiative	Maximum Measure Life, Years
Refrigerator Decommissioning	5
Refrigerator, Energy Star®	17
Replacement Doors	30
Showerheads, Energy Efficient Residential in <u>Multifamily</u> units	6
Showerheads, Energy Efficient Residential all dwelling types	10
Waste Water Heat Recovery	30
Water Heater Pipe Insulation (Minimum 3 feet)	15
Water heater, Natural Gas, Energy Star®	12
Water Heater, Tankless, Natural Gas, Energy Star®	20
Water Heater, Heat Pump Water Heater, Energy Star®	15
Water Heater, High Efficiency, Electric Storage	13
Windows- Single pane upgrade to class 33 or greater ⁴	30
Whole house ventilation	15

⁴ Windows will be funded only when bundled with other qualifying weatherization Measures.

B. Low Income Weatherization Program Specific Measure Life

Unless otherwise noted in the below table, all measure life figures in the above table apply to the Company’s Low Income Weatherization program.

Measure/Incentive/Initiative	Maximum Measure Life, Years
Electric Thermostat, Low Income Weatherization	15
Structure Sealing, Manufactured Home	25
Insulation, Manufactured Home, Attic (R-11 or less to R-30)	25
Insulation, Floor, Manufactured Home, (R-11 or less to minimum R-19, up to R-30)	25
Insulation, Wall, Manufactured Home, (R-0 to R-11 or fill cavity)	25
Windows, Manufactured Home	25
Duct Sealing, Manufactured Home	18

C. Commercial and Industrial Programs

Measure/Incentive/Initiative	Maximum Measure Life, Years
Building Thermal Improvements:	
Duct Insulation	15
Exterior Roof Insulation	15
Insulated Windows	30
Roof and Ceiling Insulation	24
Wall Insulation	24
Commissioning and Optimization:	
Commissioning/Optimization of Energy Systems	5
Controls:	
HVAC Controls and Energy Management Systems	10
Lighting Control Systems	10
PC Power Management	4
Process and Other Efficiency Control Systems	10
Cooler Controller	10
HVAC and Refrigeration:	
Boilers—Steam	30
Boilers--Hot water	24
Chillers	20
Economizers	10
Evaporative assist cooling for HVAC equipment	15
Heat Recovery Systems	15
High Efficiency HVAC Retrofit Applications	15
HVAC – central	15
Premium HVAC Service	5
HVAC – unitary	15

Commercial and Industrial Programs, continued

Measure/Incentive/Initiative	Maximum Measure Life, Years
Lighting Improvements:	
TLED Lamps	12
Fluorescent Luminaires	12
HID Luminaires	12
LED Exit Signs	12
LED Luminaires	12
LED Street Lighting	20
Locking Screw-in CFL	12
Low Wattage T8 Lamps	6
Integral Ballasted LED Lamps	12
Ceramic Metal Halide Lamps	5
Screw-in CFL	3
New Construction Whole Building Analysis	
Energy Model Whole Building Approach	15
Process Efficiency Improvements:	
Fan, Compressor and Pump Systems or Stations	15
Motor and Drive Systems	15
Process Optimization	5
Other Process Modifications	15
Reciprocating Engines	15
Refrigeration Systems	15

Commercial and Industrial Programs, continued

Measure/Incentive/Initiative	Maximum Measure Life, Years
Restaurant/Kitchen Equipment:	
Connectionless Steamer	10
Deep Fat Fryer	8
Dishwashers	
Conveyor type	20
Door type	15
Under counter	10
Hot Food Holding Cabinet	12
Pre-Rinse Spray Heads	5
Water Heating Improvements:	
Low Flow Devices	10
Piping Insulation	15
Water Heaters	7
Other:	
Clothes Washers, Multifamily, High-use	8
Transformers	15
Green Motor Rewinds	10
Ice Makers	12
Resource Conservation Manager (Behavioral)	3
Voltage Optimization	15

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VIII. GLOSSARY OF ACRONYMS

AFUE	Annual Fuel Utilization Efficiency (standard federal efficiency rating)
AHU	Air Handling Unit
AIA	American Institute of Architect
ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BOMA	Building Owners and Managers Association
BPA	Bonneville Power Administration
CEE	Consortium for Energy Efficiency
CMS	Customer Management System
CRAG	Conservation Resource Advisory Group
DCV	Demand Control Ventilation
DDC	Design Development and Construction
Direct Install Measure	A conservation measure that is installed by a PSE representative—rather than a PSE customer—into a qualifying structure.
ECM	Electronically Commutated Motor
CS	Customer Solutions. A division within PSE whose charter is to provide outstanding customer service in achieving all available, feasible, and cost-effective conservation within the PSE service territory.
EF	Energy Factor
EUI	Energy Usage Index
FSTC	Food Service Technology Center
FTE	Full Time Equivalent (applicable to staffing levels, etc.)
GPM	Gallons Per Minute

Acronyms, Continued

HID	High Intensity Discharge (applies to Lighting measures)
HSPF	Heating Seasonal Performance Factor
HVAC	Heating, Ventilation and Air Conditioning
IPLV	Integrated Part Load Value
kWh	Kilowatt Hour
MEF	Manufacturers Efficiency Factor
NEMA	National Electrical Manufacturers Association
O&M	Operations and Maintenance
ODP	Open Drip-Proof (motors)
PTCS	Performance Tested Comfort Systems
PTHP	Package Terminal Heat Pump
SEER	Seasonal Energy Efficiency Ratio
SPIFF	A colloquialism, representing an incentive paid to a salesperson for selling a specific product. Also referred to as SPIV or SPIF. SPIF is not actually an acronym, as (in most cases) it doesn't have directly-correlating words (such as "Sales Person Incentive....??").
TEFC	Totally Enclosed, Fan-Cooled (motors)
TRC	Total Resource Cost
UC	Utility Cost
ULI	Urban Land Institute
USGBC	U.S. Green Building Council
UL	Underwriters' Laboratory
VAV	Variable Air Volume

Acronyms, continued

VFD	Variable Frequency Drive
WAMOA	Washington Association of Maintenance and Operations Administrators
WF	Water Factor: a measure of water consumption. A higher number, representing lower efficiency, is less desirable.
WSEC	Washington State Energy Code

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E201	18230611	Low Income Weatherization	Electricity	Shareholder	0	kWh	calculated				
E201	18230611	Low Income Weatherization	Electricity	Repairs	0	kWh	calculated	\$1,471,945.18	\$ 1,471,945.18	1	
E201	18230611	Low Income Weatherization	Electricity	Appliances: Refrigerator Replacement ~ TE, MH	503	kWh	per unit	\$ 545.00	\$ 545.00	22	Res Refrigerator
E201	18230611	Low Income Weatherization	Electricity	Appliances: Refrigerator Replacement ~ TE, SF	503	kWh	per unit	\$ 545.00	\$ 545.00	22	Res Refrigerator
E201	18230611	Low Income Weatherization	Electricity	Furnace / Heating: Ductless Heat Pump ~ TE, SF	2645.44	kWh	per unit	\$ 3,407.00	\$ 3,407.00	15	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Furnace / Heating: Ductless Heat Pump ~ TE, MH	3447.84	kWh	per unit	\$ 4,130.00	\$ 3,407.00	15	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R0 to R19) ~ TE, MH	0.5	kWh	square foot	\$ 1.10	\$ 1.10	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Attic: R0 to R30 ~ TE, MH	0.3	kWh	square foot	\$ 2.10	\$ 1.25	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R0 to R38) ~ TE, MF	1.2	kWh	square foot	\$ 2.43	\$ 2.43	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R0 to R38) ~ TE, SF	2.2	kWh	square foot	\$ 2.43	\$ 2.43	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R11 to R38) ~ TE, MF	1.39	kWh	square foot	\$ 1.95	\$ 1.95	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R11 to R38) ~ TE, SF	0.47	kWh	square foot	\$ 1.95	\$ 1.95	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R19 to R38) ~ TE, MF	0.3	kWh	square foot	\$ 1.35	\$ 1.35	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R19 to R38) ~ TE, SF	0.22	kWh	square foot	\$ 1.35	\$ 1.35	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Duct Insulation (R0-R11) ~ TE, SF	4.65	kWh	linear foot	\$ 6.46	\$ 6.46	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor Insulation (R0-R19) ~ TE, MF	1.1	kWh	square foot	\$ 1.87	\$ 1.87	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor Insulation (R0-R19) ~ TE, SF	0.91	kWh	square foot	\$ 1.87	\$ 1.87	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor (R0 to R22) ~ TE, MH	0.5	kWh	square foot	\$ 2.26	\$ 1.50	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor Insulation (R0-R30) ~ TE, MH	1.47	kWh	square foot	\$ 2.46	\$ 2.46	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor Insulation (R0-R30) ~ TE, SF	1.02	kWh	square foot	\$ 2.20	\$ 2.20	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor (R11 to R22) ~ TE, MH	0.2	kWh	square foot	\$ 1.40	\$ 1.25	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor Insulation (R11-R30) ~ TE, MF	0.66	kWh	square foot	\$ 1.13	\$ 1.13	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Floor Insulation (R11-R30) ~ TE, SF	0.61	kWh	square foot	\$ 1.38	\$ 1.38	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Wall Insulation (R0-R11) ~ TE, MF	2	kWh	square foot	\$ 2.75	\$ 2.75	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Wall Insulation (R0-R11) ~ TE, MH	1.68	kWh	square foot	\$ 2.75	\$ 2.75	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation: Wall Insulation (R0-R11) ~ TE, SF	1.78	kWh	square foot	\$ 2.75	\$ 2.75	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Low Cost: Showerheads 2.0 GPM ~ TE, MF	139	kWh	per unit	\$ 40.50	\$ 40.50	10	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Low Cost: Showerheads 2.0 GPM ~ TE, MH	139	kWh	per unit	\$ 40.50	\$ 40.50	10	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Low Cost: Showerheads 2.0 GPM ~ TE, SF	139	kWh	per unit	\$ 40.50	\$ 40.50	10	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Duct Sealing: Duct Sealing ~ TE, MH	973	kWh	per unit	\$ 500.00	\$ 500.00	18	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Duct Sealing: Duct Sealing ~ TE, SF	735	kWh	per unit	\$ 500.00	\$ 500.00	20	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Structure Sealing: Shell Sealing ~ TE, MH	0.2	kWh	square foot	\$ 1.00	\$ 1.00	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Structure Sealing: Shell Sealing ~ TE, SF	0.48	kWh	square foot	\$ 1.00	\$ 1.00	15	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	MF Air Sealing-All Areas	2.18	kWh	square foot	\$ 2.18	\$ 2.18	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	ENERGY STAR Whole House Ventilation w/Air Sealing~MF	143	kWh	per unit	\$ 250.00	\$ 250.00	15	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	EnergyStar Whole House Ventilation ~ TE, MF	143	kWh	per unit	\$ 50.00	\$ 50.00	15	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	EnergyStar Whole House Ventilation ~ TE, MH	143	kWh	per unit	\$ 50.00	\$ 50.00	15	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	EnergyStar Whole House Ventilation ~ TE, SF	143	kWh	per unit	\$ 50.00	\$ 50.00	15	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Water Heater: Pipe Insulation ~ TE, MF	20	kWh	linear foot	\$ 20.00	\$ 20.00	15	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Water Heater: Pipe Insulation ~ TE, MH	20	kWh	linear foot	\$ 20.00	\$ 20.00	15	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Water Heater: Pipe Insulation ~ TE, SF	20	kWh	linear foot	\$ 20.00	\$ 20.00	15	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Windows: Windows - Early Double to EF Double ~ TE, MH	12.26	kWh	square foot	\$ 32.52	\$ 10.00	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Windows: Windows - Single to Double Pane ~ TE, MH	20.11	kWh	square foot	\$ 32.52	\$ 12.00	25	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Windows: Windows - Single to Double Pane ~ TE, SF	11.4	kWh	square foot	\$ 32.52	\$ 13.00	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Thermostat: Electronic ~ TE, SF	49	kWh	per unit	\$ 67.50	\$ 67.50	15	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	SIR Measure: DHPs (Treat Savings)	588506	kWh	calculated	\$ 728,951.70	\$ 728,951.70	15	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	SIR measure: HPWH (Treat Savings)	223191	kWh	calculated	\$ 66,000.00	\$ 66,000.00	15	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	LED A Lamps~TE, MF (SIR Measure--Prescriptive Savings)	16.52	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED A Lamps~TE, MH (SIR Measure--Prescriptive Savings)	20.67	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED A Lamps~TE, SF (SIR Measure--Prescriptive Savings)	20.67	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED MR 16~TE, MF (SIR Measure--Prescriptive Savings)	20.8	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED MR 16~TE, SF (SIR Measure--Prescriptive Savings)	20.19	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED Candelabra~TE, MF (SIR Measure--Prescriptive Savings)	9.09	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED Candelabra~TE, SF (SIR Measure--Prescriptive Savings)	16.01	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	Heat Pump Water Heater Tier 1 ~ TE, SF	1069	kWh	per unit	\$ 900.00	\$ 900.00	13	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Heat Pump Water Heater Tier 1 ~ TE, MH	1069	kWh	per unit	\$ 900.00	\$ 900.00	13	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Heat Pump Water Heater Tier 2 ~ TE, SF	1518	kWh	per unit	\$ 1,369.00	\$ 1,369.00	13	Res Water Heat

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E201	18230611	Low Income Weatherization	Electricity	Heat Pump Water Heater Tier 2 ~ TE, MH	1518	kWh	per unit	\$ 1,369.00	\$ 1,369.00	13	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Advanced Power Strip Direct Install ~SF	216	kWh	per unit	\$ 55.00	\$ 55.00	5	Res Plug Load
E201	18230611	Low Income Weatherization	Electricity	Advanced Power Strip Direct Install ~MF	216	kWh	per unit	\$ 55.00	\$ 55.00	5	Res Plug Load
E201	18230611	Low Income Weatherization	Electricity	Advanced Power Strip Direct Install ~MH	216	kWh	per unit	\$ 55.00	\$ 55.00	5	Res Plug Load
E201	18230611	Low Income Weatherization	Electricity	LED Candelabra "TE, MH (SIR Measure--Prescriptive Savings)	16.01	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED Globe "TE, SF (SIR Measure--Prescriptive Savings)	18.09	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED Globe "TE, MF (SIR Measure--Prescriptive Savings)	14.15	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	LED Globe "TE, MH (SIR Measure--Prescriptive Savings)	18.09	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	T8 Retrofit LED, "TE, MF (SIR Measure--Prescriptive Savings)	9.66	kWh	per unit	\$ 15.00	\$ 15.00	12	Res Lighting
E201	18230611	Low Income Weatherization	Electricity	Aerator - 1.5 gpm EWH - Direct Install, SF	36.73	kWh	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Aerator - 1.5 gpm EWH - Direct Install, MF	44.84	kWh	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Aerator - 1.5 gpm EWH - Direct Install, MH	36.73	kWh	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R0 to R49) ~ TE, SF	2.23	kWh	square foot	\$ 2.43	\$ 2.43	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R0 to R49) ~ TE, MF	1.2	kWh	square foot	\$ 2.43	\$ 2.43	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R11 to R49) ~ TE, SF	0.51	kWh	square foot	\$ 1.95	\$ 1.95	30	SF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Insulation, Ceiling: Attic Insulation (R19 to R49) ~ TE, MF	0.4	kWh	square foot	\$ 1.95	\$ 1.95	30	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Thermostat: Electronic ~ TE, MF	49	kWh	per unit	\$ 67.50	\$ 67.50	15	MF Space Heat
E201	18230611	Low Income Weatherization	Electricity	Thermostat: Electronic ~ TE, MH	49	kWh	per unit	\$ 67.50	\$ 67.50	15	SF Space Heat
E214	18230625	HomePrint	Electricity	A-Lamp LED - DI	20.67	kWh	per unit	\$ 3.65	\$ 3.65	12	Res Lighting
E214	18230625	HomePrint	Electricity	APS - Advanced Power Strip	216	kWh	per unit	\$ 42.00	\$ 42.00	5	Res Plug Load
E214	18230625	HomePrint	Electricity	Globe LED - DI	18.09	kWh	per unit	\$ 5.30	\$ 5.30	12	Res Lighting
E214	18230625	HomePrint	Electricity	Reflector LED - BR30	39.41	kWh	per unit	\$ 5.30	\$ 5.30	12	Res Lighting
E214	18230625	HomePrint	Electricity	Showerhead - Fixed - leave behind	238	kWh	per unit	\$ 3.95	\$ 3.95	10	Res Water Heat
E214	18230625	HomePrint	Electricity	Residential Aerators 1 GPM	53	kWh	per unit	\$ 0.54	\$ 0.54	10	Res Water Heat
E214	18230625	HomePrint	Electricity	Residential Aerators 1.5 GPM	31	kWh	per unit	\$ 1.41	\$ 1.41	10	Res Water Heat
E214	18230625	HomePrint	Electricity	MH - Reflector LED - BR30	39.41	kWh	per unit	\$ 5.30	\$ 5.30	12	Res Lighting
E214	18230625	HomePrint	Electricity	MH - A-lamp LED	20.67	kWh	per unit	\$ 3.65	\$ 3.65	12	Res Lighting
E214	18230625	HomePrint	Electricity	MH - Globe LED	18.09	kWh	per unit	\$ 5.30	\$ 5.30	12	Res Lighting
E214	18230625	HomePrint	Electricity	MH - HEA - Franklin	0	kWh	per home	\$ 115.00	\$ 115.00	1	SF Space Heat
E214	18230625	HomePrint	Electricity	MH - HEA - CAN	0	kWh	per home	\$ 100.00	\$ 100.00	1	SF Space Heat
E214	18230625	HomePrint	Electricity	Showerhead - HH - leave behind	238	kWh	per unit	\$ 9.48	\$ 9.48	10	Res Water Heat
E214	18230625	HomePrint	Electricity	HEA - Franklin	0	kWh	per home	\$ 144.00	\$ 144.00	1	SF Space Heat
E214	18230625	HomePrint	Electricity	HEA - CAN	0	kWh	per home	\$ 121.00	\$ 121.00	1	SF Space Heat
E214	18230625	HomePrint	Electricity	EIE - Water Treatment Savings - Gas SH	7	kWh	per unit	\$ -	\$ -	10	Res Water Heat
E214	18230626	SF Existing Water Heat	Electricity	NEEA Northern Climate Specs Heat Pump Water Heater - Tier 1	1069	kWh	per unit	\$ 854.00	\$ 500.00	13	Res Water Heat
E214	18230626	SF Existing Water Heat	Electricity	NEEA Northern Climate Specs Heat Pump Water Heater - Tier 2	1592	kWh	per unit	\$ 870.00	\$ 800.00	13	Res Water Heat
E214	18230626	SF Existing Water Heat	Electricity	NEEA Northern Climate Specs Heat Pump Water Heater- Tier 3	1699	kWh	per unit	\$ 870.00	\$ 800.00	13	Res Water Heat
E214	18230628	SF Existing Space Heat	Electricity	Ductless Heat Pump	2659	kWh	per unit	\$ 3,536.00	\$ 800.00	15	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	Ductless Heat Pump (Manufactured Homes)	3343	kWh	per unit	\$ 3,536.00	\$ 800.00	15	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	Energy Star Geothermal Heat Pump	4037	kWh	per home	\$ 3,889.00	\$ 1,500.00	30	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	Energy Star Heat Pump - Tier 2 = 9.0 HSPF, 14 SEER	109	kWh	per unit	\$ 81.00	\$ 350.00	15	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	Forced-air-furnace to Heat Pump Conversion (>= 8.5 HSPF, 14 SEER)	3528	kWh	per home	\$ 2,881.00	\$ 1,500.00	15	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	Heat Pump Sizing & Lock out Controls	630	kWh	per home	\$ 512.00	\$ 300.00	15	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	NEW Energy Star Heat Pump - Tier 3 = 10.0 HSPF, 16 SEER	939	kWh	per unit	\$ 1,688.00	\$ 800.00	20	SF Heat Pump
E214	18230628	SF Existing Space Heat	Electricity	Ductless Heat Pump	2659	kWh	per unit	\$ 3,536.00	\$ 1,200.00	15	SF Heat Pump
E214	18230627	SF Existing Weatherization	Electricity	Air Sealing CFM50 - FAF	0.54	kWh	per unit	\$ 0.66	\$ 0.66	15	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Air Sealing CFM50 - HP	0.24	kWh	per unit	\$ 0.66	\$ 0.66	15	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Air Sealing CFM50 - Zonal	0.44	kWh	per unit	\$ 0.66	\$ 0.66	15	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Attic Insulation R-0 to R-49 FAF	2.35	kWh	square foot	\$ 1.12	\$ 0.33	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Attic Insulation R-0 to R-49 HP	1.33	kWh	square foot	\$ 1.12	\$ 0.33	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Attic Insulation R-0 to R-49 Zonal	2.16	kWh	square foot	\$ 1.12	\$ 0.33	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Attic Insulation R-11 to R-49 - FAF	0.62	kWh	square foot	\$ 0.98	\$ 0.33	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Attic Insulation R-11 to R-49 - HP	0.26	kWh	square foot	\$ 0.98	\$ 0.33	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Attic Insulation R-11 to R-49 - Zonal	0.44	kWh	square foot	\$ 0.98	\$ 0.33	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Energy Star Whole House Ventilation	81	kWh	per unit	\$ 50.00	\$ 50.00	10	Res Plug Load
E214	18230627	SF Existing Weatherization	Electricity	Floor Insulation R-0 to R-30 FAF	1	kWh	square foot	\$ 1.32	\$ 0.11	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Floor Insulation R-0 to R-30 HP	0.18	kWh	square foot	\$ 1.32	\$ 0.11	30	SF Space Heat

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E214	18230627	SF Existing Weatherization	Electricity	Floor Insulation R-0 to R-30 Zonal	1.03	kWh	square foot	\$ 1.32	\$ 0.11	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Home Performance with Energy Star	0	kWh	per home	\$ 600.00	\$ 400.00	1	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Wall Insulation R-0 to R-13 FAF	2.23	kWh	square foot	\$ 1.39	\$ 0.22	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Wall Insulation R-0 to R-13 HP	0.96	kWh	square foot	\$ 1.39	\$ 0.22	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Wall Insulation R-0 to R-13 Zonal	1.53	kWh	square foot	\$ 1.39	\$ 0.22	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Windows - Single Pane to U.30 - FAF	15.8	kWh	square foot	\$ 20.50	\$ 2.78	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Windows - Single Pane to U.30 - HP	6.99	kWh	square foot	\$ 20.50	\$ 2.78	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Windows - Single Pane to U.30 - Zonal	8.92	kWh	square foot	\$ 20.50	\$ 2.78	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Prescriptive air sealing - Attic	0.14	kWh	square foot	\$ 0.20	\$ 0.09	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Energy Star Whole House Ventilation with Air Sealing	81	kWh	per unit	\$ 250.00	\$ 150.00	10	Res Plug Load
E214	18230627	SF Existing Weatherization	Electricity	Duct Sealing Only - FAF	1049	kWh	per home	\$ 608.58	\$ 300.00	20	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Duct Sealing Only - HP	752	kWh	per home	\$ 608.58	\$ 300.00	20	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	Prescriptive air sealing - Crawl Space	0.14	kWh	square foot	\$ 0.20	\$ 0.09	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Single Pane to U.30 - Resistance	9.98	kWh	square foot	\$ 17.81	\$ 2.78	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Single Pane to U.30 - HP	9.98	kWh	square foot	\$ 17.81	\$ 2.78	30	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Floor Insulation - R-0 to R-22 - Resistance	0.46	kWh	square foot	\$ 1.39	\$ 0.55	25	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Floor Insulation - R-0 to R-22 - HP	0.46	kWh	square foot	\$ 1.39	\$ 0.55	25	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Prescriptive Duct Sealing - Single - Resistance	973	kWh	per home	\$ 418.00	\$ 200.00	18	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Prescriptive Duct Sealing - Single - HP	615	kWh	per home	\$ 418.00	\$ 200.00	18	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Prescriptive Duct Sealing - Double/Triple - Resistance	973	kWh	per home	\$ 418.00	\$ 400.00	18	SF Space Heat
E214	18230627	SF Existing Weatherization	Electricity	MH - Prescriptive Duct Sealing - Double/Triple - HP	615	kWh	per home	\$ 418.00	\$ 400.00	18	SF Space Heat
E214	18230461	Home Energy Reports	Electricity	Home Energy Reports (Original) Electric	0	kWh	per home	\$ 3.11	\$ 3.11	2	Res Lighting
E214	18230434	Home Appliances	Electricity	Advanced Power Strips	216	kWh	per unit	\$ 55.00	\$ 45.00	5	Res Plug Load
E214	18230434	Home Appliances	Electricity	Clothes Washer Replacement Electric WH / Electric Dryer - Frontload	848	kWh	per unit	\$ 717.00	\$ 717.00	11	Res Water Heat
E214	18230434	Home Appliances	Electricity	Freezer Decomm	444	kWh	per unit	\$ 125.99	\$ 111.00	5	Res Refrigerator
E214	18230434	Home Appliances	Electricity	LED: Engagement - Appl Repl	11.32	kWh	per unit	\$ 1.59	\$ 2.00	12	Res Lighting
E214	18230434	Home Appliances	Electricity	Refrigerator CEE Tier 1	9	kWh	per unit	\$ 27.00	\$ 25.00	15	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Refrigerator CEE Tier 2	42	kWh	per unit	\$ 122.00	\$ 50.00	15	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Refrigerator CEE Tier 3	98	kWh	per unit	\$ 211.00	\$ 75.00	15	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Refrigerator Decomm	289	kWh	per unit	\$ 199.50	\$ 111.00	6	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Refrigerator Replacement Year 1-10	494	kWh	per unit	\$ 600.00	\$ 600.00	10	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Refrigerator Replacement Year 1-15	9	kWh	per unit	\$ 100.00	\$ 100.00	15	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Showerhead - Engagement_C - Appl Repl - 1.5 gpm (E)	103	kWh	per unit	\$ 6.67	\$ 6.67	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Showerhead - Engagement_EO - Appl Repl - 1.5 gpm	125	kWh	per unit	\$ 10.00	\$ 10.00	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Clothes Washer CEE Tier 1 Any WH/Any Dryer - Frontload	82	kWh	per unit	\$ 80.00	\$ 25.00	14	Res Water Heat
E214	18230434	Home Appliances	Electricity	Clothes Washer CEE Tier 2 Any WH/Any Dryer	114	kWh	per unit	\$ 125.00	\$ 50.00	14	Res Water Heat
E214	18230434	Home Appliances	Electricity	Clothes Washer CEE Tier 3 Any WH/Any Dryer	134	kWh	per unit	\$ 124.00	\$ 75.00	14	Res Water Heat
E214	18230434	Home Appliances	Electricity	HP Clothes Dryer - Vented	183	kWh	per unit	\$ 614.05	\$ 150.00	12	Res Plug Load
E214	18230434	Home Appliances	Electricity	HP Clothes Dryer - Ventless	228	kWh	per unit	\$ 614.05	\$ 150.00	12	Res Plug Load
E214	18230434	Home Appliances	Electricity	Clothes Washer Replacement Electric WH / Electric Dryer - Top load	809	kWh	per unit	\$ 700.00	\$ 700.00	11	Res Water Heat
E214	18230434	Home Appliances	Electricity	Clothes Washer CEE Tier 1 Any WH/Any Dryer - Top load	65	kWh	per unit	\$ -	\$ 25.00	14	Res Water Heat
E214	18230434	Home Appliances	Electricity	Energy Star Freezer	23	kWh	per unit	\$ 45.20	\$ 25.00	22	Res Refrigerator
E214	18230434	Home Appliances	Electricity	Energy Star Refrigerator	39	kWh	per unit	\$ 100.23	\$ 100.00	15	Res Refrigerator
E214	18230434	Home Appliances	Electricity	CEE Tier 1 or above - Any WH/Any Dryer - Top load	65	kWh	per unit	\$ -	\$ 100.00	14	Res Water Heat
E214	18230434	Home Appliances	Electricity	Energy Star Clothes Washer - Any WH/Any Dryer - Front load	101	kWh	per unit	\$ 108.98	\$ 100.00	14	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Bath - Engagement - C - APPD - 1.0 gpm - kWh	25.93	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Bath - Engagement - C - APPR - 1.0 gpm - kWh	25.93	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Bath - Engagement - EO - APPD - 1.0 gpm	31.36	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Bath - Engagement - EO - APPR - 1.0 gpm	31.36	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Kitchen - Engagement - C - APPD - 1.5 gpm - kWh	15.11	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Kitchen - Engagement - C - APPR - 1.5 gpm - kWh	15.11	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Kitchen - Engagement - EO - APPD - 1.5 gpm	18.27	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230434	Home Appliances	Electricity	Aerator - Kitchen - Engagement - EO - APPR - 1.5 gpm	18.27	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Adapter - ShowerStart (E)	28.1	kWh	per unit	\$ 15.98	\$ 10.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead - Retail_C - Any WH - 1.50 gpm and less (E)	109.2	kWh	per unit	\$ 13.29	\$ 11.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead - Retail_C - Any WH - 1.51 to 1.75 gpm (E)	88	kWh	per unit	\$ 13.29	\$ 11.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead - Retail_C - Any WH - 1.76 to 2.0 gpm (E)	64.4	kWh	per unit	\$ 13.29	\$ 10.00	10	Res Water Heat

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E214	18230435	Residential Showerheads	Electricity	Showerhead - Retail_EO - Any WH - 1.50 gpm and less	132.1	kWh	per unit	\$ 26.58	\$ 10.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead - Retail_EO - Any WH - 1.51 to 1.75 gpm	106.4	kWh	per unit	\$ 26.58	\$ 10.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead - Retail_EO - Any WH - 1.76 to 2.0 gpm	77.9	kWh	per unit	\$ 26.58	\$ 10.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead - ShowerStart - 1.5 gpm (E)	177.6	kWh	per unit	\$ 18.87	\$ 10.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Adapter-ShowerStart - C_Electric Water Heat	23.2	kWh	per unit	\$ 7.99	\$ 6.50	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Showerhead-ShowerStart - C_Electric Water Heat	146.8	kWh	per unit	\$ 9.44	\$ 6.50	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Faucet - WaterSense - EO - Any WH - 1.5 gpm or less	18.27	kWh	per unit	\$ 20.00	\$ 10.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Faucet - WaterSense - C - Any WH - 1.5 gpm or less	15.11	kWh	per unit	\$ 20.00	\$ 11.50	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Aerator - WaterSense - EO - Any WH - 1.5 gpm or less	18.27	kWh	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Aerator - WaterSense - EO - Any WH - 1.0 gpm	31.36	kWh	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Aerator - WaterSense -C-Any WH -1.5 gpm - kWh	15.11	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230435	Residential Showerheads	Electricity	Aerator - WaterSense -C-Any WH -1.0 gpm -kWh	25.93	kWh	per unit	\$ 1.70	\$ 1.70	10	Res Water Heat
E214	18230440	Residential Lighting	Electricity	A-Lamp LED	11.32	kWh	per unit	\$ 1.59	\$ 2.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Candelabra LED	22.49	kWh	per unit	\$ 2.92	\$ 2.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Globe LED	12.93	kWh	per unit	\$ 3.68	\$ 2.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Indoor LED Fixture	18.23	kWh	per unit	\$ -	\$ 8.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	MR-16 LED	20.19	kWh	per unit	\$ 1.75	\$ 2.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Outdoor LED Fixture	5.91	kWh	per unit	\$ 9.65	\$ 9.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Reflector LED	28.05	kWh	per unit	\$ 2.08	\$ 3.25	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Retrofit Kit LED	25.61	kWh	per unit	\$ 2.08	\$ 4.50	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Specialty CFL (no incentive effective 1/1/17)	12.75	kWh	per unit	\$ 4.75	\$ 0.50	7	Res Lighting
E214	18230440	Residential Lighting	Electricity	Standard CFL (no incentive effective 1/1/17)	9.42	kWh	per unit	\$ 2.48	\$ 0.50	6	Res Lighting
E214	18230440	Residential Lighting	Electricity	T8 Retrofit LED	7.98	kWh	per unit	\$ 2.56	\$ 2.50	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	T8 Fixture LED	28.63	kWh	per unit	\$ 24.19	\$ 5.00	13	Res Lighting
E214	18230440	Residential Lighting	Electricity	Value A-Lamp LED	11.32	kWh	per unit	\$ 1.59	\$ 0.50	10	Res Lighting
E214	18230023	Web-Enabled Thermostats	Electricity	Web-Enabled Thermostats (Retail)	879	kWh	per unit	\$ 187.35	\$ 75.00	20	SF Heat Pump
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv - Space & WH - BB	12000	kWh	per unit	\$ 10,800.00	\$ 3,550.00	30	SF Space Heat
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv - Space & WH - FA	12000	kWh	per unit	\$ 8,300.00	\$ 2,950.00	30	SF Space Heat
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv - Space Heat Only - BB	8500	kWh	per unit	\$ 8,700.00	\$ 2,600.00	30	SF Space Heat
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv - Space Heat Only - FA	8500	kWh	per unit	\$ 6,700.00	\$ 2,000.00	30	SF Space Heat
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv - WH Only - Storage	3500	kWh	per home	\$ 2,600.00	\$ 950.00	30	Res Water Heat
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv - WH Only - Tankless	3500	kWh	per home	\$ 3,500.00	\$ 950.00	30	Res Water Heat
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv- Natural Gas Dryer	725	kWh	per unit	\$ 500.00	\$ 500.00	30	Res Plug Load
E216	18230612	Fuel Conversion Rebate	Electricity	E2G Fuel Conv- Natural Gas Range	314	kWh	per unit	\$ 450.00	\$ 200.00	30	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	Advanced Power Strip (IR) - Direct Install	216	kWh	per unit	\$ 55.00	\$ 55.00	5	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	Aerator - 1.5 gpm EWH - Direct Install	44.84	kWh	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Air Sealing	0.53	kWh	square foot	\$ 2.42	\$ 2.42	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Attic Insulation R0 to R38	1.2	kWh	square foot	\$ 0.73	\$ 0.75	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Attic Insulation R11 to R38	1	kWh	square foot	\$ 0.75	\$ 0.75	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Clothes Washer CEE Tier 3 (EWH/Edryer)	180	kWh	per unit	\$ 124.00	\$ 50.00	14	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Clothes Washer Replacement Electric WH / Electric Dryer (front)	809	kWh	per unit	\$ 700.00	\$ 700.00	11	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Common Area Lighting (Calculated)	38000	kWh	calculated	\$ 16,055.00	\$ 8,000.00	15	Comm Lighting
E217	18230407	Multi-Family Retrofit	Electricity	Ductless Heat Pump	2659	kWh	per home	\$ 3,250.00	\$ 1,200.00	15	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	E2G Fuel Conv - WH Only - Storage	3500	kWh	per home	\$ 2,196.00	\$ 950.00	30	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	E2G Fuel Conv - WH Only - Tankless	3500	kWh	per home	\$ 3,489.00	\$ 950.00	30	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Energy Star LED Fixture	27	kWh	per unit	\$ 50.00	\$ 25.00	15	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	Energy Star Ventilation Fan	143	kWh	per unit	\$ 40.00	\$ 50.00	10	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	Energy Star Ventilation Fan with Air Sealing	143	kWh	per unit	\$ 250.00	\$ 200.00	10	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	Floor Insulation R0 to R30	1.4	kWh	square foot	\$ 0.98	\$ 0.75	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Floor Insulation R11 to R30	0.66	kWh	square foot	\$ 1.01	\$ 0.75	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	HRV/ERV	21168	kWh	calculated	\$ 17,958.00	\$ 6,351.00	15	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Heat Pump Water Heater (Tier 1) - In Unit	1069	kWh	per unit	\$ 900.00	\$ 500.00	15	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Heat Pump Water Heater (Tier 2) - In Unit	1592	kWh	per unit	\$ 1,369.00	\$ 800.00	15	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	LED - A-Lamp - Direct Install	16.52	kWh	per unit	\$ 10.08	\$ 10.08	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	LED - Candelabra - Direct Install	9.09	kWh	per unit	\$ 11.05	\$ 11.05	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	LED - MR-16 - Direct Install	20.8	kWh	per unit	\$ 12.83	\$ 12.83	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	LED Globe - Direct Install	14.15	kWh	per unit	\$ 11.59	\$ 11.59	12	Res Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E217	18230407	Multi-Family Retrofit	Electricity	LED Reflector - Direct Install	31.86	kWh	per unit	\$ 11.59	\$ 11.59	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	Parking Garage CO Sensor (Calculated)	10095	kWh	calculated	\$ 9,376.00	\$ 3,028.00	10	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	Pool Heat Pump	24000	kWh	calculated	\$ 11,454.00	\$ 5,071.00	15	Comm Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Refrigerator CEE Tier 3	98	kWh	per unit	\$ 211.00	\$ 50.00	15	Res Refrigerator
E217	18230407	Multi-Family Retrofit	Electricity	Refrigerator Decommissioning	356	kWh	per unit	\$ 108.50	\$ 108.50	7	Res Refrigerator
E217	18230407	Multi-Family Retrofit	Electricity	Refrigerator Replacement	494	kWh	per unit	\$ -	\$ -	15	Res Refrigerator
E217	18230407	Multi-Family Retrofit	Electricity	Showerhead - Max 1.5 gpm EWH - Direct Install	354	kWh	per unit	\$ 18.00	\$ 18.00	10	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Solar Pool Heater (Calculated)	27000	kWh	calculated	\$ 12,665.00	\$ 8,000.00	12	Comm Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Thermostatic Restrictor Handheld Showerhead	335	kWh	per unit	\$ 58.00	\$ 58.00	10	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Thermostatic Restrictor Showerhead	335	kWh	per unit	\$ 41.00	\$ 41.00	10	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Thermostatic Restrictor Showerhead Adaptor	53	kWh	per unit	\$ 33.00	\$ 33.00	10	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Variable Speed Drive	34649	kWh	calculated	\$ 137,340.00	\$ 4,121.00	15	Comm Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Wall Insulation R0 to R11	2	kWh	square foot	\$ 1.04	\$ 0.75	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Water Heater (0.95+) - In-unit	149	kWh	per unit	\$ 73.00	\$ 50.00	15	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Water Heater Pipewrap - Direct Install	20	kWh	per unit	\$ 4.50	\$ 4.50	15	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Windows (double to double paned) U= 0.6 to 0.30	12.8	kWh	square foot	\$ 17.81	\$ 5.00	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Windows (double to triple paned) U= 0.6 to 0.22	15.4	kWh	square foot	\$ 19.87	\$ 7.00	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Windows (single to double paned) U= 1.2 to 0.30	23.7	kWh	square foot	\$ 17.81	\$ 7.00	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Windows (single to triple paned) U= 1.2 to 0.22	26.3	kWh	square foot	\$ 19.87	\$ 9.00	30	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	ENERGY STAR Doors	79.5	kWh	per unit	\$ 332.27	\$ 150.00	20	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	Dishwashers CEE Tier 1 (EWH)	5	kWh	per unit	\$ 6.00	\$ 20.00	15	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	LED - T8 - Tenant Controlled	9.66	kWh	per unit	\$ 13.78	\$ 25.00	15	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	Strategic Energy Management	50000	kWh	calculated	\$ 10,000.00	\$ 10,000.00	3	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	CBTU	40000	kWh	calculated	\$ 15,000.00	\$ 10,000.00	5	MF Space Heat
E217	18230407	Multi-Family Retrofit	Electricity	ENERGY STAR Clothes Dryer (Ventless)	228	kWh	per unit	\$ 349.00	\$ 100.00	12	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	ENERGY STAR Clothes Dryer (Vented)	183	kWh	per unit	\$ 46.00	\$ 50.00	12	Res Plug Load
E217	18230407	Multi-Family Retrofit	Electricity	Aerator - 1.0 gpm EWH - Direct Install	76.97	kWh	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Clothes Washer Replacement Electric WH / Electric Dryer (top)	809	kWh	per unit	\$ 600.00	\$ 600.00	11	Res Water Heat
E217	18230407	Multi-Family Retrofit	Electricity	Aerator 1.0 gpm - SF direct install	63.06	kWh	per unit	\$ 2.10	\$ 2.10	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	Aerator 1.5 gpm - SF direct install	36.73	kWh	per unit	\$ 2.10	\$ 2.10	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	SF LED - A-Lamp - Direct Install	20.67	kWh	per unit	\$ 7.22	\$ 7.22	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	SF LED - Candelabra - Direct Install	16.01	kWh	per unit	\$ 8.39	\$ 8.39	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	SF LED Globe - Direct Install	18.09	kWh	calculated	\$ 8.87	\$ 8.87	12	Res Lighting
E217	18230407	Multi-Family Retrofit	Electricity	SF LED Reflector - Direct Install	39.41	kWh	per unit	\$ 8.87	\$ 8.87	12	Res Lighting
E218	18230486	Multi-Family New Construction	Electricity	Clothes Washer 2.4+ MEF CEE Tier 3	71	kWh	per unit	\$ 75.00	\$ 75.00	14	Comm Water Heat
E218	18230486	Multi-Family New Construction	Electricity	Showerhead - Max 1.50 gpm EWH	307	kWh	per unit	\$ 31.00	\$ 25.00	10	Res Water Heat
E218	18230486	Multi-Family New Construction	Electricity	Showerhead - Max 1.75 gpm EWH	222	kWh	per unit	\$ 31.00	\$ 15.00	10	Res Water Heat
E218	18230486	Multi-Family New Construction	Electricity	Whole Building - Electric	1	kWh	calculated	\$ 0.30	\$ 0.30	14	MF Space Heat
E218	18230486	Multi-Family New Construction	Electricity	Lighting Power Density Reduction	1	kWh	calculated	\$ 0.20	\$ 0.20	12	Comm Lighting
E249R	18230522	Residential Energy Reports	Electricity	Individual Energy Reports - Expansion- Electric Only (2017)	35	kWh	per home	\$ 5.00	\$ 5.00	2	Res Lighting
E249R	18230522	Residential Energy Reports	Electricity	Individual Energy Reports - Expansion- HRU (2017)	36	kWh	per home	\$ 4.00	\$ 4.00	2	Res Lighting
E249R	18230522	Residential Energy Reports	Electricity	Individual Energy Reports - Expansion- Rural (2017)	57	kWh	per home	\$ 4.00	\$ 4.00	2	Res Lighting
E249R	18230522	Residential Energy Reports	Electricity	Refill Year 1 (2017)	77	kWh	per home	\$ 4.00	\$ 4.00	2	Res Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: Hard Wired Recessed Can Retrofit Kit	110	kWh	per unit	\$ 12.00	\$ 12.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: Integral Decorative	57	kWh	per unit	\$ 4.00	\$ 4.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: Integral Omnidirectional	80	kWh	per unit	\$ 4.00	\$ 4.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: Integral, Replacing R/BR/PAR 20	99	kWh	per unit	\$ 8.00	\$ 8.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: Integral, Replacing R/BR/PAR 30	100	kWh	per unit	\$ 8.00	\$ 8.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: Integral, Replacing R/BR/PAR 38 & 40	129	kWh	per unit	\$ 8.00	\$ 8.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	LED: MR/PAR 16	94	kWh	per unit	\$ 6.00	\$ 6.00	7	Comm Lighting
E262	18230714	Business LightingMarkdown	Electricity	TLED 4'	30	kWh	per unit	\$ 4.00	\$ 4.00	12	Comm Lighting
E262	18230716	Commercial Kitchen/Laundry	Electricity	Steam Cooker - 3 Pan	19482	kWh	per unit	\$ 304.00	\$ 250.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Steam Cooker - 4 Pan	29092	kWh	per unit	\$ 406.00	\$ 350.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Steam Cooker - 5 Pan	32702	kWh	per unit	\$ 508.00	\$ 450.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Steam Cooker - 6 Pan	39311	kWh	per unit	\$ 608.00	\$ 550.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Steam Cooker - 10 Pan	65751	kWh	per unit	\$ 1,014.00	\$ 950.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Convection Oven - Half Size - \$500	2518	kWh	per unit	\$ 793.00	\$ 500.00	12	Comm Cooking

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230716	Commercial Kitchen/Laundry	Electricity	Convection Oven - Full Size - \$1000	2774	kWh	per unit	\$ 1,007.00	\$ 1,000.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Convection Oven - Double - \$2000	5548	kWh	per unit	\$ 2,014.00	\$ 2,000.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Combination Oven < 15 pan	11497	kWh	per unit	\$ 1,054.00	\$ 1,000.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - Under Counter Low Temp - \$150	2254	kWh	per unit	\$ 232.00	\$ 150.00	10	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - Under Counter - High Temp - \$150	2309	kWh	per unit	\$ 232.00	\$ 150.00	10	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - Under Counter High Temp - Electric Booster	1349	kWh	per unit	\$ 192.00	\$ 150.00	10	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - Door Type Low Temp - \$750	14338	kWh	per unit	\$ 2,659.00	\$ 750.00	15	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - Door Type High Temp - \$750	10200	kWh	per unit	\$ 2,659.00	\$ 750.00	15	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - Door Type High Temp - Electric Booster	3966	kWh	per unit	\$ 1,813.00	\$ 500.00	15	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - ST Low Temp - \$1000	11901	kWh	per unit	\$ 5,882.00	\$ 1,000.00	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - ST Low Temp - Incidental Elec Savings	324	kWh	per unit	\$ 497.00	\$ -	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - ST High Temp - \$1000	7341	kWh	per unit	\$ 5,882.00	\$ 1,000.00	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - ST High Temp - Electric Booster	3556	kWh	per unit	\$ 4,446.00	\$ 750.00	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - MT Low Temp - \$1500	16698	kWh	per unit	\$ 3,394.00	\$ 1,500.00	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - MT High Temp - \$1500	23668	kWh	per unit	\$ 3,394.00	\$ 1,500.00	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Dishwasher - MT High Temp - Electric Booster	9308	kWh	per unit	\$ 2,312.00	\$ 1,000.00	20	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Sales Incentive - Fryer - \$30	0	kWh	per unit	\$ 30.00	\$ 30.00	0	
E262	18230716	Commercial Kitchen/Laundry	Electricity	Sales Incentive - Steam Cooker - \$30	0	kWh	per unit	\$ 30.00	\$ 30.00	0	
E262	18230716	Commercial Kitchen/Laundry	Electricity	Sales Incentive - \$30	0	kWh	per unit	\$ 30.00	\$ 30.00	0	
E262	18230716	Commercial Kitchen/Laundry	Electricity	Sales Incentive - Comm'l Ovens - \$50	0	kWh	per unit	\$ 50.00	\$ 50.00	0	
E262	18230716	Commercial Kitchen/Laundry	Electricity	Sales Incentive - Dishwasher UC or DT - \$30	0	kWh	per unit	\$ 30.00	\$ 30.00	0	
E262	18230716	Commercial Kitchen/Laundry	Electricity	Sales Incentive - Dishwasher ST or MT - \$50	0	kWh	per unit	\$ 50.00	\$ 50.00	0	
E262	18230716	Commercial Kitchen/Laundry	Electricity	Commercial Washer - EWH / E Dryer	750	kWh	per unit	\$ 210.00	\$ 200.00	7	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Commercial Washer - EWH Only	430	kWh	per unit	\$ 177.00	\$ 170.00	7	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Commercial Washer - E Dryer Only	320	kWh	per unit	\$ 149.00	\$ 140.00	7	Comm Water Heat
E262	18230716	Commercial Kitchen/Laundry	Electricity	Limited Time Offer Incentive Increases	0	kWh	calculated	\$ -	\$ 20,000.00	15	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Commercial Fryer - Large Vat	2686	kWh	per unit	\$ 428.00	\$ 400.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Griddle - 2 linear feet - Electric	1850	kWh	per unit	\$ 374.00	\$ 200.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Griddle - 3 linear feet - Electric	2775	kWh	per unit	\$ 561.00	\$ 300.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Griddle - 4 linear feet - Electric	3700	kWh	per unit	\$ 748.00	\$ 400.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Griddle - 5 linear feet - Electric	4625	kWh	per unit	\$ 935.00	\$ 500.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Griddle - 6 linear feet - Electric	5550	kWh	per unit	\$ 1,122.00	\$ 600.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Hot Food Holding Cabinet - 0-<13 ft	439	kWh	per unit	\$ 167.00	\$ 150.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Hot Food Holding Cabinet - 13-<28 ft	934	kWh	per unit	\$ 710.00	\$ 500.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Hot Food Holding Cabinet - >=28 ft	1113	kWh	per unit	\$ 1,751.00	\$ 750.00	12	Comm Cooking
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Air Cooled, Cube and Nugget IHR 50-174	429	kWh	per unit	\$ 306.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Air Cooled, Cube and Nugget IHR 175-449	1517	kWh	per unit	\$ 286.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Air Cooled, Cube and Nugget IHR 450-999	1361	kWh	per unit	\$ 249.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Air Cooled, Cube and Nugget IHR 1000+	2044	kWh	per unit	\$ 764.00	\$ 500.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Air-Cooled Flake IHR 50-999	481	kWh	per unit	\$ 274.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Air-Cooled Flake IHR 1000+	1314	kWh	per unit	\$ 764.00	\$ 500.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Water-Cooled, Cube and Nugget IHR 50-174	287	kWh	per unit	\$ 306.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Water-Cooled, Cube and Nugget IHR 175-449	1436	kWh	per unit	\$ 286.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Water-Cooled, Cube and Nugget IHR 450-999	385	kWh	per unit	\$ 249.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Water-Cooled, Cube and Nugget IHR 1000+	1903	kWh	per unit	\$ 764.00	\$ 500.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Water-Cooled, Flake IHR 50-999	456	kWh	per unit	\$ 274.00	\$ 200.00	10	Comm Refrigeration
E262	18230716	Commercial Kitchen/Laundry	Electricity	Ice: Water-Cooled, Flake IHR 1000+	1273	kWh	per unit	\$ 764.00	\$ 500.00	10	Comm Refrigeration
E262	18230718	Commercial HVAC	Electricity	HVAC Demand Control Ventilation (Heat Pump)	1475	kWh	per unit	\$ 677.00	\$ 450.00	10	Comm Space Heat
E262	18230718	Commercial HVAC	Electricity	High Efficiency HVAC Retrofit	600000	kWh	calculated	\$1,776,000.00	\$ 225,000.00	15	Comm Space Heat
E262	18230718	Commercial HVAC	Electricity	HVAC Premium Service	2601522	kWh	calculated	\$ 570,000.00	\$ 475,000.00	5	Comm Space Heat
E262	18230718	Commercial HVAC	Electricity	Web Enabled Thermostats	1782	kWh	per unit	\$ 167.50	\$ 150.00	5	Comm Space Heat
E262	18230718	Commercial HVAC	Electricity	HVAC Demand Control Ventilation (Gas Pack)	400	kWh	per unit	\$ 200.00	\$ 100.00	10	Comm Space Heat
E262	18230718	Commercial HVAC	Electricity	Hotel Room Occupancy based HVAC Controls	264	kWh	per unit	\$ 186.09	\$ 100.00	10	Comm Space Heat
E262	18230718	Commercial HVAC	Electricity	Lodging PTHP	737	kWh	per unit	\$ 608.08	\$ 100.00	15	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	LED Open sign	398	kWh	per unit	\$ 165.00	\$ 165.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Load Sensing Smart Strip	118	kWh	per unit	\$ 40.00	\$ 40.00	4	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Occupancy Sensors (<100W)	46	kWh	per unit	\$ 82.00	\$ 82.00	10	Comm Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18231134	Small Business Direct Install	Electricity	Occupancy Sensors (>100W And <150W)	116	kWh	per unit	\$ 82.00	\$ 82.00	10	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Occupancy Sensors (>150W And <200W)	162	kWh	per unit	\$ 82.00	\$ 82.00	10	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Occupancy Sensors (>200W And <450W)	301	kWh	per unit	\$ 82.00	\$ 82.00	10	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Occupancy Sensors (>450)	463	kWh	per unit	\$ 82.00	\$ 82.00	10	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Exit Sign	153.3	kWh	per unit	\$ 60.00	\$ 60.00	10	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	2' 1L T12 to 2' 1L T8 2015	33	kWh	per unit	\$ 52.23	\$ 8.25	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	3' 1L T12 to 3' 1L T8 2015	56	kWh	per unit	\$ 53.28	\$ 14.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 1L T12 to 4' 1L T8 2015	53	kWh	per unit	\$ 54.75	\$ 13.25	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T12 HO to 4' 2L T8 2015	337	kWh	per unit	\$ 57.23	\$ 40.06	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T12 to 4' 2L T8 2015	109	kWh	per unit	\$ 57.23	\$ 27.25	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T12 HO to 4' 3L T8	505	kWh	per unit	\$ 61.25	\$ 42.88	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 to 4' 2L T8 (delamp & reflector)	356	kWh	per unit	\$ 88.83	\$ 62.18	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L LED (delamp & reflector)	463	kWh	per unit	\$ 92.26	\$ 64.58	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L LED (delamp & reflector)	322	kWh	per unit	\$ 92.26	\$ 64.58	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 to 4' 4L T8	218	kWh	per unit	\$ 67.83	\$ 47.48	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 to 4' 3L T8 (delamp)	287	kWh	per unit	\$ 91.00	\$ 63.70	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 HO to 4' 2L T8 (delamp & reflector)	812	kWh	per unit	\$ 88.83	\$ 62.18	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 1L T12 HO F96 to 4' 2L 28W (retro kit 2L 8')	208	kWh	per unit	\$ 97.50	\$ 68.25	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 2L T12 HO F96 to 4' 4L 28W (retro kit 4L 8' NBF)	412	kWh	per unit	\$ 98.00	\$ 68.60	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 1L T8 F96 to 4' 2L 28W (retro kit 2L 8')	40	kWh	per unit	\$ 78.00	\$ 10.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 2L T8 F96 to 4' 4L 28W (retro kit 4L 8')	82	kWh	per unit	\$ 90.25	\$ 20.50	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 2L T12 Delamp to 4' 2L T8 (retro kit delamp)	317	kWh	per unit	\$ 114.17	\$ 79.92	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	400W HID to 4' 6L T8 (HBF)	884	kWh	per unit	\$ 236.54	\$ 165.58	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	80W Multi-Lamp Inc Fixture to 2L F17T8 (NBF)	162	kWh	per unit	\$ 108.00	\$ 40.50	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	2L F17T8 (NBF)	294	kWh	per unit	\$ 108.00	\$ 75.60	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	2L F25T8 (NBF)	383	kWh	per unit	\$ 109.00	\$ 76.30	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	2L F28T8 (NBF)	634	kWh	per unit	\$ 111.00	\$ 77.70	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Fixture LED, 35w Area (barn) w/ photo	685	kWh	per unit	\$ 211.25	\$ 147.88	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	<30W LED Wall Pack with Photocell	601	kWh	per unit	\$ 156.25	\$ 109.38	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Recessed Can 8" LED	190	kWh	per unit	\$ 81.90	\$ 47.50	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Other	43	kWh	per unit	\$ 18.70	\$ 18.70	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - School (k-12)	44	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Warehouse	46	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Office	58	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Retail	64	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Restaurant	70	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Other Health	85	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 7W - Lodging Common Area	158	kWh	per unit	\$ 18.70	\$ 18.70	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Other	68	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - School (k-12)	70	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Warehouse	72	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Office	91	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Retail	100	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Restaurant	109	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Other Health	134	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Lodging Common Area	247	kWh	per unit	\$ 19.68	\$ 19.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Other	31	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - School (k-12)	32	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Warehouse	33	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Office	41	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Retail	46	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Restaurant	50	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Other Health	61	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 5W Globe - Lodging Common Area	113	kWh	per unit	\$ 21.07	\$ 21.07	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Other	58	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - School (k-12)	59	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Warehouse	61	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Office	77	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Retail	84	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Restaurant	92	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Other Health	113	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Lodging Common Area	210	kWh	per unit	\$ 32.41	\$ 32.41	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Other	82	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - School (k-12)	84	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Warehouse	87	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Office	110	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Retail	120	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Restaurant	131	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Other Health	161	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 20 - Lodging Common Area	299	kWh	per unit	\$ 36.68	\$ 36.68	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Other	70	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - School (k-12)	71	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Warehouse	74	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Office	93	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Retail	103	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Restaurant	112	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Other Health	137	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Direction Par 30 - Lodging Common Area	255	kWh	per unit	\$ 50.64	\$ 50.64	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Other	95	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - School (k-12)	96	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Warehouse	100	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Office	126	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Retail	139	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Restaurant	151	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Other Health	185	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Par 38 & 40 - Lodging Common Area	344	kWh	per unit	\$ 52.35	\$ 52.35	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Lodging Common Area	159	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative -Office	58	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative -Other	44	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Other Health	86	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Restaurant	70	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Retail	64	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - School (k-12)	45	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Warehouse	46	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	E Aer (ELEC) 0.5 GPM	712	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	E Aer (ELEC) 1.0 GPM	350	kWh	per unit	\$ 10.95	\$ 10.95	5	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Pre-rinse sprayer, SBO >2.6 to 1.6	1208	kWh	per unit	\$ 71.21	\$ 71.21	5	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Pre-rinse sprayer, SBO 1.6 to 1.6	839	kWh	per unit	\$ 71.21	\$ 71.21	5	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Pre-rinse sprayer, SBO 2.2 to 1.6	1322	kWh	per unit	\$ 71.21	\$ 71.21	5	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Pre-rinse sprayer, SBO 2.6 to 1.6	2187	kWh	per unit	\$ 71.21	\$ 71.21	5	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Super Low Flow Shwrhd - Std (ELEC)	228	kWh	per unit	\$ 23.93	\$ 23.93	5	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Super Low Flow Shwrhd - Fitness Cntr (ELEC)	4288	kWh	per unit	\$ 23.93	\$ 23.93	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Refrigerated DC 5' T12 to LED	340	kWh	per unit	\$ 178.44	\$ 85.00	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Refrigerated DC 5' T8 to LED	263	kWh	per unit	\$ 178.44	\$ 65.75	12	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Refrigerated DC 6' T12 to LED	408	kWh	per unit	\$ 191.17	\$ 102.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Refrigerated DC 6' T8 to LED	315	kWh	per unit	\$ 191.17	\$ 78.75	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Vending Cooler Miser	40	kWh	per unit	\$ 175.50	\$ 175.50	4	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Suction Line Insulation for Walk-In Refrigeration Units	107	kWh	per unit	\$ 46.15	\$ 46.15	5	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Suction Line Insulation for Walk-In Freezer Units	148	kWh	per unit	\$ 46.15	\$ 46.15	5	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Strip Curtains - G Store - Freezer	535	kWh	per unit	\$ 16.10	\$ 16.10	2	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Strip Curtains - G Store - Cooler	123	kWh	per unit	\$ 16.10	\$ 16.10	2	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Strip Curtains - C Store - Freezer	31	kWh	per unit	\$ 16.10	\$ 16.10	2	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Strip Curtains - Rest - Freezer	129	kWh	per unit	\$ 16.10	\$ 16.10	2	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Display Case ECM	685	kWh	per unit	\$ 172.25	\$ 171.25	15	Comm Refrigeration

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18231134	Small Business Direct Install	Electricity	Case Lighting - Occupancy Sensor / Dimming Controls	10	kWh	per unit	\$ 4.29	\$ 4.29	8	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Controls - Anti-Sweat Heat (Low Temp)	369	kWh	per unit	\$ 42.24	\$ 42.40	8	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Controls - Anti-Sweat Heat (Med Temp)	230	kWh	per unit	\$ 42.40	\$ 42.40	8	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Cases - Add doors to Open Medium Temp Cases	200	kWh	per unit	\$ 104.00	\$ 50.00	8	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	ECM Controller - High Temp	100	kWh	per unit	\$ 165.10	\$ 25.00	8	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	ECM Controller- Low Temp	100	kWh	per unit	\$ 165.10	\$ 25.00	8	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Controls - Floating Head Pressure - Medium Temp	757	kWh	per unit	\$ 364.00	\$ 189.25	15	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Controls - Floating Head Pressure - Low Temp	855	kWh	per unit	\$ 364.00	\$ 213.75	15	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Address Enpower HVAC Controller	5340	kWh	per unit	\$ 2,544.75	\$ 1,335.00	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Small Pkg AC, increase refrigerant charge from typical under-charge to factory specified level	1258	kWh	per unit	\$ 57.60	\$ 314.50	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Small Pkg AC, increase refrigerant charge from high under-charge to factory specified level	1497	kWh	per unit	\$ 65.60	\$ 374.25	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Small Pkg AC, decrease refrigerant charge from typical over-charge to factory specified level	1353	kWh	per unit	\$ 48.00	\$ 338.25	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Small Pkg AC, decrease refrigerant charge from high over-charge to factory specified level	1322	kWh	per unit	\$ 48.00	\$ 330.50	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Programmable Communicating Thermostat	473	kWh	per unit	\$ 160.00	\$ 160.00	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Packages Heat Pump (PTAC)	380	kWh	per unit	\$ 845.00	\$ 95.00	10	Comm Space Heat
E262	18231134	Small Business Direct Install	Electricity	Bi-Level	457	kWh	per unit	\$ 233.50	\$ 114.25	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	2' 1L T12 HO To 2' 1L T8 2015	158	kWh	per unit	\$ 52.23	\$ 39.50	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 1L T12 to 4' 1L TLED	79.2	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T12 to 4' 2L TLED	158.4	kWh	per unit	\$ 59.01	\$ 41.30	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T12 HO to 4' 2L TLED	389.4	kWh	per unit	\$ 66.35	\$ 33.17	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T12 to 4' 3L TLED	237.6	kWh	per unit	\$ 80.79	\$ 56.56	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T12 HO to 4' 3L TLED	584.1	kWh	per unit	\$ 81.11	\$ 40.55	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 to 4' 4L TLED	316.8	kWh	per unit	\$ 93.31	\$ 65.32	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T8 32 W LLO to 4' 2L TLED	72.6	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T8 32 W NLO to 4' 2L TLED	92.4	kWh	per unit	\$ 61.19	\$ 42.83	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T8 32 W HLO to 4' 2L TLED	151.8	kWh	per unit	\$ 61.19	\$ 42.83	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 2L T8 28 W NLO to 4' 2L TLED	72.6	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T8 32 W NLO to 4' 3L TLED	138.6	kWh	per unit	\$ 73.72	\$ 51.60	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T8 32 W NLO to 4' 3L TLED	227.7	kWh	per unit	\$ 73.72	\$ 51.60	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T8 28 W LLO to 4' 4L TLED	105.6	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T8 28 W NLO to 4' 4L TLED	145.2	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T8 32 W NLO to 4' 4L TLED	184.8	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 1L T12 HO F96 to 4' 2L TLED (retro kit 2L 8')	260.7	kWh	per unit	\$ 93.55	\$ 65.48	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 2L T12 HO F96 to 4' 4L TLED (retro kit 4L 8' NBF)	521.4	kWh	per unit	\$ 77.21	\$ 54.05	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 2L T12 F96 to 4' 2L TLED (retro kit delamp)	369.6	kWh	per unit	\$ 94.19	\$ 65.93	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 1L T12 F96 to 4' 2L TLED (retro kit 2L 8')	141.9	kWh	per unit	\$ 92.72	\$ 64.90	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	8' 2L T12 F96 to 4' 4L TLED (retro kit 4L 8')	283.8	kWh	per unit	\$ 120.43	\$ 84.30	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T12 to 4' 3L T8	162	kWh	per unit	\$ 61.25	\$ 61.25	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T12 to 4' 2L T8 (delamp & reflector)	230.993	kWh	per unit	\$ 91.00	\$ 91.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 3L T12 HO to 4' 2L T8 (delamp & reflector)	574.183	kWh	per unit	\$ 91.00	\$ 91.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 HO to 4' 4L T8	673.18	kWh	per unit	\$ 67.83	\$ 67.83	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	4' 4L T12 HO to 4' 3L T8 (delamp)	742.478	kWh	per unit	\$ 91.00	\$ 91.00	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	400W HID to 80W LED	1588	kWh	per unit	\$ 471.07	\$ 317.52	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	400W HID to 60W LED	1672	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	250W HID to 60W LED	970	kWh	per unit	\$ 298.62	\$ 194.04	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	250W HID to 35W LED	1075	kWh	per unit	\$ 218.82	\$ 153.17	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	175W HID to 35W LED	735	kWh	per unit	\$ 218.82	\$ 153.17	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	100W HID to 20W LED	458	kWh	per unit	\$ 176.82	\$ 91.56	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Walk-In ECM <23W	592	kWh	per unit	\$ 225.40	\$ 259.60	15	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Walk-In ECM >23W	1458	kWh	per unit	\$ 225.40	\$ 259.60	15	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Gaskets for Walk-in Cooler - Main Door (per door) - Electric	204	kWh	per unit	\$ 76.00	\$ 61.20	4	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	Retrofit from 320W HID to Low-Med Output LED	1298	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Retrofit from 400W HID to Low-Med Output LED	1676	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Retrofit from 320W HID to High Output LED	928	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Night Covers Medium Temperature (0 F to 30F) [Unknown Heating]	43.8	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18231134	Small Business Direct Install	Electricity	2.6 gpm to 0.65 gpm-gas (Elec IE)	127	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18231134	Small Business Direct Install	Electricity	Open Case Lights - Low Power LED from T12 (4' Lamp)	170	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Med Temp Case (4' Lamp)	222	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Any Commercial, electric SBDI	228	kWh	per unit	\$ 23.80	\$ 23.80	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Any Commercial, gas IE SBDI	10	kWh	per unit	\$ -	\$ -	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Fitness Center, electric SBDI	4288	kWh	per unit	\$ 23.80	\$ 23.80	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Fitness Center, gas IE SBDI	190	kWh	per unit	\$ -	\$ -	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Any Commercial, electric SBDI- Split Cost with CWA	228	kWh	per unit	\$ 12.80	\$ 12.80	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Any Commercial, gas IE SBDI- Split Cost with CWA	10	kWh	per unit	\$ -	\$ -	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Fitness Center, electric SBDI - Split Cost with CWA	4288	kWh	per unit	\$ 12.80	\$ 12.80	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	1.5 GPM Showerhead Fitness Center, gas IE SBDI - Split Cost with CWA	190	kWh	per unit	\$ -	\$ -	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Aerator, Office Small-Electric	46.6	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Aerator, Restaurant - Electric	94	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Aerator, Retail-Electric	151.6	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Aerator, School-Electric	189.5	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	Aerator, All Others-Electric	151.6	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18231134	Small Business Direct Install	Electricity	LED A Lamp 11W - Assembly Church	55	kWh	per unit	\$ 19.68	\$ 19.68	5	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Assembly Church	35	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Exterior	79	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED Decorative - Grocery	102	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Assembly Church	47	kWh	per unit	\$ 32.41	\$ 32.41	5	Comm Lighting
E262	18231134	Small Business Direct Install	Electricity	LED MR 16 - Exterior	103	kWh	per unit	\$ 32.41	\$ 32.41	5	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Wheel/hand line systems: Replace worn nozzle with new flow controlling type nozzle for impact sprinklers - Western Washington and Oregon	20	kWh	per unit	\$ 5.67	\$ 5.67	4	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Wheel/hand line systems: Replace worn nozzle with new nozzle - Western Washington and Oregon	20	kWh	per unit	\$ 2.12	\$ 2.12	4	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Wheel/hand line systems: Rebuild or replace leaking impact sprinkler with new or rebuilt impact sprinkler - Western Washington and Oregon	18	kWh	per unit	\$ 12.33	\$ 12.33	5	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Wheel/hand line systems: Replace leaking gasket with new gasket - Western Washington and Oregon	106	kWh	per unit	\$ 3.92	\$ 3.92	5	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Wheel/hand line systems: Replace leaking drain with new drain - Western Washington and Oregon	110	kWh	per unit	\$ 13.67	\$ 13.67	5	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Wheel/hand line systems: Cut and pipe press repair of leaking hand-lines, wheel-lines, and portable main-lines - Western Washington and Oregon	53	kWh	per unit	\$ 18.00	\$ 18.00	8	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Thunderbird wheel line systems: Replace leaking hub with new hub - Western Washington and Oregon	46	kWh	per unit	\$ 50.00	\$ 50.00	10	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Wheel line systems: Rebuild or replace leaking or malfunctioning leveler with new or rebuilt leveler. - Western Washington and Oregon	26	kWh	per unit	\$ 3.25	\$ 3.25	5	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Center pivot/linear move systems: Install new sprinkler package on an existing system. - Western Washington and Oregon	59	kWh	per unit	\$ 25.53	\$ 25.53	5	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Center pivot/linear move systems: New gooseneck elbows - Western Washington and Oregon	4	kWh	per unit	\$ 4.17	\$ 4.17	15	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Center pivot/linear move systems: New drop tubes (3 feet minimum) - Western Washington and Oregon	4	kWh	per unit	\$ 6.50	\$ 6.50	10	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Center pivot/linear move systems: Replace leaking pivot boot gasket with new pivot boot gasket - Western Washington and Oregon	856	kWh	per unit	\$ 250.00	\$ 250.00	8	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Center pivot/linear move systems: Replace leaking tower gasket with new tower gasket - Western Washington and Oregon	21	kWh	per unit	\$ 53.70	\$ 53.70	8	Comm Flat
E262	18230521	Agriculture Direct Install	Electricity	Freeze Resistant Stock Water Tanks/Fountains - Heating Zone 1	376	kWh	per unit	\$ 377.00	\$ 94.00	10	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Freeze Resistant Stock Water Tanks/Fountains - Heating Zone 2	774	kWh	per unit	\$ 377.00	\$ 193.50	10	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 5 HP	5963.5	kWh	per unit	\$ 5,866.55	\$ 1,490.88	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 10 HP	11927	kWh	per unit	\$ 7,011.90	\$ 2,981.75	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 15 HP	17890.5	kWh	per unit	\$ 8,157.25	\$ 4,472.63	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 20 HP	23854	kWh	per unit	\$ 9,302.60	\$ 4,651.30	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 25 HP	29817.5	kWh	per unit	\$ 10,447.95	\$ 5,223.98	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 30 HP	35781	kWh	per unit	\$ 11,593.30	\$ 5,796.65	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 35 HP	41744.5	kWh	per unit	\$ 12,738.65	\$ 6,369.33	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 40 HP	47708	kWh	per unit	\$ 13,884.00	\$ 6,942.00	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 45 HP	53671.5	kWh	per unit	\$ 15,029.35	\$ 7,514.68	10	Comm Cooling

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230521	Agriculture Direct Install	Electricity	Variable Frequency Drive on Spud or Onion Shed Ventilation Fan - 50 HP	59635	kWh	per unit	\$ 16,174.70	\$ 8,087.35	10	Comm Cooling
E262	18230521	Agriculture Direct Install	Electricity	Evaporator Motor - Shaded Pole to ECM for Walk-ins >23 Watt	243	kWh	per unit	\$ 525.41	\$ 262.71	16	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Evaporator Motor - Shaded Pole to ECM for Walk-ins ≤ 23 Watt	114	kWh	per unit	\$ 194.77	\$ 97.39	16	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Pre-rinse sprayer, SBO >2.6 to 1.6	1200	kWh	per unit	\$ 10.95	\$ 10.95	5	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Pre-rinse sprayer, SBO 1.6 to 1.6	1208	kWh	per unit	\$ 70.42	\$ 70.42	5	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Pre-rinse sprayer, SBO 2.2 to 1.6	839	kWh	per unit	\$ 70.42	\$ 70.42	5	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Pre-rinse sprayer, SBO 2.6 to 1.6	1322	kWh	per unit	\$ 70.42	\$ 70.42	5	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Super Low Flow Shwrhd - Std (ELEC)	2187	kWh	per unit	\$ 70.42	\$ 70.42	5	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Super Low Flow Shwrhd - Fitness Cntr (ELEC)	228	kWh	per unit	\$ 21.67	\$ 21.67	10	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Load Sensing Smart Strip	100	kWh	per unit	\$ 54.60	\$ 54.60	5	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Fixture LED, 35w Area (barn) w/ photo	793	kWh	per unit	\$ 87.75	\$ 87.75	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Canopy fixture	685	kWh	per unit	\$ 196.30	\$ 171.25	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Fixture LED, <30w Wall pack (small) w/ photo	685	kWh	per unit	\$ 430.40	\$ 171.25	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Recessed Can 8" LED	109	kWh	per unit	\$ 150.80	\$ 150.80	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Other	43	kWh	per unit	\$ 81.90	\$ 81.90	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - School (k-12)	44	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Warehouse	46	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Office	58	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Retail	64	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Restaurant	70	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Other Health	85	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 7W - Lodging Common Area	158	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Other	68	kWh	per unit	\$ 16.80	\$ 16.80	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - School (k-12)	70	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Warehouse	72	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Office	91	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Retail	100	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Restaurant	109	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Other Health	134	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 11W - Lodging Common Area	247	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Other	31	kWh	per unit	\$ 15.81	\$ 15.81	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - School (k-12)	32	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Warehouse	33	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Office	41	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Retail	46	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Restaurant	50	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Other Health	61	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED A Lamp 5W Globe - Lodging Common Area	113	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Other	58	kWh	per unit	\$ 23.33	\$ 23.33	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - School (k-12)	59	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Warehouse	61	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Office	77	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Retail	84	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Restaurant	92	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Other Health	113	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED MR 16 - Lodging Common Area	210	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Other	82	kWh	per unit	\$ 24.29	\$ 24.29	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - School (k-12)	84	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Warehouse	87	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Office	110	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Retail	120	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Restaurant	131	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Other Health	161	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 20 - Lodging Common Area	299	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Other	70	kWh	per unit	\$ 31.63	\$ 31.63	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - School (k-12)	71	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Warehouse	74	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Office	93	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Retail	103	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Restaurant	112	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Other Health	137	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Direction Par 30 - Lodging Common Area	255	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Other	95	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - School (k-12)	96	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Warehouse	100	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Office	126	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Retail	139	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Restaurant	151	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Other Health	185	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Par 38 & 40 - Lodging Common Area	344	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative - Lodging Common Area	159	kWh	per unit	\$ 35.71	\$ 35.71	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative -Office	58	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative -Other	44	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative - Other Health	86	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative - Restaurant	70	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative - Retail	64	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	LED Decorative - School (k-12)	45	kWh	per unit	\$ 13.68	\$ 13.68	3	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Programmable Communicating Thermostat	473	kWh	per unit	\$ 160.00	\$ 160.00	10	Comm Space Heat
E262	18230521	Agriculture Direct Install	Electricity	2' 1L T12 HO To 2' 1L T8 2015	158	kWh	per unit	\$ 52.23	\$ 39.50	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	3' 1L T12 to 3' 1L TLED	92.4	kWh	per unit	\$ 43.85	\$ 19.07	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	3' 1L T8 25W to 3' 1L TLED	42.9	kWh	per unit	\$ 43.85	\$ 19.07	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 1L T12 to 4' 1L TLED	79.2	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T12 to 4' 2L TLED	158.4	kWh	per unit	\$ 59.01	\$ 41.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T12 HO to 4' 2L TLED	389.4	kWh	per unit	\$ 66.35	\$ 33.17	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 to 4' 3L TLED	237.6	kWh	per unit	\$ 80.79	\$ 56.56	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 HO to 4' 3L TLED	584.1	kWh	per unit	\$ 81.11	\$ 40.55	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 to 4' 2L TLED (delamp & reflector)	280.5	kWh	per unit	\$ 87.05	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 HO to 4' 2L TLED (delamp & reflector)	627	kWh	per unit	\$ 87.46	\$ 43.73	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 to 4' 4L TLED	316.8	kWh	per unit	\$ 93.31	\$ 65.32	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 HO to 4' 4L TLED	778.8	kWh	per unit	\$ 89.32	\$ 44.66	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 to 4' 3L TLED (delamp)	359.7	kWh	per unit	\$ 79.01	\$ 55.31	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 HO to 4' 3L TLED (delamp)	821.7	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 to 4' 2L TLED (delamp & reflector)	402.6	kWh	per unit	\$ 87.46	\$ 61.22	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 HO 4' 2L TLED (delamp & reflector)	864.6	kWh	per unit	\$ 87.46	\$ 43.73	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 1L T8 32 W LLO to 4' 1L TLED	36.3	kWh	per unit	\$ 58.95	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 1L T8 32 W NLO to 4' 1L TLED	46.2	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 1L T8 32 W HLO to 4' 1L TLED	75.9	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 1L T8 28 W LLO to 4' 1L TLED	26.4	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 1L T8 28 W NLO to 4' 1L TLED	36.3	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T8 32 W LLO to 4' 2L TLED	72.6	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T8 32 W NLO to 4' 2L TLED	92.4	kWh	per unit	\$ 61.19	\$ 42.83	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T8 32 W HLO to 4' 2L TLED	151.8	kWh	per unit	\$ 61.19	\$ 42.83	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T8 28 W LLO to 4' 2L TLED	52.8	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 2L T8 28 W NLO to 4' 2L TLED	72.6	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 32 W LLO to 4' 3L TLED	108.9	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 32 W NLO to 4' 3L TLED	138.6	kWh	per unit	\$ 73.72	\$ 51.60	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 32 W HLO to 4' 3L TLED	227.7	kWh	per unit	\$ 73.72	\$ 51.60	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 28 W LLO to 4' 3L TLED	79.2	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 28 W NLO to 4' 3L TLED	108.9	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 32 W LLO to 4' 2L TLED (delamp & reflector)	151.8	kWh	per unit	\$ 87.05	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 32 W NLO to 4' 2L TLED (delamp & reflector)	181.5	kWh	per unit	\$ 87.05	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T8 32 W HLO to 4' 2L TLED (delamp & reflector)	270.6	kWh	per unit	\$ 87.05	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 28 W LLO to 4' 4L TLED	105.6	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 28 W NLO to 4' 4L TLED	145.2	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 32 W LLO to 4' 4L TLED	145.2	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 32 W NLO to 4' 4L TLED	184.8	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 32 W HLO to 4' 4L TLED	303.6	kWh	per unit	\$ 89.32	\$ 60.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 28 W LLO to 4' 3L TLED (delamp)	148.5	kWh	per unit	\$ 73.72	\$ 51.61	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 28 W NLO to 4' 2L TLED (delamp & reflector)	231	kWh	per unit	\$ 98.39	\$ 68.87	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 32 W LLO to 4' 3L TLED (delamp)	188.1	kWh	per unit	\$ 73.72	\$ 51.61	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 32 W HLO to 4' 2L TLED (delamp & reflector)	270.6	kWh	per unit	\$ 98.39	\$ 68.87	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T8 32 W HLO to 4' 2L TLED (delamp & reflector)	389.4	kWh	per unit	\$ 98.39	\$ 68.87	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	8' 1L T12 HO F96 to 4' 2L TLED (retro kit 2L 8')	260.7	kWh	per unit	\$ 93.55	\$ 65.48	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	8' 2L T12 HO F96 to 4' 4L TLED (retro kit 4L 8' NBF)	521.4	kWh	per unit	\$ 77.21	\$ 54.05	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	8' 2L T12 F96 to 4' 2L TLED (retro kit delamp)	369.6	kWh	per unit	\$ 94.19	\$ 65.93	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	8' 1L T12 F96 to 4' 2L TLED (retro kit 2L 8')	141.9	kWh	per unit	\$ 92.72	\$ 64.90	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	8' 2L T12 F96 to 4' 4L TLED (retro kit 4L 8')	283.8	kWh	per unit	\$ 120.43	\$ 84.30	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 to 4' 3L T8	162	kWh	per unit	\$ 61.25	\$ 61.25	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 to 4' 2L T8 (delamp & reflector)	230.993	kWh	per unit	\$ 91.00	\$ 91.00	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 3L T12 HO to 4' 2L T8 (delamp & reflector)	574.183	kWh	per unit	\$ 91.00	\$ 91.00	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 HO to 4' 4L T8	673.18	kWh	per unit	\$ 67.83	\$ 67.83	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	4' 4L T12 HO to 4' 3L T8 (delamp)	742.478	kWh	per unit	\$ 91.00	\$ 91.00	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	400W HID to 80W LED	1588	kWh	per unit	\$ 471.07	\$ 317.52	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	400W HID to 60W LED	1672	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	250W HID to 60W LED	970	kWh	per unit	\$ 298.62	\$ 194.04	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	250W HID to 35W LED	1075	kWh	per unit	\$ 218.82	\$ 153.17	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	175W HID to 35W LED	735	kWh	per unit	\$ 218.82	\$ 153.17	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	100W HID to 20W LED	458	kWh	per unit	\$ 176.82	\$ 91.56	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Glass Reach-in Doors - Low-Temp (Gas Heating)	336	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Glass Reach-in Doors - Medium Temp (gas heating)	250	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Walk-in Doors - Low Temp (Gas Heating)	2809	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Walk-in Doors - Medium Temp (Gas Heating)	221	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Glass Reach-in Doors - Low Temp (Elect Heating)	343	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Glass Reach-in Doors - Medium Temp (Elect Heating)	252	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Walk-in Doors - Low Temp (Elect Heating)	2836	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Auto-Closers for Walk-in Doors - Medium Temp (Elect Heating)	223	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Walk-In ECM <23W	592	kWh	per unit	\$ 225.40	\$ 259.60	15	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Walk-In ECM >23W	1458	kWh	per unit	\$ 225.40	\$ 259.60	15	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Gaskets for Reach-in Glass Doors - Low Temp (per door) - Electric	243	kWh	per unit	\$ 100.00	\$ 72.90	4	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Gaskets for Reach-in Glass Doors - Medium Temp (per door) - Electric	248	kWh	per unit	\$ 81.00	\$ 74.40	4	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Gaskets for Walk-in Freezer - Main Door (per door) - Electric	347	kWh	per unit	\$ 114.00	\$ 104.10	4	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Gaskets for Walk-in Cooler - Main Door (per door) - Electric	204	kWh	per unit	\$ 76.00	\$ 61.20	4	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Retrofit from 320W HID to Low-Med Output LED	1298	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Retrofit from 400W HID to Low-Med Output LED	1676	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Retrofit from 320W HID to High Output LED	928	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Retrofit from 400W HID to High Output LED	1306	kWh	per unit	\$ 471.07	\$ 329.75	12	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Low Temperature (-35 F to 0 F) [Unknown Heating]	65.7	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Medium Temperature (0 F to 30F) [Unknown Heating]	43.8	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers High Temperature (30F to 55F) [Unknown Heating]	21.9	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Low Temperature (-35F to 0F) [Electric Heating]	130.2	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Medium Temperature (0F to 30F) [Electric Heating]	129.8	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers High Temperature (30F to 55F) [Electric Heating]	86.4	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Low Temperature (-35F to 0F) [Heat Pump]	92.5	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Medium Temperature (0F to 30F) [Heat Pump]	79.6	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers High Temperature (30F to 55F) [Heat Pump]	48.7	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Low Temperature (-35F to 0F) [Gas Heating]	65.7	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers Medium Temperature (0F to 30F) [Gas Heating]	43.8	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Night Covers High Temperature (30F to 55F) [Gas Heating]	21.9	kWh	per unit	\$ 60.20	\$ 42.14	5	Comm Refrigeration
E262	18230521	Agriculture Direct Install	Electricity	Spray valve not previously installed by PSE to 0.65-gas (Elec IE)	70	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.6 gpm to 0.65 gpm-gas (Elec IE)	127	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.2 gpm to 0.65 gpm-gas (Elec IE)	77	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230521	Agriculture Direct Install	Electricity	1.6 gpm to 0.65 gpm-gas (Elec IE)	49	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Spray valve not previously installed by PSE to 0.65-elec	1267	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.6 gpm to 0.65 gpm-elec	2295	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.2 gpm to 0.65 gpm-elec	1393	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	1.6 gpm to 0.65 gpm-elec	890	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Spray valve not previously installed by PSE to 0.65-gas (Elec IE)	1267	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.6 gpm to 0.65 gpm-gas (Elec IE)	2295	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.2 gpm to 0.65 gpm-gas (Elec IE)	1393	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	1.6 gpm to 0.65 gpm-gas (Elec IE)	890	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Sprayvalve not previously installed by PSE to 0.65-elec – with CWA	1267	kWh	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.6 gpm to 0.65 gpm-elec – Split with CWA	2295	kWh	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	2.2 gpm to 0.65 gpm-elec – Split with CWA	1393	kWh	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	1.6 gpm to 0.65 gpm-elec – Split with CWA	890	kWh	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Low Power LED from T12 (4' Lamp)	170	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Low Power LED from T8 (4' Lamp)	98	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - High Power LED from T12 (4' Lamp)	301	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - High Power LED from T8 (4' Lamp)	179	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Delamp T12 (4' Lamp)	226	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Delamp T8 (4' Lamp)	165	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Low Temp Case (4' Lamp)	302	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T8 to LED (Retrofit) Low Temp Case (4' Lamp)	206	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Med Temp Case (4' Lamp)	222	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T8 to LED (Retrofit) Med Temp Case (4' Lamp)	152	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Low Power LED from T12 (5' Lamp)	212	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Low Power LED from T8 (5' Lamp)	122	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - High Power LED from T12 (5' Lamp)	376	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - High Power LED from T8 (5' Lamp)	223	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Delamp T12 (5' Lamp)	282	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Delamp T8 (5' Lamp)	206	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Low Temp Case (5' Lamp)	378	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T8 to LED (Retrofit) Low Temp Case (5' Lamp)	258	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Med Temp Case (5' Lamp)	278	kWh	per unit	\$ 83.64	\$ 58.55	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T8 to LED (Retrofit) Med Temp Case (5' Lamp)	190	kWh	per unit	\$ 83.64	\$ 41.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Low Power LED from T12 (6' Lamp)	255	kWh	per unit	\$ 111.64	\$ 78.15	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Low Power LED from T8 (6' Lamp)	147	kWh	per unit	\$ 111.64	\$ 55.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - High Power LED from T12 (6' Lamp)	451	kWh	per unit	\$ 111.64	\$ 78.15	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - High Power LED from T8 (6' Lamp)	268	kWh	per unit	\$ 111.64	\$ 55.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Delamp T12 (6' Lamp)	339	kWh	per unit	\$ 111.64	\$ 78.15	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Open Case Lights - Delamp T8 (6' Lamp)	247	kWh	per unit	\$ 111.64	\$ 55.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Low Temp Case (6' Lamp)	453	kWh	per unit	\$ 111.64	\$ 78.15	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T8 to LED (Retrofit) Low Temp Case (6' Lamp)	309	kWh	per unit	\$ 111.64	\$ 55.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T12 to LED (Retrofit) Med Temp Case (6' Lamp)	333	kWh	per unit	\$ 111.64	\$ 78.15	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	Reach-in Case Lighting: T8 to LED (Retrofit) Med Temp Case (6' Lamp)	228	kWh	per unit	\$ 111.64	\$ 55.82	11	Comm Lighting
E262	18230521	Agriculture Direct Install	Electricity	AGDI: 400W HID to 4' 6L T8 (HBF)	2347.68	kWh	per unit	\$ 239.32	\$ 239.32	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Aerator - EWH - All Others	152.6	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Aerator - EWH - Restaurant	94	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Aerator - EWH - Retail	151	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Aerator - EWH - School	189.5	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Aerator - EWH - Small Office	46.6	kWh	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: ECM - Display Case	685	kWh	per unit	\$ 190.40	\$ 133.28	15	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Fixture - LED - Recessed Can - Lodging Common Areas	280	kWh	per unit	\$ 106.68	\$ 106.68	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Fixture - LED - Wall Pack - Photocell - 60w	937	kWh	per unit	\$ 298.62	\$ 209.03	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Fixture - LED - Wall Pack - Photocell - Less than 19w	181	kWh	per unit	\$ 176.82	\$ 70.73	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Fixture - LED - Wall Pack - Photocell - Less than 30w	601	kWh	per unit	\$ 218.82	\$ 153.17	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Decorative - Exterior	79	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Decorative - Lodging Common Areas	159	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Decorative - Office	58	kWh	per unit	\$ 27.69	\$ 27.69	3	Comm Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Globe - 5w - Exterior	56	kWh	per unit	\$ 21.07	\$ 21.07	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Globe - 5w - Lodging Common Areas	113	kWh	per unit	\$ 21.07	\$ 21.07	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Globe - 5w - Office	41	kWh	per unit	\$ 21.07	\$ 21.07	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - MR 16 - Exterior	103	kWh	per unit	\$ 32.41	\$ 32.41	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - MR 16 - Lodging Common Areas	210	kWh	per unit	\$ 32.41	\$ 32.41	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - MR 16 - Office	77	kWh	per unit	\$ 32.41	\$ 32.41	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Omni - 11w - Exterior	123	kWh	per unit	\$ 19.68	\$ 19.68	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Omni - 11w - Lodging Common Areas	249	kWh	per unit	\$ 19.68	\$ 19.68	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Omni - 11w - Office	91	kWh	per unit	\$ 19.68	\$ 19.68	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Omni - 7w - Exterior	78	kWh	per unit	\$ 18.70	\$ 18.70	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Omni - 7w - Lodging Common Areas	158	kWh	per unit	\$ 18.70	\$ 18.70	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Omni - 7w - Office	58	kWh	per unit	\$ 18.70	\$ 18.70	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 20 - Exterior	147	kWh	per unit	\$ 36.68	\$ 36.68	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 20 - Lodging Common Areas	299	kWh	per unit	\$ 36.68	\$ 36.68	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 20 - Office	110	kWh	per unit	\$ 36.68	\$ 36.68	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 30 - Exterior	126	kWh	per unit	\$ 50.64	\$ 50.64	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 30 - Lodging Common Areas	255	kWh	per unit	\$ 50.64	\$ 50.64	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 30 - Office	93	kWh	per unit	\$ 50.64	\$ 50.64	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 38 or 40 - Exterior	170	kWh	per unit	\$ 52.35	\$ 52.35	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 38 or 40 - Lodging Common Areas	344	kWh	per unit	\$ 52.35	\$ 52.35	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - LED - Par 38 or 40 - Office	126	kWh	per unit	\$ 52.35	\$ 52.35	5	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - T8 - 4 ft - 3x - from 4 ft T12 3x - LCA	409	kWh	per unit	\$ 44.25	\$ 44.25	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - T8 - 4 ft - 4x - from 4 ft T12 4x - LCA	545	kWh	per unit	\$ 52.82	\$ 52.82	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - T8 - 4 ft - 4x - from 4 ft T12 HO 4x - LCA	1738	kWh	per unit	\$ 52.82	\$ 52.82	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - T8 - DLR - 4 ft - 2x - from 4 ft T12 HO 4x - LCA	2095	kWh	per unit	\$ 62.01	\$ 62.01	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 3 ft - 1x - from 3 ft 1x T8 25w - LCA	111	kWh	per unit	\$ 43.85	\$ 21.92	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 3 ft - 1x - from 3 ft T12 1x - LCA	239	kWh	per unit	\$ 43.85	\$ 19.07	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 1x - from 4 ft T12 1x - LCA	204	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 1x - from 4 ft T8 28w LLO 1x - LCA	68	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 1x - from 4 ft T8 28w NLO 1x - LCA	94	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 1x - from 4ft T8 32w HLO 1x - LCA	196	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 1x - from 4ft T8 32w LLO 1x - LCA	94	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 1x - from 4ft T8 32w NLO 1x - LCA	119	kWh	per unit	\$ 58.59	\$ 29.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T12 2x - LCA	409	kWh	per unit	\$ 59.01	\$ 41.30	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T12 HO 2x - LCA	1005	kWh	per unit	\$ 71.09	\$ 49.76	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T8 28w LLO 2x - LCA	136	kWh	per unit	\$ 61.19	\$ 30.60	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T8 28w NLO 2x - LCA	187	kWh	per unit	\$ 61.19	\$ 30.60	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T8 32w HLO 2x - LCA	392	kWh	per unit	\$ 61.19	\$ 30.60	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T8 32w LLO 2x - LCA	187	kWh	per unit	\$ 61.19	\$ 30.60	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 2x - from 4 ft T8 32w NLO 2x - LCA	239	kWh	per unit	\$ 61.19	\$ 30.60	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x - from 4 ft T12 HO 3x - LCA	1508	kWh	per unit	\$ 81.11	\$ 56.77	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x - from 4 ft T8 28w LLO 3x - LCA	204	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x - from 4 ft T8 28w NLO 3x - LCA	281	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x - from 4 ft T8 32w HLO 3x - LCA	588	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x - from 4 ft T8 32w LLO 3x - LCA	281	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x - from 4 ft T8 32w NLO 3x - LCA	358	kWh	per unit	\$ 75.02	\$ 37.51	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 3x from 4 ft T12 3x - LCA	613	kWh	per unit	\$ 86.57	\$ 60.60	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T12 4x - LCA	818	kWh	per unit	\$ 107.67	\$ 75.37	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T12 HO 4x - LCA	2010	kWh	per unit	\$ 103.07	\$ 72.15	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T8 28w LLO 4x - LCA	273	kWh	per unit	\$ 89.32	\$ 62.53	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T8 28w NLO 4x - LCA	375	kWh	per unit	\$ 89.32	\$ 62.53	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T8 32w HLO 4x - LCA	784	kWh	per unit	\$ 96.19	\$ 67.34	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T8 32w LLO 4x - LCA	375	kWh	per unit	\$ 89.32	\$ 62.53	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Lamp - TLED - 4 ft - 4x - from 4 ft T8 32w NLO 4x - LCA	784	kWh	per unit	\$ 89.32	\$ 62.53	12	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: LED Exit Sign	153.3	kWh	per unit	\$ 60.00	\$ 60.00	9	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: LED Open Sign	338	kWh	per unit	\$ 130.65	\$ 130.65	16	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Occupancy Sensor - 100w to 150w	120	kWh	per unit	\$ 68.00	\$ 68.00	10	Comm Lighting

Exhibit 5: 2017 Prescriptive Measures

Electric



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
E262	18230520	Lodging Direct Install	Electricity	LGDI: Occupancy Sensor - 151w to 200w	167	kWh	per unit	\$ 68.00	\$ 68.00	10	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Occupancy Sensor - 201w to 450w	311	kWh	per unit	\$ 68.00	\$ 68.00	10	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Occupancy Sensor - Less than 100w	48	kWh	per unit	\$ 68.00	\$ 68.00	10	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Occupancy Sensor - over 450w	478	kWh	per unit	\$ 68.00	\$ 68.00	10	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Open Case Lighting - LED - High - from 4ft T12	301	kWh	per unit	\$ 58.55	\$ 58.55	11	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Power Strip - Advanced	118	kWh	per unit	\$ 40.00	\$ 40.00	4	Comm Lighting
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Reach In Glass Doors - Low Temp - NG - EIE	336	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Reach In Glass Doors - Med Temp - E	252	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Reach In Glass Doors - Med Temp - NG - EIE	250	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Walk In Doors - Low Temp - E	2836	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Walk In Doors - Low Temp - NG - EIE	2809	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Walk In Doors - Med Temp - E	223	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Auto Closer - Walk In Doors - Med Temp - NG - EIE	221	kWh	per unit	\$ 190.40	\$ 133.28	8	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Gasket - Reach In Glass Door - Low Temp - E	243	kWh	per unit	\$ 81.00	\$ 72.90	4	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Gasket - Reach In Glass Door - Med Temp - E	248	kWh	per unit	\$ 81.00	\$ 74.40	4	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Gasket - Walk In Cooler Door- Main - E	204	kWh	per unit	\$ 76.00	\$ 61.20	4	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Gasket - Walk In Freezer Door - Main - E	347	kWh	per unit	\$ 114.00	\$ 104.10	4	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sealing - Strip Curtain - Freezer - Restaurant	129	kWh	per unit	\$ 16.10	\$ 16.10	2	Comm Refrigeration
E262	18230520	Lodging Direct Install	Electricity	LGDI: Showerhead - Any Comm - GWH - 1.5 gpm - EIE	10	kWh	per unit	\$ -	\$ -	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Showerhead - DI - Any Comm - EWH - 1.5 gpm	228	kWh	per unit	\$ 23.80	\$ 23.80	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Showerhead - DI - Fit Ctr - EWH - 1.5 gpm	4288	kWh	per unit	\$ 23.80	\$ 23.80	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Showerhead - Fit Ctr - GWH - 1.5 gpm - EIE	190	kWh	per unit	\$ -	\$ -	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - EWH - 0.65 gpm - from 1.6	890	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - EWH - 0.65 gpm - from 2.2	1393	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - EWH - 0.65 gpm - from 2.6	2295	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - EWH - 0.65 gpm - not PI	1267	kWh	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - GWH - 0.65 gpm - from 1.6 - EIE	49	kWh	per unit	\$ -	\$ -	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - GWH - 0.65 gpm - from 2.2 - EIE	77	kWh	per unit	\$ -	\$ -	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - GWH - 0.65 gpm - from 2.6 - EIE	127	kWh	per unit	\$ -	\$ -	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Sprayhead - GWH - 0.65 gpm - not PI - EIE	70	kWh	per unit	\$ -	\$ -	4	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	LGDI: Thermostat - Programmable	473	kWh	per unit	\$ 160.00	\$ 160.00	10	Comm Water Heat
E262	18230520	Lodging Direct Install	Electricity	custom incentives	776120	kWh	calculated	\$ 1,320,893.00	\$ 924,626.00	15	Comm Flat
E262	18230520	Lodging Direct Install	Electricity	Lodging PTHP	737	kWh	per unit	\$ 6,008.08	\$ 100.00	15	Comm Space Heat
E262	18230520	Lodging Direct Install	Electricity	Hotel Room Occupancy based HVAC Controls	264	kWh	per unit	\$ 186.09	\$ 100.00	15	Comm Space Heat

Exhibit 5: 2017 Prescriptive Measures

Natural Gas



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
G201	18230661	Low Income Weatherization	Natural Gas	Shareholder	0	therms	calculated				
G201	18230661	Low Income Weatherization	Natural Gas	Repairs	0	therms	calculated			1	
G201	18230661	Low Income Weatherization	Natural Gas	Furnace / Heating: Gas Furnace Replacement >90% ~ TG, MF	66	therms	per unit	\$ 600.00	\$ 600.00	18	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Furnace / Heating: Gas Furnace Replacement >90% ~ TG, SF	89	therms	per unit	\$ 692.00	\$ 692.00	18	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R0 to R38) ~ TG, MF	0.05	therms	square foot	\$ 0.95	\$ 0.95	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R0 to R38) ~ TG, SF	0.09	therms	square foot	\$ 0.95	\$ 0.95	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R11 to R38) ~ TG, MF	0.06	therms	square foot	\$ 0.70	\$ 0.70	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R11 to R38) ~ TG, SF	0.02	therms	square foot	\$ 0.70	\$ 0.70	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Duct Insulation (R0-R11) ~ TG, SF	0.2	therms	linear foot	\$ 2.50	\$ 2.50	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Floor (R0 to R22) ~ TG, MH	0.02	therms	square foot	\$ 0.70	\$ 0.70	25	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Floor Insulation (R0-R30) ~ TG, MH	0.06	therms	square foot	\$ 0.80	\$ 0.80	25	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Floor Insulation (R0-R30) ~ TG, SF	0.04	therms	square foot	\$ 0.85	\$ 0.85	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Wall Insulation (R0-R11) ~ TG, MF	0.08	therms	square foot	\$ 0.85	\$ 0.85	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Wall Insulation (R0-R11) ~ TG, MH	0.08	therms	square foot	\$ 0.80	\$ 0.80	25	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation: Wall Insulation (R0-R11) ~ TG, SF	0.07	therms	square foot	\$ 0.85	\$ 0.85	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Duct Sealing: Duct Sealing ~ TG, MH	39.4	therms	per unit	\$ 350.00	\$ 350.00	18	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Duct Sealing: Duct Sealing ~ TG, SF	30	therms	per unit	\$ 350.00	\$ 350.00	20	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Structure Sealing: Shell Sealing ~ TG, MH	0.01	therms	square foot	\$ 0.40	\$ 0.40	25	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Structure Sealing: Shell Sealing ~ TG, SF	0.02	therms	square foot	\$ 0.40	\$ 0.40	15	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Water Heater: Pipe Insulation ~ TG, MH	0.9	therms	linear foot	\$ 5.50	\$ 5.50	15	Res Water Heat
G201	18230661	Low Income Weatherization	Natural Gas	Water Heater: Pipe Insulation ~ TG, SF	0.9	therms	linear foot	\$ 5.50	\$ 5.50	15	Res Water Heat
G201	18230661	Low Income Weatherization	Natural Gas	Common Area Measures: Space Heating Boiler Replacement ~ TG, MF	734	therms	calculated	\$ 4,152.00	\$ 4,152.00	24	Comm Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Integrated Space and Water Heat-SF	173	therms	per unit	\$ 1,526.00	\$ 1,526.00	18	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Aerator - 1.5 gpm GWH - Direct Install, SF	1.64	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G201	18230661	Low Income Weatherization	Natural Gas	Aerator - 1.5 gpm GWH - Direct Install, MF	2	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G201	18230661	Low Income Weatherization	Natural Gas	Aerator - 1.5 gpm GWH - Direct Install, MH	1.64	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R0 to R49) ~ TE, MF	0.09	therms	square foot	\$ 0.95	\$ 0.95	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R11 to R49) ~ TE, SF	0.02	therms	square foot	\$ 0.70	\$ 0.70	30	Res Space Heat
G201	18230661	Low Income Weatherization	Natural Gas	Insulation, Ceiling: Attic Insulation (R19 to R49) ~ TE, MF	0.03	therms	square foot	\$ 0.70	\$ 0.70	30	Res Space Heat
G214	18230638	SF Existing Space Heat	Natural Gas	Efficient 95% Gas Furnace (Note: Raised from 90%)	110	therms	per unit	\$ 603.00	\$ 350.00	18	Res Space Heat
G214	18230638	SF Existing Space Heat	Natural Gas	Energy Star qualified Boilers (95% AFUE)	119	therms	per unit	\$ 1,393.00	\$ 350.00	20	Res Space Heat
G214	18230638	SF Existing Space Heat	Natural Gas	High Efficiency Natural Gas Fireplace	72	therms	per home	\$ 562.00	\$ 200.00	20	Res Space Heat
G214	18230638	SF Existing Space Heat	Natural Gas	NEW Integrated Space & Water Heating	173	therms	per home	\$ 1,526.00	\$ 800.00	18	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Air Sealing CFM 50 - Gas	0.02	therms	per unit	\$ 0.66	\$ 0.66	15	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Attic Insulation R-0 to R-49 - Gas	0.1	therms	square foot	\$ 1.12	\$ 0.28	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Attic Insulation R-11 to R-49 - Gas	0.03	therms	square foot	\$ 0.98	\$ 0.28	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	CO Monitor	0	therms	per home	\$ 38.30	\$ 38.30	5	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Floor Insulation R-0 to R-30 - Gas	0.04	therms	square foot	\$ 1.32	\$ 0.11	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Home Performance with Energy Star	0	therms	per home	\$ 600.00	\$ 400.00	1	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Prescriptive Duct Sealing and Insulation - Gas	75	therms	per unit	\$ 1,000.00	\$ 400.00	20	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Showerhead - Fixed - Gas	11	therms	per unit	\$ 3.95	\$ 3.95	10	Res Water Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Wall Insulation R-0 to R-13 - Gas	0.09	therms	square foot	\$ 1.39	\$ 0.33	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Windows Single Pane to U..30 - Gas	0.64	therms	square foot	\$ 20.50	\$ 2.78	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Prescriptive air sealing - Crawl Space	0.01	therms	square foot	\$ 0.20	\$ 0.09	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Residential Aerators 1 GPM	2.15	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Residential Aerators 1.5 GPM	1.26	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Prescriptive air sealing - Attic	0.01	therms	square foot	\$ 0.20	\$ 0.09	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Duct Sealing Only	42.5	therms	per home	\$ 608.58	\$ 300.00	20	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	Showerhead - Handheld - Gas	11	therms	per unit	\$ 9.48	\$ 9.48	10	Res Water Heat
G214	18230637	SF Existing Weatherization	Natural Gas	HEA - CAN - Gas	0	therms	per home	\$ 121.00	\$ 121.00	1	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	MH Single Pane to U.30 - Gas	0.4	therms	square foot	\$ 17.81	\$ 2.78	30	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	HEA - Franklin - Gas	0	therms	per home	\$ 144.00	\$ 144.00	1	Res Space Heat
G214	18230637	SF Existing Weatherization	Natural Gas	MH Floor Insulation R-0 to R-22 - Gas	0.02	therms	square foot	\$ 1.39	\$ 0.55	25	Res Space Heat
G214	18230738	Home Energy Reports	Natural Gas	Home Energy Reports (Original)- Gas	0	therms	per home	\$ 0.88	\$ 0.88	2	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Clothes Washer CEE Tier 1 Any WH/Any Dryer - Frontload	1.2	therms	per unit	\$ -	\$ -	14	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Clothes Washer CEE Tier 2 Any WH/Any Dryer	1.9	therms	per unit	\$ -	\$ -	14	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Clothes Washer CEE Tier 3 Any WH/Any Dryer	2	therms	per unit	\$ -	\$ -	14	Res Water Heat

Exhibit 5: 2017 Prescriptive Measures

Natural Gas



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
G214	18230434	GHome Appliances	Natural Gas	Showerhead - Engagement_C - Appl Repl - 1.5 gpm (G)	5	therms	per unit	\$ 3.33	\$ 3.33	10	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Clothes Washer AnyWH/Any Dryer - Topload	0.9	therms	per unit	\$ -	\$ -	14	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	CEE Tier 1 or above - Any WH/Any Dryer - Top load	0.95	therms	per unit	\$ -	\$ -	14	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Energy Star Clothes Washer - Any WH/Any Dryer - Front load	1.47	therms	per unit	\$ -	\$ -	14	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Aerator - Bath - Engagement - C - APPD - 1.0 gpm - Therm	1.18	therms	per unit	\$ 0.30	\$ 0.30	10	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Aerator - Bath - Engagement - C - APPR - 1.0 gpm - Therm	1.18	therms	per unit	\$ 0.30	\$ 0.30	10	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Aerator - Kitchen - Engagement - C - APPD - 1.5 gpm - Therm	0.69	therms	per unit	\$ 0.30	\$ 0.30	10	Res Water Heat
G214	18230434	GHome Appliances	Natural Gas	Aerator - Kitchen - Engagement - C - APPR - 1.5 gpm - Therm	0.69	therms	per unit	\$ 0.30	\$ 0.30	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Adapter - ShowerStart (G)	1.75	therms	per unit	\$ 15.98	\$ 10.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - Retail_C - Any WH - 1.50 gpm and less (G)	4.9	therms	per unit	\$ 13.29	\$ 4.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - Retail_C - Any WH - 1.51 to 1.75 gpm (G)	3.9	therms	per unit	\$ 13.29	\$ 4.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - Retail_C - Any WH - 1.76 to 2.0 gpm (G)	2.9	therms	per unit	\$ 13.29	\$ 4.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - Retail_GO - Any WH - 1.50 gpm and less	7.82	therms	per unit	\$ 26.58	\$ 10.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - Retail_GO - Any WH - 1.51 to 1.75 gpm	6.31	therms	per unit	\$ 26.58	\$ 10.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - Retail_GO - Any WH - 1.76 to 2.0 gpm	4.6	therms	per unit	\$ 26.58	\$ 10.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead - ShowerStart - 1.5 gpm (G)	10.86	therms	per unit	\$ 18.87	\$ 10.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Adapter-ShowerStart - C_Gas Water Heat	1.1	therms	per unit	\$ 7.99	\$ 3.50	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Showerhead-ShowerStart - C_Gas Water Heat	6.7	therms	per unit	\$ 9.44	\$ 3.50	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Faucet - WaterSense - GO - Any WH - 1.5 gpm or less	0.72	therms	per unit	\$ 20.00	\$ 10.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Faucet - WaterSense - C - Any WH - 1.5 gpm or less	0.69	therms	per unit	\$ 20.00	\$ 3.50	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Aerator - WaterSense - GO - Any WH - 1.5 gpm or less	0.72	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Aerator - WaterSense - GO - Any WH - 1.0 gpm	1.23	therms	per unit	\$ 2.00	\$ 2.00	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Aerator - WaterSense -C-Any WH -1.5 gpm - therm	0.69	therms	per unit	\$ 0.30	\$ 0.30	10	Res Water Heat
G214	18230700	Residential Showerheads	Natural Gas	Aerator - WaterSense -C-Any WH -1.0 gpm	1.18	therms	per unit	\$ 0.30	\$ 0.30	10	Res Water Heat
G214	18230687	Web-Enabled Thermostats	Natural Gas	Web-Enabled Thermostat (Retail)	50	therms	per unit	\$ 187.35	\$ 75.00	20	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Aerator - 1.5 gpm GWH - Direct Install	2	therms	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Attic Insulation R-0 to R-38	0.09	therms	square foot	\$ 1.06	\$ 0.75	30	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Attic Insulation R-11 to R-38	0.06	therms	square foot	\$ 0.75	\$ 0.75	30	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Boiler (Domestic Water + Space Heating) Replacement (Calculated)	1923	therms	calculated	\$ 36,251.00	\$ 11,660.00	24	Comm Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Boiler (Domestic Water) Replacement (Calculated)	1100	therms	calculated	\$ 11,560.00	\$ 5,500.00	15	Comm Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Boiler (Pool Heating) (Calculated)	412	therms	calculated	\$ 3,600.00	\$ 1,686.00	24	Comm Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Boiler (Space Heating) Replacement (Calculated)	734	therms	calculated	\$ 6,000.00	\$ 3,670.00	24	Comm Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Floor Insulation R-0 to R-30	0.05	therms	square foot	\$ 1.59	\$ 0.75	30	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	High Efficiency Natural Gas Fireplace - In-unit	72	therms	per home	\$ 562.00	\$ 200.00	20	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Integrated Space & Water Heating Natural Gas Boiler - In-unit	129.7	therms	per home	\$ 1,526.00	\$ 800.00	18	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Natural Gas Boiler (.95 AFUE) - In-unit	89.3	therms	per home	\$ 1,393.00	\$ 350.00	20	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Natural Gas Furnace (.95 AFUE) - In-unit	82.4	therms	per home	\$ 603.00	\$ 250.00	18	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Showerhead - Max 1.5 gpm GWH - Direct Install	13	therms	per unit	\$ 18.00	\$ 18.00	10	Res Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Thermostatic Restrictor Handheld Showerhead	15	therms	per unit	\$ 58.00	\$ 58.00	10	Res Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Thermostatic Restrictor Showerhead	15	therms	per unit	\$ 41.00	\$ 41.00	10	Res Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Thermostatic Restrictor Showerhead Adaptor	2.6	therms	per unit	\$ 33.00	\$ 33.00	10	Res Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Variable Speed Drive - Gas	2724	therms	calculated	\$ 63,620.00	\$ 27,238.00	15	Comm Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Wall Insulation R-0 to R-11	0.05	therms	square foot	\$ 0.76	\$ 0.75	30	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Windows (single to double paned) U= 1.2 to 0.30	0.88	therms	square foot	\$ 20.61	\$ 7.00	30	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Windows (single to triple paned) U= 1.2 to 0.22	0.96	therms	square foot	\$ 21.97	\$ 9.00	30	Res Space Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Aerator - 1.0 gpm GWH - Direct Install	3.4	therms	per unit	\$ 2.10	\$ 2.10	10	Res Water Heat
G217	18230736	Multi-Family Retrofit	Natural Gas	Strategic Energy Management	3400	therms	calculated	\$ 1,000.00	\$ 1,000.00	3	Res Space Heat
G218	18230673	Multi-Family New Construction	Natural Gas	Condensing Boiler - Space Heat	1	therms	calculated	\$ 5.00	\$ 5.00	24	Comm Space Heat
G218	18230673	Multi-Family New Construction	Natural Gas	Condensing Boiler - DHW	1	therms	calculated	\$ 3.88	\$ 3.88	15	Comm Water Heat
G218	18230673	Multi-Family New Construction	Natural Gas	Condensing Water Heater - DHW	1	therms	calculated	\$ 1.84	\$ 1.84	7	Comm Water Heat
G218	18230673	Multi-Family New Construction	Natural Gas	1.75 gpm max showerhead	9	therms	per unit	\$ 31.00	\$ 15.00	10	Res Water Heat
G218	18230673	Multi-Family New Construction	Natural Gas	1.50 gpm max showerhead	13	therms	per unit	\$ 31.00	\$ 25.00	10	Res Water Heat
G218	18230673	Multi-Family New Construction	Natural Gas	Whole Building - Gas	1	therms	calculated	\$ 5.00	\$ 5.00	14	Res Space Heat
G249R	18230622	Residential Energy Reports	Natural Gas	Individual Energy Reports- Expansion- HRU (2017)	3	therms	per home	\$ 1.00	\$ 1.00	2	Res Water Heat
G249R	18230622	Residential Energy Reports	Natural Gas	Individual Energy Reports- Expansion- Rural (2017)	4	therms	per home	\$ 1.00	\$ 1.00	2	Res Water Heat
G249R	18230622	Residential Energy Reports	Natural Gas	Refill Year 1 (2017)	5	therms	per home	\$ 1.00	\$ 1.00	2	Res Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Commercial Fryer - Standard	432	therms	per unit	\$ 1,017.00	\$ 500.00	12	Comm Cooking

Exhibit 5: 2017 Prescriptive Measures

Natural Gas



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Steam Cooker - 3 Pan	1164	therms	per unit	\$ 284.00	\$ 250.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Steam Cooker - 4 Pan	1554	therms	per unit	\$ 378.00	\$ 350.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Steam Cooker - 5 Pan	1944	therms	per unit	\$ 473.00	\$ 450.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Steam Cooker - 6 Pan	2334	therms	per unit	\$ 567.00	\$ 550.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Steam Cooker - 10 Pan	3893	therms	per unit	\$ 946.00	\$ 950.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Convection Oven - Full Size - \$1000 - G	357	therms	per unit	\$ 1,177.00	\$ 1,000.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Convection Oven - Double - \$2000 - G	714	therms	per unit	\$ 2,354.00	\$ 2,000.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Combination Oven <15 pan	798	therms	per unit	\$ 2,531.00	\$ 2,500.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Double Rack Oven	2100	therms	per unit	\$ 4,128.00	\$ 2,000.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - Under Counter Low Temp - \$150 - G	94	therms	per unit	\$ 232.00	\$ 150.00	10	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - Under Counter High Temp - \$0 - G	40	therms	per unit	\$ 40.00	\$ -	10	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - Door Type Low Temp - \$750 - G	599	therms	per unit	\$ 2,659.00	\$ 750.00	15	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - Door Type High Temp - \$250 - G	261	therms	per unit	\$ 846.00	\$ 250.00	15	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - ST Low Temp - \$1000 - G	484	therms	per unit	\$ 5,385.00	\$ 1,000.00	20	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - ST High Temp - \$250 - G	158	therms	per unit	\$ 1,436.00	\$ 250.00	20	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - MT Low Temp - \$1500 - G	698	therms	per unit	\$ 3,394.00	\$ 1,500.00	20	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Dishwasher - MT High Temp - \$500 - G	600	therms	per unit	\$ 1,082.00	\$ 500.00	20	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Hot Water Heater- Kitchen - G	613	therms	per unit	\$ 1,644.00	\$ 800.00	7	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Boiler - Kitchen - G	800	therms	per unit	\$ 3,191.00	\$ 1,500.00	15	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Sales Incentive - Fryer - \$30 - G	0	therms	per unit	\$ 30.00	\$ 30.00	0	
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Sales Incentive - Steam Cooker - \$30 - G	0	therms	per unit	\$ 30.00	\$ 30.00	0	
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Sales Incentive Comm Oven - \$50 - G	0	therms	per unit	\$ 50.00	\$ 50.00	0	
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Sales Incentive - Under Counter Or Door Type - \$30 - G	0	therms	per unit	\$ 30.00	\$ 30.00	0	
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Sales Incentive - Single or Multi Tank - \$50 - G	0	therms	per unit	\$ 50.00	\$ 50.00	0	
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Commercial Washer - GWH / G Dryer	32	therms	per unit	\$ 210.00	\$ 150.00	7	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Commercial Washer - GWH Only	20	therms	per unit	\$ 61.00	\$ 60.00	7	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Commercial Washer - G Dryer Only	12	therms	per unit	\$ 33.00	\$ 30.00	7	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Hot Water Heater - Laundry - G	597	therms	per unit	\$ 1,644.00	\$ 800.00	7	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Boiler - Laundry - G	597	therms	per unit	\$ 3,191.00	\$ 1,500.00	15	Comm Water Heat
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Additional Measures - (DCKV, etc)	55000	therms	calculated	\$ -	\$ -	15	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Commercial Fryer - Large Vat	490	therms	per unit	\$ 591.00	\$ 500.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Griddle - 2 linear feet - Gas	174	therms	per unit	\$ 1,438.00	\$ 900.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Griddle - 3 linear feet - Gas	261	therms	per unit	\$ 2,157.00	\$ 1,300.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Griddle - 4 linear feet - Gas	348	therms	per unit	\$ 2,876.00	\$ 1,400.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Griddle - 5 linear feet - Gas	435	therms	per unit	\$ 3,494.00	\$ 1,500.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Griddle - 6 linear feet - Gas	522	therms	per unit	\$ 4,314.00	\$ 1,600.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Combination Oven - gas - 15-28 pan	1120	therms	per unit	\$ 3,361.00	\$ 3,000.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Combination Oven - gas - >28 pan	1573	therms	per unit	\$ 7,890.00	\$ 7,000.00	12	Comm Cooking
G262	18231027	Commercial Kitchen/Laundry	Natural Gas	Single Rack Oven - gas	1034	therms	per unit	\$ 1,817.00	\$ 1,500.00	12	Comm Cooking
G262	18231029	Commercial HVAC	Natural Gas	Premium Service	59435	therms	calculated	\$ 110,880.00	\$ 92,400.00	5	Comm Space Heat
G262	18231029	Commercial HVAC	Natural Gas	Web Enabled Thermostats No Electric Heat	61	therms	per unit	\$ 167.00	\$ 150.00	5	Comm Space Heat
G262	18231029	Commercial HVAC	Natural Gas	HVAC retrofit	5000	therms	calculated	\$ 50,000.00	\$ 20,150.00	15	Comm Space Heat
G262	18231022	Small Business Direct Install	Natural Gas	Auto-Closers for Glass Reach-in Doors - Low-Temp (Gas Heating IE)	0.67	therms	per unit	\$ -	\$ -	8	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Auto-Closers for Glass Reach-in Doors - Medium Temp (gas heating ie)	0.25	therms	per unit	\$ -	\$ -	8	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Auto-Closers for Walk-in Doors - Low Temp (Gas Heating IE)	5.62	therms	per unit	\$ -	\$ -	8	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Auto-Closers for Walk-in Doors - Medium Temp (Gas Heating ie)	0.22	therms	per unit	\$ -	\$ -	8	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Gaskets for Reach-in Glass Doors - Low Temp (per door) - Gas	6.2	therms	per unit	\$ 100.00	\$ 72.90	4	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Gaskets for Reach-in Glass Doors - Medium Temp (per door) - Gas	13.9	therms	per unit	\$ 81.00	\$ 74.40	4	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Gaskets for Walk-in Freezer - Main Door (per door) - Gas	8.9	therms	per unit	\$ 114.00	\$ 104.10	4	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Night Covers Medium Temperature (0F to 30F) [Gas Heating] Gas IE	5.2	therms	per unit	\$ -	\$ -	5	Comm Refrigeration
G262	18231022	Small Business Direct Install	Natural Gas	Spray valve not previously installed by PSE to 0.65-gas	50	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	2.6 gpm to 0.65 gpm-gas	91	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	2.2 gpm to 0.65 gpm-gas	55	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	1.6 gpm to 0.65 gpm-gas	35	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	Spray valve not previously installed by PSE to 0.65-gas - with CWA	50	therms	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	2.6 gpm to 0.65 gpm-gas - with CWA	91	therms	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	2.2 gpm to 0.65 gpm-gas - Split with CWA	55	therms	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat

Exhibit 5: 2017 Prescriptive Measures

Natural Gas



Schedule	Order Number	Program Description	Fuel Type	Measure Name	Savings	UOM	Unit Type	Measure Cost	Incentive	Measure Life	End Use
G262	18231022	Small Business Direct Install	Natural Gas	G PRE 26 to 65 (CWA) 1.6 gpm to 0.65 gpm-gas – Split with CWA	35	therms	per unit	\$ 76.30	\$ 41.30	4	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	1.5 GPM Showerhead Any Commercial, gas SBDI	10	therms	per unit	\$ 28.70	\$ 28.70	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	1.5 GPM Showerhead Fitness Center, gas SBDI	183	therms	per unit	\$ 28.70	\$ 28.70	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	1.5 GPM Showerhead Any Commercial, gas SBDI– Split Cost with CWA	10	therms	per unit	\$ 17.70	\$ 17.70	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	1.5 GPM Showerhead Fitness Center, gas SBDI – Split Cost with CWA	183	therms	per unit	\$ 17.70	\$ 17.70	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	Aerator, Office Small-Gas	2	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	Aerator, Restaurant - Gas	4.1	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	Aerator, Retail-Gas	6.5	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	Aerator, School-Gas	8.2	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18231022	Small Business Direct Install	Natural Gas	Aerator, All Others-Gas	6.5	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Aerator - GWH - All Others	6.5	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Aerator - GWH - Restaurant	4.1	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Aerator - GWH - Retail	6.5	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Aerator - GWH - School	8.2	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Aerator - GWH - Small Office	2	therms	per unit	\$ 13.09	\$ 13.09	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Auto Closer - Reach In Glass Doors - Low Temp - NG	0.67	therms	per unit	\$ -	\$ -	8	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Auto Closer - Reach In Glass Doors - Med Temp - NG	0.25	therms	per unit	\$ -	\$ -	8	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Auto Closer - Walk In Doors - Low Temp - NG	5.62	therms	per unit	\$ -	\$ -	8	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Auto Closer - Walk In Doors - Med Temp - NG	0.22	therms	per unit	\$ -	\$ -	8	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Gasket - Reach In Glass Door - Low Temp - NG	6.2	therms	per unit	\$ -	\$ -	4	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Gasket - Reach In Glass Door - Med Temp - NG	13.9	therms	per unit	\$ -	\$ -	4	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Gasket - Walk In Cooler Door- Main - NG	11.4	therms	per unit	\$ -	\$ -	4	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Gasket - Walk In Freezer Door - Main - NG	8.9	therms	per unit	\$ -	\$ -	4	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Night Cover - Produce - High Temp - 30F to 55F - NG - GIE	3.9	therms	per unit	\$ -	\$ -	5	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Night Cover - Produce - Low Temp - Neg 35F to 0F - NG - GIE	3.9	therms	per unit	\$ -	\$ -	5	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sealing - Night Cover - Produce - Med Temp - 0F to 30F - NG - GIE	5.2	therms	per unit	\$ -	\$ -	5	Comm Flat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Showerhead - Any Comm - GWH - 1.5 gpm	10	therms	per unit	\$ 28.70	\$ 28.70	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Showerhead - DI - Any Comm - GWH - 1.5 gpm	10	therms	per unit	\$ 28.70	\$ 28.70	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Showerhead - DI - Fit Ctr - GWH 1.5 gpm	183	therms	per unit	\$ 28.70	\$ 28.70	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Showerhead - Fit Ctr - GWH - 1.5 gpm	183	therms	per unit	\$ 28.70	\$ 28.70	10	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sprayhead - GWH - 0.65 gpm - from 1.6	35.2	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sprayhead - GWH - 0.65 gpm - from 2.2	55	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sprayhead - GWH - 0.65 gpm - from 2.6	90.7	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	LGDI: Sprayhead - GWH - 0.65 gpm - not PI	50	therms	per unit	\$ 76.30	\$ 76.30	4	Comm Water Heat
G262	18230250	Lodging Direct Install	Natural Gas	custom incentives	32728	therms	calculated	\$ 914,862.00	\$640,404.00	15	Comm Flat



Exhibit 10

2017 Northwest Energy Efficiency Alliance Plan

November 15, 2016



2017 Planned Activities Report

Prepared for Puget Sound Energy

OVERVIEW

NOTE: NEEA is currently undergoing operations planning for its 2017 activities. All activities outlined in this report are pending NEEA Board approval at the end of 2016. If there are any material changes to NEEA's current draft Operations Plan, NEEA will update the following information accordingly.

The Northwest Energy Efficiency Alliance (NEEA) is an alliance of more than 140 Northwest utilities and energy efficiency organizations working on behalf of Northwest energy consumers. NEEA aggregates and leverages the power of the region to identify and vet emerging technologies and create the market conditions necessary for them to take hold. NEEA also helps the region capture energy savings through more efficient codes and standards. Puget Sound Energy has been a member of the alliance since NEEA was formed in 1997.

NEEA's 2015-2019 Business Plan outlines two strategic goals: 1) Fill the energy efficiency pipeline with new products, services and practices; and 2) Create market conditions that will accelerate and sustain the market adoption of efficient product, service and practices. This report summarizes NEEA's 2017 planned activities to support these business plan goals. It is based on the draft version of NEEA's 2017 Operations Plan, which will be approved by the NEEA Board in December, 2016.

FILLING THE ENERGY EFFICIENCY PIPELINE

On behalf of the region, NEEA scans the market for emerging energy efficiency opportunities and conducts lab and field testing to verify product performance and energy savings. The following is a list of promising emerging technologies, service or practices, which NEEA identified through its scanning process and will continue to investigate in 2017:

- **Ductless heat pump integrated with a domestic hot water tank (residential):** Combines a ductless heat pump and heat pump water heater into one appliance. Looking at technologies applicable to both zonal and whole house applications.
- **Split system heat pump water heater (residential):** Inverter-driven heat pump-based domestic hot water with an outdoor compressor unit, and indoor storage tank.
- **Highly-efficient heat pump water heater (residential):** NEEA will continue to scan for highly-efficient heat pump water heaters that meet the highest efficiency tiers of the Advanced Water Heater Specification. As new products are tested in the lab and field they will be added to the qualified products list.
- **Window attachments (residential):** Interior or exterior window attachments with a low-e coating to improve U-value and heat gain in homes.

- **V/ HAC – Ventilation separated from heating and cooling (commercial/ industrial):** Systems approach to HVAC where ventilation control and delivery is separated from building heating and cooling.
- **Extended motor products (commercial/ industrial):** Advancing integrated motor systems with optimized performance leveraging a test method and labeling system.
- **Compressed air nozzle – Air saver unit (commercial/ industrial):** Add-on product to compressed air systems that reduces air consumption by interrupting air flow through engineered air nozzles.

Opportunities that demonstrate energy savings, are commercially available, and have market transformation potential will be selected for further investigation.

CREATING MARKET CONDITIONS FOR ENERGY EFFICIENCY (ELECTRIC)

NEEA works across all four Northwest states to influence entire markets by identifying barriers (or opportunities) to efficiency and removing those barriers through strategic market interventions. This market influence is enabled by the region having a united voice “upstream” in the market with national and international organizations.

Regional Market Strategies

To maximize long-term regional efficiency efforts, NEEA is facilitating the development of regional strategic market plans in four high-priority strategic markets: Residential New Construction, Residential Consumer Products, Commercial New Construction, and Commercial and Industrial Lighting.

In the first two years of the Business Plan, NEEA facilitated the development of long-term regional strategic market plans for the commercial lighting and consumer products market. In 2017, NEEA’s focus will be on achieving even greater efficiency and regional collaboration as a result of continued plan implementation and increased shared ownership of the regional strategic market plans. It will also focus on expanded regional platforms to support multiple programs, increase volume of efficiency products and to expand regional data collection and analytics.

Residential Sector

In 2017, NEEA’s activities in the residential sector will be focused on two strategic markets: consumer products and new construction. Both of these markets represent long-term, leveraged opportunities for market transformation with significant energy savings and strong links to building codes and appliance standards.

Consumer Products Strategic Market

NEEA’s work within the Consumer Products Market leverages national manufacturer, retailer and distributor relationships to influence manufacturing practices, increase market share of efficient products, and increase voluntary specification and federal efficiency standards. Focus areas in 2017 include:

- Leveraging the retail platform to support NEEA and utility programs and pilots and strengthening relationships with key market partners; and

- Identifying barriers and opportunities for online retail and developing a strategy to influence the sale of energy efficient products online.

NEEA's portfolio currently includes four market transformation programs in the consumer products market.

- **Heat Pump Water Heaters:** In 2017, NEEA will focus on growing supply chain and unit sales, partnering with new manufacturers to support quality replacements and capturing the emergency replacement market. Program goals for 2017 include sales of more than 14,000 units and supporting the development of over 100 regional utility programs.
- **Ductless Heat Pumps:** In 2017, NEEA's Ductless Heat Pump program will have four focus areas: lowering installed costs; supporting utility programs through increased unit energy saving and cost-effectiveness; creating consumer education tools; and, and exploring new market segment opportunities. 2017 program goals include a 20% increase in sales for zonal and 15% increase for electric forced-air homes over 2016.
- **Super-Efficient Dryers:** In 2017, NEEA's Super-Efficient Dryers program will focus on making heat pump products available through regional big box retailers and supporting utility programs and the ENERGY STAR Most Efficiency dryer category. Program goals for 2017 include two multi-family pilot projects, two in-store promotion events, and supporting the development of at least five regional utility programs.
- **Retail Product Portfolio:** NEEA's Retail Products Portfolio (RPP) program uses mid-stream incentives to influence retail product purchasing practices – and ultimately drive manufacturing and standards – for a portfolio of energy-efficient products sold through the retail channel. In 2017, NEEA will focus on expanding retailer participation, streamlining the product selection process and solidifying the measurement and evaluation process.

Residential New Construction Strategic Market

This market includes the supply chain that plans, builds, sells and inspects new residential single-family, manufactured, and low-rise multi-family structures. NEEA's portfolio currently includes two market transformation programs in this strategic market.

- **Efficient New Homes:** In 2017, NEEA will continue to develop and support performance-based utility programs, support builder participation in Home Certification programs, and develop training and support for code changes. Program goals include achieving RTF approval for the Standard Modelling Protocol NEEA is developing, supporting five or more utility programs and establishing data-sharing agreements for Home Certifications.
- **Manufactured Homes:** One of NEEA's newest programs, Manufactured Homes was launched in May, 2016. The goal of this program is to leverage the Northwest Energy Efficient Manufactured Housing Program (NEEM) to ensure a voluntary above-code manufacturing specification exists after the upcoming HUD code change, allowing for future energy savings to be captured by the region. In 2017, NEEA's goals include establishing a new NEEM 2.0 specification, and supporting utility programs to shift incentives to the new specification.

Commercial Sector

In 2017, NEEA's activities in the commercial sector will be focused in its two strategic markets: Lighting and New Construction.

Commercial/ Industrial Lighting Strategic Market

NEEA's work within the Commercial/Industrial Lighting Strategic Market includes leveraging relationships with manufacturers, distributors and other industry groups to accelerate the adoption of highly-efficient commercial lighting products and operating practices. Focus areas in 2017 include:

- **Lighting Platform:** To support regional commercial lighting efficiency efforts, NEEA will develop and provide utilities with a platform of resources in 2017. These resources will include a sales database made available to the region for business decision-making, a pool of participating distributors built through the Reduced Wattage Replacement Lamp program, and support for regional coordination and collaboration.
- **Retail and Office Strategy:** NEEA staff will identify market transformation interventions that lend themselves best to accelerating LED and controls adoption in office and retail spaces.

NEEA's portfolio currently includes four market transformation programs in the commercial lighting market:

- **Reduced Wattage Replacement Lamps:** The goal of the Reduced Wattage Replacement Lamps program is to influence the stocking and promotion of reduced-wattage (28W and 25W) T8 lamps in the lighting maintenance market. In 2017, NEEA will focus on enrolling non-traditional channels, bundling program offerings with funder programs in a mid-stream regional platform and continuing to provide outreach and incentives to drive sales. Program goals include capturing 50% of regional distributor market share for T8 lamps.
- **Luminaire Level Lighting Controls:** NEEA and its partners will develop best practices for luminaire level lighting controls, with the goal of having the technology installed as a standard industry practice in commercial office lighting. In 2017, the program will focus on conducting market research and launching demonstration projects with at least two utilities.
- **Top Tier Trade Ally Advanced Training (optional):** This is an optional program per NEEA's business plan, which Puget Sound Energy has opted to fund. The Top Tier Trade Ally Advanced Training program accelerates the market adoption of advanced lighting retrofit practices by connecting contractors with training resources and utility programs. In 2017, NEEA will continue to work with utility partners to offer NXT Level 1 training, with a goal of at least 60 people trained. Contingent upon the success of NXT level 1, NEEA will also develop and pilot the second module in the training series, NXT Level 2.
- **Commercial Lighting Infrastructure:** To influence the market to adopt more efficient lighting technology, NEEA provides and maintains a set of tools and resources to support utility lighting programs, including the NW Lighting Network and Online Basics Lighting Training. NEEA will also continue to represent the region in the Design Lights Consortium.

Commercial New Construction Strategic Market

This market includes the community of businesses that develop, plan, design, build and commission new commercial buildings.

- **Commercial Code Enhancement (formerly Commercial New Construction):** In 2016, NEEA launched a new initiative in the commercial new construction market. The goal of the Commercial Code Enhancement program is to increase the region's ability to propose, adopt, and implement more efficient commercial building energy codes. In 2017, NEEA will develop an action plan to advance code in Washington State, and complete a technology assessment as a first step to building support for advanced technologies.

- **Integrated Design Labs:** In 2017, NEEA-supported Integrated Design Lab Network will continue innovating and supporting new projects and major building renewal projects. NEEA will also support development of tools needed to advance integrated design, construction and operation of low-energy consumption buildings.

Commercial Buildings (other strategic market)

- **Commercial Real Estate/Existing Building Renewal (*optional*):** This is an optional program per NEEA's business plan, which Puget Sound Energy has opted to fund. In 2017, the program will focus on enabling engagement with decision makers (e.g. building owners and executives), and launching an online Navigator tool.
- **Commercial Window Attachments (formerly Secondary Window Glazing):** In 2016, NEEA launched a program to accelerate the market adoption of interior secondary window glazing for commercial buildings. Commercial window attachments are super-insulating interior windows that can be installed without replacing the existing windows at 50% the cost of new windows. In 2017, the program will focus on supporting AERC (Attachment Efficiency Rating Council) certifications, launching two utility pilots, and establishing a market baseline and energy savings rate for this product.

Industrial Sector

In the 2015-2019 Business Plan, NEEA's industrial sector activities focus on supporting local utility efforts by providing regional resources (e.g. tools and training, etc.) and delivering a few market transformation initiatives in areas where NEEA's regional leverage is advantageous.

- **Certified Refrigeration Energy Specialist (CRES):** NEEA has partnered with RETA (the national Refrigerating Engineers & Technicians Association) to develop, launch and promote an energy efficiency certification. The CRES certification increases industrial facility energy efficiency and provides a competitive advantage to refrigeration engineers across the region. In 2017, the program will focus on increasing the number of certificants and supporting ANSI accreditation for the certification.
- **Commercial and Industrial Strategic Energy Management (SEM):** NEEA's commercial and industrial Strategic Energy Management infrastructure program provides a holistic and integrated set of tools that support utilities and the market in building market capability, awareness and demand for SEM. In 2017, the program will continue to facilitate regional collaboration on SEM challenges and opportunities and provide standardized tools and resources through the online SEM hub (launching in 2016).
- **Industrial Technical Training (*optional*):** This is an optional program, which Puget Sound Energy has opted to fund during NEEA's 2015-2019 business cycle. In 2017, NEEA will continue its Industrial Technical Training program, which provides coordinated training on key industrial energy efficiency concepts to support industrial energy efficiency programs and build market capacity to facilitate implementation of Strategic Energy Management.

Codes and Standards

In 2017, NEEA will continue to support Northwest states in adopting and implementing increasingly efficiency energy codes and work to positively influence the federal standards-setting process.

- **Codes:** In 2017, NEEA will develop a new code change communication process to support improved communication between utilities and code developers. Program staff will begin working on Washington State 2019 code change development and continue the commercial code evaluation already underway in Oregon and Washington. The program will also provide support for market transformation programs (i.e. Commercial Code Enhancement, Next Step Homes), product testing (e.g. variable speed heat pumps), and field trials (dedicated outside air supply/ heat recovery ventilation).
- **Standards:** In 2017, NEEA staff will continue to provide input into the development and rollout of regional standards, and ensure the collective voice of the Northwest is represented in national standards rulemakings. Likely standards processes in which NEEA staff will be involved include: room air conditioners, clothes dryers, refrigerators, dish washers, air compressors, fans, fluorescent lamp ballasts, and small motors.

NATURAL GAS MARKET TRANSFORMATION

In 2015, NEEA's Board of Directors approved its first Natural Gas Market Transformation Business Plan for 2015-2019. The goal of the plan, which was developed collaboratively with Puget Sound Energy and others, is to accelerate the development and market adoption of efficient natural gas products, services, and practices, resulting in improved consumer choice and increased efficiency of natural gas use in the Northwest.

The plan includes funding for scanning activities, codes and standards, research and evaluation and five market transformation programs:

- Gas-fired heat pump water heaters
- Combination space and water heating systems
- Hearth products
- Super-efficient gas clothes dryers
- Rooftop HVAC

Natural Gas Portfolio

- **Gas-fired heat pump water heaters:** NEEA is working to accelerate product development of gas-fired heat pump water heater technology and to create market conditions that accelerate market adoption in order to influence a federal manufacturing standard. In 2016, NEEA completed a successful field trial of a gas-fired heat pump water heater and made refinements to the product based on the results. Program priorities for 2017 include broadened manufacturer engagement, creating a product specification, and scanning for additional technologies.
- **Combination space and water heating systems:** NEEA is creating and leveraging its relationships with key market partners to develop a combination space and water heating system at an efficiency exceeding current high-efficiency furnaces and stand-alone gas water heater technology. In 2016, NEEA launched a controlled field test and prototype testing of a combination system. In 2017, NEEA will complete the field study, evaluate the technology value proposition, and scan for new combination system technologies including a residential internal combustion engine heat pump.

- **Hearth Products:** The goal of this program is to increase the adoption of high-efficiency hearth products by influencing product assortment and manufacturing practices. In 2016, NEEA identified two potential market transformation opportunities for Hearth product and launched research to increase understanding of energy savings opportunities. 2017 program priorities include completing pilot light retrofit work, finalizing the market characterization study, and completing low-capacity product testing.
- **Super-efficient clothes dryers:** The goal of this program is to increase the market adoption of super-efficient, natural gas-powered clothes dryers to influence the enactment of more stringent ENERGY STAR specification and ultimately federal efficiency standards. In 2016, NEEA staff conducting lab testing of efficient dryers and worked with regional stakeholders to identify a market transformation strategy. NEEA's 2017 priority for efficient clothes dryers is to participate in the federal rulemaking process for gas dryers by influencing the test procedure.
- **Rooftop HVAC:** The goal of this program is to increase market adoption of rooftop HVAC units containing gas-fired heating units in both new and retrofit markets. In 2016, NEEA launched a field study of a rooftop HVAC unit and conducted research to better understand the market opportunity for this product. In 2017, the program will focus on completing the field demonstration project, developing a product specification and engaging the supply chain.

DELIVERING REGIONAL SERVICES

On behalf of the alliance, and to support local utility programs and NEEA's market transformation programs, NEEA provides regional services such as data collection and analysis, program evaluation, regional coordination and more.

Regional Services

- **Regional Market Intelligence:** In 2017, NEEA will continue to provide funders and regional stakeholders with timely analysis for better data-based decision making. A core objective for 2017 will be creating a 'Data Hub' for staff and funders to create operational efficiencies and share regional insights that will impact market understanding and strategy.
- **Market Research and Evaluation:** NEEA's Market Research & Evaluation team will continue to work with third-party evaluators to assess its market transformation programs and deliver market characterization and market assessment reports. In addition, NEEA will continue work on two large building stock assessments that began in 2016: the Residential Building Stock Assessment and the Commercial Building Stock Assessment.
- **Market Planning:** NEEA's Market Planning team manages the forecasting and reporting of savings for both current- and previously-funded initiatives and other value metrics. In 2017, staff will implement a new Annual Reporting approach to standardize the process and expedite funder reports.

Stakeholder Engagement Opportunities and Advisory Committees

- **Efficiency Exchange conference:** Co-hosted by NEEA and BPA, Efficiency Exchange is a networking and learning conference for energy efficiency professionals from across the

Northwest. The 2017 Efficiency Exchange Conference will be held at the Oregon Convention Center in Portland, Oregon on May 9-10.

- **Conduit (conduitnw.org):** A partnership between NEEA and BPA, Conduit is an online community that provides information sharing, coordination and collaboration among energy efficiency professionals in the Northwest.
- **Advisory Committees:** In 2017, NEEA will continue to facilitate regional collaboration and solicit regional input through its advisory committees and work groups. Puget Sound Energy is represented of each of NEEA's advisory committees and most of its work groups.

Additional Information

More information on NEEA's market transformation programs, as well as NEEA's quarterly and annual reports, can be found at neea.org.

Questions or comments about this report? Please contact Virginia Mersereau, Communications Manager, 503-688-5491, vmersereau@neea.org.