

APPENDIX B

2012 Evaluation, Measurement & Verification Plan

Avista Utilities'

2012 Evaluation,
Measurement &
Verification Annual
Plan

November 1, 2011

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2012 Evaluation, Measurement & Verification Annual Plan

Background

This 2012 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 2012 in order to adequately inform and operate energy efficiency programs at Avista. This evaluation effort is not only retrospective in order to verify savings estimates of 2011 programs but also prospective to be used for program design and improved marketing of programs. This document also provides the EM&V budget split by fuel, sector, program, jurisdiction and reviewer type.

Overview

Avista's 2012 EM&V Annual Plan identifies contemplated evaluation activities for the coming year on the 2011 portfolio. The components of this Plan were presented to Avista's Advisory Group at the October 18-19th Advisory Group meeting. An overview and definitions are shown in Avista's EM&V Framework, a companion document to this Plan.

Key aspects of this plan:

- The Company has moved to a portfolio approach for Impact and Process Analyses, insuring a comprehensive annual review of all programs, to the degree necessary, based on the magnitude of savings and uncertainty of the related unit energy savings.
- Portfolio impact and process evaluations will be conducted for all electric and natural gas programs at some level. For programs with the majority of the savings or particular aspects of interest (e.g. high level of uncertainty) impact evaluations will consist of detailed impact evaluations using approaches from the International Performance Measurement and Verification Protocol (IPMVP) and other industry-standard techniques for measuring and estimating program-level impacts.
- The entire natural gas portfolio will be evaluated as part of the annual decoupling requirement. External evaluators will evaluate measures and verify the savings acquired from natural gas efficiency programs. The intended scope for this

- evaluation will include impact as well as process evaluation. Billing analysis will be applied as appropriate.
- The second two year cycle for I-937¹ compliance will be complete at the end of 2013, requiring an external evaluation of the electric portfolio. Third-party evaluators will evaluate, measure and verify the savings acquired from electric efficiency programs during the 2012-2013 biennium. The intended scope for this evaluation will include impact as well as process evaluation. Billing analysis will be incorporated as appropriate.
 - The evaluation of 2012 and 2013 electric programs will be initiated prior to the end of 2013 in order to meet the 2014 filing deadline.
 - This planning document will not be construed as pre-approval by the Washington or Idaho commissions.
 - Evaluation resources will be focused on key programs:
 - Based upon 2011 savings and the 2012 Business Plan savings, budget and incentives, seven electric programs contribute 80 percent of the impacts. These electric programs are non-residential Energy Smart, non-residential prescriptive and site-specific lighting, non-residential site-specific HVAC, residential heating/cooling efficiency, residential lighting (which is mostly Simple Steps Smart Savings) and residential weatherization.
 - Based upon 2011 and the 2012 Business Plan savings, budget and incentives, four natural gas programs contribute seventy-three percent of the impacts. These natural gas programs having the largest impacts are non-residential site-specific HVAC, non-residential site-specific shell, residential heating/cooling efficiency and residential home weatherization.
 - Most of Avista's programs are on-going programs that have been in place since 1995 for electric and 2001 for natural gas. In 2011, new offerings were launched including the CFL distribution for residential and small commercial customers and the non-residential prescriptive stand-by generator block heater pilot program. In addition, several programs were modified from prescriptive to site-specific due to variability of savings per project and will therefore, be evaluated as part of site-specific. These programs include demand-controlled ventilation, refrigerated warehouses, side-stream filtration, appliance, vending machine controls, renewable generation and building re-commissioning. This recommendation resulted from recent evaluation results from Cadmus.
 - Avista's 2012 EM&V Plan will include market research on non-residential programs.

¹ 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.

Incremental EM&V Budget for 2012 Evaluations

The total budget for incremental external evaluation is estimated to be \$1.2 million. 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
Independent Impact/Process Evaluation of CY 2011 Natural Gas	Impact/Process	\$200,000	External Evaluator (Cadmus)
Independent Impact/Process Evaluation of CY 2011 Electric	Impact/Process	\$690,000	External Evaluator (Cadmus)
Evaluation of Non-Res Calculators for consistency with TRM	Process	\$20,000	External Evaluator (Cadmus)
CFL Mail Distribution Impact/Process	Impact	\$45,000	External Evaluator (Cadmus)
Heat Pump Furnace Analysis	Impact	\$15,000	External Evaluator (Cadmus)
Non-Participant Spillover Quantification for Res/Non-Res	Impact	\$30,000	External Evaluator (Cadmus)
Non-Res Marketing Research	Market	\$17,000	External Evaluator (Cadmus)
Natural Gas Conservation Potential Assessment	Market	\$150,000	External (Global)
Total Budget for Individual Evaluations		\$1,167,000	

The budget above does not include the cost associated with individual internal evaluation-related activities; rather these costs are captured in the aggregate EM&V budget found in the table below. This includes both internal labor and physical equipment shared in common with other evaluations or Avista's DSM operations.

Overall 2012 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 EM&V activities, perform internal EM&V evaluations, acquire physical EM&V equipment and actively participate in and fund the activities of the Regional Technical Forum (RTF).

Expense	Budget (WA/ID system)	Internal budget	External budget	WA expense	ID expense
Individual evaluations previously specified	\$1,167,000		\$1,167,000	\$933,600	\$233,400
1.2 FTE (loaded) EM&V analyst/engineer	\$217,029	\$217,029		\$152,274	\$64,755
EM&V Consulting	\$30,000		\$30,000	\$21,000	\$9,000
Regional Technical Forum dues	\$85,000		\$85,000	\$59,500	\$25,500
EM&V physical equipment	\$25,000	\$25,000		\$17,000	\$8,000
Total	\$1,524,029	\$242,029	\$1,282,000	\$1,183,374	\$340,655
Expected total DSM budget	\$23,193,567			\$16,690,752	\$6,502,815
EM&V as a % of total DSM budget ²	6.6%			7.1%	5.2%

EM&V Contract with The Cadmus Group

A “mega” RFP for EM&V on 2010-2011 electric and natural gas DSM programs was issued in November 2010. The Cadmus Group was selected and retained to complete this body of work. The findings from the 2010 Impact and Process evaluations were intended to inform the Impact and Process work plan to evaluate the 2011 programs. Some of these recommendations were considered by Avista and prioritized for the 2012 program year. Avista elected to leverage the existing EM&V contract and infrastructure to complete these tasks. Avista worked with The Cadmus Group to establish reasonable costs for each item.

The components of this work plan, including the individual evaluation activities delineated in the budget above and discussed in more detail later within this plan, were presented to Avista’s Advisory Group on October 18 and 19th, 2011.

² While EM&V expenditures will be directly assigned where appropriate, this illustrates the anticipated allocation of estimated EM&V expenditures.

Internal EM&V Activities

Within its DSM portfolio, Avista incorporates Evaluation, Measurement and Verification (EM&V) activities as a key process to validate and report energy savings related to its measures and programs. EM&V protocols serve to represent the comprehensive analyses and assessments necessary to supply salient information to stakeholders that adequately determines the prudence of Avista's DSM Programs. EM&V includes Impact, Process, Market and Cost Test analyses and taken as a whole are analogous with other industry standard terms such as Portfolio Evaluation or Program Evaluation.

A primary responsibility of Avista's EM&V resources within its Policy, Planning & Analysis team is to support the ongoing activities of the independent third-party EM&V consultants and evaluators performing the various analyses required to substantiate the conservation acquisition. The 2012 EM&V budget provides for independent, third-party EM&V services that provide a comprehensive portfolio evaluation. EM&V results are intended to verify the level at which claimed energy savings have occurred, evaluate the existing internal processes, and suggest improvements to the program and ongoing EM&V processes. These findings are reported in the Annual Report on Conservation Acquisition and include analysis of both program and process impacts for the specific programs reviewed.

In addition to the external evaluations, Avista EM&V resources support internal evaluations of specific measures and programs. The results of these activities are used to inform program management decisions, evaluate program effectiveness and investigate program metrics. These activities would serve to enhance the Company's knowledge base relating to its programs and energy efficiency offerings throughout its service territory.

To support planning and reporting requirements, several EM&V documents are maintained and published. These include the Avista EM&V Framework, an annual EM&V Plan and EM&V chapters within other DSM publications. Program-specific EM&V plans are created as required. These documents are reviewed and updated as necessary, serving to improve the processes and protocols for energy efficiency measurement, evaluation and verification. In addition, the

development of the Technical Reference Manual (TRM) continues and will be managed as a principal planning and reporting mechanism relative to individual prescriptive measures and their respective unit energy savings (UES).

To support new measure development, an EM&V plan is developed for each new program and will periodically be updated as informed by evaluation findings³. Additional EM&V efforts will be applied to evaluating emerging technologies and applications in consideration of potential inclusion in the Company's energy efficiency portfolio. Avista may spend up to 10 percent of its conservation budget on programs whose savings impact has not yet been measured, if the overall portfolio of conservation passes the Total Resource Cost test as modified by the Council. These programs may include educational, behavior change, and pilot projects. Specific activities can include product and application document reviews, development of Measurement and Verification Plans, field studies, data collection, statistical analysis, and solicitation of user feedback.

Avista and its customers benefit from regional activities and resources in the energy efficiency and conservation domain. To engage with and contribute to the regional efforts, Avista EM&V staff has membership on the Regional Technical Forum (RTF) that serves as an advisory committee to the Northwest Power and Conservation Council. The RTF is a primary source of information relating to the standardization of energy savings and measurement processes for electric applications in the northwest. This knowledge base provides valuation of energy efficiency metrics and references that are suitable for consideration in Avista's acquisition planning and reporting.

Additional regional activities include engagement with other Northwest utilities and the Northwest Energy Efficiency Alliance (NEEA) in various pilot projects or subcommittee

³ In 2010, the Policy, Planning and Analysis team was created within Avista's DSM organization to provide independent analysis and EM&V support and services for the implementation and evaluation of DSM programs.

evaluations. A portion of the energy efficiency savings acquired within the region through NEEA's efforts are attributed to Avista's portfolio. Plans for 2012 include participation in NEEA's Regional Building Stock Assessment with coordinated data collection activities.

Avista's commitment to the critical role of EM&V is supported by the Company's continued focus on the development of best practices for its processes and reporting. Application of the principles of the International Performance Measurement & Verification Protocol (IPMVP) serves as the guidelines for Measurement and Verification Plans applied to Avista programs. The verification of a statistically significant number of projects using IPMVP techniques is often extrapolated to verify and perform impact analysis on complete portfolios within reasonable standards of rigor and a reasonable degree of conservatism. This will serve to insure that Avista will manage the DSM portfolio in a manner consistent with utility and public interests.

To best serve its customers and other stakeholders, Avista will seek the "best science available" for quantifiable UES values for energy efficiency measures. This encompasses consideration of all data and informational sources that are deemed pertinent to Avista's programs as delivered including the RTF, NEEA, consultant libraries, ENERGY STAR, Sixth Power Plan, California's Database for Energy Efficient Resources (DEER), Avista-specific impact analyses and other public sources. The collection of UES values will be subject to rigorous impact evaluations to be performed by a third-party evaluator and available to the Advisory Group for review.

Within Avista's Advisory Group, a Technical Committee subgroup serves primarily within the scope of EM&V applications and currently assists Avista with the development of EM&V protocols and related conservation program considerations. These activities include providing recommendations and guidance on functional aspects of implementation and evaluation. Principal interaction with Avista includes meetings, webinars and direct interchanges. In addition, Avista provides opportunities for the Technical Committee to review the evaluation, measurement and verification protocols.

Summary of Individual Evaluations

Contained below is a summary of each of the evaluation activities anticipated to occur in 2012, with external activities listed first. All savings estimates, calculations and/or assumptions will be evaluated by an independent evaluator as part of the portfolio impact and process evaluations.

Independent Impact and Process Evaluation of Electric DSM Portfolio

Why was this selected for Evaluation?

Avista has retained The Cadmus Group to provide independent, or “third-party”, review of acquisition claims for our entire 2010-2011 electric DSM portfolio.

The scope of this evaluation will include both impact and process analyses of the total 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 estimates. (Net-to-gross ratios as well as a mechanism to calculate future years’ net-to-gross ratios were developed in a separate evaluation; however findings in this evaluation may update these earlier estimates). The resulting estimates will yield realization rates for Avista’s gross savings claims (for Washington and Idaho separately) for the overall electric portfolio, and to the degree appropriate, for major programs within the portfolio.⁴

The Cadmus Group will be tasked with developing its 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 Avista’s Technical Reference Manual (TRM), the Regional Technical Forum (RTF), or other

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.

“best science” sources will likely have impact evaluation efforts consisting of relatively simple verification based on Avista-prepared documentation. Participant interviews will be conducted to inform both impact and process evaluations. Programs with large savings and/or uncertainty in the *ex ante* estimates will receive detailed site visits. 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. Furthermore, *ex poste* estimates resulting from impact evaluations will be used to update the TRM and for use in program implementation.

The process evaluation will include participant and non-participant surveys supplemented by secondary research. From this, process recommendations for the improvement of individual programs and for the portfolio overall will be provided.

Avista will provide The Cadmus Group 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?

This is consistent with Avista’s EM&V Framework filed September 1, 2010.

What went into this budget approximation?

Avista worked with The Cadmus Group to develop this \$690,000 estimated 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 in order to achieve a 90-10 confidence level over the 2010-2011 compliance period.

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 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.

Evaluation Objectives

The final product will be an independent estimate of electric portfolio acquisition for 2011. 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 effect 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 evaluation requirements are intentionally left to the discretion of the independent evaluator.

Timeline

Work related to this began during 2011 with an estimated completion date of May 2012.

Independent Impact and Process Evaluation of Natural Gas DSM Portfolio

Why was this selected for Evaluation?

The decoupling settlement agreement⁵ requires verification 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 order in Docket No. UG-090135 requires the Company to file an EM&V Plan which “should include a bill verification⁶ analysis that examines changes in customer usage as a result of DSM programs.”⁷

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 retain The Cadmus Group, an independent evaluator, to evaluate the acquisition claims for the Washington/Idaho natural gas DSM portfolio.

This evaluation will include both impact and process evaluations, similar to Avista’s 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 estimates. (Net-to-gross ratios as well as a mechanism to calculate future years’ net-to-gross ratios were developed in a separate evaluation, however findings in these evaluations may update these earlier estimates). The resulting estimates will yield realization rates for Avista’s gross savings claims (for Washington and Idaho) for the overall natural gas portfolio, and to the degree appropriate, for major programs within the portfolio.⁸

⁵ WUTC Order 04, Docket UG-060518, Settlement Agreement, page 7 (February 1, 2007).

⁶ Avista’s intent is to incorporate billing analysis as appropriate.

⁷ 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.

⁸ 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 Cadmus Group will be tasked with developing its evaluation strategies and research plans for each program in the portfolio. A range of impact activities is 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 Avista's Technical Reference Manual (TRM) or other "best science" sources will likely have impact evaluation efforts consisting of relatively simple verification based on Avista prepared documentation with some participant interviews. Programs with large savings and/or uncertainty in the *ex ante* estimates will receive detailed site visits. 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. In addition, *ex poste* estimates will be used to update the TRM as well as for use in program implementation.

The process evaluation will participant and non-participant surveys supplemented by secondary research. From this, process recommendations for the improvement of individual programs and for the portfolio overall will be provided.

Avista will provide The Cadmus Group 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?

Order No. 4 in Docket No. UG-060518 requires an external evaluation on annual natural gas acquisition.

What went into this budget approximation?

Avista worked with The Cadmus Group to develop this \$200,000 estimated 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

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.

Evaluation Objectives

The final product will be an independent estimate of natural gas portfolio acquisition for the calendar year 2011. 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 effect 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 evaluation requirements are intentionally left to the independent verifier.

Timeline

Work related to this task began during 2011 with an estimated completion date of May 2012.

Evaluation of Non-Residential Calculators (External Process Evaluation)

Why was this selected for Evaluation?

Many of the Company's non-residential programs are supported through calculators that generate estimated savings and incentives for various prescriptive (or in some cases, semi-prescriptive – abbreviated approach) programs. While much effort has gone into the verification of the *ex ante* savings estimates within Avista's TRM, additional examination of the non-residential calculators is necessary to ensure consistency in assumptions in program implementation. This effort would ensure that all calculators would be reviewed and updated for consistency with the assumptions within the TRM.

Why was it chosen to be internal or external?

The Company would benefit from an external review to ensure consistency with Avista's TRM assumptions.

What went into this budget approximation?

The \$20,000 budget estimate was based upon the anticipated number of billable hours required for The Cadmus Group to conduct this body of work. Avista is engaging The Cadmus Group due to its familiarity with the Company's TRM.

Brief Program Description

The Company has various non-residential prescriptive offerings such as Prescriptive Green Motors, Prescriptive PC Network Controls, Prescriptive Clothes Washers, Prescriptive Food Service, Prescriptive Lighting, Prescriptive Motors, Prescriptive Variable Frequency Drives, Prescriptive Windows/Insulation, Prescriptive Heating Cooling and Ventilation and Prescriptive Standby Generator Block Heater. In addition, some measure offerings handled through site-specific used standardized calculators. These standardized calculators are used to calculate estimated savings and incentives relative to the specific parameters for each customer's activity.

Evaluation Objectives

The objective is to ensure consistency in assumptions and resulting savings estimates between the various non-residential calculators with the assumptions and unit energy

savings within Avista's TRM. This will benefit all non-residential prescriptive programs and even some programs that have a standard protocol calculation process (e.g. similar savings estimate based on ranges of horse power, etc).

Evaluation Approach

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

Timeline

This project has an anticipated start date of December 2011 with an estimated completion by the May 2012.

CFL Direct Mail Distribution (External Impact Evaluation)

Why was this selected for Evaluation?

The CFL Direct Mail distribution was a new distribution method for the Company and with little secondary data based on similarities with how Avista's was offered. This effort was launched with an established UES of 24 kWh per bulb distributed subject to impact results around delivery, breakage and other related findings.

Why was it chosen to be internal or external?

The Cadmus Group is in the process of evaluating Avista's 2011 electric and natural gas savings estimates so this additional delivery mechanism of CFLs was an addition to scope. Cadmus was included in the upfront development of this delivery mechanism in order to determine the appropriate evaluation strategy.

What went into this budget approximation?

The Cadmus Group provided an estimate of \$45,000 to conduct two series of surveys and other independent review specific to this delivery mechanism.

Brief Description

During the 2010-2011 compliance period for I-937 and upon the completion of the TRM review by The Cadmus Group, the Company determined it would be short of acquisition targets. Consequently, Avista launched this effort. Washington and Idaho electric residential and small commercial customers were given the opportunity to opt-out of the distribution. Customers who didn't opt-out, received a box of eight CFLs along with educational materials, and the opportunity to return the bulbs to Avista at no cost to the customer.

Evaluation Objectives

The objective is to provide a UES for Avista's CFLs distributed through direct mail on an opt-out basis considering breakage, specifics on location and rate of installations and other related findings.

Evaluation Approach

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

Timeline

The first round of customer surveys will begin in November 2011 with a second round to be conducted in Spring 2012. Final results will be complete by May 2012.

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 natural gas Integrate Resource Plan (IRP) filings. The natural gas CPA was originally scheduled to occur in 2011; however, the filing dates were amended in order to alternate filing years for the electric and natural gas IRPs. Therefore, the natural gas CPA will occur in 2012. Avista has historically performed an internal evaluation leading to the development of a conservation supply curve.

Why was it chosen to be internal or external?

Avista's natural gas decoupling and I-937 processes indicate the appropriateness of an external CPA. In 2010, Global Energy Partners was selected to conduct this work.

What went into this budget approximation?

Based on the level of effort applied to the recent electric CPA, the total budget for the natural gas CPAs is \$150,000.

Brief Description

The CPA is an evaluation of a multitude of potential efficiency measures. 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. As with the electric CPA, the potential study will results in a Realistic Achievable Potential (RAP) and a Maximum Achievable Potential (MAP).

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, and additional research by Global, as necessary.

Timeline

The anticipated start date is November 2011 with anticipated completion in February 2012.

Non-Residential Marketing Research (External Market Evaluation)

Why was this selected for Evaluation?

Much effort has been dedicated to impact and process evaluations over the past several years, with less focus being directed toward market evaluation. However, with large increases expected in energy efficiency targets over the next decade, improved market knowledge will be important in order to achieve these targets.

Why was it chosen to be internal or external?

The Cadmus Group is in process of evaluating Avista's 2011 electric and natural gas offerings and this additional market research complements these on-going efforts.

What went into this budget approximation?

The Cadmus Group provided an estimate of \$17,000 to conduct this effort of work along with related surveys.

Brief Program Description

This market research will support targeting Avista's programs and fine tuning the Company's education and outreach efforts.

Evaluation Objectives

The objective is to identify and define DSM marketing information to our non-residential electric and natural gas customers in order to improve programs and better target programs to increase participation.

Evaluation Approach

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

Timeline

This market research will begin January 2012 and will be completed by May 2012.

Non-Participant Spillover (External Impact Evaluation)

Why was this selected for Evaluation?

During surveys conducted around 2010 programs, non-participant surveys indicated that there was a significant amount of non-participants installing energy efficiency measures that chose not to participate in Avista's programs. This is known as "spill over". This increased surveying will quantify the spillover impacts.

Why was it chosen to be internal or external?

The Cadmus Group is in process of evaluating Avista's 2011 electric and natural gas offerings. This effort was an addition to scope.

What went into this budget approximation?

The Cadmus Group provided an estimate of \$30,000 to conduct this effort along with the related surveys.

Brief Program Description

This activity will increase sampling and surveying sufficiently in order to quantify savings associated with the installation of energy efficiency measures installed within our service territory outside of our programs.

Evaluation Objectives

In an environment of I-937 penalties, capturing all savings occurring within our service territory has gained importance.

Evaluation Approach

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

Timeline

The anticipated start date is December 2011 with an estimated completion date of June 2012.

Heat Pump Furnace Analysis (External Process and Market Evaluation)

Why was this selected for Evaluation?

Recent billing analysis and survey data on 2010 programs indicates that a significant number of participants receive incentives for both heat pumps and natural gas furnaces used as a back-up system for extreme weather conditions. Based on these findings, The Cadmus Group had recommendation future research on this topic.

Why was it chosen to be internal or external?

The Cadmus Group is in process of evaluating Avista's 2011 electric and natural gas offerings and this effort complements the work already occurring.

What went into this budget approximation?

The Cadmus Group provided an estimate of \$15,000 to conduct this body of work related to heat pump furnaces.

Brief Program Description

With the increased participation in the heat pump program (with natural gas furnace back-ups for extreme weather), the importance of research regarding participants has increased so as to improve the program as currently offered.

Evaluation Objectives

The research would evaluate the following issues:

- Whether energy benefits from participants that receive multiple incentives are consistent with Avista's objectives. Specifically, determine whether it is cost-effective to incent customers to install heat pumps, natural gas furnaces and (in some cases) to also pay a conversion incentive.
- Whether incentives for natural gas furnaces are cost-effective in all cases or if some additional restrictions, such as minimum square footage requirements or use of other fuels, might improve the program.

Evaluation Approach

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

Timeline

This work is on-going as part of the impact and process evaluations already underway.

This increased research is anticipated to be completed by May 2012.