

Avista Utilities

Washington

2017 Gas Demand-Side Management Annual Conservation Plan

November 15th, 2016

Avista 2017 DSM Business Plan

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I. Executive Summary

This business planning document is intended to be a continuous planning process. The Company is committed to maintain and enhance meaningful stakeholder involvement within this process. Over the course of the following year, revisions and updates to the plan are to be expected as part of adaptively managing the DSM portfolio.

Figure 1: Portfolio Cost-effectiveness

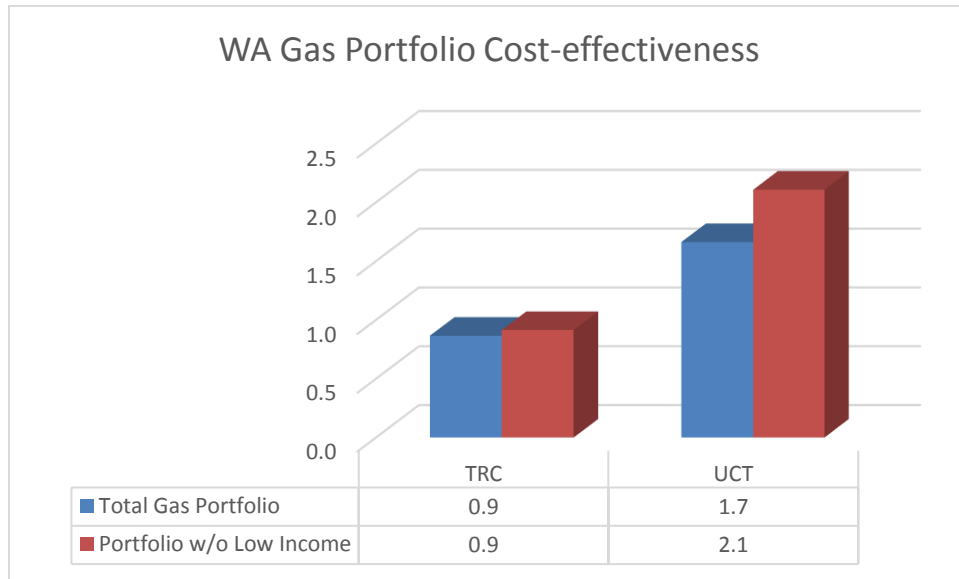


Table 1: Savings and Budget by Sector:

Washington Gas by Sector	Therms	Budget
Low Income	14,593	\$ 893,410
Residential	398,801	\$ 1,556,641
Non-Residential	206,916	\$ 606,591
Total	620,310	\$ 3,056,643

II. Introduction

The Company’s business plan continues to approach energy efficiency based on two key principles. The first is to pursue all cost-effective kilowatt hours and therms by offering financial incentives for most energy saving measures. The second key principle is to use the most effective “mechanism” to deliver energy efficiency services to customers. These mechanisms are varied and include 1) prescriptive programs (or “standard offers” such as high efficiency appliance rebates), 2) site-specific or “customized” analyses at customer premises, 3) “market transformational,” or regional, efforts with other utilities, 4) low-income weatherization services through local Community Action Agencies, 5) low-cost/no-cost advice through a multi-channel communication effort, 6) direct install programs, 7) buy down programs upstream of the

customer purchase at a retail outlet and 8) support for cost-effective appliance standards and building codes.

The Company's programs are delivered across a full customer spectrum. Virtually all customers have had the opportunity to participate and a great many have directly benefited from the program offerings. All customers have indirectly benefited through enhanced cost-efficiencies as a result of this portfolio approach.

The business planning process builds upon the electric and natural gas Integrated Resource Plan (IRP) and Conservation Potential Assessment (CPA) processes. These processes are an overall resource planning process completed every two years that integrate energy efficiency and generation resources into a preferred resource scenario. It is the purpose of the business plan to create an operational strategy for reaching the aggregate targets identified within the IRP in a manner that is cost-effective and with due consideration to all aspects of customer value. The annual planning process also leads to the identification of infrastructure and support needs such as:

- defining the necessary labor complement
- establishment of an annual budget
- review of and modification to the measurement, evaluation and verification (EM&V) plan
- identification of outreach requirements
- organization of a marketable customer-facing portfolio.

The budgetary projections established within the business plan are applied in a separate mid-year process to revise the DSM tariff rider funding mechanisms contained within the Schedule 91 electric and Schedule 191 natural gas tariffs. The tariff rider surcharges are periodically adjusted with the objective of moving these balances toward zero.

III. Key Considerations

Evaluation, Measurement and Verification Commitments

Within its DSM portfolio, Avista incorporates EM&V activities to validate and report verified energy savings related to its energy efficiency measures and programs. EM&V protocols serve to represent comprehensive analyses and assessments necessary to supply useful information to management and stakeholders that adequately identifies the acquisition of energy efficiency attributable to Avista's DSM Programs as well as potential process improvements necessary to improve operations both internally and for customers. EM&V includes Impact, Process, and Market 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 is to support the ongoing activities of the third-party EM&V consultants and evaluators performing the various analyses required to

substantiate the conservation acquisition, determine market saturation and penetration and process evaluations. The 2017 EM&V budget provides for third-party EM&V services that provide an a partial evaluation of 2017 program year portfolio, along with consolidating these findings with results obtained for 2016 for reporting requirements associated with the state of Washington Energy Independence Act (EIA) biennium. For Idaho, 2016 savings will be measured, verified, and reported during 2017. These findings are reported in the Demand Side Management Annual Report and include analysis of both program and process impacts for the specific programs reviewed.

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

EM&V efforts will also be applied to evaluating emerging technologies and applications in consideration of potential inclusion in the Company's energy efficiency portfolio. In the Washington Electric Portfolio, Avista may spend up to 10 percent of its conservation budget on programs whose savings impact have not yet been measured if the overall portfolio of conservation passes the applicable cost-effectiveness test. These programs may include educational, behavior change and other types of investigatory projects. Specific activities can include product and application document reviews, development of formal evaluation 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 regional efforts, Avista staff has a Voting and a second member of the Avista is a Corresponding Member role on the Regional Technical Forum (RTF) that serves as an advisory committee to the Northwest Power and Conservation Council (NPCC). The RTF is a primary source of information relating to the standardization of energy savings and measurement processes for electric applications in the Pacific Northwest. This knowledge base provides energy efficiency data, metrics, non-energy benefits and references that are suitable for inclusion in Avista's TRM relating to 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 evaluations. Portions of the energy efficiency savings acquired through NEEA's programs within the region are attributable to Avista's portfolio.

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 and Verification Protocol serves as the guidelines for measurement and verification plans applied to Avista programs. Additionally, the

recent compilation of EM&V protocols released under the U.S. Department of Energy's Uniform Methods Project will be considered and applied where possible to support consistency and credibility of the reported results. The verification of a statistically significant number of projects is often extrapolated to verify and perform impact analysis on complete programs within reasonable standards of rigor and degree of conservatism. This process serves to insure Avista will manage its DSM portfolio in a manner consistent with utility and public interests.

Cost-Effectiveness Metrics, Methodology and Objectives

The company's business planning approach aims to maximize cost effective conservation acquired by analyzing the cost effectiveness of each segment (Residential, Commercial/Industrial and Low Income) and how the measures within the programs contribute to the cost effectiveness of that segment and eventually the individual portfolios. Non-energy benefits (NEBs) are a common topic of discussion in many energy evaluation circles and the company is appreciative of the valuable work the RTF has done to quantify NEBs for the region. In the 2017 business plan where NEBs are calculated and the delivery method is consistent with what is required by the RTF the calculated NEBs were included in the appropriate cost effectiveness tests (Total Resource Costs and Participant Cost Test). Since the RTF, does not currently have UES or NEB values for commercial lighting a similar methodology was used to calculate the NEB value of efficient lighting measures that have longer measure lives than the baseline technology. The company will continue to follow and participate in RTF activities around NEBs and will include NEBs in the cost effectiveness calculation if appropriate.

Details regarding how Avista applies the avoided costs and cost-effectiveness methodologies to the estimation of the 2017 portfolio are contained in Appendix C to this document. The results of the TRC and Utility Cost Test (UCT) tests are summarized by program and portfolio in Appendix A.

Schedule 90 and 190 Revisions

Avista's electric DSM operations are governed by Schedule 90 tariff requirements and natural gas DSM operations are governed by Schedule 190. These tariffs (attached within Appendix E) detail the eligibility and allowable funding that the Company provides for energy efficiency measures. Though the tariff allows for considerable flexibility in how programs are designed and delivered and accommodates a degree of flexibility around incentives for prescriptive programs subject to reasonable justification, there remains the occasional need to modify the tariff to meet current and future market conditions and opportunities. The company is not currently planning any revisions to the Washington or Idaho schedule 90 or 190 tariffs. During the annual true up the company did request to increase the amount collected for DSM programs under schedules 91 and 191. The dockets for those two requests are as follows:

- UE – 160756
- UG – 160758

IV. DSM Portfolio Overview

Residential Portfolio Overview

The Company's residential portfolio is composed of several approaches to engage and encourage customers to consider energy efficiency improvements within their home. Prescriptive rebate programs are the main component of the portfolio, augmented by a variety of other interventions. These include upstream buy-down of low-cost lighting and water saving measures, select distribution of low-cost lighting and weatherization materials, direct-install programs and a multi-faceted, multichannel outreach and customer engagement effort.

Prescriptive rebate programs use financial incentives to encourage customers to adopt qualifying energy efficiency measures. Customers must complete installation and apply for a rebate, submitting proper proof of purchase, installation and/or other documentation to Avista, typically within 90 days from project completion. Customers can submit this form in hard copy and several prescriptive measures are also available to submit online at www.avistautilities.com.

Residential prescriptive programs typically cover single family homes up to a four-plex. For multifamily situations (five-plex or larger), owners/developers may choose to treat the entire complex with an efficiency improvement. In these unique cases, the projects are treated as a commercial project and are evaluated within the site-specific portfolio or the prescriptive commercial windows and insulation program.

In the past, Avista has offered other programs delivered to residential customers through third-party contractors. These include refrigerator and freezer recycling, the manufactured home duct sealing program and regional manufacturer buy-downs for small devices such as compact fluorescent lamps, LEDs and showerheads. Avista is planning to continue offering regional manufacturer buy-downs in 2017 and is evaluating the possibility of a residential request by mail kit.

For both Washington and Idaho electric, a measure-by-measure evaluation of the incremental contribution to the Total Resource Cost (TRC) test cost-effectiveness of the portfolio is the primary guidance in reaching decisions regarding eligibility for measures. For natural gas in Washington and Idaho, the Utility Cost Test (UCT) is also applied. In the event that a previously offered measure is no longer cost-effective, a transition plan is initiated to equitably treat customers who were in or about to commit to participating in the program. Typically a minimum 90-day notice is provided prior to the termination of the program.

Residential programs have a strong presence and coordination with regional efforts, such as those offered by the Northwest Energy Efficiency Alliance (NEEA). Currently there are significant regional efforts active in the markets for ENERGY STAR homes, consumer electronics, ductless heat pumps and standard improvements for new heat pump water heating technologies. Avista has offered local rebates in support of many of the NEEA market

transformation ventures and will continue to do so where opportunities for local leveraging of these programs are cost-effective options.

Low Income Portfolio Overview

The Company utilizes the infrastructure of seven Community Action Partner (CAP) agencies to deliver low income energy efficiency programs. The CAPs have the ability to income-qualify customers and have access to a variety of funding resources, including Avista funding, which can be applied to meet customer needs. The seven agencies serving Avista’s entire Washington service territory receive an aggregate annual funding of \$2,000,000 while the single agency providing service in Idaho for the Avista service territory receives \$700,000. The distribution of these funds is represented in the table below.

Table 2: 2016 Low Income Funding by CAP Agency

CAP Agency	Counties Served	Funding Allocation
SNAP	Spokane	\$1,335,000
Rural Resources (Spokane Indian Housing Authority - \$20,000)	Ferry, Lincoln, Pend Oreille, Stevens	\$194,000
Community Action Center Whitman County	Whitman	\$146,000
Opportunities Industrialization Council	Adams, Grant	\$75,000
Washington Gorge Action Programs	Klickitat, Skamania	\$10,000
Community Action Partnership (Lewiston)	Asotin	\$240,000
Community Action Partnership (Lewiston)	Serves all ten counties within Avista service territory in Idaho	\$700,000

In Washington and Idaho the agencies may spend their annual allocated funds on either electric or natural gas efficiency measures at their discretion as long as the home demonstrates a minimum level of the Avista fuel for space heating use. Both states have included in their annual funding a 15% reimbursement for administrative costs. Health and safety measures may also be completed with the amount spent on these improvements not to exceed 15% of the agency’s total annual contract amount.

The list of measures offered is derived from the Department of Commerce’s Weatherization Manual. To guide the agency toward projects that are most beneficial for the Company’s energy efficiency efforts, in most cases an “Approved” list of measures is provided that allows for full reimbursement of those that in most cases have a Total Resource Cost (TRC) of 1 or better. For

efficiency measures with a TRC less than 1, a “Rebate” that is equal to the Company’s avoided cost of energy is provided as the reimbursement to the Agency.

Both the “Approved” and “Rebate” lists are made available to the agencies during the contracting process so they are aware of the eligible measures and the designated amounts if applicable. Should the Agency have an efficiency opportunity that is not on the “Rebate” list, the Company will review each project individually to determine an appropriate funding amount. The agencies may choose to utilize their Health and Safety allotment towards covering the full cost of the “Rebate” measure if they do not have other funding sources to fill in the difference. In 2017 the “Rebate” levels for some measures, particularly weatherization, have decreased and additional outreach is being conducted during the business planning to assess impacts and Agency ability to continue to offer these measures. In Washington there is currently a waiver for cost-effectiveness on natural gas weatherization measures which allows for full funding of those measures. If a similar waiver for Washington electric measure is desired with stakeholders the company would be open to working towards those ends.

The Company is aware that there is concern about declining participation in Low-Income programs but we believe that this has been primarily driven by higher costs per weatherized household over the same fixed amount of Low-Income funds available. An actual participant goal would be difficult to determine given that the number of treated homes depends upon the depth and cost of weatherization required by the participating homes as well as the other non-utility funds available to the CAP agencies in any given year.

Non-Residential Prescriptive Program Overview

The nonresidential energy efficiency market is delivered through a combination of prescriptive and site-specific offerings. Any measure not offered through a prescriptive program is automatically eligible for treatment through the site-specific program, subject to the criteria for participation in that program. Prescriptive paths for the nonresidential market are preferred for measures that are relatively homogenous in scope and uniform in their energy efficiency characteristics.

Prescriptive paths do not require pre-project contracting, as the site-specific program does, and thus lend themselves to streamlined administrative and marketing efforts.

Incentives are established for these prescriptive programs by applying the incentive formula contained within Schedules 90 and 190 to a prototypical installation. Actual costs and savings are tracked, reported and available to the third-party impact evaluator. Many but not all of the prescriptive measures utilize RTF UES.

Non-Residential Site-Specific Program Overview

Avista offers nonresidential customers the opportunity to propose any energy efficiency project with documentable energy savings (except for those eligible for a prescriptive offering) for a

technical review and potential incentive through the site-specific program. Multifamily residential developments may also be treated through the site-specific program when all or a large number of the residences and common areas are treated. The determination of incentive eligibility is based upon the projects individual characteristics as they apply to the Company's Idaho and Washington electric Schedule 90 or natural gas Schedule 190 tariffs. The Company has established written processes and procedures to guide the consistent calculation of project incentives. Among other tools, the Company maintains an Excel model (Dual Fuel Incentive Calculator or DFIC) to perform these calculations and conducts technical and administrative checks known as the "Top Sheets."

The site-specific program has historically been one of the more cost-effective portions of the DSM portfolio, as well as generating a substantial share of the energy savings. The year-to-year program performance can be somewhat variable due to the timing of large projects.

Site-Specific Program- Continuous Improvement

Implementation improvements recently completed that will have a positive impact on the site-specific program include:

- Revisions to the site-specific program implementation processes to improve clarity and promote the timely movement of projects through the pipeline.
- The establishment of three checklists (or "Top Sheets"), one to review the energy efficiency evaluation report, one prior to contracting and a final one prior to the payment of the incentive, in order to ensure consistent documentation and treatment of each project as it progresses through these processes towards completion.

Program marketing relies heavily upon the Account Executive infrastructure and commercial and industrial energy efficiency outreach. Outreach includes print advertising, customer newsletters, customer meetings and vendor outreach. Account Executives have actively managed accounts, but are also available to any customer based upon the geographic location or industry, and serves as their liaison for all energy needs. A portion of the Account Executives effort is expended on coordinating the customer involvement in both the site-specific and prescriptive energy efficiency programs. The program delivery and engineering teams perform additional outreach to customer groups and support of the program marketing, as well as serving their functions within the program implementation process. Additionally, customers can utilize web tools for automated benchmarking of their energy services or an on-line energy audit using Avista Business Energy Advisor.

The site-specific program savings can be difficult to predict due to large projects with long sales cycles. General economy shifts may also impact customer willingness to fund efficiency improvements. Increases in process and eligibility complexity, increases in customer costs to participate beyond the capital investment and costs for post measurement activities are kept in mind and managed in order to continue to successfully engage customers.

Regional Market Transformation

Avista's local DSM portfolio seeks to influence the decision of customer towards the purchase of cost-effective energy efficiency products and services through a combination of incentives, awareness and addressing barriers to adoption. The local DSM portfolio is intended to be permanent in nature with the understanding that the specific programs and eligibility criteria will be revised over time in recognition of the changing marketplace, technologies and economics. Though these efforts can, and to a degree do, create permanent changes in how our customers make energy choices, it is generally not feasible for Avista to design local programs so as to influence markets that are often regional or national in scale.

Market transformation is an alternate approach to those markets and are defined interventions occurring for a finite period of time, utilizing strategically selected approaches to influence the energy market (customer, trade allies, manufacturers or combinations thereof) followed by an exit strategy. Successful market transformations permanently change the trajectory of markets in favor of more cost-effective energy efficiency choices, well beyond the termination of the active intervention.

Electric utilities within the northwest came together in 1997 to establish and fund a cooperative effort geared towards sustaining market transformation on a regional basis with sufficient scale and diversity to deliver a portfolio capable of delivering a cost-effective electric efficiency resource. That organization, NEEA, entered its fifth funding cycle during 2015. Avista has been an active and funding participant of this collaborative effort since the beginning. Over that period of time, NEEA has delivered to Avista and the region some of the most cost-effective electric efficiency resources within the overall portfolio. Avista has committed to continuing to be part of NEEA for this fifth funding cycle encompassing the 2015-2019 period (inclusive).

It is recognized that the future NEEA portfolio may not be as cost-effective as the past. NEEA's very successful residential lighting efforts, and many other ventures, are difficult to replicate. Nevertheless, there is little doubt that there are cost-effective opportunities that can only be achieved, or that are best achieved, through a regionally cooperative effort. Avista has a high degree of confidence that the NEEA portfolio will succeed, and that Avista's Washington and Idaho customers continue to benefit from these efforts.

For 2017 the company's portion of NEEA's Electric budget is expected to be about \$1,400,000 and \$718,782 for Washington and Idaho respectively.

For more than a decade regional natural gas utilities, including dual-fuel utilities currently participating in NEEA in their electric role, have prompted discussions of the potential for incorporating natural gas efficiency into NEEA's mission. Discussions led to a formal proposal to the NEEA Board of Directors for establishing a separately funded natural gas market transformation portfolio. The Board has approved this proposal.

At present, approximately five-sevenths of the eligible natural gas utility funding (of the 7 northwest gas utilities Intermountain Gas and Northwestern are not currently funding partners) within the Northwest have committed to funding the NEEA effort. This is a significantly lower proportion of eligible funding than the electric NEEA efforts have experienced over the years. Despite this funding relationship, Avista believes that the benefits to Avista customers will exceed Avista funding requirements. It is hoped that a combination of early successes and the opportunity to engage regulators in discussions of cost-effectiveness and cost recovery mechanisms will lead to higher levels of participation by eligible funders. Though this may take some time, the Company believes this to be an important opportunity to create a long-term means of addressing regional natural gas market transformation. The company's portion of NEEA's Natural Gas budget is expected to be \$395,939 in Washington and \$200,000 in Idaho.

The NEEA funding requirements are incorporated within the budget but are considered to be supplementary expenditures outside of the scope of the current year's local portfolio. The NEEA portfolio has not been incorporated within either the acquisition projection or the cost-effectiveness of the 2017 local portfolio developed within this Business Plan.

V. Analytical Review of Expected 2017 Operations

Avista-Specific Methodologies and Analytical Practices

Over time, Avista has evolved approaches to calculating the various metrics applied within the planning effort to the needs of our portfolio and regulation. Care has been taken to ensure that these approaches are consistent with the intent of the Northwest Power Conservation Council methodologies for the analysis of DSM. Avista completes an Annual DSM Report in the spring of each year based upon a retrospective review of actual results from the prior year. This process includes the calculation of each of the four basic standard practice tests (summarized in Appendix B). For planning purposes, the focus is upon the TRC and UCT test since that is the basis for optimizing the portfolio for the reasons previously explained, and therefore the explanation of Avista's methodologies focus upon those two tests. Historically we have found that, absent significant mid-year changes in the portfolio, the planning estimate matches reasonably closely to the actual results.

Avista's DSM portfolios are built from the bottom up, starting with the identification of prospective efficiency measures based upon the previous CPA and augmented with other specific opportunities as necessary. Since CPA's are only performed every two years, and since the inputs to the CPA are locked many months in advance of the filing of the IRP itself, there is considerable time for movement in these inputs and the development of other opportunities. The calculation of portfolio cost-effectiveness excludes costs that are unrelated to the local DSM portfolio in that particular year. Those excluded costs, termed "supplemental" costs in Avista's calculations, include:

- The funding associated with regional programs (NEEA)

- Cost to perform conservation potential assessment studies
- Funding for Idaho research and development projects obtained through Schedule 91 but unrelated to the 2015 local DSM portfolio
- Funding for Idaho Conservation and Education

Individual measures are aggregated into programs composed of similar measures. At the program level, non-incentive portfolio costs are allocated based upon direct assignment to the extent possible and based upon a program's share of portfolio avoided cost value acquisition where that is not possible. The result is a program-level TRC and UCT cost-effectiveness analysis that incorporates all of these allocated costs. The approach of ensuring that all costs are allocated at the program level is based upon feedback from previous Avista business planning efforts asserting that programs are generally sufficiently large and that the addition or deletion should be significant enough to lead to a resizing of portfolio infrastructure cost.

Since the costs and benefits associated with the adoption of a measure may accrue over time, it is necessary to establish a discount rate. Future costs and benefits are discounted to the present value and compared for cost-effectiveness purposes. Generally, energy and non-energy benefits accrue over the measure life and costs are incurred up-front. During the late summer of 2016, the company presented to the Advisory Group a proposal to use a real weighted average cost of capital instead of a nominal figure. This suggestion received positive feedback, so a real discount rate of 4.41% was used as the discount rate for the 2017 business plan based upon a nominal WACC of 6.39%.

The calculation of the TRC test benefits, to be consistent with Northwest Power and Conservation Council methodologies, include an assessment of non-energy impacts (both benefits and costs) accruing to the customer. These impacts most frequently include maintenance cost, water and sewer savings and (in the case of the low income program) inclusion of the cost of providing base case end-use equipment as part of a fully funded measure and the value of health and human safety funding (on a dollar-for-dollar basis).

For purposes of calculating TRC cost-effectiveness, any funding obtained from outside of Avista's customer population (generally through tax credits or state or federal administered programs) are not considered to be TRC costs. These are regarded as imported funds and, from the perspective of Avista's customer population appropriate to the TRC test, are not costs borne by our customers. Co-funding of efficiency measures from state and federal programs for low-income programs applicable to a home that is also being treated with Avista funding is not incorporated within the program cost. This is consistent with permitting tax credits to offset customer incremental cost as described within the California Standard Practice Manual description of the TRC test.

A more in-depth explanation of these analytical practices is contained in Appendix B.

Analytical Review of Measures and Programs

The annual business planning process begins with a “blank slate” approach to maximizing the value of the DSM portfolio to customers. The process ends when the portfolio meets, or comes as close as possible to meeting, the desired objectives. Within this section is a summary of the composition and performance of the planned 2017 portfolio.

Decisions when incorporating a measure within a program being offered to customers were primarily, but not exclusively, made upon the contribution of each individual measure to the portfolio cost-effectiveness. Factors other than cost-effectiveness that were considered in the measure status include consistency with other measures, the incentive relative to both the incremental and total customer cost, the marketability and expected customer satisfaction of the measure and the element of uncertainty surrounding all of the inputs to the planning process.

For purposes of reviewing the contributions of these programs, the portfolio has been categorized as follows:

- Residential prescriptive programs
- Residential fuel conversions
- Low income programs
- Low income fuel conversions
- Nonresidential programs

Residential prescriptive portfolio

Since the residential portfolio is composed of large numbers of individual customers, the approach is almost exclusively prescriptive in nature. Programs are offered with defined eligibility criteria, and customers meeting those criteria receive a pre-determined rebate. Customers are not required to notify the Company prior to their purchase or installation.

The planning process separated the residential programs into five individual programs for electric and two for gas:

- Home Energy Reports
- Residential Prescriptive (Electric and Gas)
- Residential Request by Mail Kit
- Residential Fuel Conversions
- Simple Steps Smart Savings (Electric and Gas)

The Home Energy Reports program is a continuation of the previous Opower program that started in 2013, with a new customer treatment and control refill that occurred in early 2016. The program savings will be analyzed as an agreed upon 2 year measure life to align with the

biennium. Since 2017 is the second year of the biennium only incremental changes (positive or negative) count towards savings acquisition. Additional program information can be found in Appendix A.

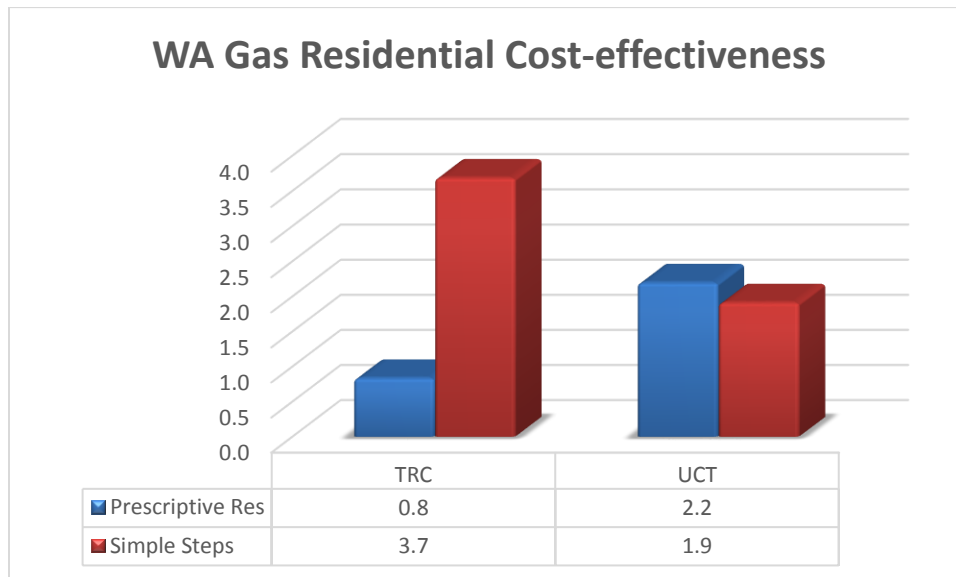
All weatherization, thermostats, heat pump water heaters and heating/cooling equipment were analyzed under a single program but measure level cost effectiveness can be found in Appendix A.

The Simple Steps, Smart Savings is an upstream buy down program and includes residential lighting, shower heads and washing machines.

The request by mail energy efficiency kit is not currently a budgeted item but will continue to be analyzed further with the Advisory Group.

The program-by-program cost-effectiveness of the portfolio is graphically represented in the figure below:

Figure 2: Residential Programs Cost-Effectiveness



Low income programs

Avista’s low income programs are offered in a cooperative effort with Community Action Partner (CAP) agencies under annual contract to Avista. The funding contracts allow for considerable flexibility for the CAP to deliver to each individual low-income client a mix of measures customized to that particular home. For purposes of establishing a projection of program performance for 2017, Avista has defined 27 electric and natural gas measures available to Washington and Idaho CAPs. Additionally, the CAP is permitted to expend up to 15% of their funding on health and safety measures on homes receiving Avista-funded treatment. CAP

agencies may charge Avista up to 15% of the total installed cost of the measures for reimbursement of administrative costs.

Avista's projected funding for each of the measure installations is limited to the present value of the energy savings, with exceptions provided for a few selected measures. Consequently, the CAP may encounter a measure which they intend to pursue that is not fully funded through Avista's allotted incentive for that measure. At the time of this business planning the impact due to the decrease in present value of the energy savings for certain measures is unknown but we will work closely with CAPs to monitor and evaluate. Under these circumstances, the CAP can either use Avista health and safety funds or use non-Avista funding to complete the funding of the measure. Avista does not include the application of non-Avista co-funding for the installation of energy measures as a cost for purposes of calculating the TRC test.

Avista defines two major non-energy benefits uniquely applicable to the low income program. These are:

1. End-use non-energy benefit - CAPs fund the entire cost of the installation of the measure in a customer home, not just the incremental cost of the higher efficiency value. To maintain consistency with how the utility is invoiced and with programmatic budgets, the Company includes the full invoiced cost within the TRC test. However, the energy efficiency value of the measure corresponds only to the incremental cost of the efficiency measure. Thus, Avista values the cost associated with the baseline end-use as a non-energy benefit being provided to the customer.
2. Health and safety non-energy benefit - The 15% health and safety allowance permitted under the Company's funding contracts with the CAP is assumed to create, on a dollar-for-dollar basis, a quantifiable non-energy benefit. It is assumed that the CAP would only make these investments in an individually reviewed home if the benefits were equal, or in excess of, the cost. Therefore, Avista recognizes a non-energy benefit for health and safety expenses that is equal to the amount expended.

Other non-energy benefits associated with individual measures are quantified and included within the low income portfolio analysis in a similar manner to any other measure within the Avista DSM portfolio.

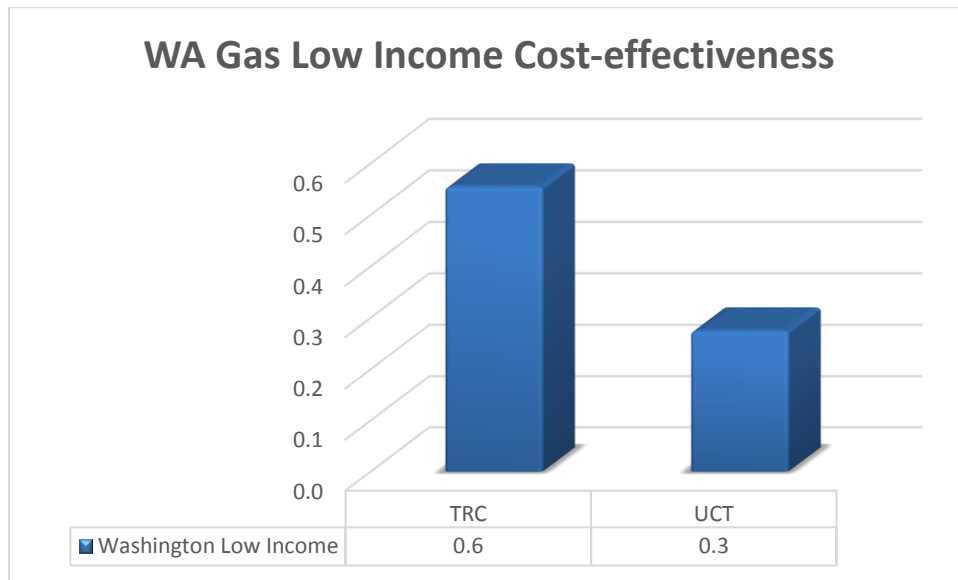
The UCT is calculated based upon the authorized expenditure of Avista funds, whereas the TRC cost is based upon the cost of the installation without regard to how that cost is paid. Since the authorized expenditures for a measure are potentially less than the full cost, due to the cap on funding available for most measures at the value of the energy savings, the portfolio UCT costs are lower than the TRC cost. Both the UCT and TRC costs include all assigned and allocated non-incentive utility costs.

Since there are often multiple measures installed at the same time, and these measure packages frequently consist of similar measures, it is statistically difficult to separately the individual

measure savings. As a result, Avista has developed adjusted engineering estimates of UES for this program that align with actual impact evaluations for participating homes. While there is confidence that the homes achieved a certain level of savings; it is difficult to determine an individual measures contribution to the energy savings.

Fuel conversions are not included in the I-937 acquisition target therefore Low Income Fuel Conversion in Washington is analyzed separately.

Figure 3: WA Low income cost-effectiveness



Non-residential prescriptive programs

Nonresidential prescriptive programs are similar to residential prescriptive programs in that they do not require a pre-installation contract and offer a fixed incentive amount for eligible measures. Measures offered through prescriptive programs are evaluated based upon the typical application of that measure by program participants. Measures that are eligible through the prescriptive program are not eligible for the otherwise all-inclusive site-specific program. Prescriptive measures are generally limited to those that are low cost, offer relatively homogenous performance across the spectrum of likely applications and would not significantly benefit from a more customized approach.

The 2017 portfolio is expected to consist of ten prescriptive programs for electric and four for gas listed below:

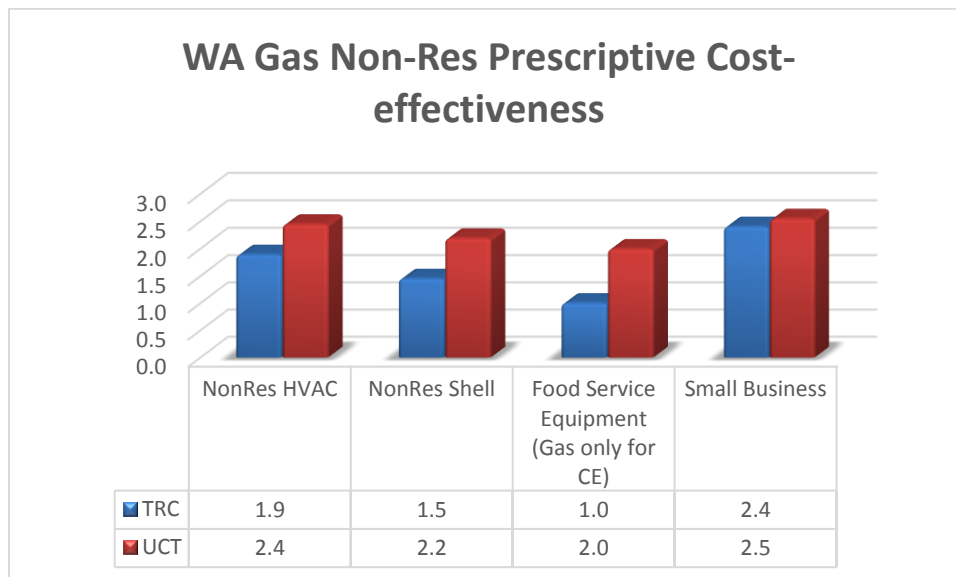
- EnergySmart Grocer
- Food Service Equipment (Electric and Gas)
- Green Motors
- Motor Control HVAC (VFD)

- Non-residential interior lighting
- Non-residential exterior lighting
- Prescriptive Shell (Electric and Gas)
- Non-residential small HVAC (Gas only)
- AirGuardian
- Small Business Direct Install/Audits (Electric and Gas)
- Fleet Heat

Four of the programs (EnergySmart Grocer, Air Guardian, Small Business Direct Install and Green Motors) are offered to customers through third-party implementation staff (ClearResult, Ensave, SBW Consulting, Inc. and Green Motors Practices Group respectively) while the other seven programs are fielded by Avista DSM staff.

Quantifiable non-energy benefits are included in the TRC calculation including, but not limited to, reductions in maintenance, water, and sewer and non-utility energy costs. All assigned and allocated non-incentive utility costs have been incorporated into the cost-effectiveness calculation.

Figure 4: WA Non-residential prescriptive programs cost-effectiveness



Site-specific program

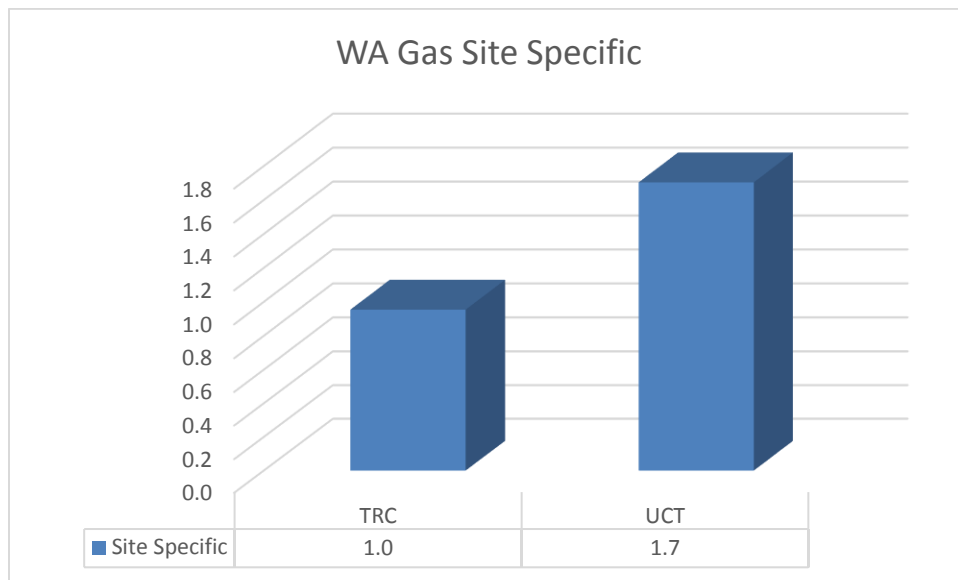
Avista’s site-specific program has historically been one of the largest and frequently one of the more cost-effective programs. Any measure with documentable and verifiable energy savings that is not otherwise covered by a prescriptive program is eligible for the site-specific program.

The all-encompassing nature of the program has led to the participation of a number of projects that would not otherwise have been incorporated within the portfolio.

For planning purposes, the program cost-effectiveness calculations were based off of the structure of the proposed revisions to schedule 90 and 190. Estimated customer incremental cost per kWh and therm was calculated by taking the year to date 2016 non-conversion site specific projects with a simple payback less than 15 years and weighting by value of avoided costs.

The company does expect some site specific conversion projects to occur in 2017, however the size and scope of those projects are very difficult to estimate, and so actual estimates have not been included.

Figure 5: Site-Specific program WA/ID Cost-effectiveness



Sector Cost-Effectiveness Projections and Related Metrics

Figure 6: Sector portfolio cost-effectiveness

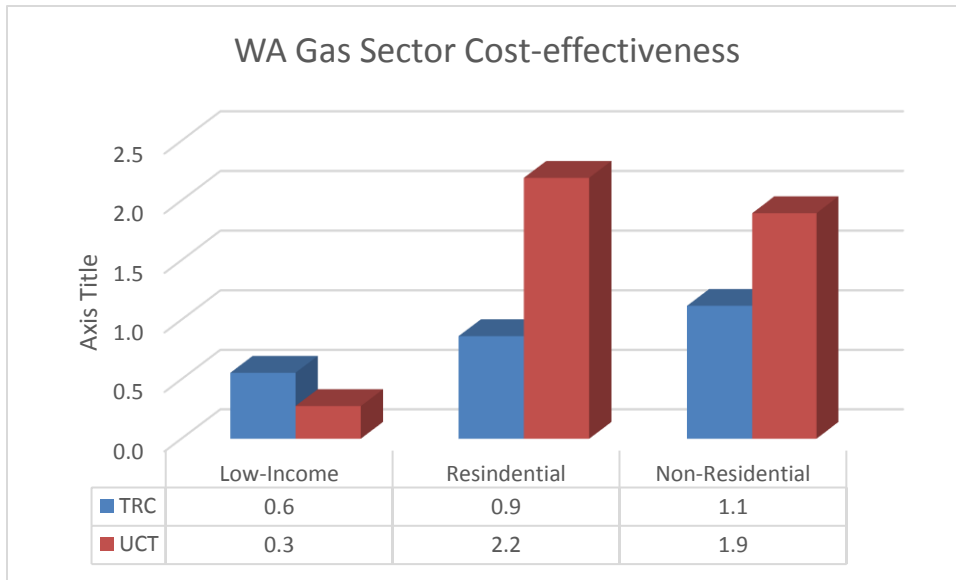


Figure 7: Sector portfolio savings

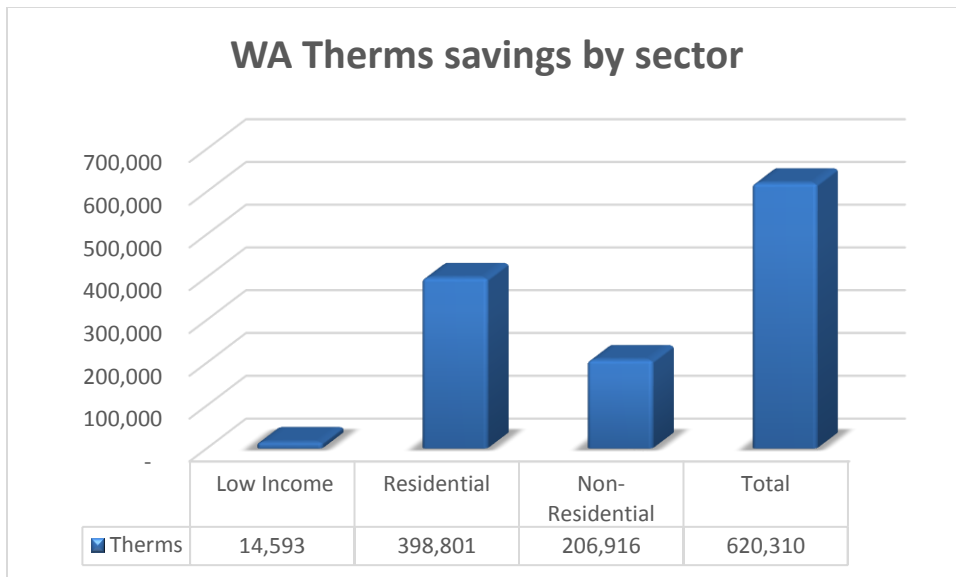
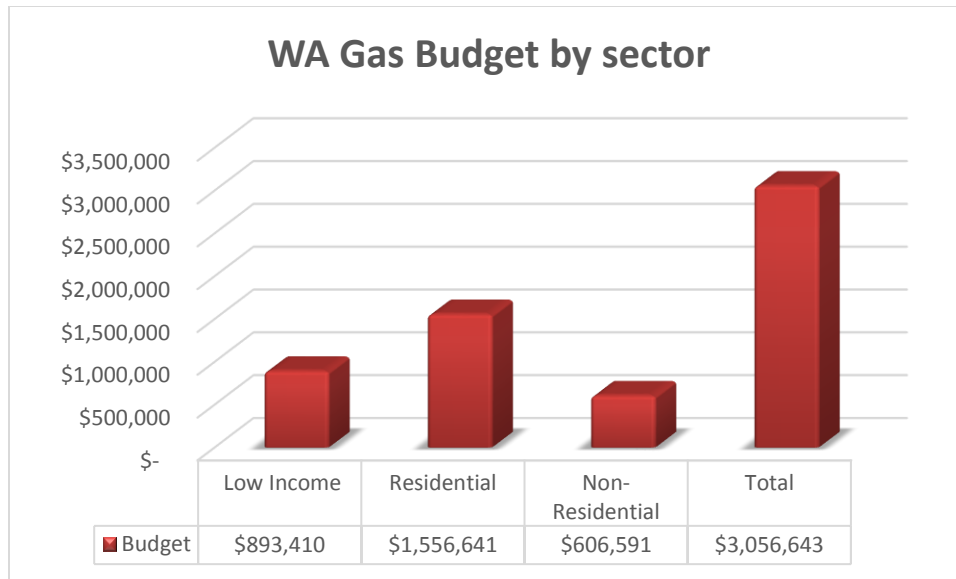


Figure 8: Sector portfolio savings



Washington Natural Gas IRP Target acquisition

The from the 2016 Natural Gas IRP the Washington natural gas conservation potential is 489,110 therms. The 2017 business plan’s expected acquisition is 606,030 therms, driven by increased throughput in the residential sector driven by high efficiency furnaces in the Washington Line Extension Allowance Program (LEAP).

Figure 9: Local 2017 IRP Target vs. 2017 WA Business Plan Goal



DSM Labor Requirements

Labor expenditures account for about 50% of the Company’s non-incentive utility cost (excluding supplemental costs). Projections of expected labor requirements by job classification are made by managers within the DSM team. These projections are then applied to the average salary for each such classification and labor overheads are applied.

Labor is allocated to a class of programs it is done on the basis of the weighted value of benefits the program brings to the overall portfolio.

The expectations in 2017 indicate that \$3.8 million of fully loaded labor funding across electric and gas programs in both Washington and Idaho will be required, a 13% increase from the 2016 budget. This amount will fund 24.5 FTE spread across 31 different individuals.

Overall DSM Budget Projections

Based upon all of the preceding planning, a compilation of the total DSM budget is assembled at the completion of the planning process. The placement of the budget compilation at the close of the process is consistent with Avista’s commitment to achieve all cost-effective DSM and to maximize the value of the portfolio without budgetary constraints. This process assumes that prudently incurred expenditures will be fully recoverable through the DSM tariff rider and that revisions in the tariff rider surcharge will be sufficiently timely so as to maintain a materially neutral tariff rider balance. Thus the budget is a product of the planning process and not a planning objective.

The overall 2017 budget projection is summarized below. The table includes (separately) elements of the DSM budget that have been designated as “supplemental” to indicate that they are unrelated to the current year operations and are not included in the cost-effectiveness calculation.

Table 3: Summary of the 2017 DSM budget

	2017 Washington Gas Budget	Supplemental Budget	Non- Supplemental Budget
Total Incentives	\$2,135,570	\$0	\$2,135,570
Total Labor	\$399,000	\$0	\$399,000
Total non-labor/non-incentive	\$725,012	\$402,939	\$322,073

The Company has been tracking the proportion of total utility expenditures returned to customers in the form of direct incentives as a metric to guide the Company towards improved

administrative efficiencies. The table below shows these proportions by individual portfolio and for the three portfolios in aggregate.

Table 4: Proportion of funds returned to customer through direct incentives

% of utility expenditures returned to customers via direct incentives	74%
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The program-by-program details of the expected incentive expenditures are provided in greater detail below. The incentives are clearly highly correlated to program throughput and energy acquisition.

Table 5: Customer direct incentive expenditure detail

Low Income Programs	Direct Incentive Expenditure
WA LI	\$582,068
Residential Programs	
Res Prescriptive	\$1,102,700
Simple Steps	\$6,162
Non-Residential Programs	
NonRes HVAC	\$43,375
NonRes Shell	\$27,025
Food Service Equipment (Gas only for CE)	\$63,367
Site Specific (Gas only for CE)	\$300,000
Small Business	\$10,872
Total Low Income Incentives	\$582,068
Total Residential Incentives	\$1,108,862
Total Non-Residential Incentives	\$444,639
Total of all incentives	\$2,135,570

The non-incentive expense, including both non-supplemental and supplemental expenditures, is detailed to a lower level of aggregation and broken out by portfolio in the table below. The allocation of these expenses is allocated by the percentage of value provided by each program.

The policy regarding assigning costs is based upon the source of the requirement or justification for the expense and the portfolio benefiting from the outcome of that expense.

Table 6: Non-Incentive Utility Expense Detail

	Washington gas portfolio	Supplemental budget	Non- Supplemental budget
Third Party non-incentive payments	\$115,748	\$0	\$115,748
Labor	\$399,000	\$0	\$399,000
EM&V	\$78,750	\$0	\$78,750
Memberships	\$22,050	\$0	\$22,050
Outreach	\$84,000	\$0	\$84,000
Training/Travel	\$7,875	\$0	\$7,875
Regulatory	\$3,150	\$0	\$3,150
Software	\$10,500	\$0	\$10,500
CPA	\$7,000	\$7,000	\$0
R&D	\$0	\$0	\$0
NEEA	\$395,939	\$395,939	\$0
Total	\$1,124,012		