BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of Puget Sound Energy 2014-2015 Biennial Conservation Report	DOCKET UE-132043
In the Matter of Avista Corporation 2014-2015 Biennial Conservation Report	DOCKET UE-132045
In the Matter of Pacific Power and Light Company 2014-2015 Biennial Conservation Report	DOCKET UE-132047

COMMISSION STAFF COMMENTS REGARDING ELECTRIC UTILITY CONSERVATION ACHIEVEMENTS UNDER THE ENERGY INDEPENDENCE ACT, RCW 19.285 and WAC 480-109 (2014-2015 BIENNIAL CONSERVATION REPORTS)

JULY 21, 2016

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Executive Summary

In 2006, Washington voters approved Initiative 937, also known as the Energy Independence Act (EIA). Now codified in RCW 19.285 and Chapter 480-109 WAC, "qualifying" electric utilities — those with at least 25,000 customers in Washington — are mandated to set and meet energy conservation targets.[1] On December 19, 2013, the Washington Utilities and Transportation Commission (Commission) approved the 2014-2023 achievable conservation potential and 2014-2015 biennial conservation target, subject to conditions, for Puget Sound Energy (PSE) in docket UE-132043, Avista Corporation (Avista) in docket UE-132045, and Pacific Power and Light Company (Pacific Power) in docket UE-132047.

On May 31 and June 1, 2015, PSE, Avista, and Pacific Power timely filed their respective Biennial Conservation Reports (BCRs or Reports), regarding their 2014-2015 conservation targets with the Commission as required by law.[2] As detailed in Table 1 below, each utility achieved cost-effective conservation savings beyond their target.

Table 1: Summary of Reported 2014-2015 Cost-Effective Savings

	Base UTC Biennial Conservation Target (MWh)[3]	Reported Biennial Conservation Savings (MWh)	Reported Portfolio-Level Cost-effectiveness (TRC)[4]
PSE	485,770[5]	552,596	1.6
Avista	65,131[6]	70,693	1.7
Pacific Power	74,703	98,881	1.7

[1] RCW 19.285.030(19) (definition of "qualifying utility"); RCW 19.285.040(1)(b) (biennial conservation targets).
[2] RCW 19.285.070; WAC 480-109-120; initial orders in dockets UE-132043, UE-132045, and UE-132047.
[3] See dockets UE-132043, Order 01 ¶ 26; UE-132045, Order 01 ¶ 28; UE-132047, Order 01 ¶ 26. This target does not include any additional decoupling incremental conservation target commitments or excluded programs i.e. NEEA.
[4] WAC 480-109-100(10)(b) allows low-income conservation to be excluded from portfolio-level cost-effectiveness calculations. PSE and Avista include low-income in its calculations. Pacific Power excludes low-income from its calculations.
[5] Including decoupling, PSE's target is 510,056 MWh.
[6] Including decoupling, Avista's target is 68,388 MWh. Note that there is some discrepancy in the target reported by Avista and the target identified by Staff. In docket UE-140188, Order 05 ¶ 26 Avista's target is 64,956 MWh plus 3,248 MWh for decoupling for a total target of 68,204 MWh. However, in docket UE-132045, Order 01 ¶ 28 and Order 02 ¶ 28 the approved target is 65,131 MWh. Under either target Avista meets its decoupling commitment. This discrepancy should be addressed in Avista's petition on excess savings in docket UE-140188.

These are the first Reports to be filed since the Commission adopted new rules for EIA compliance in March 2015.[7] While these rules largely codified existing Commission conditions, notable changes to the reporting requirements in WAC 480-109-120(4) include the reporting of the portfolio-level cost-effectiveness of the actual electricity savings from conservation, an independent third-party evaluation of portfolio-level biennial conservation savings achievement, and a summary of the steps taken to adaptively manage conservation programs throughout the preceding two years.

The 2014-2015 BCRs are also the first opportunity for the utilities to claim excess conservation savings in accordance with the passage of HB 1643. RCW 19.285.040(1)(c)(i) allows that,

> *beginning on January 1, 2014, cost-effective conservation achieved by a qualifying utility in excess of its biennial acquisition target may be used to help meet the immediately subsequent two biennial acquisition targets, such that no more than twenty percent of any biennial target may be met with excess conservation savings.*

The statute specifically addresses a utility's target, but does not consider any additional commitments the companies may have with the Commission. Both PSE and Avista currently have decoupling commitments that require them to achieve conservation five percent above that target.[8] Pacific Power has a pending request for decoupling treatment and may have a similar commitment in future biennia.[9]

Companies also achieve conservation savings from areas that are excluded from the Company-specific target, such as market transformation programs and pilots. The commission has relied on its standard practice for review and approval of investor-owned utility conservation targets, only holding companies responsible for the programs they directly implement.[10] The question of what constitutes excess savings and to which targets it can be applied will be examined in further detail in the next section.

Staff's review of the BCRs has focused on evaluating whether the companies met the reporting requirements outlined in RCW 19.285.070, WAC 480-109-040, the conditions set forth in the Order 01 in each respective docket, and whether the Company correctly reported its savings for the biennium.

In these comments, Staff will summarize each report, highlight key pieces of information, and identify lingering issues. Staff will also discuss some recent and anticipated changes in the rules, policies, and technologies affecting energy conservation in Washington. After reviewing amendments to the reports and the comments filed by other parties in this matter, Staff intends to present its final recommendations and proposed conditions for approval at the Commission's August 12, 2016, Recessed Open Meeting.

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[7] See Docket UE-131723, General Order R-578 (March 13, 2015). The new rule is codified in WAC 480-109.
[8] *In the Matter of the Petition of Puget Sound Energy, Inc. and Northwest Energy Coalition For an Order Authorizing PSE to Implement Electric and Natural Gas Decoupling Mechanism and to Record Accounting Entries Associated with the Mechanisms,* Docket UE-121697, Order 07 (June 25, 2013) ¶ 108; *WUTC vs. Avista Corporation d/b/a Avista Utilities*, Docket UE-140188, Order 05 (November 25, 2014) ¶ 26.
[9] See docket UE-152253.
[10] RCW 19.285.040(f). NEEA has been excluded because the NEEA board has members from utilities outside the Commission's jurisdiction, whether in Washington or without.

Focus Issues and Prudency

The ongoing conservation planning, reporting, and reviewing process developed for each utility's portfolio is effectively a prudency review. Throughout a biennial cycle, Staff ensures prudency related to conservation by reviewing several elements, including the proper establishment of conservation potential, whether programs are cost effective, reliable, and feasible, whether all reasonable measures were pursued, if appropriate public and stakeholder involvement was included in the process (advisory group review), and verification that programs were administered efficiently.

Details about individual Company programs will be discussed in following sections. This section provides a discussion of the areas of focus and common issues identified during Staff's review of each utility's BCR, including but not limited to:

- Treatment of Excess Savings.
- Single Large Facility Savings.
- Reporting of NEEA Savings to Commerce.
- Unit Energy Savings Values.
- Adaptive Management.
- Pilot Programs.
- Fuel Conversions.

Treatment of Excess Savings

The 2014-2015 BCR is the first opportunity for the utilities to claim excess conservation savings in accordance with the passage of HB 1643.[11] A summary of the excess savings achieved from the 2014-2015 biennium, using the current approach to target calculation, is presented in Table 2. As in past biennia, it is important that the Commission identify the amount of savings achieved during the previous biennium, which should enable the identification of excess savings available for use in the future. However, because the amendment to the statute did not contemplate the Commission's standard practice of excluding certain elements, calculating excess savings poses two critical questions that the Commission must consider before settling on an appropriate method.

- Can excess savings be applied towards a Company's decoupling commitment?
- Should savings from the Northwest Energy Efficiency Alliance (NEEA) and other excluded programs be considered excess savings?

[11] RCW 19.285.040(c)(i)"Except as provided in (c)(ii) and (iii) of this subsection, beginning on January 1, 2014, cost-effective conservation achieved by a qualifying utility in excess of its biennial acquisition target may be used to help meet the immediately subsequent two biennial acquisition targets, such that no more than twenty percent of any biennial target may be met with excess conservation savings."

Table 2: 2014-2015 Excess Savings Achieved (MWh)

	Biennial Conservation Target (Based on Commission Order)	Overall UTC Target (with Decoupling Commitment, without NEEA)	Full Target	Utility Program Savings	Total Utility Savings (including NEEA and Pilots)	Excess Savings
PSE	558,301[12]	513,690	582,589	552,596	663,122	80,533
Avista	76,261[13]	68,388	79,518	70,693	101,356	2,571
Pacific Power	89,016[14]	74,703	89,016	98,881	111,160	22,144

Excess Savings and Decoupling Commitments: the Commission's rule specifically addresses the utilities' biennial conservation targets, but does not consider any additional conservation commitments the companies may have with the Commission. Staff does not think this particular issue was contemplated by the legislature, nor has the Commission had an opportunity to establish a position.

Currently, both PSE and Avista have agreed to decoupling commitments to achieve an additional five percent of conservation above the Company's biennial conservation target.[15] In Pacific Power's most current rate case, the Company has requested a decoupling mechanism which, based on the PSE and Avista models, will likely result in an additional conservation decoupling commitment if the decoupling mechanism is approved.[16]

To avoid double counting, Staff maintains that utilities may apply each verified MWh of conservation acquired in excess of the target to meet biennial conservation requirements related to either the decoupling target or to a target shortfall in one of the subsequent two biennia, but that utilities may not use the same MWh of conservation to comply with multiple targets.

There is some question as to whether the excess savings may be used towards meeting the additional conservation decoupling commitment with the Commission. Staff believes that excess savings may be used to meet decoupling commitment shortfalls in future biennia. A decoupling

[12] See docket UE-132043, Order 01 ¶ 5; the full Biennial Conservation Target includes the savings from End-Use Efficiency Measures (551,880), and Existing Home Energy Reports (6,421). No potential savings have been excluded.
[13] See docket UE-132045, Order 01 ¶ 5 and ¶ 9; the full Biennial Conservation Target includes the savings from End-Use Efficiency Measures (67,137), Distribution Efficiency (2,061), Generation Efficiency (163), and Home Energy Reports (6,900). No potential savings have been excluded.
[14] See docket UE-132047, Order 01 ¶ 5; the full Biennial Conservation Target includes the savings from End-Use Efficiency Measures (89,016). No potential savings have been excluded.
[15] *In the Matter of the Petition of Puget Sound Energy, Inc. and Northwest Energy Coalition For an Order Authorizing PSE to Implement Electric and Natural Gas Decoupling Mechanism and to Record Accounting Entries Associated with the Mechanisms,* Docket UE-121697, Order 07 (June 25, 2013) ¶ 108; *WUTC vs. Avista Corporation d/b/a Avista Utilities*, Docket UE-140188, Order 05 (November 25, 2014) ¶ 26.
[16] See docket UE-152253.

commitment asks a utility to go above-and-beyond its achievable biennial potential to realize future savings now, and Staff believes that the Company should not be penalized if it falls short in a future biennium because of its prior success. Additionally, while the legislature did not appear to consider decoupling, the passage of HB 1643 indicates general approval that excess conservation should be available to mitigate any future shortfalls that occur despite the pursuit of all available conservation.

Staff's suggested method for calculating excess savings is detailed in Attachment 1. The target approved by the Commission in the utility's Biennial Conservation Plans (its Base UTC Target) remains the penalizable amount under the EIA. The Overall UTC Target would include the addition to the Base UTC Target of any decoupling commitment, which is penalizable under the Commission's orders.

In order to achieve clear guidance from the Commission about implementation of this new law, Staff recommends that each Company file a petition with the Commission in its respective decoupling docket. The petition should further request clarification that any penalty for missing a decoupling commitment would be calculated in the companies' respective Biennial Conservation Plan (BCP) dockets.

Excess Savings and Excluded Savings: NEEA savings are currently held separate from target setting and reporting under the Commission's standard practice of only holding the utility accountable for programs it directly controls. Staff has not considered these savings to be excess. This is because when a utility foregoes the risk of an EIA penalty due to a NEEA shortfall, it should also forego the benefit of using NEEA savings to meet its target, current or future. This would hold true for other programs withheld from the target setting process. However, this practice removes benefits that have already been purchased by ratepayers, because the costs associated with NEEA are recovered from customers through the conservation cost recovery tariffs. Further, it artificially lowers the companies' achievement reported on a statewide basis.

For the purposes of calculating excess savings, each utility could report a target that includes all potential savings, as well as any decoupling commitment (Full Target). This target could then be compared with an achieved savings amount that includes all savings achieved by the utility, no matter the path to achievement (Total Savings Achieved). Detailed calculations are contained in Attachment 1. Staff points out that this approach is quite different from our past practice and welcomes stakeholder feedback moving forward.

Single Large Facility Savings

Single large facility conservation savings are treated separately than other cost-effective conservation under the law.[17] Beginning in January 2014, single large-facility conservation savings in excess of a utility's biennial target can be used to meet up to five percent of

[17]RCW 19.285.040(c)(i); WAC 480-109-160(28) defines "Single large facility conservation savings" as 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.

subsequent target shortfalls, in addition to the twenty percent that can be met with standard excess savings.[18] No utility is separately reporting these large facility savings at this time.

Of all the facilities that may potentially qualify under single large facility savings, there are approximately twenty in PSE's service territory (seven of the twenty are currently not included in the conservation rider), seven in Avista's service territory, and one in Pacific Power's service territory. These facilities represent at least 105 aMW of total consumption. The savings potential at these facilities is unknown, but conceivably significant.

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.

Reporting NEEA Savings to Commerce

All three utilities fund and actively collaborate with NEEA, a regional market transformation organization. NEEA continues to improve the cost-effectiveness of companies' overall portfolios by leveraging regional market power and creating economies of scale to achieve co-created energy efficiency savings.[19]

PSE, Avista, and Pacific Power collaborated to develop a consistent approach for the treatment of NEEA savings beginning in the 2014-2015 biennium.[20] As a result of that collaboration, the companies agreed to fund NEEA and report the amount of savings achieved to the Commission separately from the biennial conservation target. NEEA savings are neither used when utilities are setting their target nor applied toward meeting their target.

In addition to BCRs filed with the Commission, utilities must concurrently submit conservation reports to the Washington Department of Commerce (Commerce).[21] The form provided for these reports is unclear as to where investor-owned utilities should report NEEA savings. As a result, utilities were inconsistent with including or excluding NEEA savings in the Achievement field of the Commerce Energy Independence Act (I-937) Report Workbook.

Each utility provided an appropriate and thorough narrative on the way they fit their more complicated target-setting and reporting processes into the Commerce form. However, Staff requests that the utilities work with Staff to determine a uniform approach to completing the form and update the Commerce filings before Staff recommends issuing orders in these dockets. Staffs suggests that the investor-owned utilities should remain consistent with the public utilities

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[18] WAC 480-109-100(3)(c)(ii).
[19] Formerly known as net market effects.
[20] See Dockets UE-100170, UE-100176, and UE-100177 Joint Proposal for Consistent Approach to Northwest Energy Efficiency Alliance (NEEA) Claimed Conservation Savings (October 31, 2012).
[21] WAC 480-109-120(3)(c)

in the Commerce reports. This means that companies would report a full target, without any excluded potential, and the total savings achieved from all sources. The target approved by the Commission, as well as any decoupling commitment, should be detailed in the notes of the report.

Unit Energy Savings Values

The Commission has directed the utilities to use the unit energy savings (UES) values that the Northwest Power and Conservation Council's Regional Technical Forum (RTF) calculates for each measure, where they exist and are appropriate, unless the utility has more appropriate data that specifically reflects its service territory. However, the utilities vary in how frequently they update their assumptions to reflect current RTF practice. Pacific Power and Avista update every other year when preparing their next biennial target; this allows the utilities to use the same value when setting their target and measuring whether it was met ("locked UES"). PSE voluntarily updates UES values every year ("floating UES").

Staff has previously recognized that floating UES values may increase a Company's risk of not meeting its target.[22] Indeed, Staff has recommended utilities be allowed to claim savings using locked UES values under the agreement that, in the 2014-2015 BCRs, utilities that use locked values would present savings using both locked and floating UES values. Such a presentation would enable Staff and the Commission to evaluate the actual risk associated with requiring annual updates to UES values. Pacific Power was the only Company to provide such an analysis in its 2014-2015 BCR.[23] Out of the total savings Pacific Power claimed toward the Biennial Conservation target, 3.3 percent came from using the floating UES values. This amount would not affect whether Pacific Power met its target.

Although Avista failed to provide the Commission with an analysis of reported savings using locked versus floating UES values, the need for such an analysis has been eliminated. In the target-setting process for the 2016-2017 BCP, Avista agreed to update its UES values annually. If a company voluntarily agrees to update UES values annually, Staff will not object. Staff interprets such a position by a company to mean that it has assessed the actual risk to be low, and that annual updates to UES values promote effective portfolio management. As a result, a company would then focus on the most efficient measures while culling those that are beginning to perform poorly with respect to baseline equipment.

Staff finds that while using floating UES values does impose some risk of the utility not meeting its target, this risk is small and can be mitigated through active portfolio management. In addition, the new provision to use excess savings from previous biennium to meet shortfalls

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[22] Most commonly, UES values degrade over time as the result of continuous improvement of the baseline efficiency of installed equipment. Consequently, annual updates of UES values will typically disadvantage companies because the UES values used for claiming savings would be less than the UES value used for setting the biennial targets.

[23] PSE was not expected to present such an analysis as the Company already voluntarily updates its UES values annually. Pacific Power's savings analysis replicated PSE's method of updating UES values once during the biennial period, effective January 1st of the second year based on updated information available by October 1st of the first year.

provides a layer of insurance for any utility that has been proactively updating UES values. Staff recommends that by the 2018-2019 biennium, every utility update their UES values at least once a year..

Adaptive Management

One of the key indicators that a Company is actively "pursu[ing] all conservation that is cost-effective, reliable and feasible"[24] is the extent to which each Company is adaptively managing conservation programs and portfolios. This should include continuing cost-effective programs, discontinuing programs that have been shown to no longer be cost-effective, and exploring potential new programs or technologies. Accordingly, and as required by rule,[25] each Company was obligated to include a summary in its BCR of the steps taken to adaptively manage conservation programs throughout the preceding two years.[26]

PSE summarized that it added new measures, adjusted incentives according to key market drivers, improved internal and customer-facing operational efficiencies, streamlined rebate and grant application processes, provided customers with actionable information, and maximized customer outreach in the 2014-2015 biennium. Two tables are included in its Report that highlight particular initiatives from the 2014 and 2015 program years with references to details contained in the Company's annual conservation reports.

In Avista's BCR, the adaptive management summary highlights a department reorganization that occurred early in the biennium. Avista identifies a number of pilot programs and new technologies that it adopted during the biennium or ruled out as likely not cost-effective. In 2015, Avista began a small business audit and direct-install program to overcome barriers in reaching these customers. Additionally, Avista has identified the growth in the marijuana industry as a potential source of savings and has taken steps to actively engage with producers.

Pacific Power did not include a summary of its adaptive management in its initial BCR filing. Staff has discussed this oversight with the utility, which has agreed to file a revised BCR shortly. Even without the summary, Staff has been able to identify instances of adaptive management at Pacific Power over the biennium, such as discontinuing the refrigerator recycling program when it was no longer cost-effective and actively working with the program vendor to expand its home energy reporting program.

Demonstrating appropriate adaptive management is crucial to demonstrating prudency in conservation programs. Staff suggests that the summary of the steps taken to adaptively manage programs deserves greater prominence in all three future BCRs, ideally including both the general process of adaptive management within a program and specific examples that highlight how well the process is working.

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[24] WAC 480-109-100(1)(a)
[25] WAC 480-109-120(4)(vi)
[26] WAC 480-109-100(1)(iv) "Continuously review and update as appropriate the conservation portfolio to adapt to changing market conditions and developing technologies, and assess the potential of such technologies for implementation in its service territory."

Pilot Programs

Order 01 of each utility's respective conservation docket authorized it to spend up to 10 percent of its conservation program budget on educational and pilot programs "whose savings impact has not yet been measured."[27] The language in the new rules is stronger, requiring that utilities "must implement pilot projects when appropriate and expected to produce cost-effective savings within the current or immediately subsequent biennium."[28]

In the 2014-2015 biennium, none of the utilities had notable pilot programs. Staff is disappointed in the percent of the conservation budget reported as allocated to pilot programs in this biennium, with no utility reaching even one percent. In addition, a significant portion of this limited budget went toward programs that were expansions of existing programs and, as such, were only tenuously categorized as pilot programs.

Staff expects to see the utilities, in cooperation with their advisory groups, meaningfully expand their pilot offerings during the 2016-2017 biennium.

Fuel Conversions

PSE included electric to natural gas water heater and furnace savings in both its BCP target and as part of its savings claimed in its BCR. PSE only provides incentives when a customer converts to high-efficiency appliances.

Avista provides incentives when a customer converts to standard or high efficiency natural gas appliances and thus excludes fuel conversions from both its BCP and BCR. The method of calculating these savings has been approved by each utility's respective advisory groups.

Staff does not have any recommendations regarding fuel conversions at this time but simply wishes to call attention to the varying ways the utilities are handling fuel conversions.

Company Reports and Achievements

Puget Sound Energy (Docket UE-132043)

Conservation Target and Achievement

In Order 01 of UE-132043, the Commission approved a 2014-2015 biennial conservation target of 485,770 megawatt-hours (MWh) for PSE. The Company reports that it exceeded this target, achieving 552,596 MWh. The Company spent about $190 million, which is less than two percent more than the $188 million budget the Commission approved. When including NEEA and pilot programs, the Company's total conservation achievement increases to 663,123 MWh. The total portfolio cost-effectiveness is 1.6.[29] A summary of PSE's reported savings and expenses follows:

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[27] See dockets UE-132043, Order 01 Attachment A ¶ 7; UE-132045, Order 01 Attachment A ¶ 7; UE-132047, Order 01 Attachment A ¶ 7.
[28] WAC 480-109-100(1)(c).
[29] Under the Northwest Power and Conservation Council method, a portfolio is considered cost-effective when the benefit-to-cost ratio, using the Total Resource Cost (TRC) test, is greater than one.

Table 3: Summary of PSE's 2014-2015 Conservation Achievements[30]

	Target[31]	Actual	Actual/Target Percentage
Savings (MWh)	485,770 MWh	552,596 MWh	114%
Savings (average MW)	55.5 aMW	63.1 aMW	
Expenditures	$187,646,000	$190,098,000	101%

The following table breaks down PSE's conservation achievement by program or sector, providing a comparison of the cost-effectiveness of the programs within the various sectors. Staff is impressed by the low-income conservation cost-effectiveness ratio of 1.1, an outlier among the companies.

Table 4: PSE's 2014-2015 Conservation Achievements by Program

Program	Anticipated Savings (MWh)	Actual Savings (MWh)	Budget	Expenditures	TRC
Residential	260,790	282,555	$85,520,500	$93,558,362	1.6[32]
Commercial and Industrial	243,130	265,039	$68,415,000	$67,039,006	1.6
Distribution system	6,200	1,495	$0	$0	-
Low Income	3,140	3,505	$6,198,000	$6,336,329	1.1
Pilots	35,330	18,897	$2,870,000	$1,627,149	1.9
NEEA	72,530	91,630	$10,521,000	$7,137,633	3.9

[30] Excluding NEEA savings and savings from pilots.
[31] When including the 5% decoupling commitment, PSE's 2014-2015 biennial target is 513,690. *WUTC vs. Puget Sound Energy*, Docket UE-132043, Order 03 (September 11, 2014) ¶ 22.
[32] PSE includes low-income programs in its Residential Program reporting.

Third Party Verification

PSE contracted with SBW Consulting, Inc. (SBW) to review the Company's conservation programs and verify its claimed savings in the Biennial Electric Conservation Achievement Review. Evergreen Economics, Inc. assisted as a subcontractor. Generally, SBW found that PSE has employed solid practices in tracking and measuring the achievements of its conservation programs.

SBW found that the Company accurately reflected PSE-listed savings, selected and used the correct UES values, and appropriately responded to recommendations from the previous consultant review. SBW and the Company quickly resolved the few minor issues that were identified.[33] It is Staff's opinion that both SBW and the Company performed professionally, and competently worked through issues and problems that developed during the course of the biennium.

Reporting Requirements

Staff has not identified any instances where PSE failed to meet the reporting requirements laid out in Order 01 of docket UE-132043, RCW 19.285.070, and WAC 480-109-120(4).

Avista (Docket UE-132045)

Conservation Target and Achievement

In Order 01 of UE-132045, the Commission approved a 2014-2015 biennial conservation target of 64,956 MWh for Avista. The Company reports that it exceeded this target, achieving 70,693 MWh. The Company spent about $23 million, which is four percent more than the $22 million budget the Commission approved. When including NEEA savings, the Company's total conservation achievement increases to 101,356 MWh. The total portfolio cost-effectiveness is 1.5. The following table provides a summary of Avista's reported savings and expenses:

Table 5: Summary of Avista's 2014-2015 Conservation Achievements[34]

	Target[35]	**Actual**	**Actual/ Target Percentage**
Savings (MWh)	64,956	70,693	109%
Savings (average MW)	7.42	8.07	
Expenditures	$22,107,759	$23,076,191	104%

[33] PSE 2014-2015 BECAR Final Report page ES-3.
[34] Excluding NEEA savings.
[35] When including the 5% decoupling commitment, Avista's 2014-2015 biennial target is 68,204. *WUTC vs. Avista Corporation d/b/a Avista Utilities*, Docket UE-140188, Order 05 (November 25, 2014) ¶ 26.

The following table breaks down Avista's conservation achievement by program or sector, providing a comparison of cost-effectiveness between the various elements of the program.

Table 6: Avista's's 2014-2015 Conservation Achievements by Program

Program	Anticipated Savings (MWh)	Actual Savings (MWh)	Budget	Expenditures	TRC[36]
Residential (not including Low Income)	32,045	41,794	$6,548,519	$7,500,853	1.0
Low Income	2,989	1,488	$4,011,742	$3,044,737	0.9
Commercial and Industrial	41,375	35,330	$7,775,657	$9,764,893	2.4
Distribution	2,061	1,513	-	$1,619,300	-
Generation Facilities	163	249	-	$282,074	-
Pilots	1,410	29	$253,700	$ 4,891	0.9
NEEA	29,000	30,397	$2,848,650	$2,760,816	-

Third Party Verification

Avista contracted with Nexant to review the Company's conservation programs and verify its claimed savings. Although Nexant discovered that the realization rate of some measures was not always consistent with expectations (with some measures underperforming relative to expectations and others over-performing), on balance Nexant found that the performance of Avista's portfolio was consistent with expected savings. Unverified savings for the biennium derived from locked UES values was 70,693 MWh, while evaluated, verified savings (with adjusted UES values) was 70,961 MWh. Staff accepts the values derived from the locked UES values, consistent with the Commission's order.

Although Nexant uncovered no serious infirmities during the review of Avista's conservation programs over the biennium, Staff wishes to raise two issues specific to Avista: 1) confusion over the appropriate UES values used for claiming savings; and, 2) the Opower interruption.

[36] Cost-effectiveness was not provided for every program.

Confusion over the appropriate UES values used for claiming savings

In its BCR, Avista requested permission to claim only the savings reported by third party evaluator, Nexant, toward its target. In other words, Avista requested to abandon its position with regard to using locked UES values for reporting savings this biennium. In abandoning that position (which is memorialized in multiple documents entered into the record during the target-setting process)[37], however, Avista does not propose to supplant the locked UES values with updated UES values provided by the Council's Regional Technical Forum (RTF), or other UES values updated using data specific to Avista's service territory and vetted through the Advisory Group process. Rather, Avista proposes to disregard all UES values previously identified by the RTF and previously vetted by the Advisory Group in favor of a single consultant's evaluation of Avista's portfolio.

As a result of discussions with Staff subsequent to the filing of its BCR, Avista has agreed to claim savings for this biennium consistent with its prior request to use locked UES values. Additionally, Avista has agreed, voluntarily, to claim savings using annually updated UES values for future biennia. As such, there is no issue with Avista's claimed savings that requires additional Commission intervention at this time.

As part of the annual update to its 2016-2017 BCP, Staff recommends the Commission direct Avista to review the legal framework within which it operates its conservation programs, including those Commission orders and associated conditions lists further clarifying this framework. Avista must provide a presentation on this subject to its board, and include such documentation in the annual update. It would be helpful if the board's response is also provided.

Opower Interruption

Between February and August, 2015, an error associated with the launch of Avista's new customer care and billing system caused a six-month lapse in customers receiving Home Energy Reports from Opower. This issue has been discussed in great detail (and largely resolved) elsewhere, and so Staff will not belabor the issue here, except to note: 1) savings have been properly reported in Avista's BCR; and, 2) the program continues to generate substantial savings.

As Nexant describes in its evaluation report, savings did not significantly decline during or after the lapse. Further, to the extent that savings were impacted by the lapse in report mailings, a decline in savings would be captured in the billing analysis and would be netted out of total savings. Importantly, the lapse happened in the second year of the biennium. This means that savings are reported for 2014 and *net* savings are reported for the second year. Accordingly, if savings had decreased in 2015, the net savings (relative to 2014) would have been negative and overall savings claimed for EIA compliance would also have been reduced. Staff is not concerned with the Opower savings Avista is claiming in its BCR, nor is it concerned that the six-month lapse will have serious negative impacts on the program going forward.

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[37] For example, see docket UE-132045, Biennial Conservation Plan of Avista Corporation, Appendix C – Fixed UES List for 2014-2015.

Reporting Requirements

Staff has not identified any instance where Avista failed to meet the reporting requirements laid out in Order 01 of docket UE-132045, RCW 19.285.070, and WAC 480-109-120(4).

Pacific Power & Light Company (Docket UE-132047)

Conservation Target and Achievement

In Order 01 of UE-132047, the Commission approved a 2014-2015 biennial conservation target of 74,703 megawatt-hours (MWh) for Pacific Power. The Company reports that it exceeded this target, achieving 98,881 MWh. The Company spent about $20.8 million, which is about three percent more than the $20.2 million budget the Commission approved. When including NEEA savings, the values increase to total conservation savings of 111,160 MWh and expenditures of $22,888,355. The total portfolio cost-effectiveness, including NEEA, is 1.7. A summary of Pacific Power's reported savings and expenses follows:

Table 7: Summary of Pacific Power's 2014-2015 Conservation Achievements[38]

	Target	**Actual**	**Actual/Target Percentage**
Savings (MWh)	74,703	98,881	132%
Savings (average MW)	8.528	11.288	
Expenditures	$20,242,600	$20,829,232	103%

As demonstrated in the following table, Pacific Power's performance at the program or sector level kept close to the planned level of both budget and savings. The major exception to this is in the agricultural sector, where the Company spent six times more than planned but achieved eight times the savings.

[38] Excluding NEEA savings and savings from pilots.

Table 8: Pacific Power's 2014-2015 Conservation Achievements by Program

Program	Anticipated Savings (MWh)	Actual Savings (MWh)	Budget	Expenditures	TRC[39]
Residential (not including Low Income)	43,199	44,553	$5,647,963	$5,778,955	2.2
Commercial	23,799	24,493	$5,208,810	$6,028,463	1.7
Industrial	25,467	27,173	$5,617,240	$5,185,203	
Agricultural	291	2,331	$63,533	$390,775	
Production system	16	2	$2,947	$3,357	5.5
Low Income[40]	330	330	$1,800,000	$1,557,035	0.7
Pilots[41]	-	-	$119,000	$119,690	-
NEEA	14,313	12,277	$2,131,177	$2,059,123	-

Pacific Power's refrigerator recycling program, known as "See ya later, refrigerator," ended sooner than anticipated when the Company was notified by the program administrator that they had gone out of business. While the utility had been planning to cancel the program at the beginning of 2016, this November 2015 abrupt halt impacted 29 Washington customers. After notifying the DSM Advisory Group, Pacific Power engaged a provider through an expedited process. This provider began providing outreach to customers who had scheduled pick-ups that had been cancelled in January 2016.

Staff commends Pacific Power for its prompt response to this challenging situation. It appears that all appropriate steps were taken to ensure customer satisfaction in an expiring program.

[39] Program level cost-effectiveness values for the 2014-2015 biennium provided via email by Kaley McNay on July 18, 2016.
[40] The TRC of 0.7 for Pacific Power's low income program is for 2015 only. In 2014, the low income program had a TRC of 1.1.
[41] The savings impact from Pacific Power's only pilot program "Be wattsmart, Begin at Home" was not measured or reported. This program provides energy efficiency education in schools and the impact would be difficult to measure.

Third Party Verification

Pacific Power contracted with SBW to review the Company's conservation programs and verify its claimed savings. DNV GL assisted as a subcontractor. Generally, SBW found that Pacific Power has employed solid practices in tracking and measuring the achievements of its conservation programs.

Following previous recommendations, the consultant reviewed the Company's new, web-based system for tracking its conservation programs, DSM Central (DSMC). SBW found that, overall, Pacific Power's tracking and reporting procedures are in line with best practices, aided by DSMC.

During an onsite inspection, SBW observed that operation hours on a lighting measure were incorrect. An always-on value (8,064 hours) had been applied when the affected light fixtures were actually in use only 10 hours per day 5 days per week. The correction of operating hours for this project resulted in reduced claimed savings of 13,639 kWh. This example reinforces support for onsite evaluations as an important component of program reviews.

While SBW states that it is "not critical to confirming proper measure implementation or assessing program cost-effectiveness," Staff deems the recommendation that Pacific Power consider assigning a measure-life to all active measures to be sound and encourages its implementation.

Reporting Requirements

These are the first BCRs to be filed since the Commission adopted new rules for EIA enforcement.[42] Pacific Power included a "2014-2015 Plan Condition Requirements and Compliance" checklist in Appendix 1 of their BCR detailing their compliance with Order 01 and WAC 480-109, but the March 2015 updates to the rule were not included in this list. While most of the changes to the rule were previously incorporated in Pacific Power's conditions list to Order 01, one was not.

The only reporting requirement that Staff finds missing from the BCR is a summary of the steps taken to adaptively manage conservation programs throughout the preceding two years. Through participation in the DSM Advisory Group, Staff has witnessed the Company adaptively manage the program and is confident that, at least to some degree, adaptive management is occurring. For example, Pacific Power expanded the Home Energy Reports program in mid 2014, and changed the focus of its lighting program from CFLs to LEDs. However, to be in compliance with the reporting requirements, Pacific Power must file this summary with the Commission. Staff has requested this section be filed in an update to the BCR, but has yet to receive the summary. No order should be issued until this deficiency has been corrected.

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[42] See Docket UE-131723, General Order R-578 (March 13, 2015). The new rule is codified in WAC 480-109.

Issues for Further Consideration

Quantified Health Benefits of Emission Reduction

The EIA requires the inclusion of quantifiable environmental costs and benefits when calculating cost-effective conservation.[43] The Commission has made clear that it prefers a properly balanced total resource cost test.[44] As such, when a benefit is identified as quantifiable, it should be included in a utility's calculations of cost-effective conservation.

Specifically, Staff believes that the health benefits of reduced particulate matter emissions ($PM_{2.5}$) are a quantifiable benefit of energy efficiency measures. Reduction of these particulate emissions occur in two ways. Particulate emissions are reduced when a specific measure reduces reliance on a customer's use of combustion technology, e.g., wood stove heat or an oil/gas fired-furnace or boiler. In addition, because energy efficiency measures reduce load, particulate emissions are simultaneously reduced from the system of utility-scale combustion-based electric generators.

In its December 18, 2015, comments on the Northwest Power and Conservation Council's (Council) Draft Seventh Power Plan, the Commission identified the health benefits of reduced emissions as proven and stated that including the financial health benefits of reduced $PM_{2.5}$ emissions is called for by the EIA.[45]

Staff encourages the utilities to work together with Staff to begin including these quantifiable benefits in future conservation calculations at both the measure and system levels.

Other Upcoming Issues

The energy efficiency industry, like the energy industry in general, is rapidly evolving. In addition to changing technologies, evolving policy trends, and innovations in energy efficiency, the Council released its 7th Power Plan on February 10, 2016. Utilities are required by statute to follow methodologies consistent with the Council's most recent plan.[46] Staff has also identified some further issues that should be kept in mind going forward. These include, but are not limited to: adaptive management, real-time monitoring, treatment of non-traditional conservation, and equity in energy efficiency programs.

Adaptive Management: First, Staff reiterates the importance of adaptive management in the quest to pursue all cost-effective energy efficiency. Staff expects, and the law requires, that utilities continuously review market conditions, research emerging technologies, and implement promising pilot programs. Companies must explore new programs and technologies through a variety of mechanisms, including pilots and participation in research projects and organizations.

Real-time Monitoring: Due to technological and software improvements, it is possible for utilities to reduce measure and savings evaluation costs, and possibly improve the accuracy of its

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[43] RCW 19.285.030(6). Cost-effectiveness is defined at RCW 80.52.030 and include system costs and quantifiable environmental costs and benefits.
[44] UG-121207, Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs.
[45] Commission comment for the Draft 7th Power Plan, December 18, 2015, available at https://www.nwcouncil.org/energy/powerplan/7/draftplan/comments/view?id=1862.
[46] RCW 19.285.040

efficiency savings. Through billing analysis, sub-metering and sensors, and advanced metering infrastructure, utilities can gain access to near real-time impact of both measure and contractor performance.

Staff encourages each utility to begin exploring a pilot for real-time monitoring and evaluation. A good first step is to bring the issue forward to the advisory groups, and identify the challenges and opportunities within the energy efficiency programs.

Solar applications: While not traditional energy efficiency measures, some "direct application renewables" are considered in the Council's 7th Power Plan as potential conservation resources.[47] Solar water heaters are directly included in the residential conservation supply curves, and the Plan further considers distributed solar photovoltaics (PV). The Council finds that "when deployed as a rooftop application, it (PV) typically reduces site electricity consumption more than it adds to grid generation, thus making it appear much like a conservation measure."[48]

Treating PV as a conservation resource may be in conflict with the Commission's definition of conservation as "*any reduction in electric power consumption* resulting from increases in the efficiency of energy use, production, or distribution."[49] Staff believes this is an issue that requires further consideration by the Commission before utilities implement the methodology.

Equal Access to Conservation: The issue of equity in energy efficiency programs is about more than fairness. If certain populations are being consistently underserved, then potential savings are being left on the table. Staff encourages utilities to identify and pursue portions of the population their programs may not be sufficiently serving.

Summary

Staff will review stakeholder comments and provide a recommendation as to whether the Commission should:

1. Accept that PSE, Avista, and Pacific Power complied with the conditions of their respective orders (Order 01 in Docket UE-132043, Order 01 in Docket UE-132045, and Order 01 in Docket UE-132047),
2. Are in compliance with the reporting requirements of WAC 480-109-120 and RCW 19.285.070 in their biennial conservation reports, and
3. Issue an order finding that the companies met their biennial conservation targets at the August 12, 2016, recessed open meeting.

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[47] Seventh Northwest Power Plan, Northwest Power and Conservation Council, Chapter 12 pg. 52 (Feb. 2016), available at http://www.nwcouncil.org/energy/powerplan/7/plan/.
[48] Seventh Northwest Power Plan, Northwest Power and Conservation Council, Chapter 12 pg. 52 (Feb. 2016), available at http://www.nwcouncil.org/energy/powerplan/7/plan/.
[49] *In the Matter of Petition of Puget Sound Energy, Inc., for a Declaratory Order on the Meaning of "Conservation" in Chapter 19.285 RCW*, Docket U-121165, Order 01 ¶ 12.

Attachment: Recommended Treatment of Excess Conservation

Glossary for Excess Conservation Examples

Biennial Conservation Target	**All available conservation that is cost-effective, reliable, and feasible. No less than the pro rata share of the ten year potential, at least 20%.**
Excluded Potential	Potential savings which are speculative in nature and excluded from Base UTC Target i.e. NEEA or pilot programs.
Base UTC Target	The Energy Independence Act biennial conservation plan (BCP) energy savings targets approved by the UTC. Generally, the Biennial Conservation Target minus any excluded potential.
Decoupling Commitment	Additional percent of Base UTC Target required per Commission order. Currently 5% for PSE and Avista.
Overall UTC Target	Base UTC Target plus Decoupling Commitment.
Full Target	Biennial Conservation Target plus decoupling commitment. This is the "Target" reported to Commerce.
Utility Program Savings Achieved	Energy Efficiency savings resulting from Utility Programs.
Single Large Facility Savings Achieved	Energy Efficiency savings as defined in WAC 480-109-060(26).
Total Utility Savings Achieved	Utility Program Savings Achieved plus Single Large Facility Savings Achieved.
NEEA and Other Savings Achieved	Any savings that result from programs excluded in the Base UTC Target calculation.
Total Savings Achieved	Total Utility Savings Achieved plus NEEA and Other Savings Achieved.
Excess Savings Earned	Total Savings Achieved minus the Full Target.

Example Excess Conservation Calculations (MWh)

Biennial Conservation Target All available conservation that is cost-effective, reliable, and feasible. No less than the pro rata share of the ten year potential, at least 20% . A **1,000**	**Excluded Potential** NEEA, pilots. (Potential savings which are speculative in nature are excluded from eligibility for penalty under the Commission's standard practice.) B **50**	**Base UTC Target** The Energy Independence Act biennial conservation plan (BCP) energy savings targets approved by the UTC. A -B = C **950**	**Decoupling Commitment** Additional percent of Base UTC Target required per Commission order. 5% of C = D **48**	**Full Target** Biennial Conservation Target plus decoupling commitment. This is the "Target" reported to Commerce. A + D = E **1,048**
Utility Program Savings Achieved (i) **950**	**Single Large Facility Savings Achieved** (ii) **0**	**Total Utility Savings Achieved** (i) + (ii) = X **950**	**NEEA and Other Savings Achieved** Y **100**	**Total Savings Achieved** X + Y = Z **1,050**
		UTC Target Achieved Test IF X > C "Achieved" **Target Achieved**	**Decoupling Commitment Achieved Test** IF X > D + C "Achieved" **Decoupling Commitment Shortfall**	**Excess Savings Earned** Z - E **3**

PSE Excess Conservation Calculations (MWh)

Biennial Conservation Target All available conservation that is cost-effective, reliable, and feasible. No less than the pro rata share of the ten year potential, at least 20% . A **55,8301**	**Excluded Potential** NEEA, pilots. (Potential savings which are speculative in nature are excluded from eligibility for penalty under the Commission's standard practice.) B **72,533**	**Base UTC Target** The Energy Independence Act biennial conservation plan (BCP) energy savings targets approved by the UTC. A -B = C **485,768**	**Decoupling Commitment** Additional percent of Base UTC Target required per Commission order. 5% of C = D **24,288**	**Full Target** Biennial Conservation Target plus decoupling commitment. This is the "Target" reported to Commerce. A + D = E **582,589**
Utility Program Savings Achieved (i) **552,595**	**Single Large Facility Savings Achieved** (ii) **0**	**Total Utility Savings Achieved** (i) + (ii) = X **552,595**	**NEEA and Other Savings Achieved** Y **110,527**	**Total Savings Achieved** X + Y = Z **663,122**
		UTC Target Achieved Test IF X > C "Achieved" **Target Achieved**	**Decoupling Commitment Achieved Test** IF X > D + C "Achieved" **Decoupling Commitment Achieved**	**Excess Savings Earned*** Z - E **80,533**

* PSE has agreed that it will not count NEEA savings as excess, thus they report a different amount that Staff accepts, although it is lower than their entitlement.

Avista Excess Conservation Calculations (MWh)

Biennial Conservation Target All available conservation that is cost-effective, reliable, and feasible. No less than the pro rata share of the ten year potential, at least 20% .	**Excluded Potential** NEEA, pilots. (Potential savings which are speculative in nature are excluded from eligibility for penalty under the Commission's standard practice.)	**Base UTC Target** The Energy Independence Act biennial conservation plan (BCP) energy savings targets approved by the UTC.	**Decoupling Commitment** Additional percent of Base UTC Target required per Commission order.	**Full Target** Biennial Conservation Target plus decoupling commitment. This is the "Target" reported to Commerce.
A **76,261**	B **11,130**	A -B = C **65,131**	5% of C = D **3,257**	A + D = E **79,518**
Utility Program Savings Achieved (i) **70,959**	**Single Large Facility Savings Achieved** (ii)	**Total Utility Savings Achieved** (i) + (ii) = X **70,959**	**NEEA and Other Savings Achieved** Y **11,130**	**Total Savings Achieved** X + Y = Z **82,089**
		UTC Target Achieved Test IF X > C "Achieved" **Target Achieved**	**Decoupling Commitment Achieved Test** IF X > D + C "Achieved" **Decoupling Commitment Achieved**	**Excess Savings Earned** Z - E **2,571**

Pacific Power Excess Conservation Calculations (MWh)

Biennial Conservation Target All available conservation that is cost-effective, reliable, and feasible. No less than the pro rata share of the ten year potential, at least 20% . A **89,016**	**Excluded Potential** NEEA, pilots. (Potential savings which are speculative in nature are excluded from eligibility for penalty under the Commission's standard practice.) B **14,313**	**Base UTC Target** The Energy Independence Act biennial conservation plan (BCP) energy savings targets approved by the UTC. A - B = C **74,703**	**Decoupling Commitment** Additional percent of Base UTC Target required per Commission order. no decoupling (D) **0**	**Full Target** Biennial Conservation Target plus decoupling commitment. This is the "Target" reported to Commerce. A + D = E **89,016**
Utility Program Savings Achieved (i) **98,881**	**Single Large Facility Savings Achieved** (ii)	**Total Utility Savings Achieved** (i) + (ii) = X **98,881**	**NEEA and Other Savings Achieved** Y **12,279**	**Total Savings Achieved** X + Y = Z **111,160**
		UTC Target Achieved Test IF X > C "Achieved" **Target Achieved**	**Decoupling Commitment Achieved Test** IF X > D + C "Achieved" **Decoupling Commitment Achieved**	**Excess Savings Earned** Z - E **22,144**

August 24, 2016 CRAG Meeting

Summary Notes

Contents

Attendees

CRAG

Joni Bosh, NW Energy Coalition
Lea Fisher, ICNU
Charlie Grist, NW Power & Conservation Council
Michael Karp, The Energy Project
Stan Price, NEEC
Jennifer Snyder, WUTC

PSE

Dan Anderson
Corey Corbett
Andy Hemstreet
Nate Hill
Bill Hopkins
Elaine Markham
Lance Rottger
Bob Stolarski
Jeff Tripp

Guests

Deborah Reynolds, WUTC
Cooper Wright, WUTC

Meeting Topics

1. Welcome and Agenda Review
2. Standing Agenda Items,
    a. Safety Moment
    b. Filings, emails, biennial timeline status
3. 2016 YTD Performance & Year-End Forecast
4. 2017 ACP Development
    a. Energy Reports
    b. LED Savings Values
    c. 2017 ACP Financial Accounting
5. Demand Response Update
6. Energy Efficiency Program Updates
    a. DSMc Implementation Status
    b. ShopPSE Financial Overview
    c. Refrigerator Replacement Program
    d. Energy Upgrades Campaign
    e. Large Power User/Self-Directed Program
7. Wrap Up

Discussion Highlights and Notes

PSE thanks the Northwest Energy Efficiency Council and the Smart Buildings Center for their gracious hospitality. The meeting attendees learned some fascinating facts about the building and the SBC itself.

Please note that the following summaries are ordered by topic and may not be in chronological meeting or conversation order. Bolded page numbers at the beginning of each topic indicates the corresponding PowerPoint slide number.

The primary focus of the August 24 meeting was to discuss a number of issues pertaining to the development of the 2017 Annual Conservation Plan. The PowerPoint slides provide ample details about the individual topics; accordingly, this meeting summary will focus on agreements and action items resulting from the presentations, rather than reviewing the details of each slide's contents.

Standing Agenda Items

Page 7: After Bob Stolarski welcomed the attendees and there were introductions all around, Jeff Tripp began with a safety moment discussing the effects of cumulative injuries, such as hearing loss resulting from not wearing earplugs, joint damage from not wearing knee pads, etc. It is quite important to wear appropriate safety gear for any physical activity.

Page 8 - 9: There was no discussion during the review of significant filings & CRAG-related activities since the May 18 CRAG meeting. CRAG members confirmed that PSE's FTP site is convenient and functions well for downloading large Energy Efficiency files.

2016 Year-to-Date and Year-End Forecast Performance

Pages 12 - 15: Dan Anderson reviewed the year-to-date electric and natural gas savings and expenditure performance, as well as Energy Efficiency's year-end projections. Jeff noted that a couple of key drivers of the YE forecast electric savings in the Residential Sector include retail lighting and showerheads. Corey Corbett indicated that Business Sector natural gas projects are difficult to forecast, due to the estimated project completion timeframes. Bob noted that managers review the performance and forecasts monthly, and indicated that PSE would be able to provide more program-specific and outlier information in future CRAG meetings.

2014-2015 Wrap-up: Biennial Conservation Report

Pages 16 – 23 Dan facilitated a discussion around key (not all) comments on PSE's 2014-2015 Biennial Conservation Report (BCR). After a very brief overview of the excess savings issue, (in which PSE believes that any excess savings should be allowed to apply to potential future decoupling commitment shortfall, while some Stakeholders are opposed to this view), there was a general discussion on where (what docket), and the process of PSE's petition for the treatment of excess savings should be filed. Dan indicated that the petition should be ready for CRAG review within two weeks. PSE will await direction from the Commission. The attendees also discussed the background on how excess savings are determined and why utilities are allowed to carry over a specific percentage of excess savings from biennia to biennia.

The attendees also had a discussion around single large facilities; all of which in PSE's territory are Schedule 258 (Large Power Users/Self-Directed) customers.

The discussion centered around why these types of customers are specifically identified in the excess carry-over calculation, and how it would be very difficult for PSE to provide a savings estimate on these specific customers (of the 20, 13 pay into the Rider, with 7 do not). It was agreed that reporting on the *actual* savings achieved by this set of customers (NOT the *specific* customers) is acceptable, and will be included in Energy Efficiency's Annual Reports.

The attendees generally agreed that Energy Efficiency's extensive adaptive management discussions on continuous improvement through the application of TQM in its Annual Reports could be held up as exemplary. Dan also pointed out that Energy Efficiency's pilot programs are comprised of more than just a single line item in Exhibit 1; there are many NEEA initiatives that should be considered pilots, ideas that are considered by the Business Sector's Energy Efficiency Technology Evaluation organization, and innovative measures that are incorporated directly into a program's suite of offerings, rather than starting off as pilots. Some attendees pointed out that pilots are often the "pushing the envelope" part of the energy efficiency continuum, with some providing energy savings, while others may not save energy in the short-term.

After sharing that Dan's Evaluation staff are already in careful consideration of a program that could qualify for "Real-time monitoring" (also referred to as "EM&V 2.0"), there was a general discussion about how Energy Efficiency addresses equity in underserved markets, and members' request for addition information and background on this. Bob, Dan, and Jeff shared initiatives that Energy Efficiency, and PSE in general, have consistently pursued, including multi-language fliers and brochures, "Rock the Bulb" campaigns that were targeted at hard-to-reach areas, low income weatherization (which has no spending cap) and Multifamily programs' efforts to engage hard-to-reach customers, and PSE's Energy Efficiency Outreach team's focus on hard-to-reach areas and customer classes.

The group discussed differences—and overlap—of "hard to reach" versus low income, and the challenges associated with identifying these customer types in the first place, including issues such as the specific geographies, agency interactions, data sources, privacy issues, etc. It was pointed out that a discussion on hard-to-reach classes is included in the 7th Power Plan, and that the RTF has a focus team for hard-to-reach markets. The conversation also touched on an additional item, the concept of the equity of the spread of Rider dollars throughout the PSE service territory—potentially by county—and how that correlated to the PSE customer population and participation. PSE related some of the significant challenges associated with potentially performing an analysis of that magnitude. The attendees agreed that it is a good idea for PSE to add discussions on how the programs focus on under-represented segments in their 2017 Annual Conservation Plan overviews.

2017 Annual Conservation Plan Development

Pages 24 - 33 Andy Hemstreet provided the attendees with an overview of Energy Efficiency's 2017 ACP development. He walked CRAG members through a brief and high-level tour of Exhibit 1's Excel™ workbook, illustrating hyperlinks and navigation buttons. Andy also briefly discussed Energy Efficiency's Measure Revision Guidelines' measure UES value timing and archiving process, how the Exhibit 1 measure tables are updated, and that budgets are built from the bottom-up. During the discussion, the topic of the number of low-income households served also arose.

Andy then provided general overviews on Energy Efficiency's responses to the 2014-2015 BECAR recommendations; in general, Energy Efficiency has or will put into place actions that follow the majority of those recommendations. The exception is for the recommendation to provide more detail in its Annual Report program discussions. On this issue, PSE committed to continue to working with the CRAG to meet their expectations for reporting content.

Pages 34 - 36 Jeff conducted an overview of energy reporting pilots and legacy programs. He clarified that the expansion group was the pilot, and that the Business pilot consisted of 10,000 small-to-medium businesses. There were no behavioral energy savings confirmed for the SMB segment in the evaluation. The residential evaluation indicated what steps customers are taking in aggregate, and may indicate that there may be programmatic savings that resulted from the pilot. PSE hasn't seen the result of the business evaluation. Jeff indicated that one potential reason for the disparity of business versus residential savings is that in businesses, there are too many people to train, whereas in residences, it's a much smaller group.

Jeff clarified that when PSE dropped 10,000 customers from the legacy program to test persistence, there was an average drop-off in savings of approximately 15 to 20 percent per year. There was a brief discussion on the concept of comparing the program with a resource and the need to "re-purchase the resource" every two years (the program has a two-year measure life, where the full savings is reported in the first year, with the second year reporting only the incremental savings). Jeff explained that PSE is seeking advice from the CRAG—and wishes to ensure that the CRAG is comfortable with the level of expenditures--on whether to proceed with both the legacy Home Energy Report program (as behavioral savings are included in the 7th Power Plan) and the energy report pilot.

The general consensus of the CRAG was that PSE should continue to run the programs as long as the savings are cost-effective. Jeff also indicated that he'd be willing to provide a more detailed overview of the programs' operations in future CRAG meetings or for individual CRAG members.

Page 37 Jeff then provided an overview of the impact of lower LED UES values on the developing 2017 electric savings target. He pointed out that, although aggregate savings are lower than for 2016, lower unit prices may offset any overall savings reduction.

2017 ACP Development – Financial Accounting

Pages 38-45 Following lunch, Dan provided the attendees with an overview of a new budget category: micro-overhead, that CRAG members will see in the 2017 Exhibit 1. Dan explained that, in essence, it is designed to mimic the "assessments" that were former added to the "labor" category, and will not have an incremental budget impact. CRAG members indicated that they were comfortable with the concept of enhancement.

Demand Response Update

Pages 48-52 Elaine Markham shared a brief review of the demand response background and the status of the proposed RFP. She also provided some summaries of the comments filed on the draft RFP, as well as responses to those comments. While the commercial program is open to a wide range of potential initiatives, the residential focus is more targeted. PSE doesn't have a preference for the number of bidders, although will consider the resource management impacts of potential multiple vendors across a geography. PSE presumes that most bidders will focus on either residential or commercial, rather than both; PSE is prepared to deal with the potential of a single vendor managing both, however.

On this issue of funding, Bob pointed out that, in order to be cost-effective, the program would have to cost less than the annual avoided cost of approximately $20 million. He also clarified the distinction between PSE's request to fund certain costs associated with Conservation Voltage Regulation (CVR) and demand response. Bob reminded CRAG members that, although two demand response pilots were funded through the Rider, there could be a case for considering demand response as a power purchase expense. The attendees also discussed issues related to the ownership of assets (page 51); there was a general thought that if PSE owned the asset, then those costs should be in the rate base. Issues related to funding may be dealt with by the Commission on a case-by-case basis.

Another consideration is how demand response is used; for peak shaving, load balancing—akin to acting like a generator, etc., with dispatchable load rather than power. A concept was expressed that, under ideal conditions, the generation would match the load. A new concept forming in the industry is that the load can be shaped to match generation. This makes a case for excluding demand response from the Rider.

The group also discussed concepts related to the relationship between demand response and energy efficiency, as they relate to energy and capacity issues; there may be times when demand response "competes" with energy efficiency, causing potential "trade-offs". It was pointed out that that demand response and conservation are both demand-side programs, and that both have an energy and capacity component. It is hoped that the costs of providing capacity are offset by demand response. Additional discussions centered on measuring the cost-effectiveness of the program if there aren't energy savings on the customer side.

Bob emphasized that these, and several other strategic and policy issues are rapidly approaching; .

There was also discussion around a regional study of end-use load profiles. Utilities have been asked to contribute funding to this study. PSE's IRP organization has retained a consultant to look at their needs and compare to what the regional study will provide. Additional work, such as oversampling, might be required, and the timing might need to be accelerated. The study would be for electric only, and PSE isn't quite sure of its scale at this point. The CRAG generally agreed that an end-use load study is sensible and that PSE should provide a budget estimate for this study to the CRAG for ~~funding~~ consideration of inclusion in its 2017 ACP.

ShopPSE

Pages 57 - 58 Jeff provided an overview of the online service ShopPSE. He indicated that, due to low participation numbers, PSE isn't able to offer free shipping, and that product is being warehoused at PSE fulfillment contractor's location. PSE provides links to its retail partners' sites and expansion will depend on customer demand.

Refrigerator Replacement Program

Pages 59 - 61 Jeff shared that the Retail refrigerator replacement program is cost-ineffective unless it's bundled with other measures, and so will be ending soon. The clothes washer replacement program and refrigerator decommissioning program will continue for 2017, however.

Energy Upgrades Campaign

Pages 62 - 65 Jeff provided a status update on the Energy Upgrades campaign, indicating that there are four different partners, and he shared some campaign success statistics.

Large Power Users/Self-Directed Program Overview

Pages 66 - 74 Corey Corbett provided the attendees with an overview of the Large Power User/Self-Directed, or Schedule 258 program. He clarified the distinction that 449 customers can only receive incentives as part of the Schedule 258 offerings, whereas non-449 customers can participate in CI Retrofit, CI New Construction, or Commercial Rebates programs in addition to using their 258 allocations.

All eligible customers pay into the program funding, regardless of their participation level. EMEs and PSE account managers ensure that customers are aware of this practice. Corey provided the approximate number of each customer type in the program, and outlined the competitive and non-competitive processes. He confirmed that not very many projects are turned down by PSE. Some customers make use of their allocated funding during the non-competitive phase, and then submit RFPs in order to secure additional funding in the competitive phase.

Corey provided background on what leads to the four-year cycle “hockey stick” effect. He also reinforced the concepts noted in the 2014-2015 Biennial Conservation Report comments discussion earlier in the day, in that single large facilities make up the majority of the 449 class of these customers, and that it would be very difficult to perform an analysis their savings potential prior to the commencement of a 4-year cycle. Although these are large customers and are included in the Schedule 258 target and savings result reporting, they do not make up the majority of the program’s overall savings. There was a brief discussion about the recently-completed 2012-2013 Schedule 258 evaluation, and Corey indicated that he’d be happy to respond to any CRAG follow-up questions.

2016-2017 BECAR Status

Pages 75 - 80 Dan provided a brief overview of the current activities going on as a part of the 2016-2017 Biennial Electric Conservation Achievement Review.

Wrap-Up

No additional upcoming activities or events were noted.

Parking Lot & Questions

Items captured in the parking lot:

There were no issues relegated to the parking lot at this meeting.

Agreements, Decisions

1) PSE agreed to provide more detailed program outlier performance data in future CRAG meetings.
2) PSE will await direction from the Commission as to the docket into which its treatment of excess savings petition is to be filed.
3) Rather than provide a specific estimate of single large facilities in its planning documents, PSE will report on the actual savings of this customer classification in its Annual Reports of Energy Conservation Accomplishments.
4) It is a good idea for Energy Efficiency to add underserved/hard-to-reach discussions in its 2017 ACP program overviews.
5) Bob agreed to be the point person for PSE on the RTF's hard-to-reach segment initiative.
6) The CRAG agreed that as long as Home Energy Reports and the energy reports pilot has cost-effective savings, PSE should continue to run the programs.
7) The CRAG agreed that it was sensible for PSE to provide a funding estimate to the CRAG for the end-use load study ~~through~~ for potential inclusion in the 2017 ACP budget.

PSE Action Items

1. PSE will add specific program outliers to future savings performance meeting agenda.
2. PSE will add underserved/hard-to-reach discussions in its 2017 ACP Overview document.
3. Corey will provide the docket number for the open access Order (relative to Schedule 258's 449 customers).

Fall Energy Efficiency - DSM Advisory Group Meeting
September 25-26, 2017
Avista Corporate Office, Rm 130
Day 1 - 10:00 am – 4:00 pm
Day 2 - 8:00am – 3:00pm

Day 1 Attendance

Dan Johnson - Avista
Tom Lienhard - Avista
Kevin Holland - Avista
Amber Gifford - Avista
Ryan Finesilver - Avista
Mark Baker - Avista
Renee Coelho – Avista
Collette Bottinelli - Avista
Kathi Scanlon - WUTC
Tina Jayaweera - Power Council
Stacey Donohue - IPUC
Donn English – IPUC
Billie Jo McWinn - IDPower
Bing Tso - SBW (Phone)
Shawn Collins - Energy Project
Amy Wheeless - Energy Coalition
Chuck Murray - Commerce

Notes

10:10 Avista Welcome & Review – Dan Johnson

- Org chart review. Kelly Norwood upcoming retirement and Rates falling under Kevin Christie
- Kevin Holland provided Bio
- Advisory Group goals and ground rules

10:20 Avista Program Financials – Amber Gifford

- Tariff Rider Balances – Historical Trends
    - Underfunded WA $14M (End AUG)
        - Approved in WA
    - Underfunded ID $10M (End AUG)
        - Pending Approval in ID
    - Gas was level for both
    - No questions/comments.
- WA Electric Savings
    - 76k MWH Goal – Current 122k Biennial TYD (Unverified)
- WA Gas Savings
    - 620k Therms Goal – 615 YTD (Unverified)
- ID Electric Savings Goal – IRP 13k MWh Current 40k YTD (Unverified)
- ID Gas Savings Goal – IRP 197K Therms Current 148k YTD (Unverified)

10:30 Draft Biennial Conversation Plan Review – Ryan Finesilver

- Handed out current tariffs for schedule 190 and 90 for WA & ID. No questions/comments.
- Advisory Group Webinar Recap:
    - Discussed how Biennial Conservation target was set – discussed in 1st web-ex.
    - 10 year savings potential is 368,181 MWh, 20% is 73,636 MWh which is larger than the 2 yr. target.
    - The draft total conservation commitment/BCP TARGET is 93,724 MWh – (this includes decoupling commitment and NEEA)

    - Draft 2018-2019 BCP PLAN is 94,847 MWh – will have a chart describing this in detail later. (This # excludes Fuel conversions).
    - Program Tariff – talks about eligibility, funding, incentives, etc. We are proposing no changes to schedules 190 and 90. There are links to these on our website.
    - Deliverables have now been met through all of the Web-Ex meetings over the summer.
- Kevin spoke to our energy needs – we are well situated as a company going forward to meet our load obligations.
- Tina would like to see the work papers on the avoided costs – Tina is going to look at the IRP. (James Gall will come in later to answer some questions).
- BCP
    - Timeline – Draft to AG 9/29
    - Review Period for AG 9/29-10/30 – would like to have comments back by 10-20 if possible so that we have time to incorporate changes.
    - Filing date 11/1
- Details of the 93,724 MWh BCP target reviewed – see table.
    - Shawn asked to clarify Behavioral savings - Opower forecast is being left in our savings goals even though we are sunsetting the program.
    - Tina asked if the NEEA forecast would change our goal – it will remain.
    - The Draft Biennial Conservation Plan # is 94,847 MWh (includes NEEA, excludes fuel conversions).
    - The detailed slides to follow exclude NEEA

WA Draft Biennial Conservation Plan Overviews:

- Electric Overview
    - Ryan provided a chart showing highest savings measures
        - Simple Steps making up approx. 23,000 MWh
        - Site specific next largest and so on.
- Natural Gas project savings 1,174,000 therms
    - Chuck Murray asked how our rebates are set and would like to understand how we determined to reduce our water heater rebate to $175.
- Residential Programs
    - Electric - Comparing our 2016-2017 to 2018-2019
        - We expect more savings in the next biennium overall – mostly due to LED lighting
        - Shawn would like to understand the changes in electric residential prescriptive as to why it has dropped.
        - Tom discussed that our pilots and efforts
        - Chuck brought up the point that 26% of our IRP was around insulation measures, but this slide does not reflect that.
            - Ryan addressed this question in day 2
    - Gas – comparison of current and future biennium
- Tina questioned the budget and if there is a cap on it. Ryan explained we don't have a cap, we look at programs that are cost effective and check for reasonableness.
- Non-Residential Electric

- Higher amount of interior lighting is expected
    - Tina would like to see the comparison of actuals for 2016-2017 compared to our forecasted for both current and future BCP. Also would like to know the achievable potential.
        - Ryan provided the BCP comparison in Day 2
    - Exterior lighting and site specific are expected to be slightly less.
    - Tina feels it would be helpful to have the actuals included on the slides for comparison purposes.

- Non-Res Gas
    - Tom explained why Energy Smart Grocer (ESG) showed up for 18/19 BCP, but was not in our 16/17 BCP, gas projects were performed under site-specific work in 16/17.
- Tina wants to know why the Site-specific Budget is drastically reduced for 18/19 - $2.9 vs. $4.2.
    - Tom thought partially due to being down 1 engineer. We will need to look into this.
- Low-Income
    - Electric and Gas reviewed
- Fuel Conversions

  Low Income:
    - 3 conversion types – furnace, water heater, & heat pump.
    - Clarification – heat pump – electric resistive baseboard heat converting to high efficiency heat pump. This should not fall under the fuel conversions category.
    - Questions came up around Low Income efficiency rating – is lower than standard residential furnace (>=90 AFUE). They pay on 80% AFUE. Typically a 90% goes in unless there are installation barriers.
- Residential
    - Changes to Furnace and Water Heater (wall heater = no change)
    - Tina would like to know how the incentive calculation is done – Ryan explained it starts with our tariff rider – could go to $2,800, but that is a significant jump over $1,500.
    - Chuck would like to know the assumed cost of the measures.
    - Tina would like to know the efficiency level of the water heater – since this is just in respect to conversions, there is not a requirement that customers install above code. It is just the switch in fuel.

- Multifamily Market Transformation – more discussion later.
    - This is for new construction projects – Gas.

Fuel Conversions: Proposed Budget – Kathi would like to see a 16/17 Comparison of budget and savings. Chuck would like to understand how these are represented in the IRP. Ryan explained it is in the model as it frees up capacity of electric.

- ID DSM
    - ID Conservation Target
        - Agreed to use UCT
        - We are grossing up the TRC to UCT conservation (30% adjustment)
        - ID Commitment is 19,705 MWh
    - Cost-Effectiveness – comparing TRC vs. UCT.

- Breakdown of Electric programs – Interior lighting, site Specific, and Fuel efficiency/conversions make up the top 3.
- Tina asked how the 30% adjustment came to be – Dan explained we did some research on UCT vs TRC and found some representative numbers to come up with the estimate.

12:00 Lunch

1:05 CPA RFP – Ryan Finesilver

- Electric and Gas CPAs are being done together through 1 RFP
- Additionally, there is an additional study for Demand Response for 2019.
- It isn't shown to be a needed resource in our IRP until 2026…
- RFP went out last week, looking for responses back mid-October so vendor is on board in November.
- Chuck encouraged Kathi to discuss the new standards practices manual. He is recommending our potential vendors be aware.
- October 2nd workshop around DR and cost-effectiveness. (Cancelled by UTC staff)

1:15 ID Research & Development - Tom

- Residential Static Var Compensation (RSVC) – optimizing voltages for lines so that we are not giving more voltage than is necessary on that line. Want to get optimal voltage to the customer.
- Trying to get a product out so that we can see what we are saving customers.
- Micro Grid – we are using smaller power systems so that we can make up for needs in a micro grid area. Could we eliminate the need to get power from other resources? Looking into how this could save us.
- Simulation Based Commissioning of Buildings - Energy Management System to find out how ideally they are running.
- CAES – Large industrial processes – tracking the full energy use. Tried out at Lighthouse Dressing.
- Phase 4 – RSVC – may be able to use solar, cars and other things to make the quality of power better for customers.
- Energy Storage for Enhanced Performance of the Avista System
- Aerogel Insulation System – prices are coming down on this composite so that it may be able to be used in the next 5 years. Has an R value of 40.
- Managing Efficiency Based on Operative Temperatures – helping customers do the right things to gain efficiencies. Need to get better information to customers.
    - Tom can provide full papers on these if anyone is interested
    - We spend approx. $230-$240K/year on these projects
    - University of ID involvement is some cases

1:30 IRP Questions – James Gall

1. Conversions – conversions are embedded into the load forecast. There is not anything assumed for conversions in the IRP.
    a. Chuck is clarifying that we simply make an adjustment for the number of customers and the load/types of those customers.

    b. The model chooses between the conservation measures and the supply side measures to meet the load forecast.
    c. Tina is clarifying – there isn't anything specific around conversions in our load forecast and James agrees.
2. Chuck's question around 26% insulation – comparing the business plan to the potential. We still need to look into this.
3. Tina's question around avoided cost – would like to understand the components. Capacity, market price…etc. What drives measures being chosen?
    a. James explained that we start with all the conservation measures each having a measure of energy to deliver, as well as each season. Model looks at cost effectiveness, amount of energy supplied….this is about $35/MW. Price is adjusted based on when it is delivered. Model will favor a product that helps a winter deficit for example (capapcity value). Capacity needs are summed up.
    b. See page 11 of IRP for more details around this.
    c. Stacey wants to know what the energy resources the model picks from – natural gas fired peaker, batteries, etc.
    d. Stacey wants to understand more on calculating the T&D Deferral – historical study showed $10. This year Ryan calculated a book value of our system which resulted in a higher value. Need to decide internally how to calculate this going forward.
        i. Tina mentioned getting a group together to work on this and come up with a standard method for all.

1:47 EM&V RFP - Amber Gifford

- Discussion around Nexant: Donn & Chuck both find value in changing EM&V providers
- Donn - Going with the lowest bidder may not be the best way to go – we may see better work by going with a higher cost option.
- Kevin – what is the values in switching thigs up? Stacey – concern that recommendations start being rounded out and presenting things in a "sunny light". Difficult to stay objective. Donn – feels it better to have a fresh set of eyes.
- Tom wants to know if Cadmus would be okay to repeat (since it's been 4 years). Stacey feels like it's more of a perception issue. It's very efficient in that they know how the business works and data can easily flow back and forth, but the downside being the two companies becoming too comfortable with each other. Other utilities have mixed things up a little more. Looks better for the company if we switch vendors.
- Donn thinks a good evaluator will find things in our programs that we are doing wrong.
- Tom brought up the point that this group voiced that we should let the evaluator decide what should be evaluated. That way we provide the programs and the evaluator decides what to look into.
    - We will be setting up a Skype meeting once we have evaluation criteria so we can discuss our options. The evaluation team is comprised of folks in our department.
- An additional potential bidder was added to the EM&V bidder pool: Research Into Action (which was not documented in the slide deck presentation).

2:05 Behavioral Program Discussion – Dan

- Alternatives to Behavioral Program as Opower contract ends 12/31/17 – proposal is to take our behavioral program to the next level…2.0, 3.0….
- See timeline slide for plan for 2018-2019
- AMI: 2018 deployment
- Would like to layer in the active data channel – proactive approach by texting, messaging, etc.
- Proposal – allow persistence to settle out over 2018 so we have a clear baseline and then implement new plan.
- Tina brought up the question as to whether we should quantify the persistence through Opower contract.
- Powerley (a home energy management platform) – providing load disaggregation to the customer through their phone to find energy efficiency opportunities. Allow customers to set up their communication preferences.
- Shawn asked the question if we were going to use the funds slated for Opower towards these new options. No is the direct answer, we will use EE funds for a pilot like we would any other pilot and determine the value for a program going forward. (Dan feels we are going to spend a lot less than the $2M we spend on sending out home energy reports now).
- Stacey is wondering if there are any utilities doing this. Dan is not aware of any.
- Kathi wanted to verify that we are committed to the Opower savings goal (15,386 MWh) that is in the plan, and Dan confirmed that yes, we are. We will need to work with our evaluator to determine passive/active savings channels.
- Stacey asked if we could roll out the analytics to our small business customers. Dan indicated we sure could.

2:45 Summer Advertising Campaign – Colette Bottinelli

- Goal is to increase awareness of EE programs for residential customers
- TV, Social media, print, etc.
- C&I – Cenex/Zip Trip Advertorial
- Colette shared the ads for EE tips and rebates

3:00 Products and Services Update

Kevin Hennessey – Avista Marketplace

- Providing a way for Avista customers to be able to review and research any appliance purchase they may be making for their home.
- Customers can research for EE models and then go to any retailer to purchase the product.
- Every appliance is given a score 0-100 as far as the best rated products and the list is updated every night.
- Can equate this to consumer reports for energy efficiency.

Rendall Farley – Electric Transportation Strategic Initiative

- Moving things and people using alternative approaches to fossil fuels. Better cost, more reliably, and cleaner.

- EVSE – Electric Vehicle Supply Equipment
  - Supplying charges to customers at work and at home. (Cars are parked 95% of the time). Charges can communicate via web.
- Avista wants to best serve our customers and be ready for EV. Could potentially reduce rate pressures.
- EVSE Charger – we own the charger, companies use it, we get to collect the data and move the load if needed. Facility owner pays for the energy (up to property owner if they want to require a user fee).
- This is a global phenomenon so Avista is trying to get ahead of it.
- Future R&D
  - Mass transit
- RethinkX – Interesting report to take a look at.
  - Autonomous – Level 5 vehicles (vehicle drives itself).

3:50 Day 1 Wrap Up – 4:00 Adjourned

8:15 Day 2

Day 1 attendees, plus the following additional Attendees: David Schafer, Greta Zink, Rachelle Humphrey, Lorri Kirstein, Camille Martin, Ana Matthews, Roxanne Williams, & Matt Iris.

Pilots – David Schafer & Tom Lienhard

- Residential Smart thermostats - load disaggregation. Honeywell or other. Tom indicates that we will be working with all different brands of smart thermostats...nest, eco bee, Honeywell, etc.
  - Tina questioned who the data will be made available to. David indicates we will work with an analytics company to access the data (Whisker Labs for example).
- In Home Energy Audit Plus Weatherization - customers could opt-in for this audit. Direct install or mail option.
  - Chuck - encourage expanding insulation to floors and walls (not just attic). Since drive time is a lot of it, do what you can while you are there.
  - Shawn asked about the cost to the customer - we will try to get the audit costs down. Tom said we will cover the costs during the pilot and then go from there.
  - Kathi questioned if we are modeling this after other companies.
- Wall Insulation - going to take a group of homes and pay for the cost of exterior treatment.
  - Chuck would like to be in the loop on this going forward. Would like to help outline the approach. There is a company in Portland that did a lot of research on different wall insulation so - would be a good place to start.
- Multi family - hard to Reach
  - Low-hanging fruit in common areas. Tom would like to know if it is okay to change the scope of the contractors - transitioning out of small business.
- Ecova Pilot - Should we continue down the path and go out for RFP to get the monthly data. We could do this with some other company, Ecova is just one option.
  - Stacey indicates this sounds similar to load disaggregation. Asked what kind of businesses are being targeted. Under 50K sq ft.
- EUI (Energy Utilization Index) New Construction Pilot - offering twice the incentive (.40 electric, $6 gas) for a customer that uses 1/2 the energy when building a new home. We don't worry

about any costs tests with this. We need to work with architects and engineers to move this forward. This is a commercial pilot. "Performance Based Incentive".
    - We are asking if we can continue to move this pilot forward. Kathi asked what kind of buildings we have looked at. 1 industrial and 1 commercial office space.
    - Chuck encourages us to continue.
- Real Time M&V 2.0 - Pullman interval meter data. The idea is we would like to be able to do this with all customers. Should have the data available in January.

9:10 Low-Income Weatherization Multi-Family Pilot - Shawn Collins

- Provided letter regarding this pilot proposal.
- Determine if there are Weatherization opportunities working with the CAP agencies. Since this would be working with agency owned buildings we would have eligibility verified. Trying this out at Avista could be a model for working with other parts of the state. Low-income multi family is an underserved market. Would like to get some feedback.
    - Dan asked what the funding vision is - Shawn proposes using Avista funds to gain the efficiencies and bring in other funds for labor and coordination expenses.
    - Renee indicates that the low-income funding that currently exists is doing some similar work as this proposal.
    - The proposed list is all agency owned buildings.
    - Kathi questioned how the project costs estimates were derived - Shawn said they worked with contractors to get estimated numbers.
    - Chuck supports this. He recommends finding specifically what the research question is. Advocates for utilities talking to each other so that there is a uniform methodology around this. In addition, PSE is running an effective insulation program with King County - he suggests we visit with them about what they are doing. Lastly, pre and post inspections. Using cell phones/web cams for verifications. Dan mentioned that at E-Source they were showing customers and utilities utilizing face-time as well for showing/discussions.
    - To answer a prior question, Bing mentioned he has run a MF pilot program in the last few years in California that was successful--well-received and highly cost-effective.
    - Dan says we support the proposal and questions what is next. Discuss funds and determine a plan to move forward.

9:40 Program Updates:

Small Business - Greta

- SBW - sun setting program at the end of this year.
- The reason ID customer count is a little less is due to no gas programs in ID in 2015.
- Feels this would really be a great transition into multi-family.

    - Stacey wondered how this program got started. Greta - We have been trying to reach this segment for many years. We had to figure out a count of how many customers fit into this segment. Our target of 8,000 customers to hit the majority (we eliminated gov't and multi jurisdiction). Stacey wants to know the Cost effectiveness of this program. Ryan indicated a 1.63 TRC and 1.49 UCT for 2016 using the updated avoided cost numbers.

Low Income - Renee

- CEEP (WA state funded only) - converting 85 homes with alternative fuels over to natural gas. We had no problem finding homes with alternative fuels - oil and wood. Unsure whether the program will continue next year as WA capital budget is not set. The program has been well received by customers (there was no cost to the Cust).
    - Chuck advises that we share this information with our legislature. Renee indicates that we were featured in WSU Energy Office Newsletter.
- 7 Agencies serve WA and ID. Funding starts and ends at different times. Low-income participation can be a bit "lumpy".
- Will be able to fund more this year than in 2017 because of the move to UCT. Stacey questions this - she said usually UCT harms low income programs. Renee is going to look into this and get back to Stacey.
- We are almost always able to spend the funds ($2 M WA, $700K ID). Kathi questions why the goal for WA is so high in 2015. Renee will investigate*** (she knows there are several factors).

Commercial Lighting - Rachelle

- CFL buy-down through simple steps will not be offered in 2018.
- Tom indicates that we react to what simple steps does.
- ClearResult results are evaluated through our evaluator - Nexant gets the data directly from them.
- Dan brought up that the CFL recycling program will continue next year as we see CFLs drop off.
- Residential - David
- Kathi asked what app is being used with smart thermostats. David - we are not brand specific. As far as the pilot we are going to try and leverage customers already using smart thermostats.
- Highlight of the Changes: Electric to NG furnace was $1500, now $2000, E to heat pump was $450, now $500, tankless NG water heater was $200, now $175. See slide for discontinues and new rebate offerings.
    - Tina questioned "built-green" vs. Energy Star. David eluded to checking with Ryan on the RTF values...built-green is a brand so we don't have RTF values on that.
    - With respect to E to NG furnace and the $2,000 rebate, we could max out at $2,800, but we needed to find balance. Also to note, ID does not have the advantage of the LEAP program since it is a WA program only.

Natural Gas Conversions LEAP - David

- Chuck asked if the gas portion was considered in our TRC. David answered this is all totally separate. No DSM dollars go towards this program.
- Amy circled back to the increase in incentive for E to NG furnace - since this is already a robust program and is questioning if it is necessary. David indicated we are trying to balance and remove barriers. Amy also questioned adding an income component to this - David indicated we have not looked into that.

Site Specific - Lorri

- Fuel Efficiency program is mostly comprised of the multi-family market transformation program (90% approx).
- Tina questions the large increase in kWh for 2017 and Tom and Lorri eluded it's due to the larger size of projects.
- Stacey asked about 2017 goal...Tom indicates it is 1.5 M and we are currently at over 3x that now. The projects come in very "lumpy".
- Clarification of the chart - it should not be in dollars, should just be #s.
- Kathi asked about multi-family market transformation and why the incentive went down from $3,500 to $3,000 for this year's BCP - she would like to see the trend in incentives. Collette mentioned that the cost to the customer is around $8,000 so we are not even covering half of the cost.

Behavioral Programs - Camille

- Kathi asked about the program costs for Opower vs. AMI. Opower is approx $2M for the 2 years. Dan - We won't know the AMI costs until down the road and once we move through a pilot.

Community Outreach – Ana

12:50 DSM iEnergy Discussion – Matt Iris

- One stop location for DSM – location for internal and stakeholders
- Goals for implementation – Matt explained how the program will eliminate many manual entries and manual processes.
- Stacey – was there a RFP?
    - Tom: We did create a process to determine what we need and what the software could do. We did work through the business requirements and we can provide.

2:00 Ryan Finesilver – Draft BCP questions Follow-up

Residential Prescriptive Change

- The Windows incentive will probably drop to $1.44 to be consistent between gas and electric.
- Residential Weatherization - showing what was selected for our 10 yr achievable.
- Will address through some site-specific. A portion of this has already been accomplished through UCONS (which AEG did not capture). Difficult to find the customers in need of some of these categories.

WA BCP Actual Savings Comparison

- Interior Lighting - substantial difference between 16/17 and 18/19 we feel a lot of the savings have been front-loaded and we feel there will be a falloff in 2018.

Low-Income Gas

- Ultimately the measures fluctuate based on what the agency decides to go after.

Fuel Conversions Comparison

- The group would like to see the Excel calculations for how the incentive level is set as well as the cost-effectiveness calculations.

3:00 Round-table

- Future Webinar Topic - Amy request: walk through why gas is more efficient/cost-effective for our customers. Kathi would like to see this take place sometime in October, before the BCP is filed.
- Also need a webinar for our RFP results, criteria, and discuss how to move forward
- Behavioral/AMI Incentive calculation process
- Kathi - Oct 2nd meeting to discuss DR and the standards practices manual. PSE will be there to discuss DR.
- On-Bill repayment question from Kathi - it is on our technology road map. There is not a lot of customer interest.
- PM 2.5 - we are in contract right now with ABt. They will also study BTU numbers.
- Per Amy - NW Energy Coalition - November 2nd Conference Hilton in Downtown Seattle
- RFP Question - we have a bidder that is interested in bidding on both the EM&V and the CPA. What does the group think? Consensus seems to be that there is not a conflict, but Kathi needs to think about it and get back to us.
- Spring Meeting - possibly in Olympia (Chuck could possibly get us a room).
- Seeing comparisons at this meeting really helps put things into context (Stacey). Pace of the meeting was good - 2 days ideal

4:04 Adjourned

Deliverables to Provide Post-Meeting:

- Notes from the meeting
- Fall Meeting Slide Deck
- Conversions Cost-Effectiveness Model

Future Webinars to Schedule:

1. Fuel Conversions – An overall walkthrough from the top down
2. RFP results for both the CPA & EM&V: results, criteria, and discuss how to move forward
3. Incentive calculation process
4. Behavioral/AMI Data Presentment for Customers – future state

From:	Colamonici, Carla (ATG)
To:	Amy Wheeless; Baker, Mark; Ben Otto; Beverly Baker; Bing Tso; Bryan, Catherine; Chris Davis; Christie, Kevin; Christina Zamora; Murray, Chuck (COM); Colamonici, Carla (ATG); Johnson, Dan; Reynolds, Deborah (UTC); Donn English; Osborne, Elizabeth (COM); Finesilver, Ryan; Gervais, Linda; Gifford, Amber; Holland, Kevin; Jeff Harris; Scanlan, Kathi (UTC); Kevin Keyt ; Kristi Sherlock; Lienhard, Tom; Lisa Gorsuch; Ron Gaunt; Shawn Collins; Simon ffitch; Stacey Donahue; Tim Stout; Tina Jayaweera
Cc:	Gafken, Lisa (ATG)
Subject:	Public Counsel"s Engagement in Avista"s Advisory Group
Date:	Thursday, October 12, 2017 12:31:10 PM

Hello Everyone,

I hope this message finds you well. This message is to inform you about a shift in our ongoing engagement with utility IRP processes and conservation advisory groups. Public Counsel is reallocating and refocusing its resources, particularly as it relates to conservation advisory groups and the BCP/ACP process. As you may be aware, we do not yet have a full analyst team and, thus, need to prioritize our workload.

Public Counsel will continue to engage in the IRP process and advisory groups, but we will only monitor conservation advisory group activity in the future. We will be submitting comments and plan on participating in this upcoming BCP filing, as much as our schedule will allow.

Please keep us on the conservation advisory group email distribution, but know that we may not be able to attend meetings or participate as fully as we have in the past.

The Advisory Group's work remains important, and we look forward to maintaining contact. Furthermore, as our team reestablishes in numbers, we may adjust our focus and resume work on the BCP/ACP process at a later date. In the meantime, if you have any questions, please do not hesitate to contact me or Public Counsel Unit Chief, Lisa Gafken.

Thanks,

Carla Colamonici

Regulatory Analyst

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From:	Reynolds, Deborah (UTC)
To:	bob.stolarski@pse.com; Anderson, Dan; Hemstreet, Andrew W (andrew.hemstreet@pse.com); "Dan.Johnson@avistacorp.com"; "Amber.Gifford@avistacorp.com"; Don.Jones_JR@PacifiCorp.com; Ariel.Son@pacificorp.com; "linda.gervais@avista.com"; ken.s.johnson@pse.com
Subject:	Comments on Draft 2018-19 Biennial Conservation Plans
Date:	Monday, October 23, 2017 10:05:00 AM

Greetings,

Staff has been diligently reviewing the draft 2018-19 Biennial Conservation Plans. I have some overall guidance to offer, which you may or may not have time to incorporate before making your formal filings. You can expect these issues to recur in our formal comments if they are not addressed in your filings.

1. Inclusion of NEEA in the target: Staff has closely watched the impact of excluding NEEA from the target. Each year, it has created confusion and unnecessary discussion. Staff believes that NEEA should be restored to the target for the 2018-19 Biennium, which will match the approach taken by non-investor-owned utilities.
2. Implement the National Standard Practice Manual: Staff has worked closely with the National Efficiency Screening Project, and believes that a review of the resource value tests will streamline and optimize cost-effectiveness analysis. Each BCP should include a proposal and timeline for this review, to be completed in 2018. This will include the identification of non-energy impacts that should be quantified.
3. Evaluation, Measurement and Verification 2.0: Each BCP should discuss implementation of new approaches to EM&V, taking particular notice of new metering capabilities.
4. Fuel Conversion: These programs have continued to draw controversy each year. Staff believes these programs need to be completely removed from conservation programs. This includes cancelling any tariffs.
5. On-bill Repayment: This program has obvious benefits to moderate-income customers, with less access to capital. Without a demonstration that existing conservation programs are proportionally used by low- and moderate-income customers, utilities should offer on-bill repayment as a way to provide fair access to conservation programs.

Best regards,

Deborah Reynolds
Assistant Director, Conservation and Energy Planning
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circumstances change or additional information be brought to our attention. Staff's opinions are not binding on the commission.

From:	Reynolds, Deborah (UTC)
To:	Dahl, Corey (ATG); Colamonici, Carla (ATG); joni@nwenergy.org; "Wendy@nwenergy.org"; "ShawnC@oppco.org"; "jec@dvclaw.com"; Edward Finklea (efinklea@nwigu.org)
Cc:	Cebulko, Bradley (UTC); Twitchell, Jeremy (UTC)
Subject:	FW: Comments on Draft 2018-19 Biennial Conservation Plans
Date:	Tuesday, October 24, 2017 4:27:00 PM

Greetings,
I sent these comments to the utilities yesterday. Please give me a call if you have any questions, and feel free to forward to other interested people.

Deborah Reynolds
Assistant Director, Conservation and Energy Planning
(360) 664-1255
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From: Reynolds, Deborah (UTC)
Sent: Monday, October 23, 2017 10:05 AM
To: bob.stolarski@pse.com; 'Anderson, Dan' <Dan.Anderson@pse.com>; Hemstreet, Andrew W (andrew.hemstreet@pse.com) <andrew.hemstreet@pse.com>; 'Dan.Johnson@avistacorp.com' <Dan.Johnson@avistacorp.com>; 'Amber.Gifford@avistacorp.com' <Amber.Gifford@avistacorp.com>; Don.Jones_JR@PacifiCorp.com; Ariel.Son@pacificorp.com; 'linda.gervais@avista.com' <linda.gervais@avista.com>; ken.s.johnson@pse.com
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