Joint Comments of Lynn Anderson and Jonathan Powell Regarding 2014 / 2015 Avista Utilities Biennial Conservation Report (BCR) Docket UE-132045 and UG-132046 July 19, 2016

Introduction

I appreciate this opportunity to provide comments on the 2014 / 2015 Biennial Conservation Report (BCR) of Avista Utilities as part of docket UE-132045 and the review of the regulatory prudence of their natural gas demand-side management (DSM) programs as part of docket UG-132046. The electric portions of these proceedings fulfill the obligations established in response to the 2006 Initiative 937 and the requirements specified within the Washington Administrative Code (WAC) sections 480-109-120 (4).

My comments focus primarily upon four issues:

- Significant discrepancies noted within the very limited work papers that were made available to the public as well as the misspecification of the Total Resource Cost test methodology within Avista's Annual Conservation Report.
- The general lack of transparency to members of the public in regards to the analysis incorporated within this filing.
- The lack of meaningful independence in the evaluation, measurement and verification (EM&V) of Avista's DSM portfolio, as required under WAC 480-109-120 (4), primarily but not solely due to the evaluation being managed by those who are also responsible for the delivery of the programs being evaluated.

Technical Comments

The opportunity to review the analysis leading up to Avista's BCR has been very limited due to the lack of working papers available to the public. The only publically available working paper is an incomplete summary of the Company's acquisition claim. Nevertheless a review of this sole work paper led to the discovery of several discrepancies to include:

1. Three of 18 residential measures in the 2014 portfolio did not match to the annual acquisition summary. Two of these measures (electric savings derived from a window measure installed in electrically heated homes and electric savings derived from a different window measure installed in natural gas heated homes) were off by a total of 1.4 million kWh's (25% of the total verified residential acquisition in that year)[1].
2. Three of the 19 residential measures in the 2015 portfolio also did not match to their annual acquisition summary, though the magnitude of the discrepancy was significantly less than those noted in the 2014 claim.
3. The acquisition from non-residential measures did not correspond to the annual summary of non-residential acquisition in the same spreadsheet.
4. The acquisition claimed in Table 1-2 of the Nexant document "Impact Evaluation of Washington Electric 2014-2015 Energy Efficiency Programs" did not correspond to the supporting work papers calculation of either (a) the sum of the 2014 and 2015 annual summaries or (b) the sum of the 2014 and 2015 individual projects.

There is no reason that these calculations shouldn't match to within a very small spreadsheet rounding error.

These observations were shared with Avista. In response to the first two observations above the Company responded that there was a "database error". As of the date of the filing of these comments the Company has not offered an explanation for the last two discrepancies.

Depending on where the database error crept into calculation, these discrepancies could have impacted the analysis of the acquisition, the realization rate, or both. It is also possible that the net impact of the discrepancy upon the claimed acquisition could be counter-intuitive. For example, a database error which reduces an excessive acquisition claim prior to the calculation of the realization rate will increase the realization rate, which will then be applied to not only to that program but also to all programs and measures within a much larger aggregation of programs. If these discrepancies are the result of retroactive revisions to the utility database to match the verified acquisition the outcome would be to artificially create a realization rate at or close to 100%. Due to the lack of public access to the working papers it is impossible to further determine what the impacts of these errors may have upon the BCR claims.

Regardless of the source of these discrepancies, the inconsistencies cast sufficient doubt upon the acquisition claims to call for the creation of a clear summarization that is consistent from the collection of individual projects through the annual summarization and to the final biennial acquisition claim. This summarization should include work papers supporting the realization rate calculations at each level of the acquisition summary.

Any discrepancies in the acquisition summary will also impact the cost-effectiveness analysis. Since there are no publically available work papers supporting the cost-effectiveness calculations the magnitude of the impact cannot be ascertained.

Regarding the work papers that were publically available, and for the written record, I have committed to averting my eyes away from the large amount of customer confidential information (customer names, addresses, account numbers and specific project information) contained within the original work papers provided to me in response to a records request. Avista inadvertently failed to mark the work papers as confidential when they were placed into the public domain. Avista did subsequently provide work papers with the customer confidential information redacted. The above analysis is based exclusively on the redacted version of those work papers. I have erased the original Avista work papers containing customer confidential information from my hard drive and committed to honor the confidentiality of this customer information.

Lastly, one of the measures contained in the work papers was a multifamily market transformation effort. Schedule 90 permits granting higher incentives to support regional and local market transformation efforts[2]. However, this program has been represented as a market transformation effort since 2008. There is no indication that there is a defined exit strategy, a key characteristic distinguishing market transformation programs from routine local DSM programs subject to standard incentive funding, nor is there any mention in the program descriptions of a defined trigger point for movement towards an exit strategy. Now that the program is in its ninth year without any apparent application of market transformation program management techniques it would be worthwhile to discuss whether it is appropriate to continue to treat this as a market transformation program for purposes of applying Schedule 90 tariff requirements.

Process Transparency

The opportunity for public review of the methodologies and analysis incorporated within this filing has been very limited. Though Avista has filed a large quantity of the findings of the Nexant evaluation, the work papers filed in support of those calculations have been quite limited. There were essentially no available work papers to support the natural gas docket UG-132046. No work papers have been filed to support several areas of significant importance to include, for example, the Opower acquisition calculations to include the methodology for re-adoption of energy savings, cost-effectiveness calculations (discount rate, avoided cost stream, measure life etc.), calculation of net-to-gross factors for measures which do not have an established Northwest Power and Conservation Council (NWPCC) Unit Energy Savings (UES) value, consistency in the NWPCC UES values and the other assumptions used in calculating Avista's measure and portfolio cost-effectiveness, details regarding the realization rate calculations, the approach used to incorporate (or not incorporate) distribution and service line costs into the cost-effectiveness analysis of electric-to-natural gas measures, and innumerable other critical details necessary to allow for meaningful public participation. There have been no formal data requests within this filing and the Company has not always responded to questions regarding clarifications of their analysis.

It is especially important to perform such a review of this filing since, in a very recent filing with the Idaho Public Utilities Commission, two members of the public (Lynn Anderson and Jonathan Powell) found that the Company applied a real discount rate to a nominal avoided cost stream to calculate cost-effectiveness. The Company also failed to perform net-to-gross adjustments to energy savings even though it had alluded to making such adjustments in its answer to a production request that specifically asked if it had made net-to-gross adjustments[3]. Based upon these past analytical practices and the considerable opportunity for discretion within the complex Washington BCR filing it is essential to provide public access to working papers sufficient to support the filing.

Additionally, the Company's representation of their cost-effectiveness methodology for the four standard practice tests in both their 2014 and 2015 Annual Cost-Effectiveness Reports (ACR)[4] contains flaws, though it is possible that this is restricted to the summary table and not present in the final calculations. There is no mention of the utility revenue impact of DSM programs, though it may have been termed "Non-Utility Energy and Capacity Avoided Cost" within their summary. If this is the case, this value is improperly incorporated as a benefit in the Total Resource Cost (TRC) test but omitted as a cost in the Rate Impact Measure [5]. The value is correctly included within the Participant Cost Test. If the interpretation of their terminology is different than assumed above, then it would appear that the revenue impact of DSM programs is omitted in its entirety. Given that no work papers are provided for the cost-effectiveness calculations, it is impossible determine if the cost-effectiveness standard practice tests were properly calculated[6].

The lack of publically available documents to support a review of the $27 million[7] of electric and natural gas DSM expenditures during the biennium under review is inappropriate. Avista's past assertions that the public interest is represented through the involvement of Public Counsel and end-use customer representatives (customers selected at the sole discretion of Avista) in the DSM Advisory Group does not justify the unavailability of the information necessary for other ratepayers and stakeholders to comment upon the BCR.

The lack of availability of these documents stands in stark contrast to the Company's statement that "within customer confidentiality constraints, output from any EM&V activity is available to external stakeholders"[8].

The Evaluation Process

The regulation of utility DSM portfolios and the related public policy issues are critically dependent upon a thorough and ethical evaluation of all aspects of that portfolio. This can only be achieved through an evaluation that is independent at each step of the process. The insertion of self-interest into the evaluation process at any point severely compromises the value of the evaluation work product. In the absence of a meaningful and fully independent evaluation, the ability of Avista's DSM Advisory Group to oversee Avista's efficiency program is substantially handicapped.

The Commission has observed and acted upon previous deficiencies in the Company's evaluation of DSM programs. When the evaluation of DSM performance came under greater scrutiny within the 2006-2009 natural gas decoupling pilot, the Commission found a "… lack of evaluation, measurement and verification (EM&V) techniques for conservation programs"[9] and concluded that the "… Company's EM&V efforts need to be improved"[10]. The Commission's response was to require "… the Company to file an EM&V plan for its DSM programs by September 1, 2010" to address these observed deficiencies[11]. The Company engaged in an extensive year-long collaborative effort with considerable participation from stakeholders and nationally renowned experts to create an EM&V Framework document that was responsive to the Order. The EM&V Framework became the guiding document for the independent internal and external evaluation of Avista's DSM programs from that date forward.

Avista's EM&V Framework recognizes that "sound evaluation of energy efficiency programs requires transparency and independence"[12]. Consequently the EM&V Framework document defined the independent internal evaluation team as “Avista employees who perform analysis and reporting in Demand Side Management but do not have energy savings targets as part of their goals or incentive structure”[13] to address the need to remove self-interest from the evaluation process. The EM&V Framework also references the American Evaluation Association’s Guiding Principles for Evaluators which calls for “systematic inquiry” and the need to “take into account the public interest and good …”[14]. To operationalize these principles a 2010 re-organization assigned the duties of performing independent internal evaluation and management of external evaluation activities to an organizational unit distinctly separate from those parts of the Company responsible for the management of the DSM programs.

During the first two biennia of the I-937 process (2010-2011 and 2012-2013), the Company’s internal independent evaluation team managed an external evaluation consultant (Cadmus) to deliver the independent evaluation required per WAC 480-109-120 (4). This evaluation approach revealed many and significant portfolio performance issues which, due to regulatory timing, were first recognized in Idaho Public Utilities Commission (IPUC) dockets AVU-E-13-09 and AVU-E-14-07 reviewing the regulatory prudence of Avista’s DSM programs. The IPUC Staff was deeply concerned regarding what they termed “… lapses in reliable program management”[15] and “… the Company’s loose program management”[16]. As a result of these and other adverse comments from IPUC Staff, the Company submitted reply comments stating that:

> Avista has carefully reviewed the specific suggestions of Staff regarding program management, which will be addressed in a wider overall program review that has already been initiated internally by Company senior management. This effort will include a thorough review of the Company's DSM implementation practices, as well as a renewed focus on the employment of utility best practices related to DSM program implementation and oversight.
>
> The Company looks forward to working with the Commission Staff and other interested parties in the implementation of the specific recommendations resulting from our review of internal controls and best practices. Avista will furnish a report to the Commission, its Staff and other interested stakeholders on or before July 1, 2014, describing how it has addressed concerns raised in Staff’s comments[17].

However, the remedy that Avista chose to implement in response to their recognition of inadequacies in "… internal controls and best practices" within the Company's DSM implementation practices was primarily focused upon a re-organization that eliminated the independent nature of the evaluation process in the future. This seems to be a particularly inappropriate remedy given the IPUC Staff's recognition that the independent internal evaluation team played a key role in identifying many of the deficiencies that they cited within their comments [18].

The Company's July 2014 re-organization shifted responsibility for internal evaluation and the management of external evaluation from the independent internal evaluation team created to address the 2006-2009 evaluation deficiencies back to being managed by the same individuals responsible for the delivery of the programs being evaluated. This return to a previously failed management approach compromises the commitments that Avista made within their EM&V collaborative process and the resulting EM&V Framework document and invites a repetition of same deficiencies that led to the 2010 Collaborative. Specifically, those responsible for program delivery are responsible for performing the internal evaluation assessing their own performance as well as managing the external evaluation of their performance to include:

- The selection of the current external evaluator, the compensation of the evaluator, and whether to retain that evaluator for the following biennia.
- The content of the evaluation work plan.
- The collection, screening and interpretation associated with the internal Avista data required to complete the external evaluation.
- Specifying the evaluation issues that the external evaluator will be funded to investigate and, <u>most importantly</u>, <u>having considerable and perhaps total discretion over the issues that will not be address within the evaluation</u>.

Clearly those who play key roles within the evaluation process have a high degree of self-interest in the outcome of the evaluation of their own performance. It is worth noting that, since placing the evaluation responsibilities back into the hands of those responsible for program delivery, the evaluation findings have drastically improved when compared to those that caused so much distress in recent IPUC regulatory proceedings. It would be reasonable to question the role that the elimination of an internal independent evaluation team had in achieving the sudden improvement in the evaluation.

This Commission has reviewed an early indication of the consequences of the movement away from a truly independent evaluation process. Avista's failure to provide timely updates regarding the delivery (or lack of delivery) of Opower behavioral programs is indicative of the lack of transparency that an independent evaluation process should deliver. In this specific instance the program deficiencies did eventually become known, but only after a significant and potentially costly delay. Avista responded to the discovery of the Opower hiatus with a series of remedies to address specific issues and communicated in the multi-party settlement contained within UE-151148, but there have been no revisions to the lack of a truly independent evaluation process that is the underlying source of the deficiencies. Unfortunately the Avista DSM Advisory Group lack the time and resources necessary develop an insight into the fine details of the DSM portfolio that should be provided in a timely manner by a fully independent evaluation team.

Notably absent from Avista's BCR filing was the process evaluation of Avista's re-organization contained within the original evaluation work plan communicated to the DSM Advisory Group. I was not able to find any disclosure within the filing or other public document that would indicate that the DSM Advisory Group was notified of the deletion of this portion of the original evaluation work plan. (Avista is required to inform the Advisory Group of such revisions to the evaluation plan per WAC 480-109-110 (1) (c)). Avista has been unresponsive to my question as to whether this process evaluation was completed or not. The process evaluation, if it had been performed, should have included an assessment of the degree of independence of the evaluation process under the revised organizational structure.

The evaluation that Avista has submitted in support of this BCR filing should be viewed within the context of the evaluation process leading to the reports that Avista has submitted. This docket provides the opportunity for constructive guidance regarding Avista's deviance from commitments to independent evaluation made within their EM&V Framework document and the Company's compliance with the letter and spirit of the requirements of WAC 480-109-120 (4).

Summary

These comments have outlined my concern for the distressing lack of independence within Avista's evaluation process, to include failing to fulfill the commitments made within their EM&V Framework document. The EM&V Framework document was created as Avista's response to similar past concerns regarding the legitimacy of their evaluation work product when evaluations were managed by those who were also responsible for the successful delivery of the programs under evaluation. The Company has returned to the same flawed organizational approach that failed in the past. The lack of transparency noted within UE-151148 is an early indication that this process is insufficient to meet regulatory needs. The reluctance to provide supporting work papers for this BCR filing tends to indicate that there has been no change in Avista's level of transparency since the Commission Order in UE-151148.

An open dialogue with the DSM Advisory Group and interested stakeholders may lead to the ability to craft a resolution for these issues prior to them becoming so damaging as to require another lengthy and costly collaborative effort similar to the one that the Commission ordered in 2010.

Avista's limited work papers also contain indications of discrepancies and methodological issues sufficiently large so as to cast doubt upon whether the Company achieved their acquisition target. As a consequence of these issues, and since the Company's acquisition claim exceeds the BCP target by a mere 4%[19], it is not possible to reasonably conclude if the Company has or has not met the Biennial Conservation Plan acquisition target. It would be appropriate for the Company to revisit the calculation of verified acquisition in a manner that eliminates the apparent database errors and adjusts the realization rate as necessary for these revisions.

At the same time, the Company should make available sufficient work papers to determine if they correctly calculated the TRC and Program Administrator Cost test metrics. These are two of the most important metrics necessary for reaching a finding of regulatory prudence.

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Endnotes

1. Calculated from Avista work papers.
2. Section 4.1.3 of Avista's Schedule 90 governing electric DSM operations.
3. Contained within the individual comments of Lynn Anderson and Jonathan Powell, collectively referred to as the "technical commenters" by the Idaho Public Utilities Commission, and their joint Request for Reconsideration in AVU-G-15-03.
4. Avista's 2014 Annual Conservation Report, table 2-1, page 3 and Avista's 2015 Annual Conservation Report, table 2-1, page 6.
5. The numerical detail of the Rate Impact Measure within both ACR's does include the value despite the previous representations of the cost-effectiveness methodology. Thus it seems likely that the Rate Impact Measure was correctly calculated, though this does not shed light upon the correct calculation of the TRC calculation.

6. A summary of the appropriate benefits and costs for the calculation of the Total Resource Cost test is contained in the National Action Plan for Energy Efficiency document "Understanding Cost-Effectiveness of Energy Efficiency Programs", Table 3-1 on page 3-2. The same calculation is also explained in the California Energy Commissions "California Standard Practice Manual, Economic Analysis of Demand-Side Management Programs and Projects", October 2001, page 18. The TRC test is a very close companion to the cost-effectiveness metric used by the NWPCC.
7. The following table summarizes Avista's 2014 and 2015 expenditures for electric and natural gas according to the Program Administrator Cost (PAC) tests contained within the Company's 2014 and 2015 Annual Conservation Reports.

	Electric	Natural Gas	Elec/Gas
2014	9,609,210	3,775,011	13,384,221
2015	9,949,160	3,712,845	13,662,005
'14/'15	19,558,370	7,487,856	27,046,226

Sources:

2014 values from Avista 2014 ACR, electric PAC total cost (page 5, table 2-3) and gas PAC total costs (page 7, table 2-7).
2015 values from Avista 2015 ACR, electric PAC total cost (page 8, table 2-3) and gas PAC total costs (page 10, table 2-7).

8. Page 16 of Avista's "Evaluation, Measurement and Verification Framework" document filed in response to UE-090134 / UG-090135 and UG-060518.
9. From Order 10 in Consolidated Dockets UE-090134, UG-090135 and UG-060518, section #304.
10. From Order 10 in Consolidated Dockets UE-090134, UG-090135 and UG-060518, section #305.
11. From Order 10 in Consolidated Dockets UE-090134, UG-090135 and UG-060518, section #305.
12. Page 16 of Avista's "Evaluation, Measurement and Verification Framework" document filed in response to UE-090134 / UG-090135 and UG-060518.

13. Page 6 of Avista's "Evaluation, Measurement and Verification Framework" document filed in response to UE-090134 / UG-090135 and UG-060518.
14. Available in PDF at the American Evaluation Association website at http://www.eval.org/p/cm/ld/fid=51.
15. March 6th, 2014 IPUC Staff comments in AVU-E-13-09, page 7.
16. March 6th, 2014 IPUC Staff comments in AVU-E-13-09, page 12.
17. Avista's reply comments in AVU-E-13-09 and AVU-G-13-02.
18. The IPUC Staff comments of March 6th, 2014 con AVU-E-13-09 and AVU-G-13-02 contain the following references to the role that the independent internal evaluation team had in identifying program delivery issues:

    > "Staff is concerned that these lapses in reliable program management occurred in two of the three program years included in this filing. Avista's internal evaluation team reached similar conclusions about program management for the last year of this prudency review, 2012". Page 7 of IPUC Staff comments in AVU-E-13-09 and AVU-G-13-02.
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    > "Cadmus summarized the findings of Avista's internal evaluation, which reported an "overall reliance on customer-supplied data and the need for a reliable and replicable approach to source that data". Page 7 of IPUC Staff comments in AVU-E-13-09 and AVU-G-13-02.
    >
    > "Because Cadmus and Avista's internal review found deficiencies with the engineering implementation practices, having those members check their own work is unlikely to improve accuracy". Page 8 of IPUC Staff comments in AVU-E-13-09 and AVU-G-13-02.
    >
    > "In response to 2010 evaluation, measurement and verification (EM&V) concerns, Avista created a process under which an independent internal evaluation team would review all site-specific projects with potential incentives over $50,000. This process was in place from August 2011 through December 2012 before Avista suspended it without notice". Page 7 of IPUC Staff comments in AVU-E-13-09 and AVU-G-13-02".

    These comments demonstrate the effectiveness of the independent internal evaluation team in examining program delivery practices and identifying deficiencies in a timely manner. Avista disbanded the independent evaluation team as part of their re-organization to address the deficiencies noted by the IPUC Staff.
19. Per the Company's May 31st, 2016 cover letter in Docket UE-132045.