

Avista Utilities'

**2011 Evaluation,
Measurement &
Verification Annual
Plan**

November 1, 2010

2011 Evaluation, Measurement & Verification Annual Plan

Background

This 2011 Evaluation Measurement & Verification (EM&V) Annual Plan, in combination with the Avista EM&V Framework, is intended to make transparent and easily accessible the evaluation, measurement and verification that is planned to be performed in 2011 in order to adequately inform and operate energy efficiency programs at Avista. This document also provides a tentative 3-year schedule of which programs are due for review, as well as, how the budget for EM&V will be split by fuel, sector, program, jurisdiction and reviewer type. Protocols for evaluation selection criteria and Request for Proposal (RFP) selection and awarding are available upon request. This Plan is shaped and reviewed by Avista's External Energy Efficiency (Triple E) Board as described in the Washington Utilities and Transportation Commission (WUTC) Order No. 01 on Avista's Two Year Electric Targets in Docket No. UE-100176¹.

Overview

Avista's 2011 EM&V Annual Plan identifies contemplated evaluation activities for the coming year. While currently this is the intended schedule of evaluations, the schedule is subject to change based upon operational or regulatory needs. The plans are created and managed by Avista with Triple E Board input. An overview and definitions are shown in Avista's EM&V Framework, a companion document to this Plan.

Background to consider while reviewing this plan:

- Several programs are slated for evaluations that have not been evaluated in the recent past.
- The entire natural gas portfolio will be evaluated as part of the annual decoupling requirement which includes external evaluators to evaluate, measure and verify the savings acquired from natural gas efficiency programs. The intended scope for this

¹ This plan is intended to be responsive to the Washington Utilities and Transportation Commission (WUTC) directive. However, the Idaho Public Utilities Commission (IPUC) Staff and Avista have entered into a Memorandum of Understanding (MOU) regarding energy efficiency evaluation. The IPUC Staff have actively participated in this EM&V process and Avista intends to file a report responsive to the IPUC MOU in early 2011.

evaluation will include impact as well as process evaluation. Billing analysis will be applied as appropriate.

- The first two year cycle for I-937² compliance will be complete at the end of 2011, requiring an external evaluation of the electric portfolio which includes third-party evaluators to evaluate, measure and verify the savings acquired from electric efficiency programs. The intended scope for this evaluation will include impact as well as process evaluation. Billing analysis will be incorporated as appropriate.
- Although the electric evaluation will provide a realization rate on estimated savings results for 2010 and 2011 it may be initiated prior to year-end 2011 to provide adequate time for the comprehensive evaluation report and review of the report by the 2012 deadline.
- This planning document will not be construed as pre-approval by the Washington or Idaho commissions.
- The Company used its actual 2009 savings estimates and expenditures as a starting point for its EM&V planning process since the 2011 business planning process was not yet complete. Avista's DSM programs acquired over 80 million kWh and over 2 million therms across the residential and non-residential segments in 2009.
- Based upon savings, budget and incentives distributed, seven electric programs contribute 65 percent of the impacts. These electric programs are non-residential Energy Smart, non-residential prescriptive lighting, non-residential site-specific lighting, residential heating/cooling efficiency, residential CFL buy-down implemented through PECE and multi-family implemented through UCONS.
- Based upon savings, budget and incentives distributed, three natural gas programs contribute seventy-six percent of the impacts. These natural gas programs having the largest impacts are non-residential site-specific HVAC, residential heating/cooling efficiency and residential home weatherization.
- By the nature of the overall electric and natural gas DSM portfolio impact and process evaluations, all programs will be evaluated at some level. For the programs with the majority of the savings or particular aspects of interest (e.g. high level of uncertainty) it is anticipated that impact evaluations would consist of detailed impact evaluations using International Performance Measurement and Verification Protocol (IPMVP) measurement & verification approaches.
- Most of Avista's programs are on-going programs that have been in place since 1995 for electric and 2001 for natural gas. The newest of these largest programs (indicated in the previous two bullets) is Energy Smart which began late 2007.
- Avista's three-year plan, as well as the more detailed 2011 EM&V Plan, was developed to schedule impact evaluations around all programs while contributing a greater degree of impact and process emphasis around the programs attributing the

² Washington Initiative 937 was approved by voters on November 7, 2006. Codified as RCW 19.285 and WAC 480-109, the energy efficiency aspects of this law became effective on January 1, 2010.

bulk of the portfolio savings. However, in some cases, evaluations are scheduled for smaller programs due to them being newer and/or the risk of error or uncertainty around assumptions potentially being greater than those of an older, more vetted program. Market evaluations have been scheduled in various circumstances, such as regarding the saturation levels of the end uses/technologies and to provide insight into program improvement.

- A three-year schedule is included at the end of this document that includes a listing of all programs for both the electric and natural gas portfolios, 2009 key statistics such as savings and various break-down of costs, most recent evaluations along with the year the report was issued, and finally, the three year schedule of planned evaluations, the level at which the evaluation will be conducted, the evaluation type and whether the evaluation will be internal or external. This plan is a dynamic schedule that is subject to change based on the results and recommendations from the planned external evaluations/studies.

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Incremental EM&V Budget for 2011 Evaluations

The total budget amount for incremental external evaluation is estimated to be \$1,200,000. The following table identifies individual evaluation activities that are anticipated to occur in 2011 including an approximate allocation of the total incremental budget of each effort.

Individual Evaluations	Evaluation Type	Budget Allocation (WA/ID system)	Workgroup	Notes
Independent Impact/Process Evaluation of CY 2010 Natural Gas	Impact/Process	\$250,000	External Evaluator	
Independent Impact/Process Evaluation of CY 2010 Electric	Impact/Process	\$550,000	External Evaluator	
Fireplace Dampers	Impact/Market	\$0	Avista Team	
Residential Domestic Hot Water Use Study	Impact/Market	\$0	Avista Team	
Prescriptive Non-Residential Clothes Washers	Impact/Process	\$0	Avista Team	
Resource Conservation Manager Program	Process	\$0	Avista Team	
Rebate Processing Review	Process	\$0	Avista Team	
EM&V Documentation Assessment of resources and needs	Process	\$75,000	External Evaluator	
Portfolio Level Data Management	Process	\$115,000	External Evaluator	
Technical Reference Manual Evaluator	Process	\$40,000	External Evaluator	
Natural Gas Conservation Potential Assessment	Market	\$95,000	External (Global)	Contract awarded, electric CPA in progress
Oversample of NEEA Residential Building Stock Assessment	Market	~\$75,000	External (NEEA)	Uncommitted, but under consideration
Total Budget for Individual Evaluations		\$1,200,000		

The budget above does not include the cost associated with individual internal evaluation activities rather these costs are captured in the aggregate EM&V budget found in the table below.

This would include both internal labor and physical equipment shared in common with other evaluations or Avista's DSM operations.

Overall 2011 EM&V Budget

The table below captures the individual evaluations specifically identified in the previous table in aggregate and augments them with the associated expenses necessary to manage the EM&V task, perform internal EM&V evaluations, acquire physical EM&V equipment and actively participate in and fund the activities of the Regional Technical Forum (RTF).

Avista is committed, within our Washington jurisdiction, to expend between 3% and 6% of the annual DSM budget on EM&V unless evidence suggests a need to request WUTC permission to spend otherwise. This is the first annual EM&V plan in which this requirement has been in place for the full calendar year. The Company anticipates applying this commitment to a two-year cycle (consistent with Washington I-937 compliance periods).

Expense	Budget (WA/ID system)	Internal budget	External budget	WA expense	ID expense
Individual evaluations previously specified	\$1,200,000	\$ -	\$1,200,000	\$920,000	\$280,000
1.00 FTE (loaded) EM&V analyst	\$123,000	\$ 123,000		\$86,100	\$36,900
0.50 FTE (loaded) engineering support	\$65,000	\$ 65,000		\$45,500	\$19,500
0.25 FTE (loaded) program planner support	\$27,500	\$ 27,500		\$19,250	\$8,250
0.25 FTE (loaded) analyst support	\$30,750	\$ 30,750		\$21,525	\$9,225
0.10 FTE (loaded) market research support	\$11,000	\$ 11,000		\$7,700	\$3,300
Regional Technical Forum dues	\$85,000		\$ 85,000	\$59,500	\$25,500
EM&V physical equipment	\$25,000	\$ 25,000		\$17,500	\$7,500
Total	\$1,567,250	\$282,250	\$1,285,000	\$1,177,075	\$390,175
Expected total DSM budget	\$27,250,000			\$19,600,000	\$7,650,000
EM&V as a % of total DSM budget ³	5.8%			6.0%	5.1%

³ While EM&V expenditures will be directly assigned where appropriate, this illustrates the anticipated allocation of estimated EM&V expenditures.

Summary of Individual Evaluations

Contained below is a summary of each of the evaluation activities anticipated to occur within 2011, with external activities listed first. Avista's intent on internal evaluations is for evaluations to be reviewed by peers such as the RTF or an external engineer. All evaluations and savings estimates, calculations and/or assumptions will be evaluated by an independent evaluator as part of the portfolio impact and process evaluations.

EM&V Documentation Assessment (External Evaluation, Literature Review and Assessment)

Why was this selected for Evaluation?

In recognition of the increased attention to EM&V and the desire to assure that Avista continues development and maintenance of a first-rate EM&V infrastructure, it was determined that assessment of Avista's current EM&V by an external evaluation team would be valuable both to internal/external evaluators as well as program planners. Additionally, there is much secondary data in the region that could be leveraged and considered for Avista's specific conditions and service territory. Finally, this process would drive further EM&V activities based on where weakness or deficiencies arise.

Why was it chosen to be internal or external?

External evaluators, working closely with Avista staff, will conduct this project. External evaluators will be best suited to lend perspective on Avista's EM&V, compare existing material with EM&V in other regions and jurisdictions, and identify useful secondary sources to supplement current material needed.

What went into this budget approximation?

The \$75,000 cost estimate was based upon the number of hours necessary to perform this work as well as judgment about an amount that would be appropriate to spend to achieve the research objectives.

Brief Description

This EM&V activity is not specific to a particular program, but rather, focuses on assessing Avista's existing EM&V reports and materials. This activity is an important building block in the development of a comprehensive EM&V infrastructure.

Research Objectives

This project is being conducted to provide an initial, overall assessment of Avista's EM&V to facilitate continuous improvement of Avista's EM&V infrastructure by supplementing where weaknesses or deficiencies exist.

Research Approach

The project will contain the following key steps: 1) work with Avista staff to assemble Avista's existing EM&V resources; 2) develop and implement an approach for synthesizing and presenting the existing material in a manner that is useful for Avista and stakeholders. Note that this may involve summarizing existing information and that existing reports may contain confidential information requiring appropriate protection; 3) assess Avista's existing EM&V to determine whether adequate impact, market, process and other EM&V-related information is available for Avista's portfolio of programs; 4) identify secondary sources that may be useful in filling "gaps" and prepare a discussion regarding the applicability of these sources for Avista's purposes; and 5) recommend and prioritize future EM&V and/or research needs.

Timeline

Anticipated start date of January 2011 with an anticipated completion date of July 2011.

Independent Impact and Process Evaluation of Electric DSM Portfolio

Why was this selected for Evaluation?

Avista has committed to extending the independent evaluation process established for our natural gas DSM portfolio to the electric DSM portfolio as well. Thus Avista will retain an independent evaluator to review the acquisition claims for our entire electric DSM portfolio.

The scope of this evaluation will include both impact and process analyses of the entire portfolio with a relatively higher degree of emphasis on the seven largest programs identified earlier in this document. The impact evaluation will generate independent gross first-year and life-cycle kWh savings estimates, kW savings estimates and cost-effectiveness (TRC) estimates. (Net-to-gross ratios as well as a mechanism to calculate future years' net-to-gross ratios will be developed in a separate evaluation, to be completed early 2011.) The resulting estimates will yield realization rates for Avista's gross savings claims (for Washington) for the overall electric portfolio, and to the degree appropriate, for major programs within the portfolio.⁴

The selected evaluator will be tasked with developing their evaluation strategies and research plans for each program in the portfolio. A range of impact activities are anticipated, depending on total savings and level of uncertainty in *ex ante* estimates for each program. Programs that have small *ex-ante* savings and/or rely on savings values from the Regional Technical Forum (RTF) or Avista's Technical Reference Manual (TRM) will likely have impact evaluation efforts consisting of relatively simple verification of Avista prepared documentation with some participant interviews. Programs with large savings and/or uncertainty in the *ex ante* estimates will receive detailed site visits, and medium-sized programs will receive an intermediate level of analysis, likely including document review, in some cases combined with basic site visits. Some billing analysis will be incorporated as appropriate.

⁴ In compliance with the IPUC MOU, the resulting estimates coupled with the net-to-gross ratios provided by Avista's net-to-gross study, will yield realization rates for Avista's Idaho savings claims for the overall electric portfolio, and to the degree appropriate, for major programs within the portfolio.

The process evaluation will leverage work done on the EM&V documentation assessment of resources/needs and the portfolio level data management evaluation, and will include process evaluation activities (such as interviews, surveys, secondary research including a best practices review) in order to make process recommendations for the improvement of individual programs and for the portfolio overall.

Avista will provide the independent, external evaluator full access to DSM records, consistent with customer confidentiality regulations. Also to retain the independent nature of the evaluation, Avista has chosen to not recommend EM&V methodologies for the overall approach including the extrapolation of the sample to the overall portfolio results, sampling strategies or suggested program exclusion from detailed review within this process.

Why was it chosen to be internal or external?

It is a regulatory requirement that this evaluation be externally performed.

What went into this budget approximation?

Avista worked with their external EM&V consultants⁵ to develop this \$550,000 budget beginning with an approximation of the number of anticipated sites that might participate in Avista's programs in a given year as well as what portion of those were estimated to receive site visits. An approximate industry-average number of hours necessary for the appropriate level of evaluation as well as an industry-average hourly rate for that type of evaluator were applied per anticipated site visit. Additionally, some overhead and direct costs were factored into this estimate. Logically, there would be some economies of scope between the electric and natural gas portfolios. This was given consideration as well.

Brief Description

This is an overall evaluation of the electric portfolio resulting in an independent estimate of portfolio-wide energy savings. The evaluation will also develop recommendations for

⁵ Avista retained internationally recognized evaluation, measurement and verification (EM&V) expert, Steve Schiller and Dr. Chris Ann Dickerson. Steve Schiller has been responsible for many of the guidelines used in the energy efficiency industry.

process improvements based upon primary data collection, an analysis of secondary sources, and integration of the results from related studies being conducted during this program cycle such as the EM&V documentation assessment of EM&V needs and resources and data management review.

Evaluation Objectives

The final product will be an independent estimate of electric portfolio acquisition for calendar year 2010. Process evaluation will be performed, in particular, to identify potential areas for program improvement and/or innovation. Where appropriate, the findings of the impact evaluation portion of this study will be implemented into Avista's DSM operations through revisions to the Technical Reference Manual used for program implementation purposes and tracking databases.

Evaluation Approach

Methodologies, sample selection and related specifics of the evaluation are intentionally left to the discretion of the independent evaluator.

Timeline

Anticipated start date of January 2011 with an estimated completion date of July 2011.

Independent Impact and Process Evaluation of Natural Gas DSM Portfolio

Why was this selected for Evaluation?

The decoupling settlement agreement⁶ requires an audit of DSM savings including an appropriate sampling of projects to verify the work completed, savings recorded, and a review of engineering estimates used to estimate the savings. Further, the Commission's order in Docket UG-090135 requires the Company to file an EM&V Plan which "should include a bill verification⁷ analysis that examines changes in customer usage as a result of DSM programs."⁸

Pursuant to the regulatory requirements established within Avista's decoupling mechanism and to meet external expectations for independently verified portfolio acquisition estimates, Avista has chosen to annually retain an independent evaluator to evaluate the acquisition claims made for our Washington/Idaho natural gas DSM portfolio.

This evaluation will include both impact and process evaluations, similar to our electric portfolio evaluation, with greater emphasis on the three largest programs identified earlier in this document. These impact evaluations will generate gross first-year and life-cycle therms savings estimates and cost-effectiveness (TRC) estimates. (Net-to-gross ratios as well as a mechanism to calculate future years' net-to-gross ratios will be developed in a separate evaluation, to be completed early 2011.) The resulting estimates will yield realization rates for Avista's gross savings claims (for Washington) for the overall electric portfolio, and to the degree appropriate, for major programs within the portfolio.⁹

The selected evaluator will be tasked with developing their evaluation strategies and research plans for each program in the portfolio. A range of impact activities are anticipated, depending on total savings and level of uncertainty in *ex ante* estimates for

⁶ WUTC Order 04, Docket UG-060518, Settlement Agreement, page 7 (February 1, 2007).

⁷ Avista's intent is to incorporate billing analysis as appropriate.

⁸ WUTC Order 10, Dockets UE-090134, UG-090135, and UG-060518, consolidated, paragraph 305 (December 22, 2009). The draft EM&V Plan was filed on September 1, 2010 as required.

⁹ In compliance with the IPUC MOU, the resulting estimates coupled with the net-to-gross ratios provided by Avista's net-to-gross study, will yield realization rates for Avista's Idaho savings claims for the overall electric portfolio, and to the degree appropriate, for major programs within the portfolio.

each program. Programs that have small *ex-ante* savings and/or rely on savings values from the RTF or Avista's Technical Reference Manual (TRM) will likely have impact evaluation efforts consisting of relatively simple verification of Avista prepared documentation with some participant interviews. Programs with large savings and/or uncertainty in the *ex ante* estimates will receive detailed site visits, and medium-sized programs will receive an intermediate level of analysis, likely including document review, in some cases combined with basic site visits. Some billing analysis will be incorporated as appropriate.

The process evaluation will leverage work done on the EM&V documentation assessment of resources and the portfolio level data management evaluation, and will include process evaluation activities (such as interviews, surveys, secondary research including a best practices review) in order to make process recommendations for the improvement of individual programs and for the portfolio overall.

Avista will provide the independent, external evaluator full access to DSM records, consistent with customer confidentiality requirements. Also to retain the independent nature of the evaluation, Avista has chosen to not recommend EM&V methodologies, or methodologies for the extrapolation of the sample to the overall portfolio results, sampling strategies or suggested program exclusion from detailed review within this process.

Why was it chosen to be internal or external?

It is a regulatory requirement that this evaluation be externally performed.

What went into this budget approximation?

Avista worked with their external EM&V consultants¹⁰ to develop this \$250,000 budget beginning with an approximation of the number of anticipated sites that might participate in DSM programs in a given year as well as what portion were estimated to receive site visits. An industry-average number of hours necessary for the appropriate level of

¹⁰ Avista retained internationally recognized evaluation, measurement and verification (EM&V) expert, Steve Schiller and Dr. Chris Ann Dickerson. Steve Schiller has been responsible for many of the guidelines used in the energy efficiency industry.

evaluation as well as the industry-average hourly rate for that type of evaluator were applied per anticipated site visit. Additionally, some overhead and direct costs were factored into this estimate. Logically, there would be some economies of scope between the electric and natural gas portfolios. This was given consideration as well.

Brief Description

This is an overall evaluation of the natural gas portfolio resulting in an independent estimate of portfolio-wide energy savings. The evaluation will also develop recommendations for process improvements based upon primary data collection, an analysis of secondary sources, and integration of the results from related studies being conducted during this program cycle such as the EM&V documentation assessment of EM&V needs and resources and data management review.

Evaluation Objectives

The final product will be an independent estimate of natural gas portfolio acquisition for calendar year 2010. Process evaluation will be performed, in particular, to identify potential areas for program improvement and/or innovation. Where appropriate, the findings of the impact evaluation portion of this study will be implemented into Avista's DSM operations through revisions to the Technical Reference Manual used for program implementation purposes and tracking databases.

Evaluation Approach

Methodologies, sample selection and related specifics of the evaluation are intentionally left to the independent verifier.

Timeline

Anticipated start date of January 2011 with an estimated completion date of May 2011.

Portfolio Level Data Management Evaluation (External Process Evaluation)

Why was this selected for Evaluation?

The Company committed to an independent, third-party evaluation of our data tracking systems and data strategy to improve and enhance data accuracy. This could possibly include the implementation of a new, comprehensive DSM application that would incorporate everything from rebate processing, to program design and tracking of EM&V activities.

Why was it chosen to be internal or external?

Avista is using an external, third party evaluator in response to stakeholder concern.

What went into this budget approximation?

The \$115,000 budget estimate was based upon the anticipated number of billable hours required for consultants with the appropriate skill sets and expertise. The implementation of a new system is not included in this budgeted amount. Should the Company decide to incorporate a new system or application, this amount would be incremental to the budget outlined within this document.

Brief Program Description

Avista's DSM budget for 2011 is anticipated to be nearly \$30 million and is expected to involve approximately 40,000 customers. A review of alternative means, including comprehensive data management systems is timely and appropriate.

Evaluation Objectives

The program will begin with a comprehensive assessment of data management best practices as well as a review of the Company's current data management practices. The study will provide recommendations for the acceptable level of data quality that should be maintained by Avista given the type of programs being offered, the quantity of rebates being processed and the comparative cost of compromises in data quality and the cost of improving data quality. Recommendations regarding the implementation of a comprehensive DSM application or system that would incorporate everything from rebate processing, to program design and tracking of EM&V activities could also be included.

Evaluation Approach

The evaluation approach will be based primarily upon consultant recommendations for effectively meeting the evaluation objectives.

Timeline

Anticipated start date of March 2011 with an estimated completion by the Fall 2011.

Technical Reference Manual Evaluation (External Process Evaluation)

Why was this selected for Evaluation?

During the development of the Company's EM&V Framework, it became evident that the creation and maintenance of a Technical Reference Manual (TRM) could be useful for both internal and external evaluators. The EM&V Collaborative requested that this manual be externally evaluated upon completion.

Why was it chosen to be internal or external?

The implementation of a TRM for use by internal/external evaluators is a recent addition for Avista. External evaluation of the assumptions within the TRM can provide increased value to the resulting product.

What went into this budget approximation?

Avista's external EM&V experts have contributed to the development of this manual and provided the \$40,000 estimate for independent review based upon their experience and technical knowledge.

Brief Description

This describes the deemed savings values and simple savings calculation as well as underlying assumptions for use in the implementation of Avista programs. This tool consolidates into one document the technical review of savings values for all programs for the purposes of transparency and ease of updating. This evaluation will validate these savings estimates and calculations and make recommendations for improvement.

Evaluation Objectives

There are several objectives for this independent TRM evaluation including:

- Are the savings values for all measures currently offered calculated correctly and consistently?
- Are the savings estimates used in the calculations reasonable and are they consistent with the RTF where appropriate?
- Do significant issues exist?
- What recommendations can be offered to address these issues?
- Are recommendations on alternative values based on secondary sources?
- Can you identify research that needs to be conducted either by program managers and/or marketing to improve the savings values and/or underlying assumptions?
- Can you identify fieldwork or other research that the evaluation team should do to improve the savings values?

Evaluation Approach

This manual of Avista's present savings values, calculation methods and assumptions will be provided to an independent evaluator to critically evaluate the process around how these savings estimates and simple calculators were developed as well as their reasonableness and validity. Finally, the evaluator will make recommendations to enhance as appropriate.

Timeline

TRM external review to be completed by Spring 2011.

Natural Gas Conservation Potential Assessment (External Market Evaluation)

Why was this selected for Evaluation?

An external Conservation Potential Assessment (CPA) was identified as an action item as part of previous electric and natural gas Integrate Resource Plan filings. The electric CPA is underway and is anticipated to be completed by the end of 2010. The natural gas CPA will occur in 2011. Avista has historically performed the evaluation leading to the development of a conservation supply curve internally in the past.

Why was it chosen to be internal or external?

Given the relationship of this process to Avista's natural gas decoupling and I-937 process, an external evaluation performed for the IRPs is appropriate.

In 2010 an RFP was issued and Global Energy Partners were determined to be the successful bidder.

What went into this budget approximation?

The total budget for the electric and natural gas CPA's is \$271,000. It is estimated that approximately \$95,000 of that amount will be expended for the natural gas CPA.

Brief Description

The CPA is an evaluation of a multitude of potential efficiency measures. (For example, Avista typically evaluated over 3,000 measures as part of internal evaluations.) Cost characteristics, energy savings and market potentials are examined for each measure. Based upon these factors a conservation supply curve is constructed, cost-effective measures are selected and an estimate of aggregate portfolio acquisition is completed. This information is subsequently evaluated in greater detail and incorporated into operational planning as part of the annual DSM business plan.

Evaluation Objectives

The objective is to establish a foundation for the identification of the cost-effective resource potential within Avista's service territory and to provide sufficient detail on those measures likely to be cost-effective to support a DSM business plan.

Evaluation Approach

Global will be relying upon a combination of pre-existing local and regional research regarding efficiency measures, Avista-specific costs and pre-existing market research coupled with census data to develop the conservation supply curve. The use of pre-existing information will be supplemented with Avista-specific data and expertise supplemented with Global research as necessary.

Timeline

Anticipated start date of January 2011 with an anticipated completion of March 2011.

Oversample of NEEA Residential Building Stock Assessment (External Market Evaluation)

Why was this selected for Evaluation?

Avista has the opportunity to fund an oversample of an end-use inventory project being executed by the Northwest Energy Efficiency Alliance (NEEA). The oversample would provide Avista with greater knowledge of residential end-use saturations that would be useful for future estimates of baseline scenarios for DSM operations, integrated resource planning and DSM business planning.

Why was it chosen to be internal or external?

This is an effort already initiated by NEEA. However, there are cost-savings built into leveraging the current work being planned and executed by NEEA, as opposed to Avista initiating a separate study on its own.

What went into this budget approximation?

Ecotope has been chosen to do the residential building stock assessment. Early cost estimates additional single-family and manufactured home site to be \$1,050 each and multifamily sites to be \$1,650 each. Based upon these early estimates and an approximate doubling of the current sample, Avista estimates that this will cost an estimated \$75,000. This does not include phone surveys and fixed costs such as analysis and reporting. The oversample opportunity is under evaluation and Avista is currently evaluating whether to participate in this oversampling effort.

Brief Program Description

The Northwest Energy Efficiency Alliance conducts regional market transformation programs to increase or accelerate the adoption of energy-efficient products or services. Their work requires a high degree of knowledge of end-use inventories to establish baselines and to evaluate potential market transformation ventures. Consequently they perform significant market research at a regional level, including a sampling of Avista's service territory. Since Avista is approximately 5.4% of the residential population of the NEEA market, a fairly small Avista sample would be incorporated into the overall regional survey. Avista has the opportunity to increase that sample by funding the

incremental cost of additional survey work. This would provide Avista with a better analysis of the end-use inventory within our own unique service territory.

Evaluation Objectives

The objective is to establish a sound foundation for future conservation potential assessments, baseline energy use assumptions and program planning.

Evaluation Approach

The NEEA effort is a survey augmented by field verification and potentially sub-metering.

Timeline

At the time of this submittal, not enough information was available to determine if Avista would participate in this effort. Avista is likely to make a decision regarding participation by year end. If Avista chooses to participate in an oversample of our service territory, the results will begin becoming available in 2011. A full usable set of data will not be available for several years after that point.

Fireplace Dampers (Internal Market and Impact Evaluation)

Why was this selected for Evaluation?

Prior independent (Ecotope, 2009) natural gas verification recommended the discontinuance of this measure if the claimed savings could not be more rigorously verified. Since Avista feels there is significant technical, economic and acquirable potential for the implementation of this measure, this measure has been scheduled for impact and market evaluation. If the measure proves to have sufficient potential, this measure will be continued and proposed to the RTF for inclusion as one of their deemed measures. Otherwise, this measure will be discontinued.

Why was it chosen to be internal or external?

An evaluation approach that is fairly intensive in the ongoing collection of field measurements can establish energy savings estimates and their determinants. Such an approach would be prohibitively costly if an external evaluator was selected, particularly given the low levels of customer adoption of this measure in the past, thus this would be performed internally.

What went into this budget approximation?

The budget is based upon the expectation that the evaluation will be a billing analysis and/or sub-metering (using existing equipment). Based upon this data, an alternative methodology involving the installation of dampers in a representative sample of homes may be required to more definitively determine the energy savings.

Brief Program Description

The program provides a \$100 incentive for the installation of a damper at the top of a fireplace. The top damper substantially decreases infiltration through a structure within the house specifically designed for efficiently exhausting internal air (e.g. a chimney). National research indicates that bottom dampers are typically poorly designed and constructed to prevent drawing internal air out of the home. It is also known, anecdotally, that a considerable number of residential customers fail to properly close bottom dampers.

Evaluation Objectives

An analysis will determine if sufficient potential exists for this measure to justify the resource expenditure associated with the continuance of this program. The objective of the impact evaluation would be to obtain an estimate of the energy savings of a top damper system under realistic residential applications including consideration of behavioral aspects, system HVAC efficiency, airflows within the home and size of the home. The following questions would be addressed during this evaluation:

- Is there any literature regarding fireplace dampers and their savings?
- What is the potential for this measure?
- Can savings claims be substantiated under realistic residential applications?
- What is the impact of behavioral considerations such as take-back?
- Are there non-energy benefits (e.g. draft reduction, decreased chimney maintenance, etc) associated with dampers? If so, can these be quantified?

Evaluation Approach

The evaluation approach will begin with a comprehensive literature review for secondary data related to this measure. Preliminary discussions of the methodology have focused upon billing analysis of units installed in the past and/or sub-metering of prospective installations. A higher cost approach requiring greater lead time under discussion is the pre- and post-installation sub-metering of dampers installed at selected homes. A lower cost methodology may be initially employed with higher cost approaches being considered only if the measure proves to be cost-effective and widely applicable in the preliminary analysis.

Timeline

Anticipated start date of March 2011 with an estimated completion date of December 2011.

Residential Domestic Hot Water Use Study (Internal Impact and Market Evaluation)

Why was this selected for Evaluation?

High-efficiency residential water heaters are one of the cornerstone residential measures within that portfolio, attracting not only a continuing interest of customers but establishing a foundation for trade ally relationships. Typically residential water heating is the second largest energy user within the home. Despite these attributes, the program can be only marginally cost-effective under a variety of circumstances, e.g. in homes with fewer occupants, where water heaters are in heated space etc. There are some prospects for improved water heating technology which, though currently uneconomic, may become economic with increases in customer demand and economies of scale. These technologies are under active consideration as a regional market transformation venture. It is well recognized that market transformation strategies will depend largely upon the willingness of local utilities to provide customer incentives.

Why was it chosen to be internal or external?

The approaches most likely to be employed will be fairly intensive of ongoing field measurements. Thus an internal evaluation will be considerably less costly.

What went into this budget approximation?

The budget is based upon the assumption that pre-existing Avista equipment can be used to complete the pre- and post-metering approaches likely to be used in completing this evaluation. Labor hours are incorporated into the annual Avista budget for EM&V support.

Brief Program Description

The prescriptive residential high-efficiency water heater program provides a \$50 incentive for the installation of an electric water heater (tank type) of 0.93 EF or greater, a 50 gallon natural gas water heater (tank type) of 0.60 EF or greater, a 40 gallon natural gas water heater (tank type) of 0.62 EF or greater.

Evaluation Objectives

The objective is to verify the energy efficiency savings of electric and natural gas water heaters participating in Avista's program. These verified savings will modify pre-project estimates and will improve the accuracy of Avista's *ex ante* savings estimates as well as the cost-effectiveness of the program.

Evaluation Approach

The approach is to determine the energy savings and major determinants of energy savings through the sub-metering of representative water heaters and potentially the measurement of water flow, ambient air temperature, location of the water heater and other relevant characteristics.

Timeline

Anticipated start date of June 2011 with an estimated end date of Fall 2011.

Resource Conservation Manager (RCM), (Internal Process Evaluation)

Why was this selected for Evaluation?

Avista offers two approaches to the Resource Conservation Manager (RCM) program. The Shared RCM program is a new offering within Avista's portfolio fielded in cooperation with the Washington Energy Extension and co-funded with American Recovery and Reinvestment Act (ARRA) funds. This is targeted for governmental entities too small to fully employ a single RCM. Additionally Avista also offers co-funding and technical assistance for the development of RCM positions within other appropriate facilities.

Why was it chosen to be internal or external?

Avista's relationship and knowledge of the customer and their facilities are potentially critical to this evaluation.

What went into this budget approximation?

The budget is based upon the hours of internal Avista labor expected to be charged to EM&V accounts for the completion of this evaluation.

Brief Program Description

This program would qualify customers to participate in cooperative agreements to share RCM services under circumstances where those services were previously not employed. The customers and facilities targeted have been evaluated for their potential energy savings and the cost-effectiveness of the application of RCM services to the management of that usage.

Evaluation Objectives

The evaluation is expected to capture the following information, subject to revisions that may be made as the evaluation plan is further developed:

- Is timely information being collected to perform EM&V, to include appropriate baseline data?
- Are costs being captured and allocated correctly?
- What amount of time is the RCM spending on electrical and natural gas savings?
- The actionable information will result in better documentation in which to verify savings as well as improve the program implementation.

Evaluation Approach

The evaluation will begin with review of related literature and secondary data regarding similar programs. The process by which the RCM evaluates document and implements energy efficiency measures will be observed and verified to match the initial program requirements. A critical evaluation of those processes and the collected data will occur to assess the potential for EM&V and acquisition improvements.

Timeline

Anticipated start date of February 2011 with an estimated completion of Fall 2011.

Prescriptive Non-Residential Clothes Washers (Internal Impact & Process Evaluation)

Why was this selected for Evaluation?

The Prescriptive Non-residential clothes washer program was selected for process evaluation because it is a relatively newer offering and there is value to reviewing the program implementation as part of a continuing improvement process. The impact analysis is being performed to verify that the national savings figures for this measure from Energy Star and Consortium for Energy Efficiency (CEE) is appropriate for our service territory.

Why was it chosen to be internal or external?

Significant field measurements may be required. Thus an internal evaluation would be considerably less costly than an external analysis and difficult to justify given the small size of the program.

What went into this budget approximation?

Avista internal labor has been incorporated into the overall support requirements for the EM&V effort. It is not anticipated that any new physical equipment will be required to complete the evaluation.

Brief Program Description

In October 2008, we launched a prescriptive clothes washer program. Commercial clothes washers that are certified Energy Star or CEE are eligible for a rebate upon installation. Savings and rebate amounts were determined based on information from Energy Star and CEE regarding savings over standard models. Having a streamlined prescriptive approach allows us to target Laundromats and multi-family laundry facilities which are typically difficult to handle through our site specific program. This program is marketed through account executives, vendors, contractors and other outreach material. There is an estimated non-energy benefit (NEB) of \$364 per unit associated with these measures for water savings and detergent costs.

Evaluation Objectives

This impact/process evaluation will determine the realization rate of the program for both natural gas and electric fuels and verify non-energy benefit estimates. In addition to

program impacts, the program implementation will be examined for improved delivery methods and documentation. The evaluation is expected to answer the following questions:

- What is the typical washer being replaced? What is the typical run time?
- What is the typical cost and measure life of a washer?
- Are commercial customers aware of the program?
- Are the program requirements clear to the customer?

The actionable information will result in an accurate claimed savings as well as increased resource acquisition due to improved program presentation and customer awareness.

Evaluation Approach

It is expected that a survey tool and selective sub-metering will be used to evaluate impact and process characteristics of the program.

Timeline

Market/process study details anticipated to be completed March 2011.

Rebate Processing Evaluation (Internal Process Evaluation)

Why was this selected for Evaluation?

The substantial ramp-up of the residential program has led to a commensurate increase in the number of prescriptive rebates being processed. Rebate processing has been a stakeholder concern. Therefore Avista initiated a review earlier 2010 to determine the potential for increasing accuracy and decreasing the cost associated with processing rebates in the quantities currently experienced. Opportunities to increase automation of the process are continuing to be investigated and estimates of changes to the processing cost are under review.

Why was it chosen to be internal or external?

An in-process internal evaluation has been underway since early 2010. Process improvements and processing automations will also be reviewed as part of the Portfolio Level Data Management evaluation.

What went into this budget approximation?

The costs are based upon an extrapolation of actual internal Avista labor expended on this task to date and consideration of the remaining work planned to complete the evaluation.

Brief Program Description

Avista's prescriptive programs generated approximately 32,000 rebates in 2009. These are predominantly residential rebate programs. Though the expiration of federal tax credits is likely to reduce the quantity of these rebates in 2011 and beyond, there is a continuing high interest in efficiency measures provided through prescriptive programs.

Evaluation Objectives

The objective is to determine if there are cost-effective alternatives to increase data accuracy, speed of processing and possible reduction of costs through employment of automated rebate processing.

Evaluation Approach

A comprehensive review of the process is underway by a team includes DSM program managers, customer service specialists, information systems specialists and other key individuals.

Timeline

Process review will be complete and summarized by early 2011. Some system improvements are being prioritized and are anticipated to be implemented by late Spring 2011.

Schedule of Evaluations and Related Activities

The Company has planned, in a more general manner, expected EM&V activities beyond 2011. Please refer to Appendix A for the three-year schedule of EM&V activities. This is the current plan of EM&V activities but is subject to change based on operational necessity and/or recommendations resulting from our 2011 scheduled studies.

Request for Proposal on 2011 External EM&V Activities

Currently, the Company's intent is to bid the 2011 external EM&V activities as one, comprehensive RFP with dates for various deliverables based on our specific regulatory requirements (e.g. decoupling filing, I-937 filings, etc). The Company feels that combining all of these activities into one RFP will attract not only more bidders but the most-qualified. For smaller evaluators that may not have expertise in all applicable areas, we would expect that they would partner with the appropriate consultants to meet the objectives of the RFP.