#### Appendix A

## Summary of the Dual-Fuel Incentive Calculator Implementation Policy Renee Coelho

Avista's Schedule 90 and 190 govern the DSM operations that the Company offers. These tariffs were designed to provide the utility with sufficient flexibility to be responsive to market conditions and opportunities, but at the same time impose upon the utility a greater responsibility for ensuring the tariff is implemented without undue discrimination and within the letter and spirit of the tariff itself.

As a result, the Company has developed a "Dual-Fuel Incentive Calculator" (DFIC) spreadsheet model. This model ensures a consistency in the calculation of incentives for our customers. The model is most frequently applied to our site-specific program, given that each project will require a customized incentive calculation, but is also applied to "typical" projects to determine prescriptive incentive amounts. This tool also provides engineers, account executives and program managers with key diagnostic statistics regarding the projects to improve our understanding of how the program is being applied for use in future program design and redesign.

One element that is incorporated into the DFIC model is a series of policy statements. These policies have been established to improve the consistency of the application of our programs. These policies have been copied in below in their entirety. The DFIC model is not included in this business plan but is available upon request.

#### Policy Guidelines from the DFIC Model

#### Policy Rules for the Calculation of Customer Incentives

(if in doubt about the interpretation of these rules, consult Renee Coelho or Jon Powell prior to representing any incentive to the customer)

#### Definition of Fields within SalesLogix

- KW Customer coincident demand
- kWh direct or primary savings for an electric or dual fuel project
- Therms direct or primary savings for a natural gas or dual fuel project
- Secondary kWh incidental savings or increased usage due to a natural gas or dual fuel project; does not count for or against goal. Increased usage is entered as a negative.
- Secondary therms incidental savings or increased usage due to an electric or dual fuel project; does
  not count for or against goal. Increased usage is entered as a negative.
- Measure life is the measure life for the individual project or the standard measure life when no better
  estimate is available. This provides a cross-check to verify whether or not standard measure lives used
  in reporting should be adjusted.
- Cost entire cost of the project
- Cost for CE Calcs the incremental cost of the project to be used in the cost-effectiveness calculations
- Recurring non-energy benefits an annual recurring non-energy benefits entered in nominal dollars
- One time non-energy benefits a non-recurring non-energy benefit (i.e. maintenance savings the year the windows were installed or the difference between regular windows and historical windows)
- Schedule 99/199 pseudo rate schedule for projects with a special contract
- Schedule 90 pseudo rate schedule for dual fuel projects where there are electric savings but the customer is not an electric customer of the Company
- Schedule 190 pseudo rate schedule for dual fuel projects where there are natural gas savings but the customer is not a natural gas customer of the Company

#### Treatment of Non-Energy Benefits

- Data regarding non-energy benefits is to be collected by technical project lead and by account executive; entry of one time and/or recurring non-energy benefits into SalesLogix being account executive responsibility
- Non-energy benefit data must be incorporated into cost-effectiveness calculations
- Non-energy benefits are not to be included in the calculation of simple payback for purposes of determining the customer's incentive
- Non-quantifiable non-energy benefits should be documented within the DFIC. This is important for times when the portfolio may not be cost-effective.
- Demand response for our purposes is defined as utility dispatchable and is entered in a separate demand response part of SalesLogix.

#### Calculation of Simple Payback (used for Direct Incentives)

- Simple payback is the customer cost, as defined within this policy, divided by the first year own-fuel bill savings accruing to the customer. The incentive level will then be determined by applying that simple payback to the tier structure defined in Schedule 90 and 190.
- Data collection will be the joint responsibility of the technical lead and the account executive.
   Coordination and entry of the data into SalesLogix will be the account executive's responsibility
- The account executive is responsible for submitting the data for calculation of simple payback before evaluation is submitted to customer.
- Data is to be submitted for calculation of simple payback before evaluation is submitted to customer (when report is handed from technical lead to segment manager)
- The final results of the DFIC calculation will be communicated to the account executive prior to being presented to the customer, unless the account executive approves alternate arrangements.
- Capital cost estimates can be arrived at in many ways (e.g., Means Mechnical Estimating, contractor bids, industry standards, and in-house spreadsheets)
- Simple payback calculation are not to include values for non-energy benefits
- The simple payback calculation will **not** include adjustments for **secondary** energy effects that are not "own-fuel". Thus secondary electric savings are considered in electric efficiency (and dual-fuel and fuel-switching) calculations and secondary natural gas savings are considered in natural gas efficiency (or dual-fuel or fuel-switching) calculations. But non-electric savings are not incorporated into electric SPB calculations nor are non-natural gas savings incorporated into natural gas efficiency SPB's.
- The calculation will include adjustments for direct non-electric energy effects (e.g., therm penalty as a result of a fuel switch project).
- The calculation will include the bill savings resulting from kWh, kW, kVAR impacts of the project, plus any associated electric bill, tax or fee impacts.
- Calculation is to include adjustments for secondary electric energy effects (e.g., heating increase or cooling savings resulting in kWh change)
- Similar measures (e.g., lighting and lighting controls or HVAC and HVAC controls) will be bundled for calculations, but dissimilar measures (e.g., lighting and VFDs) will not be combined.
- Projects which are served under different rate schedules are never, under any circumstances, combined into a single project.
- Projects which are at different locations are never, under any circumstances, combined into a single
  project. For purposes of this policy, different locations mean that the projects involved could not
  feasibly be served by a single meter. If the projects could be served by a single meter, the projects will
  be combined if they are of a similar measure and on the same rate schedule if the customer benefits

- from combining the multiple projects. The intent is to avoid uneconomic manipulation of metering in order to allow the combination of projects.
- Sales tax paid by the customer and associated with the energy efficiency portion of the project will be included as a cost for the simple payback calculation.
- Energy savings should be valued based upon the actual savings that the customer receives. Generally this will mean that the highest tier of usage on each individual rate should be used, which is the methodology embedded in the DFIC model. However, when using this tier would not properly value customer energy savings, the model rate inputs should be modified by using the hypothetical rate schedules "99" and "199" to represent the project-specific inputs.

### Calculation of Customer Cost (used for Direct Incentives)

- The customer costs to be included in the simple payback calculation will be only those associated with the energy efficiency portion of the project relative to a defined baseline. Energy savings will be calculated based upon the same definition of the baseline and high efficiency project.
- The calculation of customer costs will not include any deductions for non-energy benefits, but the
  baseline and high efficiency projects will be defined to exclude these costs and benefits to the extent
  possible.
- Calculation is not to include adjustments for secondary non-electric energy effects (e.g., heating increase or cooling savings in therm change)
- Calculation is to include all values for electric energy savings; kWh, kW, kVAR
- Calculation is to include adjustments for secondary electric energy effects (e.g., heating increase or cooling savings resulting in kWh change)
- Any direct or indirect incentive received by the customer will not be used to reduce the customer cost for purposes of the calculation of simple payback
- The installation of used equipment does qualify for direct incentives, assuming that the equipment
  meets the manufacturer's code minimum or industry standards. Disposal of the old equipment is not
  included in the customer cost for purposes of calculating simple payback, but is considered as a
  customer cost for cost-effectiveness purposes
- Appropriate base case for projects where existing equipment is in imminent failure is the manufacturer's code minimum or industry standard, whichever is more energy efficient.
- Appropriate base case for projects involving new construction or substantial renovation is the equivalent code minimum or industry standard, whichever is more energy efficient.
- Base case for calculation of savings will be the same base case used in calculation of customer incentives (i.e. A/C upgrade from 8 SEER to 12 SEER when code minimum is 13 SEER—if A/C was functioning fine with measure life still remaianing savings would be claimed for the upgrade and incentive paid even though code minimum wasn't met. However, if failure was imminent, meeting code minimum would be necessary to claim savings and pay incentive).

#### Calculation of Customer Cost (used for Cost-Effectiveness)

- Calculation is to include only costs associated with the energy efficiency component of a customer project
- Calculation is to be adjusted for significant differences between remaining life of existing equipment and expected life of recommended equipment
- Calculation is not to include adjustments for non-energy benefits, although non-energy benefits are to be tracked for inclusion in cost-effectiveness calculations
- Calculation is to be performed by the project engineer
- Calculation is not to include adjustments for direct incentives

#### **Qualifying Projects**

 Projects that are characterized by having a significant degradation of end-use quality do not qualify for either customer incentives or credit toward energy savings calculations. Degradation of savings is defined as a significant reduction to the value, comfort, convenience or other attributes of an end use. Any non-trivial reduction in the safety of any end-use will disqualify the project. This will apply to both residential and non-residential projects.

For example, degradation of end use would disqualify projects such as: (1) a lighting retrofit that reduces the lighting level below industry standards, (2) changes in HVAC temperature settings which are not associated with any other efficiency project, (3) reductions in lighting levels which are deemed to adversely affect safety, (4) the closure or destruction of a facility.

Examples of projects which are not disqualified due to degradation of end-use include: (1) reductions in lighting levels which do not adversely effect comfort, safety or any other end use attribute, (2) changes in HVAC temperatures when facilities are unoccupied or changes in a manner which do not adversely effect comfort or any other end use attribute, (3) changes in an industrial process which reduces the energy use without effecting the quantity or quality of the product, (4) changes in facility operating hours which do not materially effect the business value of the facility.

• Maintenance measures in general do not qualify for incentivization, nor do we take credit for the efficiency gains from maintenance measures alone. This does not preclude the development of market transformation programs intended to improve maintenance practice on a sustained basis. Maintenance measures are defined as measures which bring end-use equipment back to (or towards) their original level of efficiency or measures which are necessary for the continued operation of the unit as it was designed to function. Examples of maintenance measures would include filter changes, lamp replacements, periodic lubrications, replacement of components with an expected life less than the equipment that it is a part of (e.g. fluorescent tubes). This definition does not preclude providing incentives for improvements to existing equipment that take it to an efficiency beyond that which it was originally designed for (e.g. additional of a variable frequency drive to an existing motor). In the case of an efficiency upgrade the appropriate standard efficiency base case would be the existing equipment, properly maintained and operating as it was designed to operate.

#### Capturing of "Soft Savings"

 Behavioral savings from community outreach and education that are difficult to quantify will not be included with our primary electric and natural gas savings.

## Appendix B Tariffs Governing Avista DSM Programs

The regulation permitting Avista to offer and fund DSM programs within our Washington and Idaho service territory are governed by the nine tariffs. These tariffs are:

- Schedule 90 (Washington tariff and Idaho tariff): Specifies the conditions under which Avista operates electric DSM programs.
- Schedule 190 (Washington tariff and Idaho tariff): Specifies the conditions under which Avista operates natural gas DSM programs.
- Schedule 91 (Washington tariff and Idaho tariff): Establishes the tariff rider surcharge funding electric DSM and (in Washington only) LIRAP programs.
- Schedule 191 (Washington tariff and Idaho tariff): Establishes the tariff rider surcharge funding natural gas DSM and (in Washington only) LIRAP programs.
- Schedule 96 (Idaho only): Governs Avista's two-year demand-response pilot.

Avista has long sought to offer identical programs to our Washington and Idaho customers to avoid the need for distinguishing between our Washington and Idaho programs within the marketplace. This is of high importance given that the two jurisdictions are inextricably joined for purposes of program outreach and implementation. Thus you will note an extremely high degree of similarity between the tariffs of the two jurisdictions.

The text of the most recent versions of each of the nine tariffs is contained below. These tariffs are also available on the Company's website at www.avistautlities.com.

SCHEDULE 90 ELECTRIC ENERGY EFFICIENCY PROGRAMS WASHINGTON

#### 1. AVAILABILITY

The services described herein are available to specified residential, commercial, and industrial, retail electric distribution customers of Avista for the purpose of promoting the efficient use of electricity. Customers receiving electric distribution service provided under special contract and/or customers receiving electric services not specified under Tariff Schedule 91 (Energy Efficiency Rider Adjustment) are not eligible for services contained in this schedule unless specifically stated in such contract or other service agreement. The Company may provide partial funding for the installation of electric efficiency measures and may provide other services to customers for the purpose of identification and implementation of cost effective electric efficiency measures as described in this schedule. These services are available to owners of facilities, and also may be provided to tenants who have obtained appropriate owner consent. Assistance provided under this schedule is limited to end uses where electricity is the primary energy source. Assistance may take the form of monetary incentives or nonmonetary support, as further defined within this tariff. The Company shall strive to develop a portfolio of programs that is cost-effective on an aggregate basis. Customer participation under this schedule shall be based on eligibility requirements contained herein.

#### 2. ELIGIBLE CUSTOMER SEGMENTS

All customers in all customer segments to whom this tariff is available are eligible for participation in electric efficiency programs developed in compliance with this tariff. The broad availability of this tariff does not preclude the Company from targeting measures, markets and customer segments as part of an overall effort to increase the costeffectiveness and access to the benefits of electric efficiency.

#### 3. MEASURES

Only electric efficiency measures with verifiable energy savings are eligible for assistance. Measure eligibility may not necessarily apply to all customer segments. Final determination of applicable measures will be made by the Company. Eligible technologies may include, but are not limited to, energy-efficient appliances, assistive technologies, controls, distributed renewable energy, motors, heating, ventilation and airconditioning (HVAC) systems, lighting, maintenance, monitoring, new technologies, and shell.

Incentives for distributed renewable energy measures will be limited to net-metering facilities operating under Avista Utilities Idaho/Washington Rate Schedule 63 Net Metering rules. Incentives will be limited to energy production not to exceed 100% of the average annual energy use of the facility for the preceding three years or if new, a similar facility's annual use as calculated by the Company. Incentives will be limited to 50% of the total cost of the installation. This market transformation effort supports renewable energy measures in the residential and small commercial segments. Market transformation ventures will be considered eligible for funding to the extent that they improve the adoption of electric efficiency measures that are not fully accepted in the marketplace. These market transformation efforts may include efforts funded through regional alliances or other similar opportunities.

## 4. FUNDING AND NONMONETARY ASSISTANCE

## 4.1 Funding

The incentive to be provided by the Company for electric or fuel-conversion efficiency measure(s) is based upon the simple payback of the measure prior to the application of an incentive, as calculated by Company staff and based upon standardized measure cost(s). These incentive tiers apply to measures with energy savings lasting 10 years or longer that meet or exceed the higher of the current energy

code or industry practice that are applicable to the project. Simple payback is defined as the capital cost of the project divided by the energy savings per year. Fuel-conversion incentives are available only for conversion to natural gas with an end-use efficiency of 44% or greater. The incentives shall be as follows:

**Incentive Level** 

(cents per first year kWh saved)

Measures

Simple Pay-Back

Period (Minimum measure life of 10 years\*)

Electric Efficiency 1 to under 2 years 8 cents

2 to under 4 years 12 cents

4 to under 6 years 16 cents

6 to under 10 years 20 cents

Over 10 years \*\* 20 cents

Over 10 years \*\*\* 12 cents

Fuel-Conversion 1 to under 2 years 1 cents

2 to under 4 years 3 cents

4 to under 6 years 5 cents

Over 6 years 7 cents

- \* Measures with an energy savings life less than 10 years may receive an incentive amount not to exceed the full incremental cost of the measure.
- \*\* Applicable only to non-lighting measures.
- \*\*\* Applicable only to lighting measures .

Incentives in which the tier structure applies will be capped at 50% percent of the incremental project cost with the exception of the following that may be capped at a maximum of 100% of the measure cost:

- **4.1.1** DSM programs delivered by community action agencies contracted by the Company to serve Limited Income or vulnerable customer segments including agency administrative fees and health and human safety measures:
- **4.1.2** Low-cost electric efficiency measures with demonstrable energy savings (e.g. compact fluorescent lamps);
- **4.1.3** Programs or services supporting or enhancing local, regional or national electric efficiency market transformation efforts.

The Company will actively pursue electric efficiency opportunities that may not fit within the prescribed services and simple pay-back periods described in this tariff. In these circumstances the customer and the Company will enter into a site specific services agreement.

#### 4.2 Non-Monetary Assistance

Assistance without the granting of direct monetary incentives to the customer is available across all applicable segments and may be provided in various ways, that include, but are not limited to, the following:

- **4.2.1. Educational**, training or informational activities that enhance electric efficiency. This may include technology or customer-segment specific seminars, literature, trade-show or community events, advertising or other approaches to increasing the awareness and adoption of resource efficient measures and behaviors.
- **4.2.2. Financial** activities intended to reduce or eliminate the financial barriers to the adoption of electric efficiency measures. This may include programs intended to reduce the payment rate for resource efficiency measures, direct provision of leased or loaned funds or other approaches to financial issues with better than existing market terms and conditions.
- **4.2.3. Product samples** may be provided directly to the customer when energy efficiency products may be available to the utility at significantly reduced cost as a result of cooperative buying or similar opportunities.

#### Text of Washington Schedule 91 (establishing the tariff rider surcharge funding Avista's electric DSM programs)

SCHEDULE 91

PUBLIC PURPOSES RIDER ADJUSTMENT - WASHINGTON

#### APPLICABLE:

To Customers in the State of Washington where the Company has electric service available. This Public Purposes Rider or Rate Adjustment shall be applicable to all retail customers for charges for electric energy sold and to the flat rate charges for Company-owned or Customer-owned Street Lighting and Area Lighting Service. This Rate Adjustment is designed to recover costs incurred by the Company associated with providing Demand Side Management services and programs and Low Income Rate Assistance (LIRAP) to customers.

### MONTHLY RATE:

The energy charges of the individual rate schedules are to be increased by the following amounts:

**DSM Rate LIRAP Rate** 

Schedule 1 \$0.00317 per kWh \$0.00058 per kWh(I)

Schedule 11 & 12 \$0.00449 per kWh \$0.00081 per kWh(I)

Schedule 21 & 22 \$0.00331 per kWh \$0.00060 per kWh(I)

Schedule 25 \$0.00217 per kWh \$0.00039 per kWh(I)

Schedule 31 & 32 \$0.00295 per kWh \$0.00052 per kWh(I)

Schedules 41-48 4.65% of base rates (R) 0.84% of base rates (I)

SPECIAL TERMS AND CONDITIONS:

Service under this schedule is subject to the Rules and Regulations contained in this tariff.

The above Rate is subject to increases as set forth in Tax Adjustment Schedule 58.

## SCHEDULE 190 NATURAL GAS EFFICIENCY PROGRAMS WASHINGTON

#### 1. AVAILABILITY

The services described herein are available to qualifying residential, commercial, and industrial, retail natural gas distribution customers of Avista Corporation for the purpose of promoting the efficient use of natural gas. Customers receiving natural gas distribution service provided under special contract and/or customers receiving natural gas services not specified under Tariff Schedule 191 (Natural Gas Efficiency Rider Adjustment) are not eligible for services contained in this schedule unless specifically stated in such contract or other service agreement. The Company may provide partial funding for the installation of natural gas efficiency measures and may provide other services to customers for the purpose of identification and implementation of cost effective natural gas efficiency measures as described in this schedule. Facilities-based services are available to owners of facilities, and also may be provided to tenants who have obtained appropriate owner consent.

Assistance provided under this schedule is limited to end uses where natural gas is or would be the energy source and to measures which increase the efficient use of natural gas. Assistance may take the form of monetary incentives or non-monetary incentives, as further defined within this tariff. The acquisition of resources is costeffective as defined by a Total Resource Cost test (TRC) as a portfolio. Customer participation under this schedule shall be based on eligibility requirements contained herein.

#### 2. ELIGIBLE CUSTOMER SEGMENTS

All customers in all customer segments to whom this tariff is available are eligible for participation in natural gas efficiency programs developed in compliance with this tariff. The broad availability of this tariff does not preclude the Company from targeting measures, markets and customer segments as part of an overall effort to increase the cost-effectiveness and access to the benefits of natural gas efficiency.

#### 3. MEASURES

Only natural gas efficiency measures with verifiable energy savings are eligible for assistance. Measure eligibility may not necessarily apply to all customer segments. Final determination of applicable measures will be made by the Company. Market transformation ventures will be considered eligible for funding to the extent that they improve the adoption of natural gas efficiency measures that are not fully accepted in the marketplace. These market transformation efforts may include efforts funded through regional alliances or other similar opportunities.

## 4. FUNDING AND NONMONETARY ASSISTANCE

## 4.1 Funding

The incentive level provided by the Company to a customer for natural gas efficiency measure(s) is based upon the simple payback of the measure prior to the application of an incentive, as calculated by Company staff and based upon standardized measure cost(s). Simple payback is defined as the capital cost of the project divided by the energy savings per year. The incentives shall be as follows:

**Measures Simple Pay-Back Period Incentive Level** (dollars/first year therm saved) (Minimum measure life of 10

years\*)

I to 2 years 2.00 2 to 4 years 2.50 Natural Gas Efficiency 4 to 6 years 3.00 Over 6 years 3.50

- \*Measures with an energy savings life less than 10 years may receive an incentive amount not to exceed the full incremental cost of the measure. Incentives in which the tier structure applies will be capped at 50% of the incremental project cost with the exception of the following that may be capped at a maximum of 100% of the measure cost:
- 4.1.1 Energy efficiency programs delivered by community action agencies contracted by the Company to serve Limited Income or vulnerable customer segments including agency administrative fees and health and human safety measures:
- 4.1.2 Low-cost natural gas efficiency measures with demonstrable energy savings (e.g. rooftop unit service);
- 4.1.3 Programs or services supporting or enhancing local, regional or national natural gas efficiency market transformation efforts.

Avista Corporation will actively pursue natural gas efficiency opportunities that may not fit within the prescribed services and simple pay-back periods described in this tariff. In these circumstances the customer and Avista Corporation will enter into a site specific services agreement.

#### 4.2 Non-Monetary Assistance

Non-monetary assistance is service that does not involve the granting of direct monetary incentives to the customer. This type of assistance is available across all applicable segments. This assistance may be provided in various ways that include, but are not limited to, the following:

- **4.2.1. Educational**, training or informational activities that enhance resource efficiency. This may include technology or customer-segment specific seminars, literature, trade-show booths, advertising or other approaches to increasing the awareness and adoption of resource efficient measures and behaviors.
- **4.2.2. Financial** activities intended to reduce or eliminate the financial barriers to the adoption of resource efficiency measures. This may include programs intended to reduce the payment rate for resource efficiency measures, direct provision of leased or loaned funds or other approaches to financial issues by better than existing market terms and conditions.
- **4.2.3. Product samples** may be provided directly to the customer when resource efficient products may be available to the utility at significantly reduced cost as a result of cooperative buying or similar opportunities.
- **4.2.4. Technical Assistance** may consist of engineering, financial or other analysis provided to the customer by or under the direction of, Avista Corporation staff. This may take the form of design reviews, product demonstrations, third-party bid evaluations, facility audits, measurement and evaluation analysis or other forms of technical assistance that addresses the costeffectiveness, technical applicability or end-use characteristics of customer alternatives.

#### 5. BUDGET & REPORTING

The natural gas efficiency programs defined within this tariff will be funded by surcharges levied within Schedule 191. The Company will manage these programs to obtain resources that are cost-effective from a Total Resource Cost perspective and achievable through utility intervention. Schedule 191 will be reviewed periodically and revised as necessary to provide adequate funding for natural gas efficiency efforts.

## <u>Text of Washington Schedule 191 (establishing the tariff rider surcharge funding Avista's natural gas DSM</u> programs)

SCHEDULE 191

PUBLIC PURPOSES RIDER ADJUSTMENT - WASHINGTON APPLICABLE:

To Customers in the State of Washington where the Company has natural gas service available. This Public Purposes Rider or Rate Adjustment shall be applicable to all retail customers taking service under Schedules 101, 111, 112, 121, 122, 131, and 132. This Rate Adjustment is designed to recover costs incurred by the Company associated with providing Demand Side Management services and programs, and Low Income Rate Assistance (LIRAP) to customers. MONTHLY RATE:

The energy charges of the individual rate schedules are to be increased by the following amounts:

**DSM Rate LIRAP Rate** 

Schedule 101 \$0.05135 per Therm(I) \$0.00979 per Therm

Schedule 111 & 112 \$0.04939 per Therm(I) \$0.00846 per Therm

Schedule 121 & 122 \$0.04675 per Therm(I) \$0.00781 per Therm

Schedule 131 & 132 \$0.04298 per Therm(I) \$0.00756 per Therm

SPECIAL TERMS AND CONDITIONS:

Service under this schedule is subject to the Rules and Regulations contained in this tariff.

The above Rate is subject to increases as set forth in Tax Adjustment Schedule 158.

SCHEDULE 90 ELECTRIC ENERGY EFFICIENCY PROGRAMS IDAHO

## 1. Availability

The services described herein are available to specified residential, commercial, and industrial, retail electric distribution customers of Avista Corporation for the purpose of promoting the efficient use of electricity. Customers receiving electric distribution service provided under special contract and/or customers receiving electric services not specified under Tariff Schedule 91 (Energy Efficiency Rider Adjustment) are not eligible for services contained in this schedule unless specifically stated in such contract or other service agreement. The Company may provide partial funding for the installation of electric efficiency measures and may provide other services to customers for the purpose of identification and implementation of cost effective electric efficiency measures as described in this schedule. Facilities-based services are available to owners of facilities, and also may be provided to tenants who have obtained appropriate owner consent.

Assistance provided under this schedule is limited to end uses where electricity is the energy source. Assistance may take the form of monetary incentives or non-monetary incentives, as further defined within this tariff. The acquisition of resources is cost-effective as defined by a Total Resource Cost test (TRC) as a portfolio. Customer participation under this schedule shall be based on eligibility requirements contained herein.

### 2. ELIGIBLE CUSTOMER SEGMENTS

All customers in all customer segments to whom this tariff is available are eligible for participation in electric efficiency programs developed in compliance with this tariff. The broad availability of this tariff does not preclude the Company from targeting measures, markets and customer segments as part of an overall effort to increase the cost-effectiveness and access to the benefits of electric efficiency.

### 3. MEASURES

Only electric efficiency measures with verifiable energy savings are eligible for assistance. Measure eligibility may not necessarily apply to all customer segments. Final determination of applicable measures will be made by the Company. Eligible technologies may include, but are not limited to, energy-efficient appliances, assistive technologies, controls, distributed renewable energy, motors, heating, ventilation and air-conditioning (HVAC) systems, lighting, maintenance, monitoring, new technologies, and shell. Incentives for distributed renewable energy measures will be limited to net-metering facilities operating under Avista Utilities Idaho/Washington Rate Schedule 63 Net Metering rules. Incentives will be limited to energy production not to exceed 100% of the average annual energy use of the facility for the preceding three years or if new, a similar facility's annual use as calculated by the Company. Incentives will be limited to 50% of the total cost of the installation. This market transformation effort supports renewable energy measures in the residential and small commercial segments. Market transformation ventures will be considered eligible for funding to the extent that they improve the adoption of electric efficiency measures that

are not fully accepted in the marketplace. These market transformation efforts may include efforts funded through regional alliances or other similar opportunities.

#### 4. FUNDING AND NONMONETARY ASSISTANCE

#### 4.1 Funding

The incentive to be provided by the Company for electric or fuel-conversion efficiency measure(s) is based upon the simple payback of the measure prior to the application of an incentive, as calculated by Company staff and based upon standardized measure cost(s). These incentive tiers apply to measures with energy savings lasting 10 years or longer that meet or exceed the higher of the current energy code or industry practice that are applicable to the project. Simple payback is defined as the capital cost of the project divided by the energy savings per year. Fuel-conversion incentives are available only for conversion to natural gas with an end-use efficiency of 44% or greater. The incentives shall be as follows:

**Incentive Level** 

(cents per first year kWh saved)

Measures

Simple Pay-Back

Period (Minimum measure life of 10 years\*)

Electric Efficiency 1 to under 2 years 8 cents

2 to under 4 years 12 cents

4 to under 6 years 16 cents

6 to under 10 years 20 cents

Over 10 years \*\* 20 cents

Over 10 years \*\*\* 12 cents

Fuel-Conversion 1 to under 2 years 1 cents

2 to under 4 years 3 cents

4 to under 6 years 5 cents

Over 6 years 7 cents

- \* Measures with an energy savings life less than 10 years may receive an incentive amount not to exceed the full incremental cost of the measure.
- \*\* Applicable only to non-lighting measures.
- \*\*\* Applicable only to lighting measures .

Incentives in which the tier structure applies will be capped at 50% percent of the incremental project cost with the exception of the following that may be capped at a maximum of 100% of the incremental cost:

- **4.1.1** Limited Income or vulnerable customer segments and the agencies serving those customers;
- **4.1.2** Low-cost electric efficiency measures with demonstrable energy savings (e.g. compact fluorescent lamps);
- **4.1.3** Programs or services supporting or enhancing local, regional or national electric efficiency market transformation efforts.

### 4.2 Non-Monetary Assistance

Non-monetary assistance is service that does not involve the granting of direct monetary incentives to the customer. This type of assistance is available across all applicable segments. This assistance may be provided in various ways that include, but are not limited to, the following:

- **4.2.1. Educational**, training or informational activities that enhance resource efficiency. This may include technology or customer-segment specific seminars, literature, trade-show booths, advertising or other approaches to increasing the awareness and adoption of resource efficient measures and behaviors.
- **4.2.2. Financial** activities intended to reduce or eliminate the financial barriers to the adoption of resource efficiency measures. This may include programs intended to reduce the payment rate for resource efficiency measures, direct

provision of leased or loaned funds or other approaches to financial issues by better than existing market terms and conditions.

- **4.2.3. Product samples** may be provided directly to the customer when resource efficient products may be available to the utility at significantly reduced cost as a result of cooperative buying or similar opportunities.
- **4.2.4. Technical Assistance** may consist of engineering, financial or other analysis provided to the customer by or under the direction of, Avista Corporation staff. This may take the form of design reviews, product demonstrations, third-party bid evaluations, facility audits, measurement and evaluation analysis, project management or other forms of technical assistance that addresses the cost-effectiveness, technical applicability or end-use characteristics of customer alternatives.

#### Text of Idaho Schedule 91 (establishing the tariff rider surcharge funding Avista's electric DSM programs)

SCHEDULE 91

**ENERGY EFFICIENCY RIDER ADJUSTMENT - IDAHO** 

#### APPLICABLE:

To Customers in the State of Idaho where the Company has electric service available. This Energy Efficiency Rider or Rate Adjustment shall be applicable to all retail customers for charges for electric energy sold and to the flat rate charges for Company-owned or Customer-owned Street Lighting and Area Lighting Service. This Rate Adjustment is designed to recover costs incurred by the Company associated with providing energy efficiency services and programs to customers.

#### MONTHLY RATE:

The energy charges of the individual rate schedules are to be increased by the following amounts:

Schedule 1 - .258 ¢ per kWh Schedule 25 - .166 ¢ per kWh

Schedule 11 & 12 - .303 ¢ per kWh Schedule 25P - .146 ¢ per kWh

Schedule 21 & 22 - .232 ¢per kWh Schedule 31 & 32 - .242 ¢ per kWh

Flat rate charges for Company-owned or Customer-owned Street Lighting and Area Lighting Services (Schedules 41, 42, 43, 44, 45, 46, 47, 48 & 49) are to be increased by 3.64%.

SPECIAL TERMS AND CONDITIONS:

Service under this schedule is subject to the Rules and Regulations contained in this tariff.

The above Rate is subject to increases as set forth in Tax Adjustment Schedule 58.

#### Text of Idaho Schedule 96 (governing Avista's demand-response pilot program)

#### **SCHEDULE 96**

#### ENERGY LOAD MANAGEMENT PROGRAMS - PILOT

#### **PURPOSE:**

To provide residential and commercial demand response programs for a two-year period. Internet protocol thermostats, direct control units and related technology may be installed to test reduction in energy usage at peak times of the year.

#### **AVAILABLE**

To Rate Schedule 1, 11, and 21 Customers in the State of Idaho where the Company provides electric service in selected areas of Sandpoint and Moscow.

#### **APPLICABLE**

To all customers receiving electric service who agree to participate under this schedule.

#### **INCENTIVE**

Participating customers with demand response switches will receive an audit on all equipment controlled via the switch plus a \$10 a month credit for the months of July, August, December, January and February.

#### **SPECIAL TERMS AND CONDITIONS**

Qualifying participants must be homeowners or business owners occupying the premises for at least one year on a full-time basis.

Customers can have an alternate non-electric back-up heat source (an alternate heat source will be required if demand response units are to be installed on baseboard electric load).

Participating customers will have no incremental costs.

This program will provide load use controls for some of the following appliances:

- Air Conditioning
- Complete HVAC system (electric heat-pump w/air conditioning)
- Water Heater
- Pool Pump
- Electric Forced Air Heating System
- Electric Base Board Heating System
- Irrigation pump (if any)

Customers may apply for or terminate from this schedule anytime during the pilot.

Issued by Avista Corporation By Kelly Norwood, Vice President State and Federal Regulation

SCHEDULE 190 NATURAL GAS EFFICIENCY PROGRAMS IDAHO

#### 1. AVAILABILITY

The services described herein are available to qualifying residential, commercial, and industrial, retail natural gas distribution customers of Avista Corporation for the purpose of promoting the efficient use of natural gas. Customers receiving natural gas distribution service provided under special contract and/or customers receiving natural gas services not specified under Tariff Schedule 191 (Natural Gas Efficiency Rider Adjustment) are not eligible for services contained in this schedule unless specifically stated in such contract or other service agreement. The Company may provide partial funding for the installation of natural gas efficiency measures and may provide other services to customers for the purpose of identification and implementation of cost effective natural gas efficiency measures as described in this schedule. Facilities-based services are available to owners of facilities, and also may be provided to tenants who have obtained appropriate owner consent.

Assistance provided under this schedule is limited to end uses where natural gas is or would be the energy source and to measures which increase the efficient use of natural gas. Assistance may take the form of monetary incentives or non-monetary incentives, as further defined within this tariff. The acquisition of resources is costeffective as defined by a Total Resource Cost test (TRC) as a portfolio. Customer participation under this schedule shall be based on eligibility requirements contained herein.

#### 2. ELIGIBLE CUSTOMER SEGMENTS

All customers in all customer segments to whom this tariff is available are eligible for participation in natural gas efficiency programs developed in compliance with this tariff. The broad availability of this tariff does not preclude the Company from targeting measures, markets and customer segments as part of an overall effort to increase the cost-effectiveness and access to the benefits of natural gas efficiency.

#### 3. MEASURES

Only natural gas efficiency measures with verifiable energy savings are eligible for assistance. Measure eligibility may not necessarily apply to all customer segments. Final determination of applicable measures will be made by the Company.

Market transformation ventures will be considered eligible for funding to the extent that they improve the adoption of natural gas efficiency measures that are not fully accepted in the marketplace. These market transformation efforts may include efforts funded through regional alliances or other similar opportunities.

## 4. FUNDING AND NONMONETARY ASSISTANCE 4.1 Funding

The incentives specified below are provided by the Company to promote the best use of natural gas resources. Incentives are based upon the simple payback of the measure prior to the application of an incentive, as calculated by Company staff and based upon standardized measure cost(s). These incentive tiers apply to measures with energy savings lasting 10 years or longer that meet or exceed current manufacturing and energy codes and/or industry standard practices that are applicable to the project. Simple payback is defined as the capital cost of the project divided by the energy savings per year. The incentives shall be as follows:

Measures Simple Pay-Back Period Incentive Level (dollars/first year therm saved) (Minimum measure life of 10 years\*)
1 to 2 years 2.00

2 to 4 years 2.50 Natural Gas Efficiency 4 to 6 years 3.00 Over 6 years 3.50

\*Measures with an energy savings life less than 10 years may receive an incentive amount not to exceed the full incremental cost of the measure.

Incentives in which the tier structure applies will be capped at 50% of the incremental project cost with the exception of the following that may be capped at a maximum of 100% of the measure cost:

- 4.1.1 Energy efficiency programs delivered by community action agencies contracted by the Company to serve Limited Income or vulnerable customer segments including agency administrative fees and health and human safety measures:
- 4.1.2 Low-cost natural gas efficiency measures with demonstrable energy savings (e.g. rooftop unit service);
- 4.1.3 Programs or services supporting or enhancing local, regional or national natural gas efficiency market transformation efforts.

Avista Corporation will actively pursue natural gas efficiency opportunities that may not fit within the prescribed services and simple pay-back periods described in this tariff. In these circumstances the customer and Avista Corporation will enter into a site specific services agreement.

#### 4.2 Non-Monetary Assistance

Non-monetary assistance is service that does not involve the granting of direct monetary incentives to the customer. This type of assistance is available across all applicable segments. This assistance may be provided in various ways, that include, but are not limited to, the following:

- **4.2.1. Educational**, training or informational activities that enhance resource efficiency. This may include technology or customer-segment specific seminars, literature, trade-show booths, advertising or other approaches to increasing the awareness and adoption of resource efficient measures and behaviors.
- **4.2.2. Financial** activities intended to reduce or eliminate the financial barriers to the adoption of resource efficiency measures. This may include programs intended to reduce the payment rate for resource efficiency measures, direct provision of leased or loaned funds or other approaches to financial issues by better than existing market terms and conditions.
- **4.2.3. Product samples** may be provided directly to the customer when resource efficient products may be available to the utility at significantly reduced cost as a result of cooperative buying or similar opportunities.
- **4.2.4. Technical Assistance** may consist of engineering, financial or other analysis provided to the customer by or under the direction of, Avista Corporation staff. This may take the form of design reviews, product demonstrations, third-party bid evaluations, facility audits, measurement and evaluation analysis or other forms of technical assistance that addresses the costeffectiveness, technical applicability or end-use characteristics of customer alternatives.

#### 5. BUDGET & REPORTING

The natural gas efficiency programs defined within this tariff will be funded by surcharges levied within Schedule 191. The Company will manage these programs to obtain resources that are cost-effective from a Total Resource Cost perspective and achievable through utility intervention. Schedule 191 will be reviewed annually and revised as necessary to provide adequate funding for natural gas efficiency efforts.

## 6. OPTIONAL HIGH ANNUAL LOAD FACTOR LARGE GENERAL SERVICE PROGRAM

Customers receiving natural gas service under Schedules 131 and 132 with costeffective natural gas efficiency projects are eligible to respond to the Company's

Request for Proposals (RFP). The RFP will be developed jointly with representative Customers and the Northwest Industrial Gas Users (NWIGU). The RFP will be available for release no later than April 1, 2001 and annually thereafter. Natural gas savings are to be calculated using standard engineering practices, and with operations schedules documented by the Customer. The Company will review natural gas savings calculations, and reserves the right to modify energy savings estimates. Actual savings may be trued up based on post-installation energy use monitoring. Further details will be provided in the RFP.

Funding is available directly to the Customer upon receipt of customer verification of completed installation. The Company will fund cost-effective projects, using the costeffectiveness standards to determine the value of natural gas savings, such that the Company's incentive satisfies the Total Resource Cost test (TRC) as a portfolio. Project funding will be up to the amount of conservation revenues collected from the Schedule 131 and 132 Customers under Schedule 191 of this Tariff over the period for which this Schedule is in effect, minus the Company's cost to administer this program. Annual incentive amounts for this program will be subject to the Company's annual budget for energy efficiency programs. Further provisions will be provided in the RFP. The Company, at its option, may inspect installations prior to payments of the funding.

#### Text of Idaho Schedule 191 (establishing the tariff rider surcharge funding Avista's natural gas DSM programs)

SCHEDULE 191

**ENERGY EFFICIENCY RIDER ADJUSTMENT - IDAHO** 

APPLICABLE:

To Customers in the State of Idaho where the Company has natural gas service available. This Energy Efficiency Rider or Rate Adjustment shall be applicable to all retail customers taking service under Schedules 101, 111, 112, 131, and 132. This Rate Adjustment, is designed to recover costs incurred by the Company associated with providing energy efficiency services and programs to customers. The Company may, at its discretion to match revenue under this schedule with demand for services under Schedule 190, reduce or increase this charge on an annual basis. Any change in this charge is subject to Commission approval and its review of the previous year expenditures under Schedule 190 and determinations with regard to any revenue carry forward, and prospective budget on an annual basis. Any annual expenditures exceeding annual collections when combined with any carry forward budget surplus shall be at the Company's risk of future recovery.

MONTHLY RATE:

The energy charges of the individual rate schedules are to be increased by the following amounts:

Schedule 101 \$0.05762 per Therm

Schedule 111 & 112 \$0.05038 per Therm

Schedule 131 & 132 \$0.04020 per Therm

SPECIAL TERMS AND CONDITIONS:

Service under this schedule is subject to the Rules and Regulations contained in this tariff.

The above Rate is subject to increases as set forth in Tax Adjustment Schedule 158.

## Appendix C Heritage Plan Analytical Roadmap

Attached below is a copy of the Heritage Plan "Analytical Roadmap" that was used in 2007 to develop a methodology for developing an electric avoided cost price signal that is more specific and useful for purposes of evaluating electric efficiency measures. As a result of this effort Avista was able to better isolate the cost associated with capacity vs. energy and to incorporate a risk valuation premium within the avoided cost structure.

This methodology has been used for the development of the avoided cost streams used for DSM analysis since that date.



# **Analytics Task Force**

Road Map

Date: October 4, 2007

Presented by: Dave DeFelice, Bruce Folsom, Lori Hermanson,

Bill Johnson, John Lyons, Jon Powell

## **Task Force Road Map**

#### Introduction

Avista established a new demand response initiative, called the Heritage Project, in 2006. The goals of the Heritage Project are to increase the acquisition of sustainable and cost-effective energy and demand savings through comprehensively examining and implementing expanded energy efficiency programs, peak shaving/shifting programs, and other options (e.g., distribution system efficiencies). This project continues the Company's legacy of conservation innovation and education on our customers' behalf.

The identification of cost-effective resources and appropriate cost-recovery depends upon a technically sound and transparent analytical approach. Representatives of several departments developed the analytical process and the estimates necessary to proceed with the Heritage Project. Updates to this analytical process will be done as circumstances change, such as the underlying avoided cost of energy and carbon legislation.

Resource valuation for Heritage Project concepts has centered around six categories of resource value. Four of these values are part of a total avoided cost of energy usage and the remaining two values represent reductions in system-coincident demand.

The resource value of energy includes:

- Commodity cost of energy
- Avoiding carbon emissions
- Reducing retail rate volatility
- Reducing transmission and distribution system losses

The value of system-coincident capacity includes deferring future investments in:

- Generation capacity
- Transmission and distribution

## **Calculation of Resource Value Components**

The calculation of resource value begins with the commodity cost of energy. To this are added costs to reflect avoided carbon emissions, retail rate volatility, and transmission and distribution system losses. Each is described, in turn, below.

## 1. Commodity Cost of Energy

The base, or commodity, cost of electricity was calculated in Avista's 2007 Integrated Resource Plan (IRP). Wholesale electric prices were estimated based upon 300 iterations of the AURORA<sup>XMP</sup> market forecasting model under varying load, hydro, wind, forced outages, emissions, and natural gas prices in the Western Interconnect for the period 2008 to 2028. Renewable portfolio standards and projected carbon emissions costs are included in the base case market prices. The model chooses the most economic resources available to satisfy projected load obligations, including reserves for system reliability (i.e., planning margin). The IRP modeling results include a cost for carbon and other regulated emissions. Of these emission costs, the carbon emissions value was subtracted from the avoided energy cost calculations for separate treatment (in Section 2, below) because of the unique risks associated with this component.

Table 1 shows estimated avoided energy costs for 10-, 20- and 40-year periods (excluding carbon costs emission values).

TABLE 1: Annual Average Avoided Cost (\$/MWH)

	10-Year	20-Year	40-Year
	Levelized	Levelized	Levelized
Flat	49.60	55.84	69.41
On-	53.59	60.47	75.47
Peak			
Off-	44.23	49.60	61.25
Peak			

#### 2. Avoided Carbon Emissions Cost

New thermal resources produce emissions that have costs from taxes or cap and trade programs. Four emissions types are included in the IRP base case market forecast: carbon dioxide (CO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>) and mercury (Hg). A more detailed discussion of how emissions costs are calculated may be found in the Environmental Issues section of Avista's 2007 IRP.

Carbon emissions are separated from other pollutants because of uncertainty over how such emissions will be regulated. Many state and regional initiatives now compete with a multitude of cap and trade proposals at the national level. Avista's 2007 IRP reflects CO<sub>2</sub> costs as a probability distribution using the National Commission on Energy Policy (NCEP) for its mean value starting in 2015. The NCEP case is a comprehensive

climate change risk reduction program study that was released in December 2004. The NCEP case is conservative compared to recent federal proposals. Carbon emissions costs may differ significantly from this analysis depending on which, if any, of the federal or state laws are passed. Carbon emission costs will be updated as the legislative process develops.

Table 2 provides estimates for levelized CO<sub>2</sub> emission costs. The 10-year costs are significantly lower than 20-years costs because the CO<sub>2</sub> market is modeled to begin in 2015. Avoided CO<sub>2</sub> emission costs will increase significantly if legislation more stringent than the NCEP is adopted, or if a cap and trade program begins prior to 2015.

TABLE 2: Annual Average Avoided CO<sub>2</sub> Emissions Cost (\$/MWH)

	0		( . ,
	10-Year	20-Year	40-Year
	Levelized	Levelized	Levelized
Flat	1.96	4.29	5.83
On-	2.02	4.38	6.10
Peak			
Off-	1.89	4.18	5.48
Peak			

## 3. Energy Cost Volatility

Energy consumers are presumed to be adverse to volatility and willing to pay a premium for rate stability. In this analysis, volatility in the electricity market forecast is referred to as "risk." Fixed cost resources, such as Heritage Project measures avoid market volatility, or risk, because they do not rely upon any of the price drivers persistent in the marketplace, such as the cost of natural gas used to fuel a plant. An example of societies' preference for rate stability can be illustrated by its willingness to pay for reserve margins, normally covered by the construction and operation of peaking plants. These plants have very high operating costs on a per-MWh basis because they run sparingly; however, they mitigate the risk of buying higher priced power in tight market situations.

Several different risk quantification methodologies were applied to this analysis. The first considered various confidence intervals around the mean value of the 300 AURORAXMP Monte Carlo iterations. The analytics team found that this methodology could not sufficiently establish a relationship between a ratepayer's willingness to pay for less risk and any particular confidence interval. The Black-Scholes model was also evaluated to determine the risk premium. This model calculates the intrinsic value of a price cap to limit ratepayer risk. Ultimately, a third approach to the risk premium valuation using PRiSM was selected to remain consistent with the IRP.

PRiSM uses a linear programming model routine to determine the optimal amount and timing of future resource acquisitions and their associated costs. PRiSM is able to separate capacity and risk reduction values. Once capacity needs are met, PRiSM looks for cost-effective ways to lower power cost volatility. The volatility reduction strategy generally involves adding resources with high capital and low variable costs. These types of resources, such as wind generation, increase expected costs through the higher capital component and decrease expected risk through lower variable costs. Table 3 shows the premium that would be paid above the "short-term" market price to obtain resources that would reduce risk to the same levels as those resources that would be acquired through the Heritage Project. Incorporating this value into the avoided costs facilitates the comparison of alternative resource costs on a risk-adjusted basis.

**TABLE 3:** Annual Average Avoided Risk Cost (\$/MWH)

	10-Year	20-Year	40-Year
	Levelized	Levelized	Levelized
Flat	10.09	10.63	9.41

## 4. Reduction in Transmission and Distribution Energy Losses

The analytics team used a 6.5% average loss factor for transmission and distribution (T&D) projects. A precise estimate of T&D system impacts is difficult to quantify for Heritage Projects. Geography, season, time-of-day and other considerations can impact these calculations in a manner that is not easily translated into assumptions regarding specific resource options. Nevertheless, an estimate of the impact of a reduction in end-use demand upon T&D losses is required for resource analysis.

Discussions are underway to improve the quality of efficiency analyses by separating T&D losses between summer (space cooling) and winter peak (space heating) peaks. The improvements will incorporate both demand and ambient temperatures into the analysis of evaluated resource options.

Based upon the estimates of the avoided cost of energy, emissions and risk reduction valuation above (using the flat load assumptions), an adder of \$4.01 per MW is incorporated into the energy avoided cost, as illustrated in Table 4.

TABLE 4: Estimate of Value of Reduced T&D
Losses
(using flat load assumption over a 10-year
horizon)

	<u>\$/MWh</u>
Avoided cost of energy	49.60
Value CO <sub>2</sub> emissions	1.96
Value of risk reduction	<u>10.09</u>
Total of above energy values	61.65
Application of 6.5% T&D losses to	
<u>above</u>	<u>4.01</u>
Resulting total value of energy	<u>65.66</u>

## 5. Value of Avoided Generation Capacity

Some Heritage Project programs have disproportionate (relative to system) impacts on peak summer loads where market prices are high. There are opportunities including dispatchable programs that yield little or no energy savings, but offer the region the opportunity to avoid or postpone the construction of generation capacity. As these programs are dispatchable, their values are not properly reflected in market price forecasts derived by the AURORA<sup>XMP</sup> model. It is necessary to evaluate these opportunities as "naked" capacity (capacity without any energy). The value of capacity estimated in this section is applicable to resources possessing virtually no energy content, which essentially limits this value to demand-response programs.

A pure capacity value of \$300 per kilowatt is based upon the remaining capital cost of a combustion turbine not offset by energy revenues. Table 5 illustrates how the pure capacity value is derived. The initial installed capacity cost of the turbine is \$450 per kilowatt. When the turbine is dispatched against the short-term electricity market it generates margins (electric revenue less fuel and O&M costs) to offset \$150 per kilowatt of the initial installed cost. The remaining \$300 per kilowatt of capacity cost that is not offset by the value of energy sales is the pure capacity cost.

TABLE 5: Derivation of Pure Capacity Cost Based On a Simple Cycle Combustion
Turbine

Total Installed Cost of Simple Cycle Combustion Turbine	\$54,000,000
Turbine Capacity	120 MW
Installed Cost of Simple Cycle Combustion Turbine	\$450 /kW
Present Value of Revenue Requirement / Installed Cost	137%
Present Value of Total Installed Cost Revenue Requirement	\$73,980,000
Present Value of Net Energy Margin (Revenue - Fuel and O&M)	\$24,660,000
Present Value of Capacity Net of Energy Value	\$49,320,000
Initial Installed Cost of Capacity Net of Energy Value	\$36,000,000
Naked Capacity Cost Net of Energy Value	\$300 /kW

Northwest electricity markets witness higher prices during summer space cooling-driven regional peaks. Price excursions with very high prices are typically short, but reducing energy purchases during these periods can significantly reduce power supply costs. There are opportunities for Avista to implement demand-response and energy efficiency measures that would reduce native loads during these peak periods. The derived generation capacity value is applied to determine the cost-effectiveness of these opportunities.

## 6. Value of Avoided Transmission and Distribution Capital Investments

Decreasing electrical consumption reduces T&D infrastructure needs. Certain Heritage Project opportunities have a disproportionate impact on T&D, so it is necessary to treat them as a separate component of resource value.

The most recent estimate (2003) of avoided transmission and distribution capacity is \$81 per kilowatt, based on the Edison Electric Institute methodology for calculating distribution transformer specifications. Costs have escalated by 30% since 2003, which increases the 2006 value of avoided T&D capacity to \$105 per kW. There is an ongoing discussion regarding significant escalations to this value based upon recent T&D costs and future expectations and, therefore, the estimate of \$105/kW is viewed as a low, conservative estimate of value for analytical study purposes. The avoided T&D cost will be modified based upon the outcome of this ongoing evaluation.

## 7. Application of Generation and Transmission and Distribution Capacity

Avista is using values of \$300/kW for generation capacity and \$105/kW for transmission and distribution (T&D) capacity in its analytics. These values are installed cost values. In order to utilize these values for demand initiative evaluation the installed costs are amortized over the

useful life of the demand initiative. This creates a stream of annual capacity values that can then be applied to the capacity reduction contribution of the demand initiative.

For example, a demand initiative that removes load during peak hours will be credited with capacity savings by multiplying the capacity reduction of the demand initiative by the annual capacity value for the year (both generation and T&D). In addition, the demand initiative also receives credit for its annual energy savings. Demand initiatives that do not provide any on-peak capacity reduction will not receive the capacity credit and will only be credited with energy savings.

## **Summary**

The six components of resource value outlined above are summarized in Table 6.1

**TABLE 6: Resource Value Component Summary** 

(All calculations assume a flat load)

Component	10-yr Energy (\$/MWh)	20-yr Energy (\$/MWh)	40-yr Energy (\$/MWh)	Capacity <sup>5</sup> (\$/kW)
Avoided cost of energy	\$501	\$56 <sup>1</sup>	\$69 <sup>1</sup>	
Avoided cost of CO <sub>2</sub> emissions	$$2^{2}$	\$4 <sup>2</sup>	$\$6^{2}$	
Reduction in energy cost	$$10^{3}$	\$11 <sup>3</sup>	$$9^{3}$	
volatility				
Reduction in T&D losses	\$4 <sup>4</sup>	\$5 <sup>4</sup>	\$6 <sup>4</sup>	
Value deferred generating				$$300^{6}$
capacity				
Value of deferred T&D capacity				\$105
TOTAL COST	<b>\$66</b>	<b>\$76</b>	<b>\$90</b>	\$405

- 1 The flat load assumption is a simplification of a calculation that will be based upon a full 8760-hour stream of avoided energy costs.
- 2 This fixed CO<sub>2</sub> emissions cost adder will be applied until definitive legislative impacts can be more accurately modeled and included in the avoided cost of energy.
- 3 This adder reflects the difference between the expected value of the avoided cost stream and the value of resources obtained to reduce exposure to high market prices.
- 4 Based upon a 6.5% T&D loss assumption. In practice this will be applied to each individual hour of the 8760-hour avoided energy cost stream.

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These calculations are applicable to energy efficiency, load management, and transmission and distribution projects.

- 5 Capacity value is based upon the contributions of a resource to systemcoincident peak load reduction. Presently this is based upon a winter space heating-driven system peak assumption.
- 6 This capacity value is applicable only to programs with virtually no energy but significant capacity value.

Consistent with the company's 2007 IRP, these energy and capacity value estimates will be used to evaluate Heritage Project opportunities, resulting in an optimal selection of generation and non-generation resources. This optimal level includes a valuation of the reduction in power supply cost as well as energy cost volatility.

These summary values make it possible to evaluate non-utility generation resources by applying 8760-hour resource load shape and system-coincident peak contributions to develop an estimate of total resource value. This price becomes the cost cap for Heritage Project programs. By evaluating and sorting the collection of options, it is possible to build a resource supply-curve and estimate the resources that can be cost-effectively acquired.

# Appendix D 2011 Evaluation, Measurement and Verification Plan

Avista's 2011 EM&V Plan developed in conjunction with the Triple E Board is provided as a separate file. (Please note that this EM&V Plan continued to be developed after the date at which the analysis for the remainder of this Business Plan had to be completed for purposes of budget development. Thus, the EM&V expenditures defined within the EM&V Plan are inconsistent with the budget shown in the Business Plan in some categories.)

## Appendix E Washington Initiative I-937 Conditions

Attached below are the conditions upon which Avista will be complying with Washington state Initiative-937 for the 2010-2011 compliance period.

Company Retains Responsibility. Nothing within this Order relieves Avista of the sole responsibility for complying with RCW 19.285, which requires Avista to use methodologies consistent with those used by the Pacific Northwest Electric Power and Conservation Planning Council ("Council"). Specifically, the Conditions regarding the need for a high degree of transparency, and communication and consultation with external stakeholders, diminish neither Avista's operational authority nor its ultimate responsibility for meeting the biennial conservation target approved herein.

#### 2 (3) **Advisory Group**.

- (a) Avista must maintain and use an external conservation Advisory Group of stakeholders to advise the Company on the topics described in subsections (i) through (x) below. To meet this condition, Avista may continue to use its External Energy Efficiency Board created under Docket UE-981126, and its Integrated Resource Planning Technical Advisory Committee created under WAC 480-100-238.
  - (i) Development and modification of protocols to evaluate, measure, and verify energy savings in Avista's programs.
  - (ii) Development of conservation potential assessments under RCW 19.285.040(1)(a) and WAC 480-109-010(1).
  - (iii) Guidance to Avista regarding methodology inputs and calculations for updating cost-effectiveness.
  - (iv) Review of data sources and values used to update supply curves.
  - (v) Consideration of the need for tariff modifications or mid-course program corrections.
  - (vi) Review appropriate level of and planning for:
    - (1) Marketing conservation programs.
    - (2) Incentives to customers for measures and services.
  - (vii) Consideration of issues related to conservation programs for customers with limited income.
  - (viii) Comparing program achievement results with annual and biennial targets.
  - (ix) Review of conservation program budgets and actual expenditures compared to budgets.
- (b) Meetings should occur quarterly at a minimum. Avista must permit any member to request an additional meeting of the Advisory Group with reasonable notice.

### 3 (4) Annual Budgets and Energy Savings.

(a) Avista must submit annual budgets to the Advisory Group and to the Commission no later than November 1 of each year. The submissions must include reasonable program detail that shows planned expenses and the resulting projecting energy

- savings. In odd-numbered years, the annual budget may be submitted as part of the Biennial Conservation Plan required under Paragraph 8(f) below. In even-numbered years, the annual budget may be submitted as part of the Business Plan required under Paragraph 8(b) below.
- (b) Avista must provide its proposed budget in a detailed format with a summary page indicating the proposed budget and savings levels for each electric conservation program, and subsequent supporting spreadsheets providing further detail for each program and line item shown in the summary sheet.
- 4 (5) **Program Details**. Avista must maintain its conservation tariffs, with program descriptions, on file with the Commission. Program details about specific measures, incentives, and eligibility requirements must be filed as tariff attachments or as revisions to the Company's Business Plan. Avista may propose other methods for managing its program details in the Biennial Conservation Plan required under Paragraph 8(f) below, after consultation with the Advisory Group as provided in Paragraph 9(b) below.

### 5 (6) Approved Strategies for Selecting and Evaluating Energy Conservation Savings.

- (a) Avista has identified a number of potential conservation measures as qualifying measures in its Revised Report filed on April 16, 2010 in this Docket. The Commission is not obligated to accept savings identified in the Revised Report for purposes of compliance with RCW 19.285. Avista must demonstrate the prudence and cost-effectiveness of its conservation programs to the Commission after the savings are achieved. *See RCW 19.285.040(1)(d)*.
- (b) Avista must use the Council's Regional Technical Forum's ("RTF's") "deemed" savings for electricity measures. As of the date of this Order, the RTF maintains a Web site at <a href="http://www.nwcouncil.org/energy/rtf/">http://www.nwcouncil.org/energy/rtf/</a>.
- (c) If Avista utilizes savings amounts for prescriptive programs that have not been established by the RTF, such estimates must be based on a rigorous impact evaluation that has verified savings levels, and be presented to the Advisory Group for comment.
- (d) When Avista proposes a new program, it must present it to the Advisory Group for comment with program details fully defined. After consultation with the Advisory Group in accordance with Paragraph 3 above, Avista must file a revision to its Business Plan in this Docket. The revision may be acknowledged by placement on the Commission's No Action Open Meeting agenda.
- (e) Avista must provide opportunities for the Advisory Group to review and assist with the development of evaluation, measurement and verification protocols for conservation programs. See Paragraph 3(a)(i) above.

(f) Avista must spend between three (3) and six (6) percent of its conservation budget on evaluation, measurement, and verification (EM&V), including a reasonable proportion on independent, third-party EM&V. Avista must perform EM&V annually on a multi-year schedule of selected programs such that, over the EM&V cycle, all major programs are covered. The EM&V function includes impact, process, market and cost test analyses. The results must verify the level at which claimed energy savings have occurred, evaluate the existing internal review processes, and suggest improvements to the program and ongoing EM&V processes. An annual independent, third-party EM&V report involving analysis of both program impacts and process impacts must be part of the Annual Report on Conservation Acquisition described in Paragraph 8(g) below. Avista may modify this spending band with Commission approval following full Advisory Group consultation.

### 6 (7) **Program Design Principles**

- (a) All Sectors Included Avista must offer a mix of tariff-based programs that ensure it is serving each customer sector, including programs targeted to the limited-income subset of residential customers. Modifications to the programs must be filed with the Commission as revisions to tariffs or as revisions to Avista's Business Plan, as appropriate.
- (b) Outreach on Programs Avista must establish a strategy and proposed implementation budget for informing participants about program opportunities in the relevant and strategic market channels for each of its energy efficiency programs. Avista must share these strategies and budgets with the Advisory Group for review and comments, and provide updates at Advisory Group meetings.
- (c) Incentives and Conservation Program Implementation Avista must offer a cost-effective portfolio of programs in order to achieve all available conservation that is cost-effective, reliable, and feasible. Programs and incentives may be directed to consumers, retailers, designers, installers, wholesalers, etc., as appropriate for measures that save energy. Incentive levels and other methods of encouraging energy conservation need to be periodically examined to assure that they are neither too high, nor too low. Incentive levels should not unnecessarily limit the acquisition of all achievable energy conservation.
- (d) Conservation Efforts without Approved EM&V Protocol Avista may spend up to ten (10) percent of its conservation budget on programs whose savings impact has not yet been measured, as long as the overall portfolio of conservation passes the Total Resource Cost (TRC) test as modified by the Council. These programs may include educational, behavior change, and pilot projects. Modifications to

this spending limit must be made with Commission approval following full Advisory Group consultation. As of the date of this Order, an outline of the major elements of the Council's methodology for determining achievable conservation potential, including the Total Resource Cost test, is available on the Council's Web site at

http://www.nwcouncil.org/energy/powerplan/6/supplycurves/I937/CouncilMethodology\_outline%20\_2\_.pdf.

## 7 (8) Required Reports and Filings

- (a) File Six-Month Report on Conservation Acquisition, comparing budgeted to actual kWh's and expenditures, by August 15, 2010.
- (b) File 2011 Business Plan, containing any changes to program details and an annual budget by November 1, 2010.
- (c) File 2010 Annual Report on Conservation Acquisition, including an evaluation of cost effectiveness and comparing budgets to actual, by March 31, 2011.
- (d) File revisions to cost recovery tariff by May 1, 2011, with requested effective date of July 1, 2011.
- (e) File Six-Month Report on Conservation Acquisition, comparing budget to actual kWh's and dollar activity, by August 15, 2011.
- (f) File Biennial Conservation Plan including revised program details and program tariffs, together with identification of 2012-2021 achievable conservation potential, by November 1, 2011, requesting effective date of January 1, 2012. This filing will satisfy the requirement in WAC 480-109-010 to file 10-year Achievable Conservation Potential and Biennial Conservation Target on or before January 31.
- (g) File 2011 Annual Report on Conservation Acquisition, including an evaluation of cost-effectiveness, by March 31, 2012.
- (h) File two-year report on conservation program achievement by June 1, 2012. This filing is the one required in WAC 480-109-040(1) and RCW 19.285.070, which require that the report also be filed with the Washington Department of Commerce.

#### 8 (9) Required Public Involvement in Preparation for 2012-2013 Biennium

(a) By July 1, 2011, consult with the Advisory Group to facilitate completion of a 10-year conservation potential analysis by November 1, 2011. See RCW 19.285.040(1)(a); WAC 480-109-010(1). This must be based on a current conservation potential assessment study of Avista's service area within Washington State. This may be conducted within the context of Avista's integrated resource plan. If Avista chooses to use the supply curves that make up

- the conservation potential in the Council's Northwest Power Plan, the supply curves must be updated for new assumptions and measures.
- (b) Consult with the Advisory Group between July and October 2011 to identify achievable conservation potential for 2012-2021 and set annual and biennial targets for the 2012-2013 biennium, including necessary revisions to program details. *See* RCW 19.285.040(1)(b); WAC 480-109-010(2) and (3).
- (c) Review with the Advisory Group whether standard-efficiency fuel conversion savings should be included in the 2012-2013 Biennial Conservation Target.

#### 9 (10) Cost Effectiveness Test is the Total Resource Cost Test

- (a) The primary cost effectiveness test must be the Total Resource Cost (TRC) test as modified by the Council. The Council-modified calculation of TRC includes quantifiable non-energy benefits and a 10 percent conservation benefit adder that increases the avoided costs by 10 percent. The Council does not include a net-to-gross adjustment. As of the date of this Order, an outline of the major elements of the Council's methodology for determining achievable conservation potential, including the Total Resource Cost test, is available on the Council's Web site at <a href="http://www.nwcouncil.org/energy/powerplan/6/supplycurves/1937/CouncilMethodology">http://www.nwcouncil.org/energy/powerplan/6/supplycurves/1937/CouncilMethodology</a> outline% 20 2 .pdf.
- (b) In addition to the Council-modified TRC, Avista must provide calculations of the Program Administrator Cost test (also called the Utility Cost test), Ratepayer Impact Measure test, and Participant Cost test described in the National Action Plan for Energy Efficiency's study "Understanding Cost-effectiveness of Energy Efficiency Programs." As of the date of this Order, the study is available on the Web site of the United States Environmental Protection Agency at <a href="http://www.epa.gov/cleanenergy/documents/cost-effectiveness.pdf">http://www.epa.gov/cleanenergy/documents/cost-effectiveness.pdf</a>.
- (c) Overall conservation cost-effectiveness must be evaluated at the portfolio level. Costs included in the portfolio level analysis include conservation-related administrative costs. Avista must continue to evaluate measure and program level cost tests.

## 10 (11) Recovery Through an Electric Tariff Rider

- (a) Annual Filing Avista must file an annual tariff rider in May of the current year to recover the future year's budgeted expenses and any significant variances between budgeted and actual income and expenditures during the previous year.
- (b) Scope of Expenditures Funds collected through the rider must be used on approved conservation programs and their administrative costs.
- (c) Recovery for Each Customer Class rate spread and rate design must match Avista's underlying base volumetric rates.

# Appendix F Idaho IPUC Staff Memorandum Of Understanding

Attached below is the Memorandum of Understanding (MOU) that the Idaho Public Utilities Commission Staff and Avista entered into for purposes of clarifying the expectations of the Company's Demand-Side Management activities, evaluation, measurement and verification and reporting.

## MEMORANDUM OF UNDERSTANDING FOR PRUDENCY DETERMINATION OF DSM EXPENDITURES

This Memorandum of Understanding ("MOU") is entered into on this \_\_\_\_ day of December 2009 between Idaho Power Company ("Idaho Power"), Avista Utilities. PacifiCorp (d/b/a Rocky Mountain Power) (collectively "the Utilities" and individually as "the utility"), and the Staff of the Idaho Public Utilities Commission ("Staff"). All of the above-named entities are hereinafter sometimes referred to collectively as "Parties" or individually as "Party."

#### WITNESSETH:

- A. The Parties agree that there exists a need for the Utilities and Staff to develop a common understanding of the basis upon which prudency of demand-side management ("DSM") expenditures can be determined for purposes of cost recovery.
- B. The Parties attended a workshop on October 5, 2009, to discuss the contents of a more comprehensive utility annual DSM report that would demonstrate a commitment to, and accomplishment of, objective and transparent evaluation of DSM efforts. The agreed-upon principles ("guidelines") stemming from that workshop are set out below.
- C. A copy of Staff's expectations for DSM prudency review is included as Attachment No. 1. Although Utilities will make a good faith effort to address Staff's expectations in following these guidelines, Staff expectations are informational and the Utilities will not be bound by them in the context of this Memorandum of Understanding.
- D. The Parties recognize that implementation of the DSM prudency guidelines and evaluation framework described below will not automatically result in

DSM prudency findings. Instead, even with their implementation, future DSM prudency findings will require the preparation of a formal filing with the Commission.

NOW, THEREFORE, in consideration of the foregoing, the parties agree as follows:

#### **Utility DSM Annual Report Requirements**

- 1. Template. Idaho Power's 2008 Demand-Side Management Annual Report will be used as a starting point template for enhanced reports beginning with reports for 2009 DSM operations and results. Elements like those found in Idaho Power's 2008 report will be included in each Utility's annual report for Idaho programs that reporting year, clearly identifying Idaho-specific data and narratives. The DSM annual reports may be filed as stand-alone documents or as a combination of documents (e.g., combined with a DSM business plan) that together fulfill the agreements in this MOU.
- Table of Contents. Each annual DSM report will contain a table of contents that references all items specified below, including the appendix where the Cost-Effectiveness and Evaluation Table can be found.
- Highlights or Introduction Section. Each annual DSM Report will include an initial overview of:
- a. Process evaluations begun or completed during the previous year, modifications to DSM processes that resulted from those evaluations, and planned process evaluations and modifications for the coming year.
- b. Impact evaluations begun or completed during the previous year,
   modifications to DSM programs that resulted from those evaluations, and planned

impact evaluations for the coming year. This section will also highlight updates of assumptions or reference reports used in assessing cost-effectiveness during the past year and those expected to be reviewed in the coming year.

- 4. <u>Cost-Effectiveness Section</u>. Each DSM annual report will include a Cost-Effectiveness section and table listing individual programs/measures and the basis for estimates of their cost-effectiveness, i.e., formulas, data inputs and assumptions, and source/rationale for each datum and assumption, including the date of the source.
- 5. Evaluation Section. Each DSM annual report will include an Evaluation section and table showing the schedule for evaluations, including impact assessment, assumptions, source review, the schedule for field impact measurement, and completion date. If this schedule is not included, a reasonable explanation for why such a schedule, in whole or in part, is not necessary will be included.
- a. It is anticipated that over a reasonable frequency cycle (e.g., 2 to 3 years), all substantial programs will have undergone process and impact evaluations. However, Staff agrees that the initial evaluation cycles may be longer for 2008 and 2009 programs until these guidelines are fully implemented.
- b. A copy of each DSM evaluation completed since filing the previous DSM annual report will be included as an appendix to the annual DSM report, as well as any confidential cost information that are not included. The utility will supplement its DSM report with any confidential cost information once the Staff has signed a protective agreement with the utility.
- Program Specific Section. Program-specific sections of the annual DSM
   Report will be reported by sector or by customer class, with a description of each

individual program offered in the sector or customer class, and will include a list of measures within each program.

- a. <u>Process Evaluation</u>. Each program-specific section will have a process evaluation description that includes:
- Program implementation modifications undertaken during the course of the year and the rationale behind the change(s).
  - ii. Other process issues identified during the course of the year.
  - iii. Any formal process evaluation undertaken during the year.
- iv. Total process evaluation cost, inclusive of both utilityprovided and contract-provided services, and names of primary outside evaluators
  conducting process evaluations and titles of internal evaluators. The DSM Report will
  indicate which cost information is considered confidential; each utility will supplement its
  DSM report with any program evaluations containing confidential proprietary information
  once the Staff has signed a protective agreement with the utility.
- Process changes completed or planned during the upcoming year, if any.
- b. <u>Impact and Cost-effectiveness Evaluation</u>. Each program-specific section will include an impact and cost-effectiveness evaluation description including:
- i. Primary assumptions and source (with year source was produced) used in the initial determination of cost-effectiveness.
- Primary assumptions and source (with year source was produced) used to determine post implementation impact and cost-effectiveness.

- iii. Any changes from initial determination (or last evaluation) used for current cost-effectiveness evaluation and the reason for the change (such as updated assumptions, sources or field measurement).
- iv. Planned cycle for reassessment of cost-effectiveness assumptions or measurement.
- v. Total impact evaluation cost, inclusive of both utility-provided and contract-provided services, and names of primary outside evaluators and titles of inside evaluators. The DSM Report will indicate which cost information is considered confidential; each utility will supplement its DSM report with any program evaluations containing confidential proprietary information once the Staff has signed a protective agreement with the utility.
  - vi. Changes in program due to evaluation results.
- c. Market Effects Evaluations. Each program-specific section will describe any market effects evaluations that have been planned or completed by or for the utility, including those planned or completed by the Northwest Energy Efficiency Alliance that are pertinent to any programs for which the utility is claiming electricity savings or other impacts.
- 7. Expenses Without Direct Energy Savings. As discussed in the October 5 workshop, the Utilities have expenses associated with DSM-related activities for which they do not claim energy savings. Expenses associated with non-quantifiable energy saving programs and initiatives, including but not limited to, infrastructure, education, outreach, and research, will be identified in the DSM annual reports and may be considered reasonable and necessary expenses for a broad based DSM portfolio.

Reasonable evaluations of such programs and efforts, commensurate with their costs, will be accomplished and reported. The Utilities will include these expenses in the calculations which determine a cost-effective DSM portfolio.

#### **Prudency Determination**

- A utility may request a DSM prudency review at any time.
- 9. The Parties recognize that planning, implementing, and evaluating DSM programs are not a precise science; they require the application of judgment and experience. Utilities are encouraged to continually review these programs and make appropriate program improvements.
- 10. Within that context, review of utility demand-side management expenses for prudency shall take into consideration utility compliance with the planning, evaluation, and reporting guidelines listed above. A showing by the utility that it made a good faith effort to reasonably perform within these guidelines will constitute *prima facie* evidence that the utility's DSM expenses were prudently incurred for cost recovery purposes. By its performing within these guidelines, assuming there is no evidence of imprudent actions or expenses, the utility can reasonably expect that in the ordinary course of business Staff will support full cost recovery of its DSM program expenses.

#### Treatment of 2008 and 2009 Expenditures

11. Recognizing that their 2008 DSM reports have already been filed, the Utilities need not amend those reports, but instead will combine evaluation reporting for 2008 with 2009 in their 2009 reports to be filed in 2010. Because it is not possible to comply exactly with the requirements listed above for the historical expenses of 2008 and 2009, Parties agree to include as many components as possible in the 2010 Annual

DSM Report. Staff agrees to provide reasonable and necessary leeway for the implementation of the guidelines described in this MOU for the 2010 DSM reports.

12. Staff agrees that Avista Utilities may re-file its 2008 DSM prudency requests that were deferred in AVU-E-09-01 and AVU-G-09-01 as full-year prudency requests that will not be opposed by Staff.

# Commission Not Bound by This Memorandum of Understanding

 The parties to this Memorandum of Understanding acknowledge that the Commission Staff binds only itself and has no explicit or implicit authority to bind the Idaho Public Utilities Commission.

IN WITNESS WHEREOF, the Parties hereto have caused this Memorandum to be executed in their respective names on the dates set forth below.

Dated this day of December 2009.	IDAHO PUBLIC UTILITIES COMMISSION STAFF
	By:
Dated this day of December 2009.	IDAHO POWER COMPANY
	By:
Dated this 21 day of December 2009.	AVISTA UTILITIES
	By: David J. Meyer Representing Avista Utilities

Dated this	day of December 2009.	ROCKY MOUNTAIN POWER
		By: Representing Rocky Mountain Power

# Appendix G Individual Program Plan Summaries

Avista's program managers complete a written program plan as part of the business planning process. This document is purely a working document designed to force a comprehensive reconsideration of all elements of program implementation efforts and to provide a document to improve the management of the program implementation process. Attached within this appendix is a summary of those program plans that were completed as part of this analysis. Revisions to the program plans continued after the date that the analysis for the business planning was completed, thus there may not be a perfect match between the most recent program plans and the assumptions adopted for the development of the 2011 budget.

Originally it was anticipated that the impact evaluation portion of the EM&V plan would be initiated by identifying the critical assumptions leading towards an energy savings claim for each program and measure. After the work leading to the program plans was initiated the direction of the EM&V plan (attached as Appendix D) changed directions to a higher level document that is more reliant upon independent external auditors. Consequently the EM&V portions of these program plans have been deleted except for the portion where the program manager identifies what critical aspects of the program are to be tracked. The identification of these raw data sources should assist future internal and external EM&V work.

Avista does tentatively plan on engaging in a flowcharting exercise to clarify and document the assumptions going into the energy savings claims made through these measures and programs. That process will be useful in initiating a new EM&V analyst into the process as well as in providing a summary of the background for external auditors.

The cost-effectiveness of the programs for 2011 has been estimated, including sensitivities to net-to-gross ratios and with and without the use of tax credits as customer cost offsets. All of the calculations represented in the table below are <u>without</u> the use of the traditional 10% conservation preference.

Program managers continued to work to improve program throughput and cost-effectiveness after the date at which their written program plans were due for incorporation into this document. This additional effort was especially focused on programs with substandard cost-effectiveness.

Significant additional attention is in progress in regards to the measures which will be incorporated into the "no prior approval required" measure list for installation under Avista's 2011 low-income contracts. It is possible that additional revisions will be made to the cost-effectiveness calculations, acquisition and status of the measures based upon the results of the in-progress Ecotope impact evaluation of low-income DSM.

Following is a list of the program plans that were prepared as part of the business planning process as well as a table outlining the cost-effectiveness of the programs as defined for cost-effectiveness and acquisition purposes. Occasional disconnects in the definition and naming of

these programs are the result of the ongoing process that was occurring while the business plan document was being finalized.

Program Plans (in order of their appearance within this appendix):

#### Non-Residential

Site-Specific Program

**HVAC Variable Frequency Drive Program** 

Prescriptive Lighting Program

**EnergySmart Program** 

**Green Motors Rewind Program** 

Power Management for PC Networks

Prescriptive Commercial Clothes Washer Program

**Demand Controlled Ventilation Program** 

Prescriptive Electric to Natural Gas Water Heater Conversion Program

Prescriptive Food Service Equipment Program

Prescriptive Commercial HVAC Program

Prescriptive LED Traffic Signal Program

Prescriptive LEED Program

Prescriptive Premium Efficiency Motors Program

Prescriptive Refrigerated Warehouse Program

Prescriptive Retro-Commissioning Program

Prescriptive Commercial Shell Program

Prescriptive Side Stream Filtration Program

Prescriptive Vending Machine Controller Program

Non-Residential HVAC Rooftop Maintenance Pilot Program

#### Residential

**Energy Star Appliance Rebate Program** 

Second Refrigerator or Freezer Recycling Program

Residential Lighting Programs

Energy Conservation in Schools, Dollars for Change, CFL recycling programs

Events Program (also known as Geographic Saturation)

Home Energy Audit Pilot Program

#### Low-Income

Low-Income Shell (Weatherization)

Low-Income Energy Star Appliance

Low-Income Fuel Conversion

Low-Income Hot Water Heater Efficiency

Low-Income HVAC Efficiency

		Cor	mbined fuel TRO	B/C's with tax cr	edits		Со	mbined fuel TRC B/6	C's without tax cred	lits
		100%	75%	50%	25%	100%		75%	50%	25%
Program	Portfolio	NTG sub-TRC	NTG sub- TRC	NTG sub- TRC	NTG sub-TRC	NTG sub	-TRC	NTG sub-TRC	NTG sub- TRC	NTG sub-TRC
Demand Controlled Ventilation	Non-Residential	1.19	1.19	1.18	1.18	1.19		1.19	1.18	1.18
Energy Smart Grocer Program	Non-Residential	1.93	1.76	1.49	1.03		1.93	1.76	1.49	1.03
Green Motors (rewind)	Non-Residential	1.97	1.83	1.60	1.16		1.97	1.83	1.60	1.16
Nonres rooftop maintenance <sup>1</sup>	Non-Residential									
Nonres traffic lights	Non-Residential	19.38	19.33	19.23	18.95		19.38	19.33	19.23	18.95
Nonres vending machines	Non-Residential	2.13	2.12	2.11	2.09		2.13	2.12	2.11	2.09
Prescriptive food service	Non-Residential	2.29	2.28	2.27	2.23		2.29	2.28	2.27	2.23
Prescriptive network computers  Prescriptive new equipment upgrades <sup>2</sup>	Non-Residential Non-Residential	2.35	2.35	2.34	2.31		2.35	2.35	2.34	2.31
Prescrptive Non-res clotheswashers	Non-Residential	6.01	6.01	6.00	5.98		6.01	6.01	6.00	5.98
Prescriptive Nonres lighting	Non-Residential	1.04	1.04	1.04	1.04		1.04	1.04	1.04	1.04
Prescriptive retrofit equipment upgrades	Non-Residential	1.13	1.13	1.12	1.12	1.13		1.13	1.12	1.12
Prescriptive VFDs	Non-Residential	3.65	3.64	3.62	3.55		3.65	3.64	3.62	3.55
Premium Efficiency Motors	Non-Residential	0.75	0.75	0.75	0.75		0.75	0.75	0.75	0.75
Resource Conservation Manager	Non-Residential	2.36	1.77	1.18	0.59		2.36	1.77	1.18	0.59
Side Stream Filtration	Non-Residential	0.85	0.85	0.85	0.85		0.85	0.85	0.85	0.85
Steam Trap Replacement	Non-Residential	2.03	2.02	2.02	2.00		2.03	2.02	2.02	2.00
Small Commercial HVAC	Non-Residential	2.38	2.37	2.36	2.33		2.38	2.37	2.36	2.33
Commercial Shell	Non-Residential	1.52	1.52	1.51	1.50		1.52	1.52	1.51	1.50
LEED <sup>3</sup>	Non-Residential									
Electric to NG Water Heater Conversion	Residential	5.52	5.52	5.52	5.52		5.52	5.52	5.52	5.52
Energy Conservation Schools Program	Residential	6.19	6.19	6.19	6.19		6.19	6.19	6.19	6.19
Geographic saturation	Residential	6.19	6.19	6.19	6.19		6.19	6.19	6.19	6.19
Multifamily	Residential	3.77	3.77	3.77	3.77		3.77	3.77	3.77	3.77
Res appliances	Residential	1.19	1.17	1.15	1.06		0.57	0.57	0.56	0.54
Res Energy Star Home	Residential	1.84	1.79	1.70	1.47		1.48	1.45	1.39	1.23
Res fuel conversion	Residential	1.28	1.25	1.21	1.09		1.28	1.25	1.21	1.09
Res HVAC efficiency	Residential	1.25	1.23	1.20	1.11	1.18		1.16	1.13	1.05
Res lighting	Residential	4.03	3.78	3.36	2.52		4.03	3.78	3.36	2.52
Res refrig recycling	Residential	1.13	0.85	0.57	0.28	1.13		0.85	0.57	0.28
Res shell	Residential	1.22	1.20	1.17	1.08		0.97	0.95	0.93	0.88
Res water heating efficiency	Residential	1.85	1.77	1.64	1.34		1.85	1.77	1.64	1.34
Trees	Residential	0.87	0.87	0.87	0.87		0.87	0.87	0.87	0.87
Res outsourced programs <sup>4</sup>	Residential									
Home Energy Audit	Residential	1.12	1.01	0.85	0.58		0.74	0.69	0.61	0.45
LI appliances	Low Income	0.67	0.64	0.59	0.48		0.67	0.64	0.59	0.48
LI fuel conversion	Low Income	1.41	1.35	1.25	1.02	1.41	0.40	1.35	1.25	1.02
LI HVAC efficiency  LI shell	Low Income	0.19	0.19 0.65	0.17	0.14 0.49		0.19	0.19	0.17	0.14 0.49
LI water heating efficiency	Low Income	0.05		0.60				0.65	0.60	0.49
LI Water neating emidency	Low Income Low Income	0.05	0.05	0.05	0.04		0.05	0.05	0.05	0.04
Solar <sup>6</sup>	Renewable									
Wind <sup>7</sup>	Renewable									
Prescriptive program total		1.35	1.32	1.26	1.11		1.20	1.18	1.13	1.01
Demand Response <sup>8</sup>	Demand Response	-	-	-	-		-	-	-	-
Site-Specific	Non-Residential	2.55	2.53	2.47	2.32		2.55	2.53	2.47	2.32
	Pgm aggregate (w/o labor and non- program NL/NI	1.68	1.64	1.58	1.42		1.54	1.51	1.46	1.32

#### Footnotes:

- 1. The rooftop HVAC maintenance program was a pilot program only in 2010. As of the close of October 2010 it was not sufficiently developed to allow for a program to be incorporated within the 2011 Business Plan. However this program is one that has been identified as a prospective cost-effective program with natural gas savings, when launched in conjunction with a programmable thermostat program.
- 2. Estimates of the potential throughput of this program were not available at the time that the cost-effectiveness calculations were completed. The program is under continuing redevelopment.
- 3. The LEED program was developed to encourage and incentivize customers to pursue LEED certification within non-residential structures. The savings attributable to the improvements to meet LEED standards are incorporated within other non-residential and site-specific programs. Thus the LEED program itself has only costs and no benefits. The cost-effectiveness of this program lies in the additional throughput attributed to other programs. The program was not incorporated into other 'infrastructure' programs since the expenditures under the program are direct customer incentives.
- 4. During 2010 there was discussion of the launch of additional short-term outsourced programs, similar to Avista's UCONS program for the direct-installation of efficiency devices in multifamily homes. That discussion was not mature enough to develop program inputs for the 2011 Business Plan, but the potential for developing such a program remains a significant possibility for 2011.
- 5. The health and human safety (H&HS) measures provided through the low-income portfolio do not generate energy savings. They are assumed to have non-energy benefits equivalent to their cost based upon the presumption that the funds are being effectively expended by the community action agencies.
- 6. Avista's Schedule 90 tariff includes selected customer-owned distributed renewable generation within the scope of the incentives provided for through the tariff, including solar generation. With the Company's proposed revision to the tariff language that would exclude incentives for measures with energy simple paybacks in excess of 13 years, it is not believed that any solar projects will be funded in 2011 given this tariff revision.
- 7. Avista's Schedule 90 tariff includes selected customer-owned distributed renewable generation within the scope of the incentives provided for through the tariff, including wind generation. With the Company's proposed revision to the tariff language that would exclude incentives for measures with energy simple paybacks in excess of 13 years, it is not believed that any wind projects will be funded in 2011 given this tariff revision.
- 8. Avista's current demand response effort is associated with the SmartGrid pilot currently underway in Pullman. As of the time that the 2011 Business Plan was completed it was expected that 2011 would be an installation and baseline study period for the pilot. Avista's DSM portfolio was not anticipated to incur any expenses or receive any benefits from the program during the year.

# **Site Specific Program**

#### Commercial Sector

## Key Individuals and Responsibilities:

**Renee Coelho and Greta Zink** are designated as the current Program Managers as well as serving as primary contact for internal and external inquiries. The program is implemented by 8 Account Executives, 7 Engineering Staff, a program coordinator and 2 program managers. **Tom Lienhard and Mike Dillon** are the primary technical resources for the program.

#### Target Market(s):

This is applicable to any commercial, industrial or pumping customer who, receive firm electric or natural gas service from Avista and would like to consider making cost effective, energy efficiency improvements to their business. Key external stakeholders include business owners, building owners, property management companies, tenants and trade allies. Key internal stakeholders include Account Executives, contract services, accounts payable, marketing and corporate communications.

#### Program Overview:

The site specific program is a major component in our commercial/industrial portfolio. Customers receive technical assistance and incentives in accordance with Schedules 90/190. Our program approach is to review most energy efficiency projects that have demonstrable kilowatt hour and/or therm savings. The majority of site specific kWh and therm savings are comprised of appliances, compressed air, HVAC, industrial process, motors, shell, and custom lighting projects that do not qualify for the prescriptive lighting program. It is estimated that customers who participate in the 2010 site specific program will realize energy savings of over 27 million kWh and 907,000 therms. The site specific program brings in the largest portion of savings to the overall energy efficiency portfolio.

# Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Lighting – Interior	96	1,089,035	8,009,866	0
Lighting – Exterior	15	27,478	242,561	0
HVAC – Heating	66	505,715	970,675	163,640
HVAC – Cooling	21	118474	698,093	0
Industrial Process	11	599,760	2,950,883	20,102
Compressed Air	7	128,743	1,031,012	0
Shell	184	556,130	958,103	160,367
Appliances	29	36,914	57,404	14,643
HVAC Combined	97	790,705	2,584,530	134,986
Motors Industrial	3	29,079	382,381	0
Motors	2	8,903	117,878	0
Total	531 projects	\$3.8 million	18 million	493K

The above is non-audited 2010 results based on YTD results through September 2010. Rebate throughput is 30% higher compared to the same timeframe for 2009. In addition to extensive marketing efforts, federal tax credits are believed to have contributed significantly to increased throughput.

# **Budget and Savings:**

Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
Lighting – Interior					
Lighting – Exterior					
HVAC – Heating					
HVAC – Cooling					
Industrial Process					
Compressed Air					
Shell					
Appliances					
HVAC Combined					
Motors Industrial					
Motors					
Total					

53

The estimates of unit throughput for 2011 are significantly lower than 2010 due to the expiration of federal tax credits. It is expected that a high percentage of older units were replaced during the 2009 and 2010 time period in order to take advantage of these tax credits. This incentive to replace older equipment before burnout advanced many of these replacements that would have otherwise occurred in 2011 and the few years thereafter.

## Market Segment Overview:

There are is some code activity in Washington, mainly affecting new construction but we may need to evaluate changes in case they influence this market in the foreseeable future.

There are no technology or infrastructure changes that are likely to influence the premium that would be paid for high-efficiency appliances incentivized under this program in the near future.

The federal tax credits are scheduled to expire at the end of 2010, this could have an effect on throughput and potentially lower the average high-efficiency unit that is installed on equipment such as natural gas furnaces. For example, currently we have a significant number of units that meet our 90% AFUE requirement as well as the federal 95% AFUE requirement.

#### Implementation Plan:

The Site Specific program is an integral part of the DSM savings acquisition. References to the program are communicated daily by Avista Account Executives, bi-monthly through the Energy Solutions Questline newsletter and on Efficiency Avenue located in the Business section of everylittlebit.com. Any program changes would have advance notice for customers in the form of a minimum of 90 days to submit under old requirements. This usually includes at a minimum direct mail communication to trade allies and current customer participants as well as internal, forms and website updates.

## Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency equipment or measure installed. In 2011, in response to external audit feedback, square footage and age of the home where the energy efficiency measure was completed will be included in the customer rebate form. While measures may be paid to a landlord at a different location, measures will be tracked by service address where the work was completed.

For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# **HVAC Variable Frequency Drive**

Commercial Sector

#### Key Individuals and Responsibilities:

**Renee Coelho** is designated as the current Program Manager. This is likely to shift during CY 2011 due to recent organizational changes.

Mike Dillon is the primary technical resource for the program.

# Target Market(s):

Large office buildings, school districts, universities, hospitals, manufacturing and production facilities with mid-size commercial HVAC fans and pumps are the target customers. Installations under this program include: supply and/or return fans, building exhaust fans, boiler feed water pump, cooling tower, chilled water pump and condensing water pump. A total of 3 types of variable frequency drives are offered a rebate through this prescriptive method of program delivery: VFD for Fans; VFD for Cooling Pump Only; or VFD for Heating Pump or a Combined Heating and Cooling Pump.

Key external stakeholders include business owners, facilities managers, property managers and trade allies. Key internal stakeholders include Account Executives, Marketing, and Accounts Payable.

## Program Overview:

The Commercial HVAC Variable Frequency Drive (VFD) Program serves the customer who would benefit from a variable frequency drive on their heating and cooling equipment. The program was originally conceived in 1995 to offer commercial customers a "prescriptive" way to participate in DSM by installing a device that would be a benefit in most large commercial HVAC applications. An outside consulting firm was hired to analyze and develop the savings and initial incentives. These parameters are evaluated periodically or as changes are made to codes, DSM incentive levels or other issues. VFD's are a gray area in the construction industry. In some cases they are required while in others they are one of many efficiency choices a customer can make. Customers usually install VFD's in a retrofit situation but we are seeing more of them being installed as part of a new construction scope of work. This program allows multiple VFD's to be submitted for a rebate at one time and often the customer will install anywhere from 2 – 10 VFD's on their HVAC equipment system with average sizing from 2hp to 100 hp. The incentive that is paid for each VFD is based on the horsepower installed and varies based on the type of HVAC application (i.e. fan or pump).

### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
VFD Fan	33	73880		
VFD Cooling Pump only	14	34850		
VFD Heating Pump only	6	2210		
VFD Combined Heating and	0	0		
Cooling Pump				
Total	53 units	\$111,732	1.453 million	0
	17 customers			

The above numbers are based on YTD results through September 2010. Information about each measure: Fans = 923.5 hp installed at \$80/hp; 16 units under 10 hp; avg hp installed 27; Cooling pump = 410 hp installed at \$85/hp; 9 units installed at 20 hp or less; avg hp installed 29; Heating pump = 26 hp installed at \$85/hp; all units are 5hp or less; avg hp installed is 4.

#### **Budget and Savings:**

Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
VFD Fan	30	80	1022	0	
VFD Cooling Pump only	15	85	1091		
VFD Heating Pump only	5	85	1756		
VFD Combined Heating and	2	100	1756		
Cooling Pump					
Total	52	-			

The estimates of unit throughput for 2011 are about the same each year; approximately 20 or so customers installing approximately 50 units.

#### Market Segment Overview:

There are is current code activity in Washington in 2010 that may affect new construction.

## Implementation Plan:

This program is familiar to property managers, building owners and equipment vendors and Energy Services Companies for schools, hospitals and large office buildings. An Avista Account Executive can also deliver this program to a customer in these applications who may not be

working with a dedicated vendor. No prior contact is necessary prior to the installation of the equipment.

Updates for any changes to program requirements are provided through direct mailing, via the Energy Solutions Questline newsletter and on the everylittlebit.com website.

## Data Collected to Support Future EM&V:

All variable frequency drives are inspected prior to payment being issued. With the payment based on the size of horsepower installed – ensures that the appropriate amount is distributed. Future EM & V efforts for this program will be determined in the future after the hiring of a new EM & V Specialist. For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# **Prescriptive Lighting**

Commercial/Industrial Sector

## Key Individuals and Responsibilities:

Leona Doege is designated as the current Program Manager. This is likely to shift in Q4 2010 or CY 2011 due to Leona's temporary Smart Grid Demonstration Project (SGDP) duties. The program coordinator is Sandra Hoye who works with the processing team of contract employees and students to perform data entry duties for this program.

Tom Lienhard is the primary technical resource for the program.

#### Target Market(s):

This is applicable to <u>existing</u> commercial or industrial facilities with electric service provided by Avista with rate schedules 11 or above.

#### Program Overview:

This program is intended to prompt the customer to increase the energy efficiency of their lighting equipment through direct financial incentives. It indirectly supports the infrastructure and inventory necessary to ensure that the installation of high-efficiency equipment is a viable option for the customer.

There is significant opportunity for lighting improvements in commercial facilities. Avista has been offering site specific incentives for qualified lighting projects for many years. In an effort to streamline the process and make it easier for customers and vendors to participate in the program we developed a prescriptive approach, which began in 2004. This program provides for many common retrofits to receive a pre-determined incentive amount. Incentive amounts were calculated using a baseline average for existing wattages and replacement wattages. Energy savings claimed are calculated based on actual customer run times using the averages as calculated for incentive amounts.

The prescriptive lighting program makes it easier for customers, especially smaller customers and vendors to participate in the program. We have seen a substantial increase in the number of projects that have been completed since this approach was instituted.

A total of 38 individual measures are included in the Prescriptive Lighting Program. These include T12, HID and incandescent retrofits to more energy efficient light sources including, T8, T5, induction, LED, cold cathode and compact fluorescent lamps.

# Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings
2-Lamp T12 U-Lamp to 2-Lamp F17T8	214	3210	20698
4-Lamp T12 to 4-Lamp T8 (4-Foot)	2364	47280	368784
4-Lamp T12 to 3-Lamp T8 (4-Foot)	5859	205065	1572087
4-Lamp T12 to 2-Lamp T8 (4-Foot)	1232	36960	380540
3-Lamp T12 to 3-Lamp T8 (4-Foot)	774	15480	127989
3-Lamp T12 to 2-Lamp T8 (4-Foot)	216	5400	44479
2-Lamp T12 to 2-Lamp T8 (4-Foot)	3703	44436	207960
2-Lamp T12 to 1-Lamp T8 (4-Foot)	58	870	9048
1-Lamp T12 to 1-lamp T8 (4-Foot) 4-Lamp T12 Fixture to 4-Lamp T8 Fixture/Retrofit: (8)4 foot or (4)8 foot	486 2504	4860 125200	25777 765623
lamps 2-Lamp T12 Fixture to 2-Lamp T8 Fixture/Retrofit: (4)4 foot or (2)8 foot	1891	47275	289096
lamps 2-Lamp T12 Fixture to 2-Lamp T5 High-Output	0	0	0
2-Lamp T12 HO or VHO Fixture to 2-	139	6950	42067
Lamp T8 High-Output Fixture/Retrofit 2-Lamp T12 HO or VHO Fixture to 4-	432	36720	311351
Lamp T5 High-Output Fixture 2-Lamp T12 HO or VHO Fixture to 2-	0	0	0
Lamp T5 High-Output 5-foot Fixture 1-Lamp T12 Fixture to 1-Lamp T8 Fixture/Retrofit: (2)4 foot or (1)8 foot	29	435	2624
lamps 1-Lamp T12 Fixture to 1-Lamp T5	0	0	0
Fixture High-Output Fixture 250 watt HID Fixture to 4-Lamp T8 FixtureHO or 2-Lamp T5HO 5-foot	0	0	0
Fixture 400 watt HID Fixture to 4-Lamp T5 High-Output Fixture	1763	96965	2409245
400 watt HID Fixture to 6-Lamp T5 High-Output Fixture	640	67200	403354
400 watt HID Fixture to 6-Lamp T8 Fixture (4-Foot Lamps)	818	44990	1373062
400 watt HID Fixture to 8-Lamp T8 Fixture (4-Foot Lamps)	59	5900	85045
400 watt HID Fixture to 200 Watt Induction Fluorescent Fixture	59	8850	93881
1000 watt HID Fixture to (2 fixtures) 6- Lamp T-5 High-Output	206	36050	465329
1000 watt HID Fixture to 400 Watt Induction Fluorescent Fixture	6	1050	25085
100 watt or less Incandescent to Compact Fluorescent Lamp (30 watt or	3823	11469	584460
Less) Over 100 Watt to 200 watt Incandescent to Compact Fluorescent Lamp or Fixture (40-55 watt)	970	14550	266323
Over 200 watt Incandescent to Compact Fluorescent Lamp or Fixture	115	2875	45926

(55-65 watt)			
60 watt or greater Incandescent to Dimmable Compact Fluorescent or Cold Cathode**	593	5930	96208
100 watt or greater incandescent flood to Ceramic Metal Halide (25 watt)	189	5670	56020
150 watt or greater incandescent to New Linear T8 Fluorescent Fixture	68	2720	25247
90 watt or greater incandescent to 15 watt or less LED	0	0	0
120 watt or greater incandescent to 20 watt or less LED	30	1020	9734
20-30 watt Incandescent to LED or Low-Wattage Equivalent	4	40	328
20-60 watt Incandescent to Cold Cathode	0	0	0
Incandescent Exit Sign to New LED Exit Signs	263	6575	64509
Manual Light Switch to Occupancy sensor controlled wall switch	113	2260	5553
Fixture with no Occupancy Sensor to Built in Occupancy Sensor in fixture	540	18900	198806

The above estimates 2010 results based on YTD results through September 2010.

Incentive levels are based on 2010 incentive levels that went into effect May 1<sup>st</sup>, 2010. Some measures were paid on old incentive levels through July 31<sup>st</sup>, 2010 as we offer a 90 day overlap between forms to allow for customers to finish projects that were begun with the old form incentive levels.

kWh savings are based upon our baseline averages not from actual customer savings as those items were tracked on a project basis rather than an individual measure basis. Savings are in line with 2010 budget estimates.

Due to the reduction in many of the incentive levels that took place May 1<sup>st</sup>, 2010 (expected to decrease throughput), and the new lamp legislation that will ban most T12 lamps (expected to increase throughput), which may have the effect of balancing one another, savings are expected to remain the same for 2011.

Budget and Savings:				Non-
Measure	Units	Incentive \$	kWh	incentive \$ (NEB)
2-Lamp T12 U-Lamp to 2-Lamp F17T8	Unk	15 <sup> </sup>	96.72	3.00
4-Lamp T12 to 4-Lamp T8 (4-Foot)	Unk	50	156	2.00
4-Lamp T12 to 3-Lamp T8 (4-Foot)	Unk	35	268.32	2.00
4-Lamp T12 to 2-Lamp T8 (4-Foot)	Unk	30	308.88	4.00
3-Lamp T12 to 3-Lamp T8 (4-Foot)	Unk	20	165.36	2.00
3-Lamp T12 to 2-Lamp T8 (4-Foot)	Unk	25	205.92	3.00
2-Lamp T12 to 2-Lamp T8 (4-Foot)	Unk	12	56.16	2.00
2-Lamp T12 to 1-Lamp T8 (4-Foot)	Unk	15	156	2.00

1-Lamp T12 to 1-lamp T8 (4-Foot)	Unk	10	53.04	2.00
4-Lamp T12 Fixture to 4-Lamp T8	Unk	50	305.76	(2.00)
Fixture/Retrofit: (8)4 foot or (4)8 foot	Olik	50	303.70	(2.00)
lamps			4.72.00	4 00
2-Lamp T12 Fixture to 2-Lamp T8 Fixture/Retrofit: (4)4 foot or (2)8 foot	Unk	25	152.88	1.00
lamps				
2-Lamp T12 Fixture to 2-Lamp T5 High-	Unk	50	174.72	1.00
Output	Olik	30	1/4./2	1.00
2-Lamp T12 HO or VHO Fixture to 2-	Unk	50	302.64	1.00
Lamp T8 High-Output Fixture/Retrofit				
2-Lamp T12 HO or VHO Fixture to 4- Lamp T5 High-Output Fixture	Unk	85	720.72	1.00
2-Lamp T12 HO or VHO Fixture to 2-	Unk	100	240.24	0.00
Lamp T5 High-Output 5-foot Fixture	Ulik	100	240.24	0.00
1-Lamp T12 Fixture to 1-Lamp T8	Unk	15	90.48	3.00
Fixture/Retrofit: (2)4 foot or (1)8 foot	CIII	10	70.10	2.00
lamps		• •	00.04	• 00
1-Lamp T12 Fixture to 1-Lamp T5 Fixture High-Output Fixture	Unk	20	99.84	2.00
250 watt HID Fixture to 4-Lamp T8	Unk	55	661.44	2.00
Fixture HO or 2-Lamp T5HO 5-foot	Olik	33	001.44	2.00
Fixture				
400 watt HID Fixture to 4-Lamp T5	Unk	105	1366.56	6.00
High-Output Fixture	** 1		600.04	(10.00)
400 watt HID Fixture to 6-Lamp T5 High-Output Fixture	Unk	55	630.24	(18.00)
400 watt HID Fixture to 6-Lamp T8	Unk	100	1678.56	7.00
Fixture (4-Foot Lamps)	Olik	100	1070.50	7.00
400 watt HID Fixture to 8-Lamp T8	Unk	100	1441.44	5.00
Fixture (4-Foot Lamps)		. = .		
400 watt HID Fixture to 200 Watt Induction Fluorescent Fixture	Unk	150	1591.20	13.00
1000 watt HID Fixture to (2 fixtures) 6-	Unk	175	2258.88	20.00
Lamp T-5 High-Output	Ulik	173	2230.00	20.00
1000 watt HID Fixture to 400 Watt	Unk	450	4180.80	28.00
Induction Fluorescent Fixture				
100 watt or less Incandescent to Compact Fluorescent Lamp (30 watt or	Unk	3	152.88	0.00
Less)				
Over 100 Watt to 200 watt	Unk	15	274.56	1.00
Incandescent to Compact Fluorescent	Olik	13	274.30	1.00
Lamp or Fixture (40-55 watt)				
Over 200 watt Incandescent to	Unk	25	399.36	1.00
Compact Fluorescent Lamp or Fixture (55-65 watt)				
60 watt or greater Incandescent to	Unk	10	162.24	0.00
Dimmable Compact Fluorescent or	Ulik	10	102.24	0.00
Cold Cathode**				
100 watt or greater incandescent flood	Unk	30	296.40	0.00
to Ceramic Metal Halide (25 watt)	TT 1	40	271.20	1.00
150 watt or greater incandescent to New Linear T8 Fluorescent Fixture	Unk	40	371.28	1.00
90 watt or greater incandescent to 15	Unk	24	265.20	0.00
watt or less LED	Olik	∠ <del>-1</del>	203.20	0.00
120 watt or greater incandescent to 20	Unk	34	324.48	2.00
watt or less LED				
20-30 watt Incandescent to LED or Low-Wattage Equivalent	Unk	10	82	0.00
20-60 watt Incandescent to Cold	Unk	10	90.2	0.00
Cathode	Ulik	10	90.2	0.00
Incandescent Exit Sign to New LED Exit	Unk	25	245.28	0.00
Signs				
Manual Light Switch to Occupancy	Unk	25	49.14	(1.00)
sensor controlled wall switch Fixture with no Occupancy Sensor to	T T1-	25	260 16	0.00
Built in Occupancy Sensor in fixture	Unk	35	368.16	0.00
•				

Individual unit counts of the many measures incorporated into this program are too detailed to be instructive for program management or planning. An overall estimate of program energy savings, 14.3 million first-year kWh's, is the appropriate metric to use for program planning and management purposes. Individual counts of measures are tracked over the course of the program year for EM&V purposes.

# Market Segment Overview:

2009 Department of Energy (DOE) Lamp Rulemaking will go into effect July 14<sup>th</sup>, 2012. At which time, most T12 lamps can no longer be manufactured or imported in the United States. Figure below, courtesy of NEMA.

Summary: New 2012 Standards for General Service Fluorescent Lamps (GSFL) Issued by the US Department of Energy June 29, 2009

<b>Lamp Туре</b>	Correlated Color Temperature	Energy Conservation Standard lm/W
4-Foot (T8-T12) Medium Bi-pin	≤ 4,500K	89
≥25W	> 4,500K and \le 7,000K	88
2-Foot (T8-T12) U-Shaped >25W	≤4,500K	84
<u>=</u> 25W	> 4,500K and \le 7,000K	81
8-Foot (T8-T12) Slimline	≤4,500K	97
≥52W	> 4,500K and \le 7,000K	93
8-Foot (T8-T12) High Output	≤4,500K	92
	> 4,500K and \le 7,000K	88
4-Foot (T5) Miniature Bi-pin Standard	≤4,500K	86
Output ≥26W	> 4,500K and \( \lefta \),000K	81
4-Foot (T5) Miniature Bi-pin High Output ≥49W	≤4,500K	76
≤43 W	> 4,500K and ≤ 7,000K	72

Effective Date of new DOE standards: July 14, 2012

Current exemptions continue [For example, lamps with CRI ≥87, cold temp. (CT), UV, etc.]

#### Impact for Lamps $\leq 4500$ K and $\geq 4,500$ K and $\leq 7,000$ K

- T12 4-ft. & 2-ft U-lamps with medium bi-pin bases
  - Majority of F40 and F34T12 lamps and all FB40 and FB34T12 U-lamps fail.
  - 4-ft. requires 3560 lumens @ 40W and 3030 lumens @ 34W to pass @ 89 LPW.
  - 2-ft. U-lamps require 3360 @ 40W and 2856 @ 34W to pass @ 84 LPW.
  - CWX/DX/DSGN50/C50 are exempt due to CRI.
- T12 8-ft. Slimline with single pin bases
  - All 75W F96T12 lamps fail.
  - All 60W F96T12/ES fail except for the 800/SPX Series & some 700/SP long life Series.
  - CWX/DX/DSGN50/C50 are exempt due to CRI.
- T12 8-ft. 800mA HO with RDC bases
  - All 110W F96T12 HO lamps fail. Requires enhanced coatings with 10,120 lumens to pass.
  - All 95W F96T12/ES/HO fail except for enhanced 800 Series. Requires 8740 lumens to pass.
  - CWX/DX/DSGN50/C50 are exempt due to CRI; CW/CT & D/CT are exempt.
- T8 4-ft. & 2-ft. U-lamps with medium bi-pin bases
  - All 4-ft. T8 basic 700/SP Series lamps @ 2800 lumens fail. Requires 2850 lumens to pass.
  - All other 4-ft. pass.
  - All 2-ft. 800/SPX Series U-lamps pass. Some 700/SP Series pass.
- T8 8-ft. Slimline with single pin bases
  - All pass except some 700/SP Series. Requires 5723 lumens @ 59W to pass.
- T8 8-ft. HO with RDC bases
  - All pass except some 700/SP Series. Requires 7912 lumens @ 86W to pass.
- T5 4-ft with miniature bi-pin bases
  - All pass.

### Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, marketing efforts to drive customers to the program and ongoing work with trade allies to ensure that customer demand can be met.

The Prescriptive Lighting Program is an integral consideration in the ongoing everylittlebit.com campaign, specifically Efficiency Avenue. The campaign builds broad awareness for energy efficiency as well as specific programmatic highlights.

Key to success is clear communication to lighting supply houses, distributors, electricians and customers on incentive requirements and forms. Utility websites are also channels to communicate program requirements and highlight opportunities for customers. Avista's regional based Account Executives (AEs) are a key part of delivering the Prescriptive Lighting Program to commercial and industrial customers.

Any changes should have advance notice for customers in the form of 90 days to submit under old requirements. This usually includes at a minimum direct mail communication to trade allies as well as internal, forms and website updates.

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# Data Collected to Support Future EM&V:

Beginning January 1<sup>st</sup>, 2010, each measure within the program was monitored on its percentage of throughput. We do see changes in throughput per measure from year to year. However, monitoring throughput per measure will help direct our efforts for 2011 and 2012 program planning and changes we expect to make according to code changes.

In addition, individual measure costs were tracked when feasible for CY 2010. We can compare these average actual individual measure costs to our estimates in our savings calculator. Results will be useful in determining appropriate material and labor costs for many measures on the Program.

For process evaluation data results will be collected monthly to show throughput of individual measures installed and incentives paid, kWh savings claimed and incremental non-incentive costs on projects. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# **EnergySmart Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Mike Dillon is the primary technical resource for the program.

### *Target Market(s):*

• This is applicable to non-residential electric and natural gas customers with refrigeration facilities.

## Program Overview:

- The EnergySmart Program was selected as the preferred bid through the 2006/2007 commercial refrigeration RFI/RFP process. The program was launched in late 2007 and is facilitated by PECI.
- A Field Energy Analyst with expertise in commercial refrigeration provides customers with technical assistance and a comprehensive audit producing a detailed energy savings report regarding potential savings for their facility and is guided through the process from inception through the payment of incentives for qualifying equipment. Refrigeration often represents the primary electricity in a grocery store or supermarket. Although the potential for savings is high, it is often overlooked because of the technical aspect of the equipment. This program provides a concentrated effort to assist customers through technical aspects of their refrigeration systems while providing a clear view of what savings can be achieved.
- PECI utilizes a modeling program called Grocer Smart to determine savings. PECI is handling the outreach effort through industry contacts, cold calling and contractor relationships. The account executives are also providing customer referrals with permission from the customers. PECI has also contracted with BPA and PSE to provide this program so overlapping customer with other electric utilities may also benefit. Administrative fees are paid to PECI on a pay for performance of \$0.0801 per kWh and \$0.6000 per therm.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010	Annualized kWh savings	Annualize d therm	
EnergySmart Program	230	incentives* 858,974	7,662,527	<b>savings</b> 20,100	
Total	230	030,974	7,002,327	20,100	

#### Budget and Savings:

					Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
EnergySmart Program	200	785,000	7,000,000	0	560,700
Total	200	793.101	7,000,000	0	570,855

• The estimates of throughput for 2011 are based on projections from PECI. The non-incentive dollars are budgeted dollars for PECI pay for performance fees which are currently 0.0801 per kWh. The incentive dollars are based on the annualized 2010 numbers times the 2011 estimated kWh. The total line is the numbers realized from making the kWh fit into measures list.

#### *Market Segment Overview:*

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence this program in the near future.

#### *Implementation Plan:*

• The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest and ongoing work with PECI.

## Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include data on the project cost, installation location and date, measure installed and unit count, kWh and therm savings, savings method, measure life, incentive per unit and total incentive paid.

# **Green Motors Rewind Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Levi Westra is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric customers.

#### Program Overview:

- This program is intended to organize, educate and promote member motor service centers to commit to energy saving shop rewind practices, continuous energy improvement and motor driven system efficiency.
- This program is run in partnership with the Green Motors Practices Group.
- Avista joined this program in 2008 offering the program to electric customers who participate in the green rewind program from 15 to 500 HP motors. The incentive paid is \$2.00 per HP and .05 to Green Motors for administrative costs per HP. Of the \$2.00, \$1.00 is an instant discount to the customer and \$1.00 goes to the motor service center doing the rewind.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Green Motor Rewind	22	7,730	64,636	N/A
Total	22	7,730	64,636	N/A

Budget and Savings:

					Non-incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Green Motor Rewind Total	25	8,784 9,010	73,450 75,893	N/A	4,000 3,794.65

• The estimates of throughput for 2011 are expected to be similar to 2010. The incentive dollars and kWh were extrapolated from the 2010 numbers and the non incentive dollars are for the administrative fees to Green Motors Practices Group. Then during the actual business planning process, the unit numbers were applied to various HP motors to come up with the final numbers for the business plan which are reflected in the total.

#### Market Segment Overview:

- NEMA code changes are taking effect in December of 2010 and may affect the throughput of this program.
- There are no technology or infrastructure changes that are likely to influence the premium that would be paid for green motor rewinds incentivized under this program in the near future.

## *Implementation Plan:*

• The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, marketing efforts to drive customers to the program and ongoing work with Green Motors Practices Group and motor service centers.

## Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include motor HP, RPM, cost, savings per rewind and location.

# **Power Management for PC Networks**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Tom Lienhard is the primary technical resource for the program.

### *Target Market(s):*

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This is available to non-residential electric customers that install a network based power management software solution.

#### Program Overview:

- This program was developed to incent non-residential customers with multiple personal computers (PCs) to install a network based power management software solution. Even though PCs have the capability to shift into a low-power operating state after a specified period of inactivity, only a small fraction of those PCs actually do.
- For companies that have numerous PCs, the wasted energy from computers that remain in the full power state even when they are idle can be significant. Software products that can simplify the process of implementing power management in large numbers of networked PCs are available.
- This program offers a \$10 incentive per controlled PC that meets our eligibility criteria. Criteria includes: ability to provide regular energy use reports, ability to control every available level of power management offered by the PC, ability to reset user over-ride capabilities, a minimum average savings of 120 annual kWh per PC, ability to provide usage data prior to the controls being installed (baseline setting) and the software must remain in operation for a minimum of 3 years.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Installed PC Network Software	2,917	29,170	375,633	N/A
Total	2,917	29,170	375,633	N/A

Budget and Savings:

Measure	Units	Incentive \$	kWh	Therms	incentive \$
Installed PC Network Software	2,925	29,250	351,000	N/A	N/A
Total	2,925	29,250	351,000	N/A	N/A

• The estimates of unit throughput for 2011 are based on the throughput for 2010. The kWh savings estimates are based on the total average kWh savings totals for 2009 and 2010.

### Market Segment Overview:

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence this program in the near future.
- This program is marketed through account executives, vendors and outreach material.

## *Implementation Plan:*

• The key drivers to delivering on the objectives of this program will be using marketing efforts to drive customers to the program and ongoing work with vendors to make sure they are aware of the incentives available to customers.

## Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include data on the cost, number of controllers, installation date of the software, baseline reports providing usage data prior to installation and usage data reports showing savings after installation of software.

# **Prescriptive Commercial Clothes Washer Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Tom Lienhard is the primary technical resource for the program.

### *Target Market(s):*

• This is applicable to non-residential electric and natural gas customers in multi-family or commercial Laundromat facilities.

## Program Overview:

- This program is intended to prompt the customer to replace or install an energy-efficient commercial clothes washer in a multi-family or commercial Laundromat facility.
- Commercial clothes washers that are certified Energy Star or CEE listed are eligible for the incentive.
- Having a streamlined prescriptive approach allows us to reach these markets before decisions are made and influence customers to select higher efficiency models.

## Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
CW- Electric DHW and E	45			C
Dryer				
CW- Electric DHW and G	0			
Dryer				
CW- Gas DHW and E Dryer	16			
SW- Gas DHW and G Dryer	83			
Total	144	42,000	107,711	3,803

#### **Budget** and Savings:

					Non- incentive \$
Measure	Units	Incentive	kWh	Therms	
		\$			
CW- Electric DHW and E	45	9,000			

Dryer

CW- Electric DHW and G 1 200

Dryer

CW- Gas DHW and E Dryer 15 3,000 SW- Gas DHW and G Dryer 85 17,000

Total 146 29,200 190,206 3,855 0

• The estimates of unit throughput for 2011 similar to the numbers for 2010. The incentive estimate is based on the \$200 incentive; the kWh and therm savings are based on the 2010 numbers extrapolated using the 2011 unit numbers.

#### Market Segment Overview:

- CEE is proposing that commercial clothes washers be more closely aligned with residential clothes washer specifications as far as savings. If this is accepted, the changed could be effective on 1/1/11.
- This program is marketed through account executives, vendors and outreach material.

### *Implementation Plan:*

• The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, marketing efforts to drive customers to the program and ongoing work with trade allies to ensure that customer demand can be met.

### Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include data on the cost, manufacturer and model of machine, installation date, number of units and location of each machine, type of water heater that serves the clothes washer, type of dryer as well as the number of loads that are processed per week.

## **Demand Controlled Ventilation Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Mike Dillon is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric or natural gas customers.

#### Program Overview:

- This program is intended to prompt the customer to install ventilation controls on existing buildings that use carbon dioxide levels to measure occupancy and modify the percentage of outside air based on variable levels, rather than setting the intake rates for maximum occupancy levels at all times.
- Demand controlled ventilation measures the approximate number of people occupying a space and resets the intake rate based on the measurement.
- To be eligible for the program, the conditioned spaces must be kept between 65 and 75 degrees during operating hours, the controlled conditioned space must have a minimum of 2,000 square feet, incentives are paid at .25 per square foot with a cap of 2,500 square foot per sensor. If the space has portable walls, each room must be controlled separately and controlled space must meet a minimum of ASHREA 62 standards.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Demand Controlled Ventilation	25,460 sq ft	5,675.75	30,368	2,071
Total	25,460 sq ft	5,675.75	30,368	2,071

Budget and Savings:

					Non-
					incentive \$
Measure	Units	Incentive	kWh	Therms	
		\$			

Demand Controlled	26,000	6,500	27,212	2,425
Ventilation				
Total	26,000	6,500	27,212	2,425

• The estimates of throughput for 2011 are similar to 2010.

#### Market Segment Overview:

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence this program in the near future.
- This program is marketed by account executives, vendors and outreach material.

•

#### *Implementation Plan:*

• The key drivers to delivering on the objectives of this program are the direct-incentives to customers, marketing efforts to drive customers to the program and ongoing work with trade allies to make them aware of our commercial programs.

#### Data Collected to Support Future EM&V

•

Data collected in anticipation of future internal and external EM&V needs include data on costs, type of area to be controlled, square footage of area, total number of square feet to be controlled, if the controlled space has air conditioning, what the controlled space is heated with, maximum occupancy of controlled space and approximate percent of time he space is at full occupancy.

# Prescriptive Electric to Natural Gas Water Heater Conversion Program

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Carlos Limon is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric and natural gas customers

#### Program Overview:

- This program is intended to prompt our smaller commercial customer to convert their electric water heater that is 80 gallons or smaller to a natural gas water heater 80 gallons or smaller.
- This program offers a \$150 incentive for the conversion when it meets our eligibility criteria. Criteria includes: building square footage must be 4,000 or less (larger buildings can apply for a site specific rebate through their Avista Account Executive), must be both Avista electric and natural gas customer, and the Efficiency Factor of the new water heater must be equal or greater than .60 or have an AFUE equal or greater that 90%.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
E to NG WH Conversion Total	1	300	3287	

**Budget** and Savings:

24	<b>T</b> I •/	Ŧ	1 117	(D)	Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
E to NG WH Conversion Total	0	0	0	0	0

### Market Segment Overview:

• This market is hard to reach as many smaller commercial customers do not own their facility and property managers do not pay the utility bill so neither wishes to do property improvements. During the life of this program we processed one incentive. It did not pass the sub-TRC during the 2011 business planning process and the decision was made to eliminate this program from the prescriptive offering. We will accept rebates for these conversions that were installed on or before December 31, 2011. All paperwork needs to be submitted before March 31, 2011. The website will be updated to reflect these changes.

Implementation Plan:

• This program is being discontinued as of 12/31/10.

## Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include total cost, manufacturer, model and size of unit removed, installation date of new unit, manufacturer, model and size of new installed unit, building square footage and installing contractor name.

# **Prescriptive Food Service Equipment Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Andy Paul is the primary technical resource for the program.

# Target Market(s):

• This is applicable to non-residential electric and natural gas customers.

### Program Overview:

- This program was launched to provide an easy path for customer to make choices for high efficiency equipment in commercial kitchens. This had been a difficult market to reach with our site specific program and is ideal for the prescriptive approach as the savings are similar between applications.
- Equipment must meet Energy Star or CEE Tier levels depending on the unit to be eligible for incentives.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualized therm savings
CEE Tier 2 Ice Maker, AC,IMH, 1001 to 1500 lbs/day	2	400		C
CEE Tier 2 Ice Maker, AC,IMH, 201 to 300 lbs/day	1	125		
CEE Tier 2 Ice Maker, AC,IMH, 301 to 400 lbs/day	7	875		
CEE Tier 2 Ice Maker, AC,IMH, 401 to 500 lbs/day	1	125		
CEE Tier 2 Ice Maker, AC,IMH, 501 to 1000 lbs/day	3	375		
CEE Tier 2 Ice Maker, AC,IMH, over 1500 lbs/day				
CEE Tier 2 Ice Maker, AC,IMH, under 200 lbs/day				
CEE Tier 2 Ice Maker, AC, RC, 1001 to 1500 lbs/day				
CEE Tier 2 Ice Maker, AC, RC, under 400 lbs/day	1	125		

CEE Tier 2 Ice Maker, AC, RC, 401 to 500		
lbs/day  CEF Tion 2 Ion Molton, AC, BC, 501 to 1000		
CEE Tier 2 Ice Maker, AC, RC, 501 to 1000 lbs/day		
CEE Tier 2 Ice Maker, AC, RC, over 1500		
lbs/day		
CEE Tier 2 Ice Maker, AC, SC, under 200	1	100
lbs/day CEE Tier 2 Ice Maker, WC, IMH, 1001 to 1500		
lbs/day		
CEE Tier 2 Ice Maker, WC, IMH, 301 to 400		
lbs/day		
CEE Tier 2 Ice Maker, WC, IMH, 401 to 500 lbs/day		
CEE Tier 2 Ice Maker, WC, IMH, 501 to 1000		
lbs/day		
CEE Tier 2 Ice Maker, WC, IMH, over 1500		
lbs/day  CEF Tion 2 Ioo Molton W.C. IMIL 201 to 200	1	125
CEE Tier 2 Ice Maker, WC, IMH, 201 to 300 lbs/day	1	123
CEE Tier 2 Ice Maker, WC, SC, under 200		
lbs/day		
CEE Tier 2 Ice Maker, WC, SC, over 200		
lbs/day CEE Tier 3 Ice Maker, AC,IMH, 1001 to 1500		
lbs/day		
CEE Tier 3 Ice Maker, AC,IMH, 201 to 300	1	200
lbs/day		
CEE Tier 3 Ice Maker, AC,IMH, 301 to 400		
lbs/day CEE Tier 3 Ice Maker, AC,IMH, 401 to 500		
lbs/day		
CEE Tier 3 Ice Maker, AC,IMH, 501 to 1000	1	200
lbs/day		
CEE Tier 3 Ice Maker, AC,IMH, over 1500 lbs/day		
CEE Tier 3 Ice Maker, AC,IMH, under 200		
lbs/day		
CEE Tier 3 Ice Maker, AC, RC, 1001 to 1500		
lbs/day CEE Tier 3 Ice Maker, AC, RC, under 400		
lbs/day		
CEE Tier 3 Ice Maker, AC, RC, 401 to 500		
lbs/day		
CEE Tier 3 Ice Maker, AC, RC, 501 to 1000		
lbs/day		

CEE Tier 3 Ice Maker, AC, RC, over 1500		
lbs/day		
CEE Tier 3 Ice Maker, AC, SC, under 200		
lbs/day		
CEE Tier 3 Ice Maker, WC, IMH, 1001 to 1500		
lbs/day		
CEE Tier 3 Ice Maker, WC, IMH, 301 to 400		
lbs/day		
CEE Tier 3 Ice Maker, WC, IMH, 401 to 500		
lbs/day		
CEE Tier 3 Ice Maker, WC, IMH, 501 to 1000		
lbs/day		
CEE Tier 3 Ice Maker, WC, IMH, over 1500		
lbs/day		
CEE Tier 3 Ice Maker, WC, IMH, 201 to 300		
lbs/day		
CEE Tier 3 Ice Maker, WC, SC, under 200		
lbs/day		
CEE Tier 3 Ice Maker, WC, SC, over 200		
lbs/day		
Energy Star 3 pan gas steam cooker		
Energy Star 4 pan gas steam cooker		
Energy Star 5 pan gas steam cooker		
Energy Star 6 pan gas steam cooker		
Energy Star 3 pan electric steam cooker		
Energy Star 4 pan electric steam cooker		
Energy Star 5 pan electric steam cooker	_	
Energy Star 6 pan electric steam cooker	2	1,440
Energy Star gas fryer	3	1,500
Energy Star electric fryer	2	300
Energy Star DW Door Type HT E Bldg HW &		
G HW Booster		
	4	4,000
E HW Booster	4	1 000
Energy Star DW Door Type HT G Bldg HW &	1	1,000
G HW Booster		
Energy Star DW Door Type HT G Bldg HW &		
E HW Booster		
Energy Star DW Door Type LT E Bldg HW &		
G HW Booster	2	2.000
Energy Star DW Door Type LT E Bldg HW &	3	3,000
E HW Booster	4	4.000
Energy Star DW Door Type LT G Bldg HW &	4	4,000
G HW Booster  Engrav Star DW Door Type LT G Pldg HW &		
Energy Star DW Door Type LT G Bldg HW & E HW Booster		
E II W DOOSIEI		

Energy Star DW MTC HT E Bldg HW & G		
HW Booster Energy Star DW MTC HT E Bldg HW & E		
HW Booster		
Energy Star DW MTC HT G Bldg HW & G		
HW Booster		
Energy Star DW MTC HT G Bldg HW & E HW Booster		
Energy Star DW MTC LT E Bldg HW & G		
HW Booster		
Energy Star DW MTC LT E Bldg HW & E HW		
Booster Energy Star DW MTC LT G Bldg HW & G		
HW Booster		
Energy Star DW MTC LT G Bldg HW & E		
HW Booster		
Energy Star DW STC HT E Bldg HW & G HW		
Booster Energy Star DW STC HT E Bldg HW & E HW	1	1,500
Booster Booster	1	1,500
Energy Star DW STC HT G Bldg HW & G HW		
Booster		
	1	1,500
Booster Energy Star DW STC LT E Bldg HW & G HW		
Booster Booster		
Energy Star DW STC LT E Bldg HW & E HW		
Booster		
Energy Star DW STC LT G Bldg HW & G HW		
Booster Energy Star DW STC LT G Bldg HW & E HW		
Booster Booster		
Energy Star DW UC HT E Bldg HW & G HW		
Booster		
Energy Star DW UC HT E Bldg HW & E HW	4	1,000
Booster Energy Star DW UC HT G Bldg HW & G HW		
Booster Booster		
Energy Star DW UC HT G Bldg HW & E HW		
Booster		
Energy Star E Hot Food Hold Cart 12 cu ct or		
less Energy Star E Hot Food Hold Cart 12-18 cu ft		
Energy Star E Hot Food Hold Cart 12-18 cu ft	14	7,000
Energy Star freezer, solid 1 door	1	70
Energy Star freezer, solid 2 door	3	330

Energy Star freezer, solid 3 door	2	280		
Energy Star refrigerator, glass 1 door	3	150		
Energy Star refrigerator, glass 2 door	4	320		
Energy Star refrigerator, glass 3 door				
Energy Star refrigerator, solid 1 door	6	430		
Energy Star refrigerator, solid 2 door	12	1,060		
Energy Star refrigerator, solid 3 door				
H E electric combination oven	1	1,000		
H E electric convection oven	3	1,200		
H E electric griddle				
H E gas combination oven	4	4,000		
H E gas convection oven	6	3,000		
H E gas griddle				
H E gas rack oven	2	2,000		
Vent Hood VSC, electric space heat				
Vent Hood VSC, electric space heat & VH				
MAU				
Vent Hood VSC, gas space heat	7	19,597.50		
Vent Hood VSC, gas space heat & VH MAU	2	390		
HE NG Water Heater (removed in mid 2010)	4	5,000		
Timeclock Controls for water heaters(removed	2	80		
in mid 2010)				
Total	120	67,797.50	280,311	20,239

Budget and Savings:

					Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Commercial Food Service Equipment	144	64,545	393,678	23,831	600
Total	144	64,545	393,678	23,831	600

• The estimates of throughput for 2011were extrapolated from the 2010 numbers. The non-incentive dollars are for participation in trade shows.

# Market Segment Overview:

• There are no currently anticipated code changes that are likely to influence this market within the next year.

•

Implementation Plan:

• The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest and ongoing work with account executives and restaurant equipment vendors.

## Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include data on the cost, installation site and date, manufacturer, model number, if the equipment was installed as a retrofit or new equipment, if old equipment was still functioning properly, and type of booster heater for dishwashers.

# **Prescriptive Commercial HVAC Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Mike Dillon is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric and natural gas customers.

Program Overview:

 This program is intended to provide a prescriptive approach for small commercial/industrial customers who are installing or replacing HVAC equipment.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Commercial HVAC	0	0	0	0
Total	0	0	0	0

Budget and Savings:

Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
Commercial HVAC					
Total	13,000 kbtu	37,500	N/A	30,770	

Throughput for 2011 is based on engineer estimates from 2010 site specific project loads.

Market Segment Overview:

• There are no technology or infrastructure changes that are likely to influence this program in the near future.

Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, working with vendors and contractors to make them aware of this new incentive opportunity for small commercial/industrial customers and working with account executives.

# Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include type of equipment, equipment efficiency, segment of business, and hours of operation.

# **Prescriptive LED Traffic Signal Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Tom Lienhard is the primary technical resource for the program.

# Target Market(s):

• This is applicable to non-residential electric customers

### Program Overview:

- This program is intended to prompt the customer to replace incandescent traffic signals with high efficient LED traffic signals.
- Incentives are paid for pedestrian signals, red, yellow and green traffic signals and traffic arrows.
- This program is available to traffic signal owners which are primarily municipalities.

### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Pedestrian Signals 9 Inch				
Pedestrian Signals 12 Inch	8			
Traffic Signals 8 Inch Green				
Traffic Signals 8 Inch Red				
Traffic Signals 8 Inch				
Yellow				
Traffic Signals 12 Inch	244			
Green				
Traffic Signals 12 Inch Red	66			
Traffic Signals 12 Inch	248			
Yellow				
Traffic Arrows 8 Inch Green				
Traffic Arrows 8 Inch Red				
Traffic Arrows 8 Inch				
Yellow				
Traffic Arrows 12 Inch	103			
Green				
Traffic Arrows 12 Inch Red	19			
Traffic Arrows 12 Inch	96			

## Budget and Savings:

					Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Pedestrian Signals 9 Inch					
Pedestrian Signals 12 Inch					
Traffic Signals 8 Inch Green					
Traffic Signals 8 Inch Red					
Traffic Signals 8 Inch					
Yellow					
Traffic Signals 12 Inch					
Green					
Traffic Signals 12 Inch Red					
Traffic Signals 12 Inch					
Yellow					
Traffic Arrows 8 Inch Green					
Traffic Arrows 8 Inch Red					
Traffic Arrows 8 Inch					
Yellow					
Traffic Arrows 12 Inch					
Green					
Traffic Arrows 12 Inch Red					
Traffic Arrows 12 Inch		23,540	218,354		
Yellow					
Total	800	25,285	218,625	N/A	200

• The estimates of unit throughput for 2011 based on results from a survey we did in 2010 on traffic signals remaining to be replaced.

### Market Segment Overview:

• Code changes have occurred that require all traffic signals manufactured to be energy efficient. We believe that we are reaching market saturation and plan to run this program until the end of 2011.

### *Implementation Plan:*

• Due to changes in manufacturing codes and the belief that we are reaching market saturation, we will be sending out notice that this program will be ending as of 12/31/10.

Data Collected to Support Future EM&V

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, installation date of each signal installed, and location of installation.

# **Prescriptive LEED Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Mike Dillon is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric and natural gas customers.

#### Program Overview:

- This program is intended to prompt significant market transformation for the number of LEED certified buildings in our service territory.
- The proposed incentive level is \$.25 per conditioned square foot for LEED certified buildings that are new construction projects and \$.50 per conditioned square foot for LEED certified buildings that are existing buildings and that have an energy use index of at least 25% less than required by Washington State Energy Code.
- The incentive is intended to help cover the costs of the certification with a requirement that 4 points are achieved in the Energy Optimization section of the LEED Checklist. Projects with potential LEED certification incentives, along with the other incentives we pay on the projects, are contracted through the site specific process.

Prior Year Program Results:

N	Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
LEED Total		3	376,888	N/A	N/A
rotal					

Budget and Savings:

	Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
LEED		2	754,251	N/A	N/A	N/A
Total		2	754,251	N/A	N/A	N/A

• The estimates of unit throughput for 2011 are based on projects in the pipeline.

#### Market Segment Overview:

Avista began providing market transformation incentives for projects that went through the United States Green Building Council's LEED New Construction and Existing Buildings processes in 2004. At that moment in time we had minimal green building activities in our service territory. Since then we have seen a large increase in the design of projects that choose to go through the LEED certification process. From the USGBC website there have been 68 projects that have either been certified or applied for the certification process in our Washington and Idaho service territory (54 NC, 6 EB, 3 LEED Schools and 5 CI/CS). Of these 68 projects Avista has been involved in 30 of these projects 28 of which are currently in study or completed phase. The spillover consists of projects that never went beyond the application phase, only served by one of our fuels, in an area where we might operate but not necessarily provide utilities to that facility, required building to LEED standards or a transportation gas customer. Over the course of the program we have paid out (or are contracted to) \$1,813,015 in incentives. We now believe that we have been successful in introducing the LEED certification process to the building stock in our service territory and thus we should begin to wrap up the market transformation program. We should accept all projects that have their applications and be under contract by 12/31/2010 under the old programs, but those projects must wrap up and have final approval from the Green Building Certification Institute before 12/31/2011.

## Implementation Plan:

Work with the account executives to contract any projects we are aware of before the end of the 2010 calendar year.

# Data Collected to Support Future EM&V

• Since we do not claim any savings for this program we do not collect any specifically for EM&V. Invoices are required to show project cost and installation.

# **Prescriptive Premium Efficiency Motors Program**

Commercial Sector

*Key Individuals and Responsibilities:* 

- Greta Zink is designated as the current Program Manager.
- Levi Westra is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric customers.

#### Program Overview:

- The premium efficiency motors program was developed several years ago in an effort to change the buying patterns for customers who use motors in their facilities. This program provides an incentive for customers who purchase premium efficiency motors over standard motors for stock.
- The incentive is intended to pay approximately 50% of the incremental costs of buying premium efficiency motors. This is our only prescriptive program that allows incentives to be paid upon purchase rather than upon installation. This is an intentional piece of this program since we are trying to get customers to keep premium efficiency motors in stock.
- In order to qualify for incentives, motors must meet our listed NEMA Premium efficiency standards.
- Premium efficiency motors provide customers with reduced downtime and lower maintenance costs. This program has also provided a market transformation element because purchasing practices have been altered as a result of our incentives.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
<b>Premium Efficiency Motors</b>	169	50,250	369,241	N/A
Total	169	50,250	369,241	N/A

Budget and Savings:

					Non-
					incentive \$
Measure	Units	Incentive	kWh	<b>Therms</b>	

		\$			
Premium Efficiency Motors	150	44,600	327,728	N/A	200
Total	150	49,436	330,000	N/A	200

• The 2011 estimates are slightly lower than the 2010 actual. Although we did not have any motors over 200HP processed in 2010, with the limited number of high efficient motors on the CEE list, we may not see the throughput that we have in years past. The incentive and kWh numbers for 2011 were determined by using the 2010 actual and dividing by the units and multiplying by the 150 units estimated for 2011. The non-incentive dollars are for form change costs. The total line reflects the numbers in the business plan spreadsheet that came from sizing the program to fit the expectations.

#### *Market Segment Overview:*

Code changes going into effect December 2010 will make NEMA
 Premium Efficiency motors the new standard for motors in the 1 -200
 HP range. There are currently 633 motors that are one full band above
 the standard that will be considered high efficient. The new federal
 minimum for 250 -500 HP motors is below NEMA Premium efficiency
 levels. As such, the NEMA Premium levels for these motors will
 continue to represent premium efficiency.

#### *Implementation Plan:*

• Due to the code changes that will be effective in December of this year, we plan on scaling back the Premium Efficiency Motor Rebates to motors that fall between 1 and 200 HP. Any motors that are above 200 HP will need to be considered on a site specific basis.

#### Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include purchase date, manufacturer, motor model number, rated efficiency, ODP or TEFC, HP and RPM, Continuous or Non-continuous and installation location.

# **Prescriptive Refrigerated Warehouse Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Andy Paul is the primary technical resource for the program.

# Target Market(s):

• This is applicable to non-residential electric customers with refrigerated warehouses.

# Program Overview:

- This program was launched in 2006 to provide the opportunity for customers to receive a prescriptive incentive for efficiency improvements in refrigerated warehouses using a streamlined approach.
- Although there are a relatively small number of customers in this segment, there are significant opportunities for energy savings in the measures covered under this program.

Prior Year Program Results:

Annualize	Annualized	Annualized	Annualize
d 2010 units*	2010 incentives*	kWh savings	d therm savings
875 ln ft	39,375	N/A	12,542
	d 2010 units*	d 2010 2010 units* incentives*	d 2010 2010 kWh savings units* incentives*

EC condenser fan motor 1/15 hp				
EC condenser fan motor 1/6 hp				
EC condenser fan motor 1/3 hp				
EC condenser fan motor 1/2 hp				
Refrigerated Warehouse Cooler				
Table				
1000 watt high pressure sodium				
150 watt high pressure sodium				
250 watt high pressure sodium				
400 watt high pressure sodium				
1000 watt metal halide				
250 watt metal halide				
250 watt pulse start metal halide				
320 watt pulse start metal halide				
360 watt metal halide				
400watt metal halide				
2 lamp T5 high output cold temp				
3 lamp T5 high output cold temp				
4 lamp T5 high output cold temp	50	2,500	43,184	N/A
5 lamp T5 high output cold temp				
6 lamp T5 high output cold temp				
6 lamp T8 cold temp				
HID (150W min)converted to 2 lamp	49	8,330	75,867	N/A
T5 high output cold temp				
HID (320W min)converted to 4 lamp	1	200	2,084	N/A
T5 high output cold temp				
HID (320W min)converted to 5 lamp				
T5 high output cold temp				
HID (500W min)converted to 6 lamp				
T5 high output cold temp				
250 watt pulse start metal halide				
converted to 3 lamp T5 high output				
cold temp				
250 watt pulse start metal halide				
320 watt pulse start metal halide				
Refrigerated Warehouse Freezer				
Table				
1000 watt high pressure sodium				
150 watt high pressure sodium				
250 watt high pressure sodium				
400 watt high pressure sodium 1000 watt metal halide				
250 watt metal halide				
250 watt metal hande 250 watt pulse start metal halide				
220 wait pulse start metal halida				

320 watt pulse start metal halide

360 watt metal halide

400 watt metal halide

2 lamp T5 high output cold temp

3 lamp T5 high output cold temp

4 lamp T5 high output cold temp

5 lamp T5 high output cold temp

6 lamp T5 high output cold temp

6 lamp T8 cold temp

HID (150W min) converted to 2 lamp

T5 high output cold temp

HID (320W min) converted to 4 lamp

T5 high output cold temp

HID (320W min) converted to 5 lamp

T5 high output cold temp

HID (500W min) converted to 6 lamp

T5 high output cold temp

250 watt pulse start metal converted to

3 lamp T5 high output cold temp

250 watt pulse start metal halide

320 watt pulse start metal halide

Total 50,405 121,135 12,542

Budget and Savings:

Nonincentive \$

kWh Measure Units **Incentive Therms** \$

Fast-acting freezer doors

Fast-acting cooler doors

Dock door seals for freezers

Dock door seals for heated spaces

Cooler condenser fan VFD

Freezer condenser fan VFD

Evaporator fan VFD

Compressor VFD

Electronic compressor unloading

control

Central computer refrigeration

control

Auxiliary evaporative condenser

EC evaporator fan motor 1/20 hp

EC evaporator fan motor 1/15 hp

EC evaporator fan motor 1/6 hp

EC evaporator fan motor 1/3 hp

EC evaporator fan motor 1/2 hp

EC condenser fan motor 1/20 hp

EC condenser fan motor 1/15 hp

EC condenser fan motor 1/6 hp

EC condenser fan motor 1/3 hp

EC condenser fan motor 1/2 hp

# Refrigerated Warehouse Cooler Table

1000 watt high pressure sodium

150 watt high pressure sodium

250 watt high pressure sodium

400 watt high pressure sodium

1000 watt metal halide

250 watt metal halide

250 watt pulse start metal halide

320 watt pulse start metal halide

360 watt metal halide

400watt metal halide

2 lamp T5 high output cold temp

3 lamp T5 high output cold temp

4lamp T5 high output cold temp

5 lamp T5 high output cold temp

6 lamp T5 high output cold temp

6 lamp T8 cold temp

HID (150W min)converted to 2 lamp

T5 high output cold temp

HID (320W min)converted to 4 lamp

T5 high output cold temp

HID (320W min)converted to 5 lamp

T5 high output cold temp

HID (500W min)converted to 6 lamp

T5 high output cold temp

250 watt pulse start metal halide

converted to 3 lamp T5 high output cold temp

250 watt pulse start metal halide

320 watt pulse start metal halide

# Refrigerated Warehouse Freezer Table

1000 watt high pressure sodium

150 watt high pressure sodium

250 watt high pressure sodium

400 watt high pressure sodium

1000 watt metal halide

250 watt metal halide

250 watt pulse start metal halide

320 watt pulse start metal halide

360 watt metal halide 400 watt metal halide 2 lamp T5 high output cold temp 3 lamp T5 high output cold temp 4 lamp T5 high output cold temp 5 lamp T5 high output cold temp 6 lamp T5 high output cold temp 6 lamp T8 cold temp HID (150W min) converted to 2 lamp T5 high output cold temp HID (320W min) converted to 4 lamp T5 high output cold temp HID (320W min) converted to 5 lamp T5 high output cold temp HID (500W min) converted to 6 lamp T5 high output cold temp 250 watt pulse start metal converted to 3 lamp T5 high output cold temp 250 watt pulse start metal halide 320 watt pulse start metal halide

49,905 121,135 12,250

• The estimates of throughput for 2011 are not input by units as this program has measures that are in linear feet, per square feet or per item.

#### Market Segment Overview:

Total

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence this program in the near future.

#### *Implementation Plan:*

• The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, marketing efforts to drive customers to the program and ongoing work with account executives to remind the customer that this is available.

Data Collected to Support Future EM&V

## **Prescriptive Retro-Commissioning Program**

Commercial Sector

*Key Individuals and Responsibilities:* 

- Greta Zink is designated as the current Program Manager.
- Mike Dillon is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric and natural gas customers.

#### Program Overview:

- This program provides an opportunity for eligible customers to receive an incentive towards a qualified retro-commissioning study. This program was developed for commercial buildings that have never gone through any type of commissioning or quality assurance process and are performing below their potential.
- Retro-commissioning is a systematic process for investigating, analyzing and optimizing the performance of building systems that have never been commissioned. Building commissioning is increasingly recognized as a cost-effective process to improve building performance, reduce energy use, increase equipment life, improve indoor air quality and improve occupant comfort and productivity.
- Although the savings that are achievable through retro-commissioning can be significant, market penetration still seems to be relatively low. Our program is trying to overcome these barriers with education, incentives and a streamlined approach to implementation.
- Currently the program parameters include a .10 per square foot incentive for retro-commissioning studies done by a qualified commissioning agent, an incentive for contractors to make eligible quick fixes and the opportunity for customer to receive schedule 90/190 incentives for qualifying projects.
- To be eligible for incentives you must meet the following criteria; building must have at least 5,000 square feet and must be controlled by an energy management system. The Energy Use Index must be greater than 100% of normal. The building must be at least 5 years old. The minimum average occupancy must be at least 50% over the last 2 year period.

Prior Year Program Results:

Measure Annualized Annualized Annualized Annualize 2010 units\* 2010 kWh savings d therm

		incentiv	savings	
Retro-Commissioning	0	0	0	0
Total	0	0	0	0

Budget and Savings:

Non-	
incentive	\$

Measure	Units	Incentive \$	kWh	Therms	incentive \$
Retro-Commissioning Total	1	5,375			

• The estimates of throughput for 2011 are based on what is in the pipeline. The kWh is calculated site specifically when the reporting on the building is done, so it is not possible to estimate the savings.

#### Market Segment Overview:

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence this program in the near future.

#### Implementation Plan:

• We are in discussions with others regarding this program with possible partnership to spark more customer interest.

#### Data Collected to Support Future EM&V

Data collected in anticipation of future internal and external EM&V needs include pre and post usage, list of measures and savings calculations.

# **Prescriptive Commercial Shell Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Mike Dillon is the primary technical resource for the program.

*Target Market(s):* 

• This is applicable to non-residential electric and natural gas customers.

Program Overview:

• This program is intended to provide a prescriptive approach to commercial/industrial customers who will be adding insulation or replacing windows. This program is not intended for new construction.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Commercial Shell	0	0	0	0
Total	0	0	0	0

Budget and Savings:

	Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
Comn Total	nercial Shell	180,000 sq ft	62,000	175,950	11,700	

• Throughput for 2011 is based on engineer estimates from 2010 site specific projects load.

Market Segment Overview:

• There are no technology or infrastructure changes that are likely to influence this program in the near future.

# Implementation Plan:

•

The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, working with contractors and vendors to make them aware of this new incentive opportunity and working with the account executives.

# Data Collected to Support Future EM&V

•

Data collected in anticipation of future internal and external EM&V needs include segment of business, existing insulation level, current u-value of windows, heating and/or cooling system type and hours of occupancy.

## **Prescriptive Side Stream Filtration Program**

Commercial Sector

*Key Individuals and Responsibilities:* 

- Greta Zink is designated as the current Program Manager.
- Tom Lienhard is the primary technical resource for the program.

#### *Target Market(s):*

• This is applicable to non-residential electric customers who have open loop evaporative cooling tower/chiller systems.

## Program Overview:

- This program is intended to prompt the customer to increase the energy efficiency of their side stream filtration systems through direct financial incentives.
- This program provides incentives for the installation of permanent side stream filtration systems on open loop chiller/cooling tower systems for new or existing systems. This helps keep the exterior water loop cleaner and makes the exchange of heat or cooling more efficient and helps the equipment operate more efficiently between normal cleanings and inspections.
- Incentives for this program are paid at \$18 per ton or 50 percent fo the installed cost, whichever is less.
- Other benefits of installing side stream filtration systems include extending the equipment life, improve plant efficiency, and reduction in corrosion and erosion.
- To be eligible for this program the following program criteria must be met: pre-approval by Avista is required to receive the incentive, the system must filter at least 2 percent of the full chilled water circuit flow, the system must have automatic backwash system and controls, the minimum filter efficiency must be at least 75 percent, the filer media must remove particles 0.5 microns and greater in size, if chiller and cooling tower systems are interconnected, the entire system must be filtered, normal annual teardown, inspection and maintenance of the chiller must still be performed.

## Prior Year Program Results:

Measure	Measure Annualized 2010 Tons*		Annualized kWh savings	Annualize d therm	
		incentives*		savings	
Side Stream Filtration	555	9,990	143,814	N/A	

## Budget and Savings:

	<b>T</b> T •4	<b>.</b>	1 777	(EV)	Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Side Stream Filtration	300	5,400	38,100	N/A	N/A
Total	300	5,400	38,100	N/A	N/A

• The estimates of tons throughput for 2011 are averaged from the 2010 actual numbers.

### Market Segment Overview:

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence this program in the near future.

#### *Implementation Plan:*

• The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, marketing efforts to drive customers to the program and ongoing work with trade allies to ensure that customer demand can be met.

### Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include energy use per kW/ton at full load and average load, average chiller load percent, annual chiller operation hours, the system tons per ton, installation location and date of install, contractor name.

# **Prescriptive Vending Machine Controller Program**

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Tom Lienhard is the primary technical resource for the program.

*Target Market(s):* 

• This program is available to non-residential electric customers.

Program Overview:

- This program is intended to prompt the customer to install energy saving controls on cold drink vending machines dispending non-perishable drinks.
- The program is only available for vending machines that do not currently have controls.
- This program pays an incentive of \$90 per controller.

Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Vending Machine Controller Total	1	90	900	N/A

Budget and Savings:

					Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Vending Machine Controller Total	10	900	9000	N/A	N/A

• The estimates of unit throughput for 2011 are the same as 2010.

Market Segment Overview:

• There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.

- There are no technology or infrastructure changes that are likely to influence this program in the near future.
- This program is marketed through account executives, vendors and outreach material.

## Implementation Plan:

• The key drivers to delivering on the objectives of this program will be using marketing efforts to drive customers to the program and ongoing work with vendors to make sure they are aware of the incentives available to customers.

# Data Collected to Support Future EM&V

• Data collected in anticipation of future internal and external EM&V needs include data on the cost, hours of operation, installation date and location of each controller installed as well as the vending machine model number.

# Non-Residential HVAC Rooftop Maintenance Pilot Program

Commercial Sector

Key Individuals and Responsibilities:

- Greta Zink is designated as the current Program Manager.
- Levi Westra is the primary technical resource for the program.

#### *Target Market(s):*

• This is applicable to non-residential electric customers who have a rooftop unit.

## Program Overview:

- This program is intended to better define the savings that occur with the regular maintenance of a commercial HVAC rooftop unit. We started this pilot program in 2009 and planned to have an analysis complete for 2011 Business Planning, however due to contractor and equipment issues, the final data will not be available until later this year.
- This pilot program replaced the AirCare Plus Program that ran for 5 years. AirCare Plus started as a NEEA venture to attempt market transformation for the rooftop HVAC industry. The premise of the program was that very little, if any, maintenance was done on a regular basis for rooftop units. NEEA decided to no longer fund the project when it was determined not to be a reasonable market transformation effort. We decided to fund the program at a local level and make changes to the protocol to fit our needs. The program was run in our Idaho service territory for 2 years and then was expanded service territory wide for 2006, 2007 and 2008. During external audits, this program was flagged as one to be re -evaluated for savings. In order to accommodate that request, we did not renew our contract with PECI and initiated this pilot program.
- This pilot program was set up to compare like rooftop units on one rooftop, performing maintenance on one and not the other and log the data on both units to better identify the energy saving of regularly maintaining those units. We also are monitoring the conversation with the RTF on the BPA pilot that is ongoing.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Rooftop Pilot	3	0	0	0

Total	3	0	0	0

Budget and Savings:

	<b>T</b> T •4	<b>.</b>	1 777	TO.	Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Rooftop Pilot <b>Total</b>	3	0	0	0	0

• The estimate of throughput for 2011 is still at zero. We will be compiling our pilot data later this year and determining if this program should be reinstated or terminated.

#### Market Segment Overview:

- There are no currently anticipated code changes that are likely to influence this market within the foreseeable future.
- There are no technology or infrastructure changes that are likely to influence the premium that would be paid for high-efficiency appliances incentivized under this program in the near future.

#### *Implementation Plan:*

• The decision to implement this program will be determined after all data is analyzed. If it is determined to go forward, we will budget and implement for 2012.

#### Data Collected to Support Future EM&V

• Currently we are collecting the following data from the rooftop units; energy usage, temperature, location, date and time.

# **Energy Star® Appliance Rebate Program**

Residential Sector

### Key Individuals and Responsibilities:

Camille Martin is designated as the current Program Manager. The program coordinator is Sandra Hoye who works with the processing team of contract employees and students as well as serving as primary contact for internal and external inquiries.

Tom Lienhard is the primary technical resource for the program.

#### *Target Market(s):*

This is applicable to residential gas and electric customers seeking to purchase energy efficient appliances, in Washington and Idaho. Both new construction and retrofit purchases may apply. Key external stakeholders include homeowners, landlords (and renters) and businesses. Key internal stakeholders include contact center, accounts payable, marketing and corporate communications.

#### Program Overview:

This program has been designed for ease of use by Avista electric and natural gas residential customers in Idaho and Washington. Currently, any new Energy Star® rated freezers, refrigerators, dishwashers and clothes washers are rebated as part of this program. Rebates are applicable to new or existing single and multi–family residences, including manufactured, modular homes and domestically used in businesses.

This program is intended to prompt the customer to increase the energy efficiency of their appliances through direct financial incentives. It indirectly supports the infrastructure and inventory necessary to ensure that the availability and variety of high-efficiency appliances for the customer.

By ensuring that sufficient demand exists for these appliances it is expected that an adequate demand for high-efficiency appliances will exist to justify maintaining them in inventory. To that extent the program is anticipated to have a long-term market transformation component as well as a short-term acquisition objective. This program additionally supports regional and national market transformation efforts. Incentives also encourage customers to replace operative non-efficient appliances to reduce the energy use in their home.

### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Freezers				· ·
Refrigerators				
Dishwashers (Electric H2O				
Heat)				
Clothes Washers (Electric				
H2O Heat)				
Dishwashers (Natural Gas				
H2O Heat)				
Clothes Washers (Natural				
Gas H2O Heat)				
Total				

The above estimates 2010 results based on YTD results through September 2010. Rebate throughput is 30% higher compared to the same timeframe for 2009. In addition to extensive marketing efforts, state appliance rebates are believed to have contributed significantly to increased throughput.

# **Budget and Savings:**

					Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	
Freezers	345	\$20	60/year		\$0
Refrigerators	3,704	\$25	105/year		\$0
Dishwashers (Electric H2O	1,785	\$25	70/year		\$0
Heat)					
Clothes Washers (Electric	2,894	\$50	220/year		\$0
H2O Heat)					
Dishwashers (Natural Gas	1,563	\$25	100/year	6/year	\$0
H2O Heat)					
Clothes Washers (Natural	2,872	\$50	30/year	2/year	\$0
Gas H2O Heat)					
Total	13,163				

The estimates of unit throughput for 2011 are significantly lower than 2010 due to the expiration of state appliance rebates. It is expected that a high percentage of older units were replaced during the 2010 time period in order to take advantage of these state rebates. This incentive to

replace older appliances before burnout advanced many of these replacements that would have otherwise occurred in 2011 or the few years thereafter.

## Market Segment Overview:

Changing to a tiered approach in incentivizing Energy Star® appliance purchases may cause market transformation with retailers stocking more of the highly efficient appliance models. There are infrastructure changes that are likely to influence the premium that would be paid for high-efficiency appliances incentivized under this program, in the near future.

Idaho's state appliance rebates ended in September 2010. Washington state appliance rebates are scheduled to expire at the end of 2010. This could have an effect on throughput and potentially lower the average high-efficiency appliance that is installed.

#### Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, marketing efforts to drive customers to the program and ongoing work with retailers to ensure that customer demand can be met.

The Energy Star® Appliance Rebate Program is an integral consideration in the ongoing everylittlebit.com campaign. The campaign builds broad awareness for energy efficiency as well as specific programmatic highlights.

Key to success is clear communication to customers on rebate requirements and forms. Utility websites are also channels to communicate program requirements and highlight opportunities for customers.

Any changes should have advance notice for customers in the form of 90 days to submit under old requirements. This usually includes at a minimum direct mail communication to retailers as well as internal, forms and website updates.

#### Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency appliance installed. While rebates may be paid to a landlord at a different location, measures will be tracked by service address where the appliance was installed.

For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# **Second Refrigerator or Freezer Recycling Program**

Residential Sector

### Key Individuals and Responsibilities:

Camille Martin is designated as the current Program Manager. The program contractor is JACO Environmental, Inc. (JACO) who manages the turn-key program that includes marketing, customer call center (customer unit pick-up requests & scheduling and complaints) haul-away, unit dismantling & recycling, administration of program and rebate processing as well as serving as primary contact for internal and external inquiries.

Tom Lienhard is the primary technical resource for the program. Bob Nicholas is JACO's primary contact for the Second Refrigerator or Freezer Recycling Program.

### Target Market(s):

This is applicable to residential electric or electric/gas combo customers seeking to recycle energy inefficient refrigerators or freezers, in Washington and Idaho. Key external stakeholders include JACO, homeowners, renters and landlords. Key internal stakeholders include contact center, accounts payable, marketing and corporate communications.

## Program Overview:

This program is intended to prompt the customer to decrease their energy used on inefficient second refrigerators or freezers by recycling and receive financial incentives. JACO Environmental Inc. (JACO) picks up to two Refrigerators and/or Freezers (units) from a customer's home when they request a pick-up. The pick-up service is free to the customer. A \$30 rebate is provided for each operational refrigerator and/or freezer, up to two per household. The pre-1995 refrigerator(s) or freezer(s) are picked up and delivered to a recycling facility operated by JACO. JACO recycles nearly 95 percent of each refrigerator, and safely dispose of the toxins and ozone-destroying chlorofluorocarbon gases from foam insulation. JACO works with local businesses to recycle glass, plastic and metal.

#### Program Criteria:

- The refrigerator or freezer needs to be in working condition and between 10 to 30 cubic feet in size. Units also must be 1995 models or older.
- The program is for Avista Electric or Electric/Gas customers only.
- Customers must own the unit(s) being recycled, with a limit of two units per account.
- The \$30 rebate check will be mailed to the customer within 4 to 6 weeks after the appliance collection.

#### Prior Year Program Results:

Measure	Annualized	Annualized	Annualized
	2010 units*	2010	kWh savings
		incentives*	

Units (Freezers or refrigerators

The above estimates 2010 results based on YTD results through September 2010. Rebate throughput is about the same compared to the same timeframe for 2009. Avista and JACO have done extensive marketing efforts to increase the amount of units being recycled.

#### **Budget and Savings:**

	A.			Non- incentive \$
Measure	Units	Incentive \$	kWh	
Units (Freezers or refrigerators	2,500	\$30.00 ea	579 ea (avg)	\$110.00 ea

The estimates of unit throughput for 2011 will most likely continue to be steady or slightly lower compared to 2010 due to the expiration of state appliance rebates and their refrigerator recycling requirement.

Estimates of energy savings for different types of units (freezers or refrigerators), different locations and home characteristics (e.g. located in the home or garage etc) are specifically tracked and the appropriate energy savings are claimed. The averages above are based upon the historical mix within the Avista service territory.

#### Market Segment Overview:

Market research indicates that there is a significant presence of working 2<sup>nd</sup> refrigerators and stand-alone freezers in the Pacific Northwest. For example, the Northwest Energy Efficiency Alliance's 2007 <u>Single Family Residential Existing Construction Stock Assessment</u> indicated that among single family owners intending to stay in the same location 18+ months, there was an average of 0.39 secondary refrigerators per household (see Table 52 on page 44 (PDF page 46) of the report at <a href="http://www.nwalliance.org/research/reports/E07179.pdf">http://www.nwalliance.org/research/reports/E07179.pdf</a>).

Given this situation, and given the relatively low costs to properly remove and dispose of such appliances, the opportunities for cost-effective peak demand reduction and annual energy savings. The success of the Program will be attributed to the accelerated retirement and removal of the older and least efficient refrigerators.

Many customers retain and operate spare appliances even though such units are old, inefficient, and/or ineffectively operated (e.g., a secondary refrigerator is mostly empty, or used simply to keep beverages cold). These circumstances occur because the customer: 1) does not recognize

the full cost of operating the units in this way, and/or 2) perceives a hassle factor regarding the disposal of the unit. JACO's program overcomes this inertia by: 1) publicizing the true costs of running the old, inefficient units, 2) making unit disposal convenient and no-cost, and 3) offering an incentive to further lure the customer away from the old unit.

This program also prevents the customer from either: 1) using a haul-away and resale service, or 2) transferring the appliance to another customer. In either of these options, the older, inefficient appliance often continues to be utilized.

#### **Marketing**

The marketing campaign promotes from May through December. JACO notes that refrigerator recycling program participation is highest in the summer months (when home improvement projects and home relocations most frequently occur) and lowest around the November-January holidays (when second-unit need is the greatest); average daily harvest rates during the summer typically run up to 50% higher than average month harvest rates.

Given the geographic, demographic, and seasonality considerations, JACO and sub-contractor for marketing and public relations- Runyon Saltzman & Einhorn (RS&E) recommend a mix of media based on the following criteria:

- Maximization of advertising reach (local newspapers) and frequency throughout the targeted geographies through the utilization of cost-effective and targeted media vehicles, with a focus on 1) generating high levels of initial awareness and 2) sustaining levels of high awareness.
- Ability of the media to deliver messages to a targeted geography, thereby reducing geographic waste resulting from campaign coverage to areas not eligible for subject program.
- Impact and effectiveness of the medium as a direct response vehicle, i.e., the ability to present both in-depth program detail and a visual display of response mechanism (for example, a telephone number or web site address for interested audience members to contact).

#### **Media Plan Objectives**

The media plan's explicit objectives are to 1) generate a high level of awareness regarding the Avista's refrigerator recycling program, 2) prompt calls to the JACO call center or visits to the program web site, 3) encourage unit collection scheduling via either the JACO call center or the web site, and 4) By utilizing cost-effective and targeted media vehicles and compelling creative messages, JACO and RS&E will be able to maximize the program's advertising reach, frequency and impact throughout the targeted geography.

#### How to reach Avista Customers:

*Bill Inserts*. The most cost-effective way to reach residential customers in the Avista service territories – especially in light of service territory geographic considerations (e.g., two states) – is through monthly bills, in the form of a bill insert, during most active (i.e., warm weather) months of the year). The bill insert has been developed by Avista and RS&E, for visual impact, and to increase the chances that customers will view the insert rather than toss it straight into the trash (unread).

The key drivers to delivering on the objectives of this program are the direct-incentives to fuel customer interest, and marketing efforts to drive customers to using the program.

The Second Refrigerator Recycling Program is an integral consideration in the ongoing everylittlebit campaign. The campaign builds broad awareness for energy efficiency as well as specific programmatic highlights.

Key to success is clear communication to customers on unit pick-up services, recycling and rebate requirements. Utility websites are also channels to communicate program requirements and highlight opportunities for customers.

#### Data Collected to Support Future EM&V:

The following data will be collected and evaluated to verify this savings:

- a. Measurement and verification data (evaluation of JACO's database records)-This will be an evaluation of a representative sample of the records of the recycled units.
- Deemed savings (comparison of the adjusted baseline and verified data) Savings are based on stipulated values that come from historical savings values of specific models.
  - i. Calculate the net energy savings and the net to gross ratio.
- c. Statistical analysis (historical & current metered energy use data) -Time series approach-The gross billing analyses will use two years of utility billing records to determined the energy use pattern.

As part of a larger regional effort offered by many utilities, Avista has the ability to leverage additional data obtained from other very similar utility programs offered throughout the region and collected through JACO and the RTF.

# **Residential Lighting Programs**

Residential Sector

Energy Conservation in Schools, Dollars for Change and CFL recycling programs

#### Key Individuals and Responsibilities:

Camille Martin is designated as the current Program Manager and primary contact for internal and external inquiries.

Mike Dillon is the primary technical resource for the program.

#### *Target Market(s):*

This is applicable to residential electric customers, in Washington and Idaho. Key external stakeholders include homeowners, landlords (and renters), and trade allies. Key internal stakeholders include contact center, accounts payable, marketing and corporate communications.

#### Program Overview:

Simple Steps, Smart Savings-Twist and Specialty Compact Fluorescent Lamp (CFL) Buydown Program contracted through Fluid Marketing Strategies, Inc.

This program is intended to prompt the customer to increase the energy efficiency of their lighting through indirect financial incentives through retail buy-down at most big box in the region. It also indirectly supports the infrastructure and inventory necessary to ensure that the installation of high-efficiency lightings a viable option for the customer.

By ensuring that sufficient demand exists for these lighting it is expected that an adequate inventory of high-efficiency lighting will exist to justify maintaining them in inventory. Incentives also encourage customers to increase efficiency before burn-out of the existing lighting.

### Dollars for Change-An Avista CFL School Fundraiser Program

Avista is looking for ways to encourage energy conservation. Avista is uniquely positioned to provide a service to schools and non-profit organizations. At the same time, funding for these organizations is in short supply and they are looking for ways to raise money. A CFL fundraising program can help meet these needs with mutual benefit.

Described simply, Avista provides energy conservation expertise and volume purchasing power while fundraising organizations provide a compelling sales force to place CFLs and energy conservation information in homes. Secondary benefits include an entrepreneurial experience and energy conservation information for the fundraising organization. Avista receives the benefit of energy savings.

#### **CFL Recycling Program**

Avista has expanded its long-term commitment to the environment and sustainability by providing a compact fluorescent light (CFL) bulb recycling program at 18 locations in Avista's electric service territory. This free service is the first such offering made in the area to customers to recycle CFLs. Customers can simply bring in any expired, unbroken CFL bulbs, and give them to local participating recycling centers. The bulbs will then be managed responsibly by an environmental management company who will coordinate CFL packaging, transportation and recycling to maximize safety and ensure environmental compliance. The CFL recycling

program is another example of how Avista is empowering customers to help make a difference in their own homes, and have less of an impact on the environment.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
Simple Steps-CFL Buydown \$ for change CFL Recycling Program Total				_

The above estimates 2010 results based on YTD results through September 2010.

## **Budget and Savings:**

Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
Simple Steps-CFL Buydown	90,000	\$180,000	1,530,000	0	\$22,500
\$ for Change	3,500	\$7,315	112,000	0	\$0
CFL Recycling Program	NA	\$0	0	0	\$5,000
Total	93,500	\$187,315	1,642,000	0	\$27,500

# Market Segment Overview:

## **Simple Steps, Smart Savings**

Fluid Marketing Strategies (Fluid) has designed and produced retail Point of Purchase (POP) materials for participating retail locations, including those in Avista's territory. Marketing materials are being delivered directly to the stores by the Fluid field representatives. Field representatives will support participating retail stores in Avista's territory, provide on-site merchandising, sales associate training and event staffing. Fluid operates a consumer facing website that provides educational information about promotional products and allows Avista customers to locate stores carrying product.

## **Dollars for Change**

Initiation of the relationship between Avista and the non-profit organization begins with execution of a contract per DSM program requirements. Each fundraising organizer receives a guide packet that includes basic instruction, marketing materials and tips. Order forms, permission slips, conservation tip sheets, CFL recycling flyers and other forms/templates are

contained on a CD that the sponsoring organization (organizer) can use to download and make necessary copies.

The organizer launches the sales campaign and collects orders. The orders are tallied and the organizer contacts Avista to arrange the bulk delivery of CFLs and collateral materials to the school. The organizer puts together individual orders and makes final delivery. Each order shall include energy conservation tips and CFL recycling information on a flyer.

#### **CFL Recycling Program**

The CFL Recycling Program is marketed through Avista's websites and at residential outreach events. Many of the recycling centers have advertised the program at their recycling centers.

#### Dollars for Change-2009 Operational Program for 10 Schools, 4 Options

Gratis Supply	Additional Supply Price	Additional Supply Subsidy	Retail Price	Unit Profit	Bonus	Total School Profit	Avista Cost
\$500 (270 bulbs)	\$1.85	\$0	\$3.00	\$1.15 on 2230 addl bulbs sold	\$0	\$810 on gratis supply + \$2564.50 + \$0 bonus = \$3,374.50	\$500 gratis supply + \$0 subsidy + \$0 bonus = <b>\$500</b> (x10 schools = \$5,000)
\$500 (270 bulbs)	\$1.00	\$0.85	\$3.00	\$2.00 on 2230 addl bulbs sold	\$0	\$810 on gratis supply + \$4460 + \$0 bonus = \$5,270	\$500 gratis supply + \$1895.50 subsidy + \$0 bonus = \$2,395.50 (x10 schools = \$23,955)
\$0	\$1.85	\$0	\$3.00	\$1.15 on all bulbs sold	\$500	\$2875 + \$500 bonus = <b>\$3,375</b>	\$0 gratis supply + \$0 subsidy + \$500 bonus = <b>\$500</b> (x10 schools = \$5,000)
\$0	\$1.00	\$0.85	\$3.00	\$2.00 on all bulbs sold	\$500	\$5000 + \$500 bonus = <b>\$5,500</b>	\$0 gratis supply + \$2,125 subsidy + \$500 bonus = <b>\$2,625</b> (x10 schools = \$26,250)

### Implementation Plan:

#### Simple Steps, Smart Savings

Key to success is clear communication to customers through Fluid website on the program and highlight opportunities for customers.

## **Dollars for Change**

Initiation of the relationship between Avista and the non-profit organization begins with execution of a contract per DSM program requirements. Each fundraising organizer receives a

guide packet that includes basic instruction and tips. Order forms, permission slips, conservation tip sheets, CFL recycling flyers and other forms/templates are contained on a CD that the sponsoring organization (organizer) can use to download and make necessary copies. The organizer launches the sales campaign and collects orders. The orders are tallied and the organizer contacts Avista to arrange the bulk delivery of CFLs and collateral materials to the school. The organizer puts together individual orders and makes final delivery. Each order shall include energy conservation tips and CFL recycling information on a flyer.

#### **CFL Recycling**

This program is slated for termination at the end of 2011 based upon the success that the program has had in encouraging local governments to adopt CFL recycling practices for their jurisdictions.

#### Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost

General process evaluation data results will be collected monthly to show throughput of a number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# **Events Program**

Residential Sector

## Key Individuals and Responsibilities:

Camille Martin is designated as the current Program Manager. This is likely to shift during CY 2011 due to recent organizational changes.

Mike Dillon is the primary technical resource for the program.

# Target Market(s):

This is applicable to residential customer DSM event outreach in Avista's Washington and Idaho territory. Key external stakeholders include homeowners, landlords (and renters), and community organizations. Key internal stakeholders include contact center, accounts payable, marketing and corporate communications.

#### Program Overview:

This program is intended to prompt and encourage Avista customers to increase the energy efficiency of their residence through education and knowing about and using Avista's residential energy efficiency rebates. The purpose of this business plan is to outline an enhancement to the residential energy conservation strategy. As part of this strategy the "Something for Everyone" and "Geographical Saturation" (Events) will promote energy efficiency measures in residential customer homes.

#### They include Events and Workshops:

- The program educates and gives an effective way to communicate energy efficiency and modifies behavior through awareness and product knowledge.
- Avista participates in workshops, conferences, energy fairs, home shows and community events through Avista's service territory in Washington and Idaho, to spread the energy efficiency message.
- o Distributes energy efficiency materials, such as, CFLs and weatherization products to introduce the use of such products to our customers.
- o Informs residential customers about the energy efficiency options and rebates available to them through Avista and state rebates.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
CFL Distribution	15,150	\$33,000	484,800	N/A
Wx Distribution	8,500	\$12,000		
Total				

The above estimates 2010 results based on YTD results through September 2010.

#### **Budget and Savings:**

Non-	
incentive	\$

Measure Units Incentive kWh Therms

CFL Distribution Wx Distribution Total

#### Market Segment Overview:

*Market analyses* estimate a program's influence on encouraging future energy efficiency projects because of changes in the energy marketplace. These evaluations are primarily, but not exclusively, used for programs with market transformation elements and objectives.

This program markets Avista's long standing energy efficiency message to their customers. The goal of market effects analysis is to determine the potential of a market and to understand its evolving opportunities as they relate to the Events Program. This program's market analysis can include:

- 1. Market size (current and future)
- 2. Potential distribution channels (i.e., media, vendor, customer touch point)
- 3. Market Potential-Key success factors (barrier identification, customer interest)
- 4. Market profitability (program penetration potential)

#### Implementation Plan:

The key drivers to delivering on the objectives of this program are fuel customers interest, marketing efforts to drive customers to implement energy saving in their homes and use Avista's rebates. Communicating to customers about Avista's websites are also channels to communicate program requirements and highlight opportunities for customers.

## Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include invoicing for CFLs, weatherization materials and event registration, event evaluations, 2011 proposed event list and customer surveys that are filled out to get CFLs and weatherization items.

For process evaluation data results will be collected monthly to show throughput of number of CFL and weatherization materials distributed, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize

changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

#### **Home Energy Audit Pilot Program**

Residential Sector

### Key Individuals and Responsibilities:

Joe Brabeck is designated as the current Program Manager. Bryce Eschenbacher is the primary technical resource for the program. Mary Tyrie is the Marketing Manager assigned to this project.

*Target Market(s):* Free-standing single family homes, duplexes and manufactured homes in Spokane County.

## Program Overview:

This program provides residents of free-standing single family homes, side-by-side duplexes and manufactured homes, and a comprehensive energy audit of their homes. In addition to energy efficiency the audit will often uncover potential health, safety and structural durability issues such as water damage and mold problems. Through the use of both an external and internal physical inspection plus a variety of diagnostic tests the auditor will identify a number of energy savings opportunities. The customer receives a comprehensive report of the auditor's findings. The report focuses on no-cost (behavioral) and low-cost improvements first (often to be done by the homeowner) and then targets other efficiency measures which will require some capital investment.

The audits are designed to follow structural, safety and air quality standards set forth by the Building Performance Institute (BPI) and the Association of Heating, Refrigeration and Airconditioning Engineers. All lead audit contractors are required to be certified Building Analyst/Home Auditors by BPI.

The program is funded in part by Avista DSM funds, an Energy Efficiency Community Block Grant (funds received via reimbursement from our government partners) and customer contributions.

Key external stakeholders include homeowners, renters and landlords. Key internal stakeholders include contact center, accounts payable, marketing and corporate communications.

#### Program Objective:

Determine the cost-effectiveness of in-home energy audits as a way to capture electric and natural gas savings. A secondary objective is to educate customers about energy efficiency and saving energy by implementing the auditor's recommendations.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010	Annualized kWh savings

		incentives*	
Program launched in May 2010	205	\$18,040	41,000

The above estimates 2010 results based on YTD results through September 2010.

#### **Budget and Savings:**

				Non- incentive \$
Measure	Units	Incentive \$	kWh	
Home Audits Completed	420	\$88.00 ea	200 ea (avg)	\$110.00 ea

The estimates of unit throughput for 2011 will likely be higher for a number of reasons

- 1. A full year of audits vs. 8 months in 2010
- 2. Increased awareness due to additional marketing and promotion,
- 3. Additional government funding resulting in lower costs to customers and
- 4. Word of mouth endorsements.

In addition the majority of the time the program has been running has been during the warmer weather months. Colder weather and resulting higher heating bills will encourage and motivate more people to participate in the program.

#### Market Segment Overview:

#### **Customer Awareness Initiative**

The customer awareness and education plan is based on a joint strategy with the governmental agencies with which we have partnered, it is a year round effort that includes the following tactics.

#### Bill inserts in partners bills as well as targeted town codes in the Avista bill.

Impact and effectiveness of the medium as a direct response vehicle, i.e., the ability to present both in-depth program detail and a visual display of response mechanism, including a telephone number or web site address for interested audience members to contact.

#### Email blasts to Avista customers in targeted town codes.

Bill Inserts and Email Blasts are the most cost-effective way to reach residential customers in the Avista service territories – especially in light of service territory geographic considerations (e.g., two states) – is through monthly bills, in the form of a bill insert.

Newspaper advertising in appropriate zones based on zip codes. Ability of the media to deliver messages to a targeted geography, thereby reducing geographic waste resulting from campaign coverage to areas not eligible for subject program.

# Increase Avista's involvement in grassroots community events including, energy fair participation, and specific neighborhood meetings.

Allows for one on one education of the program and the benefits the customer will receive.

#### All messaging directs interested parties to the Avista website.

Provides area for customers to learn the details about the how the program can help them save KWH and Therms as well as to see if they are eligible for the program and what they can expect to pay.

# Partner with the governmental agencies on ways to further promote through their channels.

Possible promotions based on income levels or geographic areas.

### Plan objectives

- 1) generate a high level of awareness regarding the Avista's In Home energy audit program,
- 2) prompt calls to the program web site,
- 3) By utilizing cost-effective and targeted media vehicles and compelling creative messages, JACO and RS&E will be able to maximize the program's advertising reach, frequency and impact throughout the targeted geography.

#### Implementation:

The Home Energy Audit program is implemented in the following way.

- 1. Customer submits application via the online registration form or completes a paper copy of the registration form
- 2. Program manager receives application and acknowledges via email and request payment. Some customers send in payment with paper copy and some customers who registered online send in a check (as instructed) prior to the emailed request.
- 3. Program manager receives payment, processes it and assigns the audit to one of Avista Home Energy Audit contractors.
- 4. Auditor completes audit and forwards data to Program Engineer who produces final report packet and mails it directly to customer. Packet includes audit report, home improvement rebate forms, Energy Star appliance rebate forms, a refrigerator recycling coupon, an energy efficiency tip sheet, a weatherization contractor list, an information sheet about the Energy Efficiency Revolving Loan Program and a customer feedback/survey card.
- 5. Random selected phone follow-ups 6 months after the audit is completed to find out if any measures were implemented.
- 6. Periodic cross-referencing of rebate lists and audits list to help determine follow up
- 7. Periodic review of energy usage histories to determine if energy savings were realized.

8. Randomly selected site visits and interviews with customers to determine behavioral changes and any measures not uncovered by other information capturing methods.

## **Key Drivers:**

The key drivers to delivering on the objectives of this program are the direct-incentives to subsidize the cost of the audit thereby increasing customer interest, and marketing efforts to drive customers to using the program.

The In-Home Energy Audit Program is an integral consideration in the ongoing everylittlebit campaign. Access to registration is channeled through the ELB website The campaign builds broad awareness for energy efficiency as well as specific programmatic highlights. Key to success is clear communication to customers of the numerous benefits of the audit. both energy and non-energy benefits (health, safety comfort, durability) Utility websites are also channels to communicate program benefits and highlight opportunities for customers.

## LI SHELL (WEATHERIZATION)

Residential Sector

### Key Individuals and Responsibilities:

Renee Coelho is designated as the current Program Manager. The program coordinator is Rachelle Humphrey who processes invoices and assists in tracking. Avista contracts with Community Action Partners (CAP) agencies to deliver limited income programs. CAP agencies have primary contact responsibilities with customers.

Mike Dillon is the primary technical resource for the program. Lori Hermanson provides data for monthly tracking reports.

## Target Market(s):

This is applicable primarily to existing single-family residential buildings, both 'stick-built' and manufactured homes. CAP agencies have flexibility to treat new construction or multifamily and are encouraged to identify strategies to reach multifamily and renters. Key external stakeholders include homeowners, landlords (and renters), and trade allies. Key internal stakeholders include rates, contact center CARES reps, accounts payable and community development, especially the limited income energy assistance programs.

#### Program Overview:

The limited income CAP agencies focus primarily on shell measures and improvements. They offer ceiling/attic, wall, floor and duct insulation. The complete blower door tests to assess infiltration opportunities and complete extensive infiltration measures as applicable. When infiltration measures are completed a post-blower door test is also completed to estimate savings. Energy Star windows measures are also completed for single pane or broken windows.

CAP agencies complete a site-specific home energy audit to determine which shell measures will be completed. For 2011 prescriptive savings estimates will most likely be used rather than site-specific inputs based on results from the 3<sup>rd</sup> party conducted natural gas decoupling audit. The audit found some modeling to be overly optimistic. For infiltration some sort of queue from the agency will be necessary since that measure is difficult to make prescriptive.

# Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
G INS – CEIL/ATTIC	111	\$102,856		16,791
G INS – FLOOR	79	\$93,492		7,845
G INS – WALL	45	\$54,666		5,923
G INS – DUCT	43	\$15,320		1,697
G REPLC WINDOWS	93	\$117,387	40,671	8,929
E INS – CEIL/ATTIC	72	\$43,907	92,849	-,
E INS – FLOOR	79	\$19,557	281,241	
E INS – WALL	124	\$32,714	500,073	
E INS – DUCT	7	\$1,695	23,979	
E REPLC WINDOWS	83	\$136,413	175,756	
E INFILTRATION	92	\$77,598	131,921	
G INFILTRATION	148	\$83,195		10,020
Total	976	\$778,800	1,246,490	51,205

The above estimates 2010 results based on YTD results through September 2010. For 2011 limited income allocations have increased in both states. As a result 2011 estimates are higher.

# **Budget and Savings:**

					Non- incentive \$
Measure	Units	Incentive \$	kWh	Therms	·
G INS – CEIL/ATTIC	216	\$185,905		21,383	
G INS – FLOOR	199	\$257,894		43,290	
G INS – WALL	76	\$102,126		21,194	
G INS – DUCT	52	\$17,720		5,254	
G REPLC WINDOWS	113	\$138,623		8,546	
E INS – CEIL/ATTIC	82	\$76,108	131,692		
E INS – FLOOR	107	\$182,501	563,271		
E INS – WALL	138	\$62,100	103,554		
E INS – DUCT	22	\$11,442	5,386		
E REPLC WINDOWS	121	\$234,786	427,800		
E INFILTRATION	158	\$106,293	129,261		
G INFILTRATION	278	\$112,807		14,157	
Total	1,562	\$1,488,305	1,355,578	108,570	

Market Segment Overview:

There is some code activity in Washington, mainly affecting new construction but we may need to evaluate changes in case they influence this market in the foreseeable future. There are technology endeavors underway to further triple pane window options in the market, for example, the Department of Energy's R-5 window program. While this endeavor is promising it could affect the premium paid for high-efficiency windows incentivized under this program in the future.

#### Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-installation and zero cost to fuel customer interest and ongoing work with CAP agencies to deliver these programs cost-effectively.

Key to success is clear communication to CAP agencies through contracting, face to face meetings and encouraging open dialogue. For 2011, additional efforts will be made to clearly communicate invoicing and savings tracking requirements and forms.

## Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency equipment or measure installed. While measures are paid to CAP agencies at a different location, measures will be tracked by service address where the work was completed.

For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# LI Energy Star Appliance

Residential Sector

### Key Individuals and Responsibilities:

Renee Coelho is designated as the current Program Manager. The program coordinator is Rachelle Humphrey who processes invoices and assists in tracking. Avista contracts with Community Action Partners (CAP) agencies to deliver limited income programs. CAP agencies have primary contact responsibilities with customers.

Mike Dillon is the primary technical resource for the program. Lori Hermanson provides data for monthly tracking reports.

# Target Market(s):

This is applicable primarily to existing single-family residential buildings, both 'stick-built' and manufactured homes. CAP agencies have flexibility to treat new construction or multifamily and are encouraged to identify strategies to reach multifamily and renters. Key external stakeholders include homeowners, landlords (and renters), and trade allies. Key internal stakeholders include rates, contact center CARES reps, accounts payable and community development, especially the limited income energy assistance programs.

#### Program Overview:

This program covers the installation of Energy Star refrigerators prescriptively for replace before burn out situations where the refrigerator is older than 1992 vintage. There is also an option to install Energy Star refrigerators in replace upon or immediately before burn out situations with prior written approval. Typically a replace before burnout with greater than 550 kWh should pass cost-effectiveness tests. Determination is made based on total resource cost-effectiveness analysis that the measure passes or it may also be approved if the overall limited income portfolio performance is high enough. Limited income total resource cost-effectiveness is tracked in a "calculator" that is updated monthly to reflect portfolio performance. If specific energy usage of existing refrigerator is unknown or if it is a replace upon burn out, then the new Energy Star refrigerator is compared to a standard efficient system to estimate savings.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010	Annualized kWh savings	
		incentives*		savings
E EStar Refrig	124	\$88,827	117,199	

The above estimates 2010 results based on YTD results through September 2010. For 2011 limited income allocations have increased in both states. As a result 2011 estimates are higher.

Non-	
incentive	9

Measure	Units	Incentive \$	kWh	Therms	incentive \$
E EStar Refrig	95	\$69,043	9,462		

#### Market Segment Overview:

There is some code activity in Washington, mainly affecting new construction but we may need to evaluate changes in case they influence this market in the foreseeable future.

There are no technology or infrastructure changes that are likely to influence the premium that would be paid for high-efficiency appliances incentivized under this program in the near future.

The federal and state tax credits are scheduled to expire at the end of 2010 but shouldn't affect limited income programs.

## Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-installation and zero cost to fuel customer interest and ongoing work with CAP agencies to deliver these programs cost-effectively.

Key to success is clear communication to CAP agencies through contracting, face to face meetings and encouraging open dialogue. For 2011, additional efforts will be made to clearly communicate invoicing and savings tracking requirements and forms.

#### Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency equipment or measure installed. While measures are paid to CAP agencies at a different location, measures will be tracked by service address where the work was completed.

For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

#### LI Fuel Conversion

Residential Sector

### Key Individuals and Responsibilities:

Renee Coelho is designated as the current Program Manager. The program coordinator is Rachelle Humphrey who processes invoices and assists in tracking. Avista contracts with Community Action Partners (CAP) agencies to deliver limited income programs. CAP agencies have primary contact responsibilities with customers.

Mike Dillon is the primary technical resource for the program. Lori Hermanson provides data for monthly tracking reports.

## Target Market(s):

This is applicable primarily to existing single-family residential buildings, both 'stick-built' and manufactured homes. CAP agencies have flexibility to treat new construction or multifamily and are encouraged to identify strategies to reach multifamily and renters. Key external stakeholders include homeowners, landlords (and renters), and trade allies. Key internal stakeholders include rates, contact center CARES reps, accounts payable and community development, especially the limited income energy assistance programs.

## Program Overview:

This program involves two measures that replace existing electric straight resistance heat with natural gas, for both space and water heating needs. The measures include necessary piping and venting to convert the existing home and in some cases the addition of duct-work as well. For customers to qualify for a conversion project they must demonstrate they heat primarily with electric heat. A bill analysis is completed that estimates the electric usage devoted to space heating to arrive at what is called an R-number. A customer must have a minimum R-number of 4,000 to qualify for a conversion to natural gas.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
E to G Furnace	73	\$333,458	636,887	
E to G Hot Water	117	\$291,216	645,772	
Total	190	\$624,674	1,282,659	

The above estimates 2010 results based on YTD results through September 2010. For 2011 limited income allocations have increased in both states. As a result 2011 estimates are higher.

#### **Budget and Savings:**

Non-	
incentive S	5

Measure	Units	Incentive \$	kWh	Therms
E to G Furnace	53	\$215,774	461,634	
E to G Hot Water	112	\$221,296	620,850	
Total	165	\$437,070	1,082,484	

This is always a bit difficult to estimate as natural gas penetration is estimated to be high. With natural gas prices remaining low there is a shorter payback to converting to natural gas and remaining electric heat customers have as much to gain as ever. CAP agencies are encouraged to mine for potential conversions due to the significant bill savings opportunities for customers.

## Market Segment Overview:

There are no technology or infrastructure changes that are likely to influence the premium that would be paid for conversions under this program in the near future. For non-ducted electrically heated homes, ductless heat pumps are improving on technology and price may have some spill over to natural gas equipment, whether existing or speculative.

#### Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-installation and zero cost to fuel customer interest and ongoing work with CAP agencies to deliver these programs cost-effectively.

Key to success is clear communication to CAP agencies through contracting, face to face meetings and encouraging open dialogue. For 2011, additional efforts will be made to clearly communicate invoicing and savings tracking requirements and forms.

#### Evaluation, Measurement and Verification:

In 2010 Avista completed some initial impact evaluations on the savings from the fuel conversions (and efficiency upgrades) from electric straight resistance. Avista performed internal estimates of heat load in residential buildings that will inform further internal and external EM&V. These results indicated that only 47% of the estimated heat load within these buildings could be verified through billing analysis of various HVAC measures. It is uncertain how the impact of customer behavior (e.g. 'take-back'), pre-project fuel assumptions (e.g. augmentation with non-Avista fuels) and changes in fuels as a consequence of the efficiency project influenced these overall results. Additional analysis and follow-up is anticipated. In the meantime and as a result, kWh savings estimates were reduced for displacing electric straight resistance.

These measures will be incorporated into two separate 2011 process evaluations of separate data management and rebate processing.

Future market evaluations of these measures will be evaluated after preliminary results of the Northwest Energy Efficiency Alliance (NEEA) Residential Building Stock Assessment (RBSA) work is available. This work, in conjunction with the 2010 Net-to-Gross study, will help Avista answer the question of what the current saturation of high-efficiency appliances within this segment is and whether the program is effectively addressing influencing that saturation.

Customer and trade-ally interviews may follow depending upon the conclusions of these analyses.

## Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency equipment or measure installed. While measures are paid to CAP agencies at a different location, measures will be tracked by service address where the work was completed.

For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# LI Hot Water Heater Efficiency

Residential Sector

### Key Individuals and Responsibilities:

Renee Coelho is designated as the current Program Manager. The program coordinator is Rachelle Humphrey who processes invoices and assists in tracking. Avista contracts with Community Action Partners (CAP) agencies to deliver limited income programs. CAP agencies have primary contact responsibilities with customers.

Mike Dillon is the primary technical resource for the program. Lori Hermanson provides data for monthly tracking reports.

# Target Market(s):

This is applicable primarily to existing single-family residential buildings, both 'stick-built' and manufactured homes. CAP agencies have flexibility to treat new construction or multifamily and are encouraged to identify strategies to reach multifamily and renters. Key external stakeholders include homeowners, landlords (and renters), and trade allies. Key internal stakeholders include rates, contact center CARES reps, accounts payable and community development, especially the limited income energy assistance programs.

### Program Overview:

This program covers the upgrade of water heaters, prescriptively electric water heaters and natural gas models as well. Limited income energy efficiency equipment upgrades such as water heating are challenging from a cost-effective perspective. In a regular income situation, the customer is in need of a water heater and would have to pay at least for a code minimum system. Therefore the cost of the upgrade is the incremental cost. For limited income, since we pay 100% of the project, the entire system cost needs to be treated in the TRC. For 2011 it has been clarified that the cost up to code minimum is also an equivalent non-energy benefit for the customer.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
G HE WH 40G	1	\$1,568		8
G HE WH 50G	5	\$13,021		59
E HE WH (50G)	5	\$6,545	6003	
Total	11	\$21,134	6003	67

The above estimates 2010 results based on YTD results through September 2010. For 2011 limited income allocations have increased in both states. As a result 2011 estimates are higher.

## **Budget and Savings:**

Measure	Units	Incentive	kWh	Therms	Non- incentive \$
Measure	Omts	\$	KVVII	1 Hel His	
G Hot Water 40 gallon	2	\$3,000		16	
G Hot Water 50 Gallon	10	\$15,715		110	
E HE WH	5	\$4,484	1450		
Total	17	\$23,199	1450	126	

#### Market Segment Overview:

There are technology changes that are likely to influence the savings potential in a positive manner. New .67 EF tank-type systems without the need for power vents are being produced. Regionally discussions are underway on potential activities to test and increase market opportunities.

### Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-installation and zero cost to fuel customer interest and ongoing work with CAP agencies to deliver these programs cost-effectively.

Key to success is clear communication to CAP agencies through contracting, face to face meetings and encouraging open dialogue. For 2011, additional efforts will be made to clearly communicate invoicing and savings tracking requirements and forms.

## Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency equipment or measure installed. While measures are paid to CAP agencies at a different location, measures will be tracked by service address where the work was completed.

For process evaluation data results will be collected monthly to show throughput of a number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

# LI HVAC Efficiency

Residential Sector

### Key Individuals and Responsibilities:

Renee Coelho is designated as the current Program Manager. The program coordinator is Rachelle Humphrey who processes invoices and assists in tracking. Avista contracts with Community Action Partners (CAP) agencies to deliver limited income programs. CAP agencies have primary contact responsibilities with customers.

Mike Dillon is the primary technical resource for the program. Lori Hermanson provides data for monthly tracking reports.

# Target Market(s):

This is applicable primarily to existing single-family residential buildings, both 'stick-built' and manufactured homes. CAP agencies have flexibility to treat new construction or multifamily and are encouraged to identify strategies to reach multifamily and renters. Key external stakeholders include homeowners, landlords (and renters), and trade allies. Key internal stakeholders include rates, contact center CARES reps, accounts payable and community development, especially the limited income energy assistance programs.

### Program Overview:

Typically this program covers situations where the CAP determines that the customer has a very inefficient natural gas furnace (or potentially heat pump based on forthcoming LI air source heat pump analysis) and recommends installing a new, high efficient system. The savings is based on the existing system vs. the proposed system. In some cases, if the customer's existing system is no long functioning or very close to the end of its life, then the savings would be based on the difference between a new standard code system and the proposed high efficiency model.

#### Prior Year Program Results:

Measure	Annualized 2010 units*	Annualized 2010 incentives*	Annualized kWh savings	Annualize d therm savings
G HE Furnace	5	\$18,760		500
E HE AirSource Heat Pump	0	0	0	
Total	5	\$18,760		500

The above estimates 2010 results based on YTD results through September 2010. For 2011 limited income allocations have increased in both states. As a result 2011 estimates are higher.

#### **Budget and Savings:**

Measure	Units	Incentive \$	kWh	Therms	Non- incentive \$
G HE Furnace	8	\$33,750		1044	
E HE AirSource Heat Pump	5	\$25,000	16,185		
Total	13	\$58,750	16,185	1044	

#### Market Segment Overview:

There are is some code activity in Washington, mainly affecting new construction but we may need to evaluate changes in case they influence this market in the foreseeable future.

#### Implementation Plan:

The key drivers to delivering on the objectives of this program are the direct-installation and zero cost to fuel customer interest and ongoing work with CAP agencies to deliver these programs cost-effectively.

Key to success is clear communication to CAP agencies through contracting, face to face meetings and encouraging open dialogue. For 2011, additional efforts will be made to clearly communicate invoicing and savings tracking requirements and forms.

### Data Collected to Support Future EM&V:

Data collected in anticipation of future internal and external EM&V needs include individual data on the cost, size, and installation date of each energy efficiency equipment or measure

installed. While measures are paid to CAP agencies at a different location, measures will be tracked by service address where the work was completed.

For process evaluation data results will be collected monthly to show throughput of number of measures installed, incentives paid, kWh and therm savings claimed and incremental non-incentive costs. A monthly narrative will be included with the above results to summarize changes under evaluation and/or changes implemented to program processes, rebate amounts, savings claims, etc.

#### Appendix H – Avista's Approach to the Standard Practice Cost-Effectiveness Tests

#### Jon Powell and Lori Hermanson

The following summary of Avista's application of the standard practice cost-effectiveness tests has been adapted from "Appendix B" in the 2007 Triple E Report to incorporate updates that have become important to Avista's approach since that time.

The analytical evaluation of Avista's programs can largely be divided into two general approaches; the standard practice cost-effectiveness tests and descriptive statistics. Each approach and each calculation within the two different approaches provide a different perspective on the status of a program. When viewed as a whole they are intended to provide a meaningful insight into the program for purposes of making informed decisions for the management of individual programs as well as the overall portfolio.

The descriptive statistics, such as direct incentive per kWh saved, general costs per kWh saved and so on are easily understood and calculated. Over the course of designing, implementing and evaluating these programs these descriptive calculations are made and modified as necessary to meet the management needs of the portfolio.

The cost-effectiveness tests are a more standardized and, in many ways, a more rigorous analytical tool. In consideration of their value as a management tool Avista is providing a brief summary of the calculation, meaning and interpretation of these tests for our implementation staff. This summary has been periodically modified and redistributed internally and externally for use in introducing the methodology for calculating and interpreting the standard practice tests. Additional updates have been incorporated to include issues such as Avista's tax treatment and net-to-gross scenarios.

The four 'standard practice tests' were originally developed in California as a means to standardizing the cost-effectiveness calculations of demand-side management programs from a variety of perspectives. The basic four tests include:

#### Total Resource Cost (TRC) test:

This is a measure of the benefits and costs accruing to the total ratepayer population. It is not a true societal test in that externalities are not valued however imports of funding to the customer base (e.g. state or federal tax credits) <u>are</u> considered as offsets to the customer incremental cost. Avista's calculation of the TRC test includes a variant that <u>excludes tax credits</u> as an offset by request of the Triple-E Board. It is also notable that Avista's avoided cost streams are now incorporating carbon costs. In this sense some of the variants of the TRC test performed by Avista are taking on more of the characteristics of a full societal test.

The standard practice tests call for the TRC calculation to be based upon only those participants who were motivated by the program to adopt the efficiency measure (called

"net" participation). Avista provides TRC results based upon both "gross" (total participation) as well as net participation in recognition of regulatory requirements, Triple-E Board interest and for comparison with other utilities.

For purposes of the TRC test, the cost-benefit analysis is a comparison of the present value of energy and non-energy benefits vs. the customer incremental cost and non-incentive utility program cost. Incentive costs are considered to be a transfer within the ratepayer population and are neither a cost nor benefit.

#### Utility Cost Test (UCT) or Program Administrator Cost Test (PACT):

This test indicates whether the utility cost of serving all customers goes up or down as a result of the program. This test is a comparison of the reduction in the cost of providing energy to the customer in comparison to the total cost (incentive and non-incentive) of running the DSM program. Neither customer costs nor non-energy benefits are included within this calculation. The UCT/PACT test generally yields a higher benefit to cost ratio since the customer incremental cost is usually significantly higher than the utility incentive and net positive non-energy benefits.

#### Participant Test:

This is the cost-effectiveness from the perspective of the participating customer. It includes the retail value of the energy savings and non-energy benefits from the project vs. the customer project costs. This is a useful measure of potential program adoption levels in that it provides insight into the 'traction' that a measure may have with prospective participants (subject to many other considerations).

#### Rate Impact Measure (RIM) or Non-Participant Test:

This indicates the programs impact upon retail rates. It is a comparison of lost retail revenue versus the incremental reduction in utility cost. If retail rates exceed the avoided cost of energy (including demand and other impacts), any DSM program is mathematically guaranteed to fail this test. Programs that target 'underpriced' energy products (e.g. system load coincident energy usage) may conceivably pass the RIM test. The RIM test does not consider the impact of programs upon the customers billing determinants (energy usage), and is thus only applicable to program non-participants.

A summary of the application of these four standard practice tests can be shown in the illustrative table below:

<u>Benefits</u>	TRC test	UCT test	Participant test	RIM
Electric avoided cost	\$4,000,000	\$4,000,000		\$4,000,000
Gas avoided cost	\$200,000	\$200,000		\$200,000
Non-energy benefits	\$100,000		\$100,000	
Retail electric savings			\$5,000,000	
Retail gas savings			\$250,000	
TOTAL BENEFITS	\$4,300,000	\$4,200,000	\$5,350,000	\$4,200,000
Costs				
Customer incremental cost <sup>1</sup>	\$3,000,000		\$3,000,000	
Retail electric savings				\$5,000,000
Retail gas savings				\$250,000
Utility non-incentive program cost <sup>2</sup>		\$300,000		
Utility incentive program cost <sup>3</sup>		\$2,000,000	-\$2,000,000	\$2,000,000
TOTAL COSTS	\$3,300,000	\$2,300,000	\$1,000,000	\$7,250,000
Net benefits	\$1,000,000	\$1,900,000	\$4,350,000	(\$3,050,000)
Benefit/cost ratio	1.30	1.83	5.35	0.57

- Customer incremental costs after utility incentives and state and federal tax credits. Avista
  includes TRC scenario calculations that do not include state and federal tax credits as offsets to
  customer incremental cost.
- 2. Utility non-incentive costs include labor costs, general program costs, EM&V costs and all other utility expenditures that are not passed to the customer in the form of direct incentives.
- 3. Incentives costs incorporate any cost that is appropriate to consider as a transfer to the customer. This includes direct financial incentives but may also include the cost or value of physical product provided to the customer in the form of physical products.

All calculations above are performed based upon the present value of the stream of costs or benefits over the full expected measure life. The discount rate applied to all cost and benefit streams is the current utility weighted average cost of capital approved in the last rate case and used in the most recent IRP.

Avista does not presently establish separate baselines assumptions for the remaining life of the pre-existing equipment vs. the life of the newly installed equipment beyond the remaining life of the pre-existing equipment (as does the Northwest Power and Conservation Council). Doing so would require a means of estimating the remaining life of the currently installed equipment. The Company is searching for approaches that would allow for greater consistency with the NPCC approach without imposing impractical requirements upon the Company's DSM implementation process.

Avista's avoided cost calculation are based upon the most recent recognized IRP process as modified for the analysis described in Appendix C.

Only rigorously quantifiable non-energy benefits are incorporated into the benefit-cost analysis. Other qualitative non-energy benefits are identified and described, to the extent possible, but do not become part of the cost-effectiveness analysis.