Exhibit No. ___(MSK-1T)

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-100176

DIRECT TESTIMONY OF

DR. M. SAMI KHAWAJA

REPRESENTING

THE CADMUS GROUP, INC.

I. INTRODUCTION

Q. Please state your full name, business address, and company name.

A. My name is M. Sami Khawaja, and my business address is 720 SW Washington Street, Portland, OR 97205. My employer is The Cadmus Group, Inc.

Q. On whose behalf are you presenting testimony in this proceeding?

A. The Cadmus Group was retained by Avista to serve as the third-party independent evaluator of its 2010 and 2011 DSM programs. Although the Cadmus Group contract is with Avista, and my testimony is submitted as part of the Avista filing, the content of my testimony represents our independent review of Avista's DSM programs.

Q. Have you previously submitted testimony in this proceeding?

A. No, I have not.

Q. Please describe your qualification.

A. I hold a doctorate degree in Economics and Systems Science. I have been conducting demand side management (DSM) program impact and process evaluations since 1983. I am the author of the *Electric Power Research Institute Impact Evaluation Guide*, coauthor of the *International Performance, Measurement, and Verification Protocols*, coauthor of the *Environmental Protection Agency National Action Plan for Energy Efficiency Impact Evaluation Guide*, and author of over 30 papers on evaluation issues. I have taught over 40 evaluation and cost-effectiveness workshops nationally and internationally. I am one of the Association for Energy

Service Professionals trainers. I am currently an adjunct professor of economics at Portland State University.

Q. Describe your current and previous job responsibilities.

A. For the last three years I have managed the Energy Service Division (a group of 150 energy professionals) at The Cadmus Group. In 1998 I started an energy efficiency evaluation and planning firm called Quantec. The company grew to 60 professionals and was purchased by Cadmus in 2008. Prior to that I held various positions at other consulting firms, PacifiCorp, and Portland State University.

Q. Describe your involvement in the delivery of Avista DSM programs.

A. The Cadmus Group was retained by Avista to serve as the third-party independent evaluator of its 2010 and 2011 DSM programs. As such, we conducted impact and process evaluations of the programs in the residential, non-residential, and low-income sectors. The evaluation covered both electric and gas programs.

Q. Were the evaluations prepared in accordance with industry standards?

A. Yes. All evaluations were conducted in a manner meeting industry standards and established protocols. These include: (1) International Program Measurement and Verification Protocols: Concepts and Options for Determining Energy and Water Savings Volume 1, April 2007; (2) Model Energy Efficiency Program Impact Evaluation Guide: A Resource of the National Action Plan for Energy Efficiency, November 2007; and (3) Electric Power Research Institute: Guidebook for Energy Efficiency Program Evaluation, Measurement, and Verification, 2008**.**

Q. Have you conducted similar portfolio-level evaluations before?

A. Yes. Under my supervision, Cadmus has recently completed similar portfolio-level evaluations for the following electric and gas utilities:

1. Ameren UE Missouri.
2. Ameren Illinois Utilities.
3. Questar (Utah).
4. California Public Utilities Commission.
5. DTE Energy (Michigan).
6. Consumers Energy (Michigan).
7. Salt River Project (Arizona).
8. PacifiCorp (Oregon, Washington, Idaho, and Utah).
9. Progress Energy (Carolinas).
10. PECO (Pennsylvania).
11. PPL (Pennsylvania).
12. Dayton Power & Light (Ohio).
13. Empower (Maryland).

Q. Have your evaluations elsewhere been reviewed by Public Utility Commissions or state-level evaluators?

A. Yes. In all cases listed in the previous question, the evaluations were either reviewed and approved or are in the process of being reviewed and approved by the various representative utility commissions.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present the findings of our evaluations, including a review of Avista's cost-effectiveness, for the 2010-2011 time period.

Q. Describe Cadmus' approach to conducting evaluations of DSM programs.

A. Cadmus strongly believes that the best value evaluators can provide is real-time feedback to program managers. Real-time feedback allows for continuous improvements and course corrections as needed. We have worked closely with Avista's Policy, Planning and Analysis (PPA) and Implementation teams to implement recommended corrections from the beginning. We also worked closely with the stakeholders represented in the various technical and policy groups.

Q. Describe Avista's energy efficiency internal Organization structure.

A. Avista has created two distinct groups for the purpose of delivery of DSM programs. One team is directly responsible for implementing the programs and another is responsible for policy, planning and analysis (PPA team). We reported directly to the PPA team. In my opinion, this structure is optimal for delivery of DSM programs. Our team was insulated from any natural pressure from the team whose performance was being evaluated.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring Exhibit No.__(MSK-2) that presents our 2010 and 2011 electric portfolio impact evaluation, Exhibit No.__(MSK-3) which is the 2010 gas

impact report already submitted in 2011, Exhibit No.__(MSK-4) that presents our 2011 gas impact evaluation, Exhibit No.__(MSK-5) which is the 2010 portfolio-wide process evaluation already submitted in 2011, Exhibit No.__(MSK-6) that is the 2011 portfolio-wide process evaluation, and finally, Exhibit No.__(MSK-7) which is a memo from May 1, 2012 to Avista's Technical Committee explaining the CFL Contingency Plan input components to derive final savings values.

Q. Please describe any data collection and activities associated with the evaluation.

A. The two-year evaluation utilized approximately 29 Cadmus staff and engineers and several engineers from our sub-contractor (SBW Consulting, Inc.) for the impact evaluation and 19 Cadmus staff and our survey sub-contractor Discovery Research Group for the process evaluation.

The low income impact evaluation used gas, electric and conversion measures billing analysis using the entire population of 2010 participants. The gas billing analysis was performed the first year, and electric and conversion homes were analyzed the second year so that a full year of pre- and post-data could be used. The non-residential impact evaluation performed 311 site or metering visits, individual site billing analyses, simulation modeling, and general engineering calculations. Teams of engineers spent several weeks in the field at different points in 2011 and 2012. The residential impact evaluation performed 230 verification site visits examining 332 measures, a heat pump metering study of 79 homes, a 2010 census billing analysis of gas furnaces, an ENERGY STAR Homes modeling simulation, and a weatherization billing analysis of

the census population. Additional research was undertaken on the saturation of heat pump and gas furnace combinations, and an analysis was performed on the energy and costs of the various home heating combinations. Over 1,000 phone surveys were conducted for the residential and commercial sectors to gather information for the CFL Contingency Plan savings calculation. Significant effort by Cadmus engineers and senior staff went into modifying unit energy savings (UES) values in the technical reference manual (TRM) where necessary.

The 2010 and 2011 process evaluations completed 939 residential participant, 280 residential non-participant, 448 non-residential participant, 207 non-residential non-participant, and 123 low income participant surveys. The evaluations also included 90 contractor interviews, as well as interviews with several implementation contractors, Avista PPA and implementation staff. These process evaluations studied many topics ranging from participant feedback, program management and design, trade ally input, data tracking, marketing and outreach, and a market analysis case study on non-residential lighting. Details on each of these evaluation activities and results can be found in the associated Cadmus reports for Avista's 2010-2011 Electric Portfolio Evaluation, Avista's 2011 Natural Gas Portfolio Evaluation, and Avista's 2011 Process Evaluation submitted as part of this June 1, 2012 filing, and Avista's 2010 Natural Gas Portfolio Evaluation and Avista's 2010 Process Evaluation already submitted in 2011.

Q. Please summarize the Company's electric energy efficiency-related savings for this time period.

A. As shown below in Table 1, over 124,500 MWh of energy savings were acquired through Avista's Washington DSM projects between January 1, 2010, and December 31, 2011. The electric portfolio had a realization rate of 89%.

Table 1. Expected and Evaluated Electric Savings

Sector	Project Count	Expected Savings (kWh)	Gross Verified Savings (kWh)	Realization Rate
Residential	27,749	63,340,690	52,463,788	**83%**
Nonresidential	2,602	73,583,693	69,837,841	**95%**
Low-Income	735	3,749,264	2,910,327	**78%**
Total[1]	**31,086**	**140,673,647**	**125,211,956**	**89%**

Note 1: The Project Count total does not include bulbs from the Simple Steps or CFL Contingency Participation.

Q. What are the electric energy savings by program?

A. The 2010-2011 program years' savings are summarized in Table 2 by program.

Table 2. Electric Evaluated Savings by Program

Program	Project Count	WA Savings (kWh)
Low Income	735	2,910,327
CFL Contingency	1,556,024 bulbs	27,173,793
Simple Steps, Smart Savings™	523,677 bulbs	16,401,152
Second Refrigerator and Freezer Recycling	2,939	3,062,439
ENERGY STAR® Products	14,907	2,444,129
Heating and Cooling Efficiency	3,730	2,751,306
Space and Water Conversions	321	2,463,378
Weatherization/Shell	4,717	1,447,434
Water Heating	848	100,997
ENERGY STAR® Homes	261	336,246
Residential Renewables	26	109,143
Energy Smart Grocers	469	8,758,922
Nonresidential Prescriptive	1,365	16,332,473
Nonresidential Site Specific	768	40,920,217
Total[2]	**31,086**	**125,211,956**

Note 2: The Project Count total does not include bulbs from the Simple Steps or CFL Contingency Participation.

Q. Did Avista achieve its reported electric goals for the two-year time period?

A. Yes, both the Washington Integrated Resource Plan (IRP) and I-937 goals were satisfied in the 2010-2011 biennium. Table 3 below shows I-937 goals and savings toward those goals. Details of I-937 goals are included in this testimony because it is more relevant to Washington's assessment of penalties. The Washington IRP goal was satisfied by achieving 151% of goal, and I-937 savings achieved 132% of goal. Note that the total gross savings in Table 3 do not match Table 2 because Table 3 includes NEEA savings, and I-937 limits the amount of conversion savings.

Table 3. I-937 Goals and Evaluated Savings

	Non-Conversion			Conversion			Total		
Sector	Savings Goal (MWh)	Gross Achieved (MWh)	Goal Achieved	Savings Goal (MWh)	Gross Achieved (MWh)	Goal Achieved	Savings Goal (MWh)	Gross Achieved (MWh)	Goal Achieved
DSM Programs	125,982	119,717	**132%**	2,621	2,621	**100%**	128,603	122,338	**132%**
NEEA		47,129			0			47,129	
Total	**125,982**	**166,845**	**132%**	**2,621**	**2,621**	**100%**	**128,603**	**169,467**	**132%**

Q. Please summarize the Company's natural gas energy efficiency-related savings for this time period.

A. As shown below in Table 4, over 2,499,000 therms of energy savings were acquired from the Washington DSM projects between January 1, 2010, and December 31, 2011. The gas portfolio had a realization rate of 85%.

Table 4. Expected and Evaluated Gas Savings

Sector	Project Count	Expected Savings (therms)	Gross Verified Savings (therms)	Realization Rate
Residential	20,270	1,384,356	1,055,285	**76%**
Non-Residential	763	1,424,538	1,407,540	**99%**
Low-Income	404	123,371	37,091	**30%**
Total	**21,437**	**2,932,265**	**2,499,916**	**85%**

Q. What were the natural gas energy savings by program?

A. The 2010-2011 program savings are summarized in Table 5 by program.

Table 5. Gas Evaluated Savings by Program

Program	Project Count	WA Savings (therms)
Low Income	404	37,091
ENERGY STAR Products	7,268	58,547
Heating and Cooling Efficiency	4,675	477,601
Weatherization/Shell	7,098	461,754
Water Heater Efficiency	991	9,003
ENERGY STAR Homes	238	48,379
Nonresidential Prescriptive	170	121,983
Nonresidential Site Specific	593	1,285,558
Total	**21,437**	**2,499,916**

Q. Did the company achieve its reported natural gas goals for the two-year time period?

A. No, the Washington IRP goal was not satisfied for 2010 and 2011. Table 6 below shows the IRP goals and evaluated savings.

Table 6. IRP Goals and Evaluated Gas Savings

Sector	Savings Goal (therms)	Gross Achieved (therms)	Goal Achievement
Residential	1,632,963	1,055,285	**65%**
Nonresidential	1,433,188	1,407,540	**98%**
Low-Income	115,830	37,091	**32%**
Total	**3,181,981**	**2,499,916**	**79%**

Q. Please describe your methodology on Appliance Recycling savings analysis.

A. Cadmus used methodology consistent with the Northwest Power and Conservation Council's 6th Power Plan along with data specific to Avista to determine per-unit savings for the JACO Appliance Recycling Program. Cadmus estimated unit energy consumption based on appliance characteristics obtained from Avista's program tracking database, and made adjustments to account for usage patterns, unit replacement, and naturally-occurring disposal based on participant and nonparticipant survey data.

Q. Please describe your research methodology for the CFL Contingency Plan.

A. Cadmus performed 676 residential surveys and 361 commercial surveys to evaluate the 2011 CFL Contingency Plan. The surveys, administered in two rounds, specifically informed installation rates, including breakage, burn out and removal. Residential installation hours-of-use (HOU) were derived by asking survey participants for the location of installed bulbs by room type. This room type distribution was then

applied to a recent multi-state metering study. The waste heat factor was computed using Avista specific data and the Regional Technical Forum's (RTF) method. Also consistent with the 6th Power Plan, Cadmus utilized the RTF delta watt multipliers to estimate the induced wattage reduction.

In service rates (ISR) over time were analyzed using a weighted logistic regression model, utilizing the amount of time that had elapsed since the box of bulbs was sent and the date of the survey. Cadmus determined that 39% of the residential bulbs were physically installed in 2011, and that ISR is applied to the program savings estimate for 2011 presented in this testimony. Our regression model predicts installations occurring in 2012 and 2013, but we advise additional surveys be performed to determine the actual ISR for those years. The appropriate calculation of savings needs to acknowledge when the light bulbs actually get installed. As such, 39% of the savings occurred in 2011 and we project (subject to verification through surveys) that 35% will be installed in 2012 and 18% will be installed in 2013 as shown below. Additional information on the various savings input components can be found in Exhibit No.__(MSK-7). The following table shows the residential ISR calculated for 2011 and forecasted for 2012 and 2013.

Table 7. Residential CFL Contingency ISRs

Year Installed	Residential Logistic Model
2011	39%
2012 (Forecasted)	35%
2013 (Forecasted)	18%
Total	**91%**[3]

Note 3: Total variance due to rounding.

Q. What recommendations resulted from the impact evaluation?

A. Because the low-income realization rates set forth in tables 1 (electric) and 3 (natural gas) were so low – i.e., 78% and 30% respectively, Cadmus has made certain Low income sector recommendations:

- Perform non-energy benefits quantification, possibly including economic, payment, mobility, affordability, and increased property value.
- Standardize expected savings calculations across both Washington and Idaho to help avoid discrepancies in realization rates.
- Refine expected savings calculations to account for pre-period annual consumption, square footage, and interaction effects. This will help create a more robust savings estimate and avoid over-estimates that may occur through a prescriptive application of deemed estimates.
- Track alternative heating sources. Collecting information on a customer's primary heating usage at the time of weatherization will allow for more reasonable estimates in cases where, despite being a gas customer, gas is used as a secondary heating source.

- Include high-use customers in program targeting. Targeting high-use customers may help to achieve higher energy savings for the program and aid these higher than average use customers sooner.

Non-residential sector recommendations include:

- Create a quality control system to double check all projects with savings over 300,000 kWh and 10,000 therms.
- Consider performing three- to six-month post-installation random inspections to confirm measure persistence and to potentially identify opportunities to improve performance.
- Require all internally and externally developed simulation models be saved to Avista's server and backed up.
- On large, new construction heating, ventilation and air conditioning (HVAC) projects, confirm the proposed system matches the as-built system.
- Consider developing a new construction measure to combine the interactive effects associated with all individual measures at these types of projects.
- Avista should consider adding a program for recommissioning to report energy savings achieved by resolving issues with a measure identified as non-functional during the previous year's evaluation process. Recommissioning measure costs would primarily involve utility and implementer staff costs to resolve issues and re-inspect the measure. Recommissioning measures should be evaluated as a census sample, and the *ex post* energy savings should not be extrapolated to the

overall program population. While Avista's databases house the information necessary to streamline evaluation, such as site addresses, site contact information, and measure-level details, a simpler extraction process could help improve the process.

- Avista may want to consider providing incentives for demand controlled ventilation, refrigerated warehouses, and steam trap replacements through the Site Specific program. (This 2010 recommendation was implemented by Avista for 2012.)
- Avista should consider revising the methods for calculating and tracking HVAC/lighting interactive effects.

<u>Residential sector recommendations include:</u>

- Move all clothes washer rebates to the electric program unless a large penetration of gas dryers exists. Forthcoming Residential Building Stock Assessment data should assist in this analysis.
- Include a seasonal energy efficiency ratio (SEER) requirement to increase savings for high-efficiency heat pump participation.
- Consider restricting dual fuel customers acquiring multiple rebates that have interactive effects.
- Increase measure level detail capture on applications to be included in the database. Specific additional information includes energy factors or model

numbers for appliances, baseline information for insulation, and home square footage, particularly for ENERGY STAR Homes.

Q. Have you reviewed the cost-effectiveness analysis produced by Company employee Ms. Lori Hermanson?

A. Avista's cost-effectiveness is computed using Cadmus' evaluated gross numbers. Cadmus' preliminary review of Avista's cost-effectiveness calculations showed that Avista's methods are in line with those set forth in the California Standard Practice Manual for Economic Analysis of Demand-Side Programs and Projects.

Q. Based on the process evaluation findings, were the programs delivered efficiently?

A. Yes, they were. Based on my experience, Avista's program delivery is in line with industry best practices.

Q. **What were the major findings and recommendations for the 2010 process evaluation?**

A: The major residential process findings and recommendations include:

- High ENERGY STAR market share for dishwashers signifies that high free-ridership is likely for this measure and further market transformation through rebate is unlikely.
    - Discontinue rebate for ENERGY STAR dishwashers. (This 2010 recommendation was implemented by Avista for 2012.)
- Organization of programs may be unnecessarily complex.

- Simplify and document program organization structure. Cadmus recommended grouping programs in logical clusters, in order to reduce complexity of documentation and tracking.

- Program data are tracked adequately for internal purposes, but improvements could enhance evaluability.
  - Wherever possible, Avista should develop tracking methods that support consistent analysis across programs. For example, a standardized format for customer address data across separate databases would ease database combination or integration.

- Participants learn of programs through variety of channels, with Avista representative and contractor outreach being key methods.
  - Ensure contractors have adequate information to disseminate. Avista must focus on providing trade allies with adequate and accurate information. This can be achieved by distributing updated materials regularly, holding trainings for contractors, or formalizing the trade ally network to ensure frequent communication.

- High participation levels in the Simple Steps, Smart Savings program indicate potential for program expansion.
  - Avista should consider the benefits of adding measures to the Simple Steps program.

- HVAC contractors value Avista's program, contribute significantly to program outreach, are willing to engage more directly with Avista, and would appreciate additional marketing support.
    - Avista should offer additional training and informational materials to contractors who serve the HVAC program, to ensure high-quality program information reaches customers and to encourage program promotion through contractors.

The major non-residential process findings and recommendations include:

- Documentation of program operational procedures was not easily accessible.
    - Developing a program manual, with implementation plans, operational procedures, marketing strategies, and verification protocols aggregated into a single program handbook, could help ensure execution of program plans.
- Customers felt there was a lack of information about program offerings.
    - Enhance outreach and communication efforts; develop additional printed program materials to educate customers about program opportunities; and consider holding online Webinars to assist customers with questions about program offerings.
- Avista's informal network of trade allies works well, but limited information has been documented about trade allies, the markets they serve, and their areas of specialization and qualifications.

- Provide regular trade ally communications through targeted outreach efforts, such as a Website, monthly e-mails, or a newsletter. Consider providing promotional materials to trade allies, providing program working sessions or luncheons.

- Although a marketing budget had not been allocated before 2011, Avista's nonresidential marketing and outreach strategy has worked well.
  - Conduct marketing surveys and targeted marketing research that would gather additional information about customer facilities and technology end-uses.
- Guidelines or standardized procedures for pre- and post-inspections for prescriptive programs have not been documented.
  - Consider developing a verification protocol to document pre- and post-inspection procedures for prescriptive programs and ensure data tracking for project installation.

The major low income process findings and recommendations include:

- Avista's low-income weatherization program has been successfully implemented, without significant delivery barriers, and Avista homes weatherized by Community Action Partner (CAP) agencies without Avista funding may represent opportunities to claim non-programmatic savings.
  - Work with agencies to track non-programmatic savings.

- Current participant and measure data are not being used consistently or effectively to calculate robust expected savings estimates. Agencies are willing to provide additional building and measure details for Avista to incorporate into an improved expected savings calculation.
    - Ensure consistency and accuracy of data collected for expected savings calculations; work with CAPs for more detailed data collection; and continue to communicate with agencies regarding opportunities for automating reporting.
- While state resource portfolio requirements remain unclear in regard to holding low-income weatherization to the same cost-effectiveness standards as other DSM programs, a ruling on this issue will allow Avista to consider options for changing the design and delivery of their low-income weatherization program.
    - Work with stakeholders to get clarity on whether low-income weatherization is held to the same cost-effectiveness requirements as other DSM program offerings.
- The program's energy-saving educational component appears to lack standardization across agencies; however, it appears to operate successfully, based on participant survey responses.
    - Focus energy education on actions resulting in high energy savings (e.g., reducing space heating setpoints and hot water use).

- Participants reported additional benefits (e.g., increased comfort, improved health, reduced forced mobility) beyond cost-savings associated with reductions in energy consumption.
    - Consider funding additional research of non-energy benefits, in particular those benefits that can be added to the Total Resource Cost (TRC).

Q. What were the major findings and recommendations from the 2011 process evaluation?

A. The major residential process findings and recommendations include:

- Overall participation declined from 2010 to 2011. The decrease appeared to center in programs affected by the American Recovery and Reinvestment Act (ARRA) tax credits.
    - Renew emphasis on customer outreach and mass marketing, including refreshing campaign messaging and using trade allies.
- Lower-than-expected evaluated per-unit savings may indicate a need to review program eligibility criteria. Eligibility for multiple incentives may affect measure savings when multiple HVAC measures are incented.
    - Consider additional program requirements to ensure cost-effective measures.
    - Revisit program eligibility for multiple measures where savings are interactive (particularly HVAC equipment).

- Opportunities exist for increased involvement from trade allies. Trade allies are looking for more support from Avista to provide them with program literature for their customers.
    - Produce and disseminate simple program information sheets to contractors and retailers.
- Program tracking is effective, though consistency across programs and tracking of follow-through for audit participants could be enhanced.
    - Integrate audit program tracking into the central participant rebate database.
- An assessment of residential marketing revealed that Avista is adhering to best practices for energy-efficiency marketing and outreach. However, surveys indicate nonparticipant awareness may be declining, and opportunities exist for enhancing Avista Websites.
    - Marketing recommendations include enhancing Website connectivity, continuing to pursue diverse marketing and outreach strategies, and taking advantage of the trade ally network for direct customer outreach.
- Overall program satisfaction remained high over both years, with a notable improvement in the Home Energy Audit program. This high level of satisfaction may indicate an opportunity for increasing repeat participation.
    - Continue to prioritize customer satisfaction, and take advantage of high satisfaction by targeting past participants.

The major non-residential process findings and recommendations include:

- Overall, participant surveys revealed high satisfaction, with slightly lower satisfaction by components such as program materials and scoping audits. When compared across programs, EnergySmart Grocer participants were less satisfied than prescriptive and site-specific participants for several components such as program materials, program offerings, and equipment installed. Nonparticipants that were aware of programs were less likely to be very satisfied than participants.
- Contractors are an important source of information about programs; however, contractors would like more direct contact with Avista and assistance in promoting programs to customers. In addition, lighting contractors promote the program less actively then general contractors.
    - Leverage contractor relationships with customers to communicate program offerings, expand trade ally resources through training, dedicated Website, and print materials. Continue to engage lighting contractors for the promotion of new lighting incentives and technologies.
- Awareness of Energy Independence and Security Act (EISA) standards is prevalent (86% of participants and 66% of nonparticipants). Although nonparticipating customers are more likely to have T-12s installed in their facilities, and saturation of T-12s is fairly high for all customers, both

installed and in storage, nearly two-thirds of those interviewed have no plans for T-12 replacements.

  - Consider proactive approach in communication about T-12 phase out to customers, and strategies to motivate additional T-12 removal such as lighting contractor partnership incentives, or developing a new program that extracts these T-12 bulbs from storage prior to use.

- Several individuals manage the components of the site-specific program, but no central leadership role exists to oversee planning, and ensure future goals are met cost effectively.
  - Consider establishing a central leadership position for the site-specific program.
- Expanded marketing efforts in 2011 demonstrate a best practice approach to commercial programs, including "Power Breakfasts," featuring customer testimonials and case study print advertisement.
- The participant database contains some inconsistencies that create challenges for evaluation.
  - Establish a consistent approach to data entry across all programs and staff and develop a quality assurance checklist for data entry and review.
- Pre- and post-inspection requirements and procedures need better definition and transparency.

- Establish a documented pre- and post-inspection protocol and continue strengthening feedback loops for large project performance review.

Q. Please summarize your testimony.

A. I believe the Avista evaluation addresses all measurement and verification needs in accordance with industry and regulatory standards. Impact evaluation on the 2010-2011 program years verified electric savings exceeding both IRP and I-937 goals, but the natural gas 2010-2011 program years did not achieve the IRP goal. The process evaluation revealed that the programs are run efficiently and some areas for improvement exist.

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

A. Yes, it does.