

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-111882
DOCKET NO. UG-14 ____

DIRECT TESTIMONY OF

CHRIS D. DRAKE

REPRESENTING AVISTA CORPORATION

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I. INTRODUCTION

Q. Please state your name, employer and business address.

A. My name is Chris Drake. I am employed by Avista as Manager of Demand Side Management (DSM) Program Delivery. My business address is East 1411 Mission Avenue, Spokane, Washington.

Q. Would you please describe your education and business experience?

A. I graduated from Gonzaga University in 1992 with a Bachelor of Arts degree in Communications. I completed my Project Management certificate in 2005 from Washington State University and Gonzaga University.

I joined the Company in 1996 in the Hydro Licensing and Safety Department. In 1999 I accepted a program coordinator position and later became a program manager within the Marketing Department in 2000. In 2001 I assumed responsibilities for the majority of the residential portfolio that included prescriptive rebate offerings and later became responsible for the Low Income Weatherization program. I began my current position in August of 2010. I am responsible for design and implementation of in-house and third-party implemented program delivery, which includes Avista’s prescriptive residential and some commercial and industrial DSM program offerings.

Prior to joining Avista, I served as an Infantry officer in the United States Army from 1992 until 1996, finishing my service as the battalion logistics officer deployed to Panama.

1 **Q. What is the scope of your testimony in this proceeding?**

2 A. I will provide an overview of the Company's DSM program offerings
3 available to Washington customers in the 2012-2013 program years. I will also respond
4 to the results from the third-party evaluation, measurement and verification (EM&V)
5 including impact and process evaluations.

6 **Q. Are you sponsoring any exhibits to be introduced in this proceeding?**

7 A. No I am not.

8 **II. OVERVIEW**

9 **Q. Would you please provide a brief overview of Avista's DSM**
10 **programs?**

11 A. Yes. Avista's core objective has historically been to provide customers
12 with cost-effective energy efficiency services. Avista is in its 36th year of doing so.
13 Avista's approach is to use the most effective "mechanism" to deliver energy efficiency
14 services to customers. These mechanisms are varied and include: 1) prescriptive
15 programs (or "standard offers" such as high efficiency appliance rebates); 2) site-
16 specific or "customized" analyses at customer premises; 3) "market transformational,"
17 or regional, efforts with other utilities through NEEA; 4) low-income energy efficiency
18 services through local Community Action Agencies; 5) low-cost/no-cost advice through
19 a multi-channel communication effort; and 6) support for cost-effective appliance
20 standards and building codes. I will be describing all of these program delivery
21 mechanisms as they apply to residential, nonresidential and low-income customers later
22 in my testimony.

1 **Q. How does Avista make available its DSM program offerings and**
2 **educate customers about energy savings?**

3 A. Avista continually provides opportunities for customers to learn about
4 low cost/no cost ways to manage their home and business energy usage. The External
5 Communications department provides various outreach and campaign support for this
6 effort. We also provide tips through the Avista Utilities' website, on billboards, as well
7 as radio and television spots throughout both the heating and cooling seasons. A variety
8 of tips are provided throughout the year to help encourage efficient use of space heating
9 and cooling, appliances and electronics as well as linking to and promoting related
10 rebate opportunities as applicable. The campaign is reinforced by website tools and
11 information including a comprehensive online Home Energy Advisor where customers
12 can see a representation of how their energy is being used and sign up for savings plans
13 that fit their lifestyles. Similar broad-based techniques are used for both residential and
14 nonresidential.

15 In addition, both residential and nonresidential customers have access to direct
16 outreach activities. Avista offers energy fairs for residential customers, with emphasis
17 given to low-income customers. Direct outreach for nonresidential customers is
18 delivered through account executives and efficiency engineers who provide on-site
19 information regarding energy savings opportunities and available program information.

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III. DSM PROGRAM OVERVIEW

Q. Please describe the residential DSM program and offerings provided in 2012 through 2013.

A. The Company’s residential portfolio provides a variety of measures, through different delivery channels, offering energy efficiency improvement opportunities to Avista customers. The majority of the residential portfolio is implemented through prescriptive rebates and processed in-house by Avista. New construction and existing residential homes (up to four-plex) that heat with Avista electric or natural gas, select from a list of energy efficiency measures with rebates for consideration of installation in their homes. Customers must purchase and install the equipment or qualifying energy efficiency measure and submit a rebate application with the appropriate documentation within 90 days of installation in order to receive an incentive.

In the 2012-2013 program years Avista offered residential programs to Washington electric and/or natural gas customers shown in Illustration No.1 below:

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Illustration No. 1:

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| RESIDENTIAL |
| High Efficiency Furnace/Boiler |
| High Efficiency Heat Pump |
| Ductless Heat Pump |
| High Efficiency Variable Speed Motor |
| High Efficiency (Tank-Type) Water Heater |
| Space Heat Conversion (Direct Use of Natural Gas) |
| Water Heat Conversion (Direct Use of Natural Gas) |
| Multifamily Natural Gas Market Transformation (Direct Use of Natural Gas) |
| Ceiling, Attic, Floor, Wall Insulation |
| Window Replacement |
| Fireplace Damper |
| ENERGY STAR® Homes |
| ENERGY STAR® Appliances |
| CFL (and CFL Recycling) Promotions |
| "Second" Refrigerator/Freezer Recycling Program |
| Community Events and Workshops |
| Low-cost/no-cost information |
| On-line Home Energy Audits and Analysis |
| Simple Steps Smart Savings (CFLs and Showerheads) |
| CFL Direct Mail |

The residential programs shown above are primarily standard offerings, otherwise known as prescriptive programs.

Washington residential customers also received Avista-sponsored programs in the form of manufacturer buy-downs for compact fluorescent lighting and low-flow showerhead measures. These products have a lower retail price point at the time of purchase and are usually part of a regional, multi-state program offering.

1 **Q. Please describe the nonresidential DSM offerings provided during**
2 **this time.**

3 A. Within the nonresidential segment, programs are offered to retail electric
4 and natural gas customers through a combination of prescriptive rebates and site-
5 specific assessments. Prescriptive rebates are geared toward relatively uniform
6 measures, applications and energy savings. This delivery method reduces
7 implementation expense while simplifying participation for both customers and trade
8 allies. The site-specific offerings are available for all other efficiency measures and
9 applications. In these situations, each energy efficiency project is individually analyzed
10 based on the measure being installed and considers other variables that may be present
11 in the building or in the process operation.

12 Illustration No. 2 below includes a list of nonresidential rebates available for
13 electric and/or natural gas customers in the 2012-2013 program years:

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1 **Illustration No. 2:**2 **NONRESIDENTIAL (COMMERCIAL & INDUSTRIAL)**

3 EnergySmart Grocer
4 Power Management for PC Networks
5 Premium Efficiency Motors
6 Food Service Equipment
7 Commercial HVAC Variable Frequency Drives
8 Retro-Commissioning
9 Commercial Clothes Washers
10 Vending Machine Controllers
11 Lighting and Controls
12 Green Motors Rewind Program
13 Commercial Natural Gas HVAC
14 Commercial Windows and Insulation
15 Standby Generator Block Heater
16 Demand Controlled Ventilation
17 Steam Trap Repair/Replacement
18 LEED Certification
19 Refrigerated Warehouse Program
20 Side Stream Filtration
21 LED Traffic Signals
22 Electric to Natural Gas Water Heater Conversion Program
23 Site-Specific Offerings in Various End Uses

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25 Avista offers site-specific incentives for commercial and industrial customers
26 for custom projects. The site-specific program provides incentives on cost-effective
27 commercial and industrial energy efficiency measures that meet required simple
28 payback and measure life requirements. This is implemented through on-site audits and
29 analyses, customized project evaluation, and dual fuel incentive calculators for energy
30 savings generated specific to the customer's premise or process ("project"). Incentives
31 were offered for any measure that had greater than a one-year and less than an eight-
32 year simple payback for lighting measures or less than a thirteen-year simple payback
33 for non-lighting measures.

1 **Q. Please provide an overview of the new program launched in 2012**
2 **around commercial lighting.**

3 A. During 2012, the Company leveraged regional and national efforts to
4 accelerate the conversion of T12 fluorescent lighting fixtures to higher efficiency T8
5 fixtures. Avista's conversion program was specifically designed to target the
6 replacement of existing operational T12 fixtures. The program featured a prescriptive
7 incentive available for a limited period of time, an application process specific to the
8 needs of this program and a coordinated outreach program focusing the customers
9 attention on the need to take action by a pre-specified deadline. The program required
10 customers to submit their rebate applications between January 1, 2012 and December
11 31, 2012.

12 Customer participation significantly exceeded expectations with a total of 1,500
13 rebates issued during this time with an estimated savings of 15 million kWhs.
14 Participation was heavily weighted towards the last month of that program, indicating
15 the value of the pre-specified program deadline and further defining a potentially
16 replicable approach to replace-before-burnout efficiency opportunities in the future.

17 **Q. How does Avista address energy efficiency programs for low-income**
18 **customers?**

19 A. The residential low-income program is comprised primarily of site-
20 specific offerings delivered by local Community Action Partner (CAP) Agencies to
21 benefit income-qualified, residential customers. Avista contracts with agencies to utilize
22 existing infrastructure currently in place as a result of delivering the Federal

1 Weatherization Assistance and Low Income Home Energy Assistance Programs
2 (LIHEAP). The customer intake process includes potential consideration of
3 participation for energy assistance and other income-qualified programs that can also
4 serve as referrals for weatherization services.

5 Low-income efficiency measures are similar to measures offered under the
6 traditional residential prescriptive programs.

7 The program targeted to low-income customers is provided by the Community
8 Action Center of Whitman County, Community Action Partnership of Lewiston,
9 Opportunities Industrial Center (OIC) of Washington (Yakima), Rural Resources
10 Community Action, Spokane Neighborhood Action Program (SNAP) and Washington
11 Gorge Action Programs. The agencies receive a set amount of funding each year to
12 make energy efficiency improvements to income-qualified homes that are heated by
13 Avista electric or natural gas services. These improvements may include upgrades to
14 heating and water heating equipment, ceiling, wall and floor insulation, replacement of
15 windows, doors, and conversions from electric heating to natural gas heating.

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17 **IV. EVALUATION, MEASUREMENT AND VERIFICATION**

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19 **Q. Would you please describe the engagement of Cadmus for Avista's**
20 **evaluation, measurement, and verification (EM&V)?**

21 A. Yes. A central component of Avista's EM&V Framework and Annual
22 EM&V Plan is independent, third-party, verification of the Company's claimed
23 efficiency savings. Cadmus was retained after a competitive Request-for-Proposal

1 process to perform impact and process evaluations. Impact evaluation independently
2 estimates and/or measures realized savings at the customer premises through a variety
3 of means, including metering equipment, billing analyses and quantitative methods.
4 Process evaluation examines the potential for program delivery improvements based on
5 participant and nonparticipant surveys, among other means.

6 **Q. With regard to the impact evaluation, what is a realization rate and**
7 **how does this affect claimed savings?**

8 A. Energy efficiency savings are estimated based on a per-measure or unit
9 energy savings (UES) basis (e.g., specified commercial lighting fixture retrofits,
10 ENERGY STAR® Dishwashers, or square footage of ceiling insulation). The UES
11 accepted value is multiplied by the number of units installed. Thereafter, the number of
12 units installed is verified for accuracy and proper installation and the actual savings
13 value per measure and operation can be tested by data loggers, billing analysis and other
14 analytical means. For measures that have an RTF deemed savings, that savings would
15 not require additional impact analysis. If the realized or verified savings estimate per
16 measure are confirmed without change and if the numbers of installations, upon
17 verification, are found to be properly installed and equal to those claimed, then the
18 realization rate is 100%. If the actual savings level per measure is less or if the installed
19 units are less, then the realization rate would be less than 100%. If the actual savings
20 level per measure is more or if the installed units are more, the realization rate would be
21 higher than 100%.

1 As noted in the Cadmus' report Exhibit No. ____ (MSK-2) at page 3, Avista's
2 realization rate was 97.1% for 2012 and 2013.

3 **Q. Are there any accomplishments during 2012-2013 that you would**
4 **like to highlight?**

5 A. Yes. Avista has established processes and procedures in order to support
6 ongoing achievement of both energy savings and cost-effectiveness goals. Positive
7 savings results are the goal of implementation processes, and those results were good in
8 2012 and further improved in 2013. Realization rates continue to be high including a
9 tighter cluster of precision in 2013 representing continued focus on process
10 improvement. The implementation team of program managers and coordinators,
11 engineers, account executives and analysts worked hard to ensure reliable and
12 consistent processes, and those efforts produced positive results. From the process
13 perspective, customer satisfaction with energy efficiency programs is very high.
14 Customer satisfaction with implementation staff is also very high.

15 While existing processes and procedures have produced desired results, we
16 recognize there is room for improvement.

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1 **Q. The Cadmus’ 2012 Process Evaluation Memorandum (2012 Cadmus**
2 **Memo) dated August 2, 2013, makes a series of recommendations regarding**
3 **process improvements to Avista’s DSM programs. What is the Company’s**
4 **response to these recommendations?**

5 A. First, the purpose of a process evaluation is for continued program
6 improvement. The Company has historically reviewed and modified its DSM programs
7 for improved use of customer funds and better service to customers. Cadmus’ approach
8 is to provide real-time feedback to allow for continuous improvements and course
9 corrections as needed. It is important to note that process is the means by which positive
10 impact results are achieved. Impact results for 2012 were very good and the 2012
11 Cadmus Memo was an interim document in anticipation of the 2013 process report. I
12 address specific areas for modification to Avista’s processes later in my testimony.

13 **Q. Do you agree with Cadmus’ conclusions and recommendations**
14 **regarding the large project review?**

15 A. Yes. At page 17 of the 2012 Cadmus Memo, Cadmus notes “the 2011
16 Large Project Review process was not implemented successfully...” Specifically,
17 Cadmus had several recommendations to assist Avista with successful implementation,
18 and an effective process:

- 19 • Effectively communicate the new project review process to all key team
20 members;
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22 • Ensure there are clear protocols in place for addressing issues identified during
23 the review and spot-check;
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25 • Establish a goal for the number or percentage of projects that should undergo a
26 random spot-check;

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- Establish a reasonable goal for how long the review process should take;
 - Consider adopting a tiered approach to the review so that larger, high-risk projects receive more scrutiny before contracts are issued and incentives are paid; and
 - Consider structuring random spot-checks, or “audits,” to occur at various times of the process.

11 Consequently, the Company began establishing a new procedure and program
12 implementation to assure that full documentation was in place at various stages of
13 nonresidential site-specific projects. For example, two checklists, one prior to
14 contracting and one prior to payment, were developed and implemented mid-2013 and
15 accompany site-specific projects for documentation and review purposes. This was
16 coincident with a "roles and responsibilities" initiative to assure accountabilities will be
17 properly aligned and communication channels clearly open. These actions are intended
18 to be responsive to Cadmus’ recommendations on the Large Project Review Process.

19 **Q. Please comment on the 2012 Cadmus Memo which notes that only a**
20 **third of large projects went to the DSM analysts for review.**

21 A. The understanding of the engineering team in sending projects to the
22 DSM analysts for review was that the review process was designed for site-specific
23 projects with individual measures exceeding \$50,000. Therefore, projects proposed and
24 contracted, prior to the implementation of the large project review, prescriptive projects,
25 and projects with multiple measures that in aggregate were more than \$50,000 were
26 included in the Cadmus evaluation, but were not part of the DSM analysts review. To

1 further clarify the process, Technical Review and Administrative Review (known as
2 “Top Sheets”) were developed.

3 **Q. Please explain the Top Sheets that were introduced in 2013.**

4 A. The Top Sheet procedures accomplish multiple improvements. This
5 provides a structured documentation protocol for each project. It ensures second
6 review, at a minimum, for each project. This procedure places quality assurance at the
7 source, or beginning, of a project as a “best-practice” with the intent of increasing
8 quality control.

9 To complement the deployment of the Top Sheet procedures within the
10 implementation team for project, policy, and contract review, the DSM analysts also
11 perform an internal review of a subset of completed site-specific and prescriptive
12 projects. The projects selected for internal review are randomly selected. The
13 information resulting from the internal review is communicated back to the
14 Implementation Team to be incorporated into the continuous process improvement
15 activities.

16 **Q. The 2012 Cadmus memo highlighted a lack of clarity on prescriptive**
17 **incentives related to incentive caps with the evaluator stating, “Cadmus does not**
18 **believe the tariff language was clear enough on the topic of compliance to conclude**
19 **whether individual *prescriptive* projects should be subject to the simple payback**
20 **period and incentive cap restrictions at the time of rebate application**
21 **approval.”(page 5) How was this process improvement issue addressed?**

1 A. The Company followed processes and procedures as set forth in its DSM
2 tariff Schedule 90. Schedule 90 previously did not explicitly mention prescriptive (or
3 ‘standard offer’) programs. Prescriptive programs allow the Company to offer a fixed
4 amount for the installation of measures without the need for individualized calculation
5 of the rebate or the signature of a pre-project agreement. This approach is important to
6 the efficient marketing and administration of programs promoting small measures.
7 Prescriptive programs have been a critical element to the Avista DSM portfolio for
8 many years. The Company proposed and received approval of additional language to
9 provide greater clarity of how these programs are offered and designed in compliance
10 with tariff rules¹. The clarification was as follows:

11 Prescriptive programs are guided by the typical application of that
12 measure in accordance with the previously defined incentive structure.
13 Incentive levels for these programs are based on market conditions at the
14 time of program design and are not dependent on actual project cost
15 relative to incentive caps. Incentives shall not exceed project costs.
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17 **Q. Please provide a description of “market transformation” programs
18 and how “market transformation” programs compare with other energy efficiency
19 programs.**

20 A. Market transformation programs are different from local DSM
21 acquisition programs in that they intervene in a market for a defined period of time and
22 are then terminated with the impact of the transformed market continuing on past that
23 termination. Local DSM acquisition programs are subject to change based on qualifying
24 technologies changing, but there isn’t a built-in termination of the program. The

¹ Docket No. UE-131217

1 Company's working definition of market transformation can be generally described as
2 follows:

3 Market transformation is a specifically defined intervention intended to shift
4 the adoption of a cost-effective efficiency measure towards a higher long-
5 term trajectory for a defined period of time, after which point the
6 intervention ends, however the impact of the intervention continues.

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8 In comparison to the remainder of Avista's energy-efficiency programs:

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- 10 • Market transformation programs have an exit strategy. Generally available
11 incentive-granting programs are usually offered with the expectation of
12 continuing availability.
 - 13 • The intent of market transformation programs is to create a sustainable change
14 in the market rather than to acquire individual resources from individual
15 customers.

16 Frequently, market transformation programs are performed on a regional basis,
17 because individual utilities don't have the critical mass necessary to impact most
18 markets. Typically these regionally cooperative programs are performed as part of the
19 Northwest Energy Efficiency Alliance's (NEEA) portfolio;² however, other ad hoc
20 regional cooperative programs may also form around specific measures.

21 **Q. The 2012 Cadmus Memo notes data entry errors, and provides**
22 **recommendations for improving the database entry accuracy and processes (page**
23 **19). Do you agree with these findings?**

24 A. Yes. Specifically, on page 19 of the memo, Cadmus recommends:

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- 26 • Continue to move forward implementing the new review process to
27 identify and resolve savings calculation errors;
 - 28 • Clearly document legacy projects or market transformation projects in
SalesLogix; and

² NEEA leverages its strong regional partnerships to effect market transformation by accelerating the adoption of energy-efficient products, services and practices.

- 1 • Continue to improve data entry in SalesLogix to reduce missing or
2 incorrect fields and enhance the comprehensive dataset.
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4 The Company agrees there are improvements that should be made to data entry
5 accuracy, as well as processes and procedures around efficient and consistent use of the
6 database. Site-specific verification dates may be the same as the payment dates, for
7 example, because the verification happened the same day the check was hand delivered.

8 Avista agrees that documentation improvements within our nonresidential
9 database should be made and these improvements are in progress. Additionally, Avista
10 has recently completed Standard Operating Procedures for Washington DSM programs
11 and will continue to work towards consistent understanding of processes and
12 procedures.

13 Another area of emphasis is existing database fields that are used differently by
14 different programs and work groups. Fields will be reviewed to confirm they are a
15 value-added field for reporting and evaluation, consistently used by all work groups, or
16 eliminated if appropriate. The goal, again, is to improve documentation and data fields
17 in order to further ease reporting and evaluation.

18 Another example is the post-verification date field, which includes prescriptive
19 projects that are randomly sampled for post-verification, customers who did multiple
20 installations of similar measures and a percentage of like measures that were post-
21 verified, as well as users who documented post-verification in notes or attachments
22 rather than the data field. Avista acknowledges that we need to clarify our procedures
23 around installation verifications and ensure that documentation (e.g. pictures and dates)
24 are consistently recorded within the nonresidential database.

1 **Q. What efforts are being made to improve project documentation**
2 **related to nonresidential programs?**

3 A. Avista agrees that process improvements can be made in its
4 nonresidential project documentation as noted by Cadmus. In an effort to address this
5 finding, two checklists have been implemented prior to the contracting of projects and
6 the payment of incentives for nonresidential site-specific projects in an effort to ensure
7 consistent and comprehensive project documentation and application of the Company's
8 tariff Schedules 90 and 190 (Electric and Natural Gas Energy Efficiency Programs).

9 Cadmus recommended additional notation of "legacy" or "market
10 transformation" type projects within the database for ease of access, reporting and
11 evaluation. These classifications arose from unique circumstances where particular
12 types of measures were affected by code changes or projects requiring transition
13 management due to tariff updates. Avista will identify such items in order to
14 accommodate ease of reporting and evaluating when these unique situations occur in the
15 future.

16 **Q. Lastly, the 2012 Cadmus Memo recommends the establishment of**
17 **clear protocols to address internal communications. Has the Company taken any**
18 **action to address these recommendations?**

19 A. Yes. As of April 2014, the Company initiated a new process to improve
20 internal communications and delivery of its DSM programs, both the implementation
21 team and the Policy, Planning and Analysis team now report to the same Senior
22 Director Mr. Kevin Christie. Through Mr. Christie's leadership, the Company is

1 conducting a review of its DSM implementation practices, as well as renewing its focus
2 on the employment of utility best practices related to DSM program implementation and
3 oversight.

4 **Q. Do the findings of the Cadmus Report suggest that the energy-**
5 **efficiency programs operated by the Company are not cost effective or are**
6 **imprudently managed?**

7 A. No. Avista energy efficiency programs are cost-effective and prudently
8 managed, but we recognize there is room for improvement.

9 For over 36 years Avista has had a significant and consistent commitment to
10 energy efficiency. The Company's energy efficiency programs have been very
11 successful offering a broad array of efficiency measures. The energy efficiency program
12 is designed and implemented, with input from the Advisory Group, to provide
13 customers with the means to effectively implement meaningful energy efficiency
14 measures, in a cost-effective manner. Participating customers have benefited through
15 lower bills. Non-participating customers have benefited from the Company having
16 acquired lower cost resources in the form of DSM, as well as maintaining the energy
17 efficiency message and infrastructure for the benefit of our service territory.

18 The purpose of the impact evaluation is intended to independently verify
19 "claimed" savings based on implementation of programs over the evaluated time period.
20 The purpose of the process evaluation is to review procedures and implementation of
21 programs for continual improvement. Avista has made, and will continue to make,

1 improvements in its energy efficiency programs based on the recent, and future EM&V
2 evaluations.

3 **Q. Does that complete your pre-filed direct testimony?**

4 A. Yes, it does.