Exhibit No. ___ (MSK-6)

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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EXHIBIT NO._____(MSK-6)

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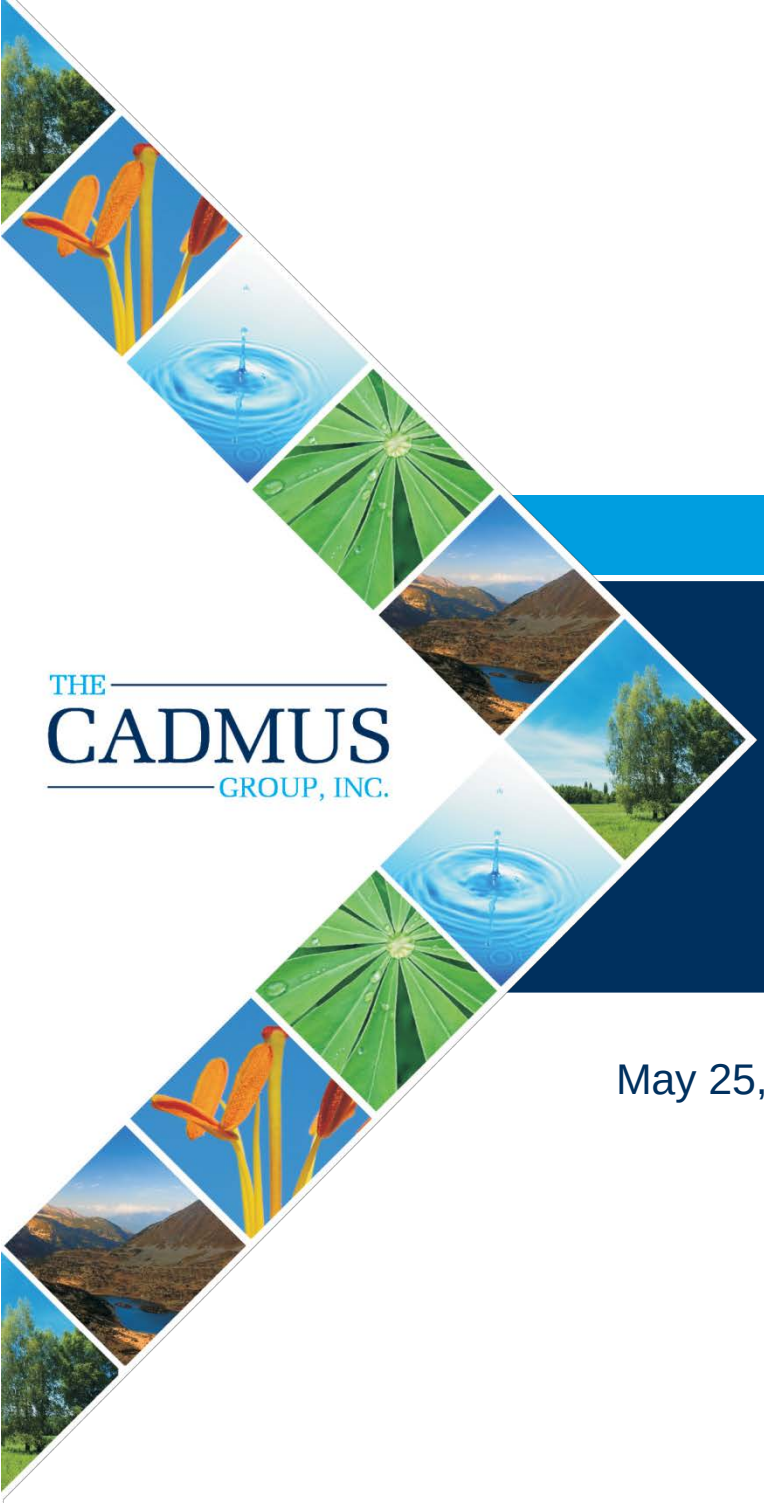
REPRESENTING

THE CADMUS GROUP, INC.



THE CADMUS GROUP, INC.

Avista 2011 Multi-Sector Process Evaluation Report

May 25, 2012

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Portfolio Executive Summary

Avista Corporation contracted with The Cadmus Group, Inc., to perform a portfolio-wide evaluation for the 2011 demand-side management programs. This report presents the process evaluation findings.

Evaluation Activities

Table ES-1 summarizes the process evaluation activities.

Table ES-1. Process Evaluation Activities

Activity	Residential	Nonresidential
Avista Implementation and Planning Staff Interviews*	4	12
Participant Surveys	464	162
Nonparticipant Surveys	210	101
Contractor Interviews	20	40
Nonresidential Lighting Site Visit Surveys	0	41
Implementer Interviews*	2	1
Assessment of Tracking Databases	✓	✓
Review of Program Documentation	✓	✓
Review of Marketing Materials	✓	✓
Examination of Stakeholder Reports	✓	✓

* Multiple representatives present for each interview

Residential Conclusions and Recommendations

This section describes the evaluation's conclusions and recommendations for the residential programs examined (listed in Table ES-2).

Table ES-2. PY 2011 Residential Programs

Residential Gas and Electric Savings Programs
ENERGY STAR Appliance Rebate
ENERGY STAR Homes
High Efficiency Equipment
Weatherization and Shell Measures
Home Energy Audit Pilot
Residential Electric-Only Programs
Geographic Saturation Events
Second Refrigerator and Freezer Recycling
Space and Water Conversions
Simple Steps, Smart Savings

Program Participation

Conclusions

- Overall residential participation declined from 2010 to 2011. Decreased participation appeared most prominent in programs affected by American Recovery and Reinvestment Act (ARRA) tax credits.
- Program awareness among nonparticipants declined from 2010 to 2011.
- Home Energy Audit Pilot Program participation exceeded expectations in 2011, and showed good levels of follow-through among participants.

Recommendations

- Renew emphasis on customer outreach and mass marketing, including refreshing campaign messaging and using trade allies.
- Consider using lessons learned from the Home Energy Audit Pilot Program to design and implement a full-scale program that employs audits or a similar whole-house approach.

Program Design

Conclusions

- Lower-than-expected evaluated per-unit savings indicate a need to review program eligibility criteria and measure offerings. Measure savings can be negatively affected when multiple HVAC measures are incented and installed together.
- Program managers' limited availability to focus on long-term program considerations may hinder program performance.

Recommendations

- Consider additional program requirements to ensure measure savings remain in line with expectations. For example, Avista should revisit program eligibility for multiple measures, where savings are interactive (particularly for HVAC equipment), and consider adjusting savings to reflect interactive effects, or incenting specific packages of complementary measures. Avista may also consider not offering heat pump incentives when natural gas is available.
- Explore the possible benefits of outsourcing simple rebate processing for ENERGY STAR appliances and hot water heaters to allow program managers to focus on long-term program considerations.

Market Characteristics

Conclusions

- Avista's recent program changes have reflected documented nationwide market transformation.

Recommendations

- Ensure future program effectiveness by continuing to update program offerings and designs to reflect changes in market conditions.

Data Tracking

Conclusions

- Program tracking has proved effective, but evaluability could be improved. Consistency across programs and tracking of follow-through for audit participants could be enhanced.

Recommendations

- Ensure consistency in data tracked across multiple databases, including: the multi-program database; the JACO database; the Home Energy Audit database; and Avista's central customer information database.
- If Avista continues the Home Energy Audit Program, audit tracking should be enhanced to include: integration into the central participant rebate database; and more robust tracking of data collected through the audit, and of follow-through installations.

Marketing and Outreach

Conclusions

- Avista adheres to best practices for energy-efficiency marketing and outreach. However, Cadmus identified opportunities for enhancing Avista Websites.

Recommendations

- Avista should maintain its multifaceted approach to reach a broad range of customers, while targeting difficult-to-reach customers, where appropriate. Possible Website enhancements include:
  - Exploring relationships between the corporate Website and EveryLittleBit.com. Explore the Entrance-, Exit- and In- Page analytics to achieve a deeper understanding of the paths people take within the Website.
  - Adding a content-sharing toolbar to the EveryLittleBit.com Website to promote referrals. This toolbar would allow users to share content via e-mail, RSS feeds, or social media platforms.

Participant Experience and Satisfaction

Conclusions

- Participant satisfaction remains high across all programs and program elements.
- The Home Energy Audit Pilot Program experienced a significant increase in participant satisfaction, compared to the 2010 program.

Recommendations

- Continue to prioritize customer satisfaction, and take advantage of high satisfaction by targeting past participants for future participation.

Residential Program Freeridership

Conclusions

- Avista's increasing residential freeridership indicates market transformation is occurring.

Recommendations

- Continue conducting research to inform decision making about future program improvements/continuation.

Effectiveness of Implementers

Conclusions

- Avista's use of third-party program implementers has been appropriate and effective.
- Avista's has strong, positive relationships with its implementation contractors in both programs.

Recommendations

- Explore possible benefits of third-party program implementation. Avista's newly launched online rebate application system may alleviate staff burden associated with rebate processing. However, transferring responsibility for rebate processing to a third-party contractor could convey further benefits. Specifically, this option should be explored for the ENERGY STAR Appliance Rebate Program and water heaters, as the application reviews for these measures do not require a high level of expertise.

Trade Ally Participation and Satisfaction

Conclusions

- Trade allies remained key program messengers, and opportunities exist for increased involvement from them. Trade allies are looking for more support from Avista to provide them with program literature for their customers.

Recommendations

- Investigate the possibility of a more formal relationship with trade allies. This would allow increased program marketing through trade ally channels, while ensuring accountability and professionalism. Disseminating simple program information sheets to contractors and retailers would be a low-cost, first step toward developing relationships with key trade allies. More involvement might include, for example, hosting trade-ally training events.

Nonresidential Conclusions and Recommendations

This section describes the evaluation's conclusions and recommendations for the nonresidential programs examined (listed in Table ES-3).

Table ES-3. PY 2011 Nonresidential Programs

Prescriptive Programs
Commercial Clothes Washer
Food Service Equipment
Green Motors Rewind
HVAC Rooftop Maintenance
Lighting Incentives
Power Management for PC Networks
Premium Efficiency Motors
Other Nonresidential Programs
Site-Specific Program
ENERGY STAR Grocer Program

Program Management and Implementation

Conclusions

- In many cases, programs met or exceeded savings goals. Although the lighting program fell short of its goals, new program incentives in 2012 seek to increase customer motivation.
- Avista implementation staff expressed concerns with time constraints at preventing them from taking a more active role in planning and documentation of program procedures, and requested more real-time feedback during the evaluation process.
- The Site-Specific program, which contributes a large portion of savings to the nonresidential portfolio, lacks a central leadership role.
- The EnergySmart Grocer program implementer experienced issues with contractors.

Recommendations

Cadmus recommends Avista consider the following improvements to the nonresidential program implementation:

- Consider a method for prioritizing management tasks, thus enabling allocation of more time for planning and development of program documentation.
- Revisit the staffing needs for delivering the current programs.
- Revisit the option of using third-party implementers for some programs.
- Consider round tables with the program implementation, management, and policy team to facilitate additional communication regarding planning and evaluation.
- Consider designating a central leadership role for the Site-Specific program to oversee future planning and vision, and ensure it continues to deliver cost-effective energy savings to the C&I portfolio.
- Further investigate contractor issues to ensure high satisfaction levels of EnergySmart Grocer program participants

Customer Feedback

Conclusions

Program Satisfaction

- Overall, awareness of the Avista nonresidential programs appears to be increasing, and participant satisfaction levels have been very high.
- Certain program elements receive a large share of "somewhat satisfied" ratings, suggesting opportunities for improvements. These include: scoping audits, program materials, and application processes.
- EnergySmart Grocer program participants expressed lower satisfaction levels than the Prescriptive and Site-Specific programs, across various delivery elements. Better understanding the causes of this and addressing solutions may prove important for the program's continued success.
- Lower satisfaction levels reported by nonparticipants suggest a need to better understand why program offerings and materials have not met their needs.

Purchases and Decision Making

- While saving money ranked as the most influential factor regarding decisions to install energy-efficient equipment, the decline in reported "saving energy" influence from the prior 2010 survey should be noted, and could have implications for marketing messages.
- Learning of programs through contractors and vendors (37%) compared to nonparticipants (5%) suggests the contractor and vendor community may strongly influence participation, and may be able to intervene at critical decision moments (remodeling and replacing working equipment ranked as the second-highest factor influencing purchases).

Communications and Outreach

- The increase in participants citing contractors or vendors as a source for learning about the programs (from 15% in 2010 to 37% in 2011) suggests trade allies should be leveraged as part of the nonresidential program's outreach and communication strategies.
- Program information on Avista's Website may not effectively reach across the market or be utilized effectively to help customers. Over half of nonparticipants reported the business Website did not apply to them, and cited the need for more information about programs.

Customer Profiles

- The Site-Specific programs' cost-effectiveness may be at risk if the delivery cost becomes too great for very small facilities (less than 5,000 sq. ft.): more than one in four participants surveyed fall within this size range. The program may require different outreach and delivery strategies to ensure costs aligned with achievable savings.
- The dominance of participant-owned facilities in the surveys suggest Avista may not be reaching the decision makers in leased facilities—a more challenging target, but one

which may offer large opportunities for growth or for meeting program goals in future years.

Recommendations

- Continue to leverage contractors to reinforce the program's messages, particularly in communicating program offerings to small-to-medium customers. Further explorations could determine if contractors offer better market coverage, are more likely to connect with customers when purchases are being contemplated, provide a more compelling value proposition, or offer other lessons Avista could apply, both with contractors and across other communications channels.
- Strategies should be developed to penetrate leased C&I spaces, targeting building owners, managers, and brokers of leased space. Examples could include:
  - Tailored messages, delivered through presentations or workshops in conjunction with the Building Owners and Managers Association and commercial real estate associations.
  - Designated point-of-contact and Web information for building managers and brokers.
  - Incentive and financing solutions, such as on-bill financing, green lease arrangements, and bonus incentives targeting retrofits when new tenants move in.
- Cadmus recommends Avista evaluate alternative strategies for reaching small-to-medium businesses cost-effectively via contractors, direct install, or more Prescriptive, "self-serve" options via the Avista Website. Such strategies could include:
  - Promote newsletter sign-ups and exploration of program information on the Website.
  - In program information, cross-reference sources or the availability of answer lines.
  - Evaluate measures installed by small customers in the Site-Specific program for inclusion in a Prescriptive program.
- Where customers expressed lower satisfaction levels, program elements should be investigated. Such investigations might include:
  - Review audit program communications and supporting collateral to improve customers' understanding of the depth of audits, and recommendations. Consider providing information about economic advantages to energy efficiency such as improved benefits to costs ratios, and simple payback.
  - Determine/track cycle times for customer follow-up after audits and for rebate applications; if reasonable times are exceeded, consider implementing follow-up communications to keep customers informed and ensure internal follow-up, if needed.
  - Confirm issues identified in the EnergySmart Grocer program have been resolved.

Trade Ally Feedback

Conclusions

- Avista's informal network of trade allies works well to promote the programs through word-of-mouth and strong communications with Avista representatives. Many trade allies

have worked with Avista for several years or more. Overall, trade allies reported high satisfaction levels with the programs, with slight variations by contractor type. While lighting contractors indicated a high satisfaction level with program materials, they were less likely to promote the programs than general contractors.

- Trade allies suggested improved program promotions to assist customers, providing additional materials or information online. Trade allies requested greater one-on-one communication with Avista representatives, or dedicated assistance to answer questions about the programs.

Recommendations

- Explore more formalized ways to aid trade allies in promoting nonresidential programs to customers. Avista should continue efforts to expand outreach to trade allies, through sponsored events and workshops, breakfast meetings, focus groups, and other targeted communications.
- Given trade allies' requests for a dedicated Avista contact, more one-on-one communication, and additional materials to inform customers about the programs, more timely feedback could be achieved through online resources. These resources may also help to reinforce the program's messages, offering resources through multiple channels by providing the following services:
  - Offering a dedicated Website, containing guidance through Webinar and video presentations.
  - Online registration for events or information requests.
  - An online help desk or phone hotline, which would direct customers to answers for frequently asked questions, or would reserve more complicated questions for program staff.
  - Other, additional promotional materials, posted online, such as handouts regarding costs and benefits of energy-efficiency equipment.

Special Report: Lighting

Conclusions

- T-12 lamps and fixtures remain in many customer facilities, and customers retain many T-12 lamps in inventory for replacements. Although customers report awareness of new regulations phasing out most T12s and incandescent light bulbs, most customers do not have a sense of urgency with regard to replacing affected lighting equipment.
- Contractors are highly aware of the upcoming changes, but at least half do not discuss this with their customers, and most are not changing their business approaches or carrying out any promotions. This offers Avista an opportunity to play a helpful role in informing and preparing customers for upcoming changes, while accelerating installation of more efficient equipment in the market.

Recommendations

- Take a more proactive role in communicating with customers: upcoming changes in lighting product availability; Avista's program availability to offer them help; and when the T-12 program will end. Communications should also offer help in identifying T-12 lamps (descriptions or illustrations of size), and inform customers about the lighting quality of alternatives.
- To motivate contractors and accelerate customer action, Avista may consider creating a lighting contractor partnership program, with incentives paid to contractors (or rebates paid directly to contractors) for encouraging customers to update lighting fixtures while incentives remain available.
- Avista should consider a new program, targeting replacements of T-12s in inventory, to help customers upgrade to more efficient new fixtures and lamps, and to move toward realization of energy savings in their facilities.

Marketing and Outreach

Conclusions

- Avista's expanded marketing campaign and increased outreach events indicate a focused strategy for nonresidential programs used in 2011 will continue in 2012. Using a wide variety of marketing channels and strategies, Avista's marketing team and program staff are pursuing more direct outreach opportunities with customers and trade allies, through Power Breakfast meetings, developing customer success stories through testimonials, and updating the Website to be more user friendly for business customers.
- Many Avista marketing strategies align with best practices for C&I energy-efficiency programs. Through these outreach events, Avista staff gather direct feedback from customers to enable more targeted marketing opportunities.

Recommendations

- To ensure the recognition and longevity of focused outreach efforts, Cadmus recommends Avista continue expanded annual market campaigns to enable more focused targeted marketing for the nonresidential programs. In addition, nonresidential programs may benefit from these additional suggestions:
  - Develop a detailed marketing plan enabling annual tracking and assessment of activities. The marketing plan would identify target audiences, clarify marketing objectives, and identify evaluation metrics.
  - Continue efforts to enhance the business Website through promotions and featured business information tools (such as Efficiency Avenue), testimonials, general program brochures; and encourage easier access for trade allies through featured guidelines and tips.

Application Processing and Data Tracking

Conclusions

- From the review of application forms and databases, interviews with staff, and survey results, Cadmus concludes some data fields needed for program evaluation are not being tracked or are being reported inconsistently.
- Improvements to participant tracking, and data integration could enhance data quality, and ensure programs can be evaluated.
- Although application forms have been improved somewhat, some data points added to revised program worksheets currently are not accounted for in updated application forms. Adding these fields would enhance the accuracy of savings estimates.
- As Avista moves toward integrating these databases over the next few years, integration may reduce errors resulting from data transfer and reporting. An integrated customer information system may also reduce the burden of data requests for evaluations.
- Fields critical to evaluation are not being tracked in Sales Logix or reported in extract databases. Inability to identify specificity of program and measure detail created challenges in selecting unique participants for survey sampling. The lack of business or site addresses created additional challenges for site-visit sampling. Missing or inconsistent data were found in the following fields:
  - Customer Account Number
  - Contact Name
  - Business Address, Phone Number, E-mail
  - Program Type
  - Measure Descriptions, Measure Quantity, and Fuel Type

Recommendations

- Drawing upon the review of application forms and databases, interviews with staff, and survey results, Cadmus recommends the following:
  - Track missing data fields in Sales Logix, and include these in extract databases.
  - Document QA procedures or checklists to reduce missing or inconsistent data entry.
  - In addition to checking for missing data, Avista staff may benefit from developing a checklist for staff entering participant data into databases, ensuring all data are collected consistently.
- Work toward integrating customer information tracking databases, thus enhancing efficiency and reducing error.
- Consider incorporating changes to forms to account for new data collected through calculators.

QA and Verification

Conclusions

- Avista's QA procedures for Site-Specific projects have been documented well, requiring second-party approval of evaluation reports. The review process is governed through Tracker protocols, a system established to track projects' progress through the pipeline. This process is supported through ongoing efforts with the engineering team, program, and policy staff.
- Pre- and post-inspection requirements and procedures would benefit from better definition and transparency. While post-installation inspections are routinely required for Site-Specific projects, pre-inspections are not.
- Pre- and post-inspections for Prescriptive programs are not required. Post-inspections may be conducted for programs undergoing changes or projects with new contractors.

Recommendations

- Cadmus recommends Avista continue strengthening feedback loops for performance review of large projects. To achieve greater consistency, Avista should consider documenting pre- and post-inspection protocols, which could include the following, recommended, industry best practices for C&I programs:
  - Establish inspection frequency, based on a program's relationship with vendors, number of vendors, types of measures, project volume, variability, and size of projects.
  - Obtain a random sample of vendor and measure types.
  - Clearly define pre- and post-inspection policies and procedures.
  - Require random, on-site inspections of 10% to 20% of projects in lower-incentive Prescriptive programs.
  - Require pre-project inspections for all large projects with highly uncertain baseline conditions.

1 2010 RESIDENTIAL PROCESS REPORT

1.1 Introduction

The residential process evaluation focuses on nine Avista programs. During the program year, Cadmus prioritized programs achieving the greatest savings (Table 1-1, in bold).

Table 1-1. PY 2011 Residential Programs

Residential Gas and Electric Savings Programs
ENERGY STAR Appliance Rebate
ENERGY STAR Homes
High Efficiency Equipment*
Weatherization and Shell Measures
Home Energy Audit Pilot
Residential Electric-Only Programs**
Geographic Saturation Events
Second Refrigerator and Freezer Recycling
Space and Water Conversions
Simple Steps, Smart Savings

* In 2011 the Heating and Cooling Efficiency program and the Water Heater Efficiency program measures were offered together under the High Efficiency Equipment Program.

** The Shade Tree program was discontinued in 2011.

1.1.1 Evaluation Activities and Objectives

The evaluation sought to assess the following research areas for each program:

- Customer participation;
- Trade ally participation;
- Effectiveness of program design and delivery; and
- Opportunities for improvements.

In assessing these topics, Cadmus relied on three main data collection efforts:

- A document review;
- In-depth interviews; and
- Telephone surveys of participants and nonparticipants.

The document review addressed the following materials, provided by Avista:

- Tracking databases;
- Business plans;

- Marketing materials; and
- Cost-effectiveness inputs and analysis spreadsheets.

1.1.2 Program Overview

Table 1-2 lists the residential energy-efficiency programs, included in the 2011 evaluation, along with associated incentive levels.

Table 1-2. PY 2011 Residential Programs and Incentives

Residential Gas and Electric Saving Programs and Measures	Incentives
ENERGY STAR Appliance Rebate	
ENERGY STAR Freezer	$20
ENERGY STAR Refrigerator	$25
ENERGY STAR Dishwasher	$25
ENERGY STAR Clothes Washer	$50
New Construction/ENERGY STAR Homes*	
ENERGY STAR Home with Electric only or Electric and Gas	$900
ENERGY STAR Home with Gas only	$650
High Efficiency Equipment*	
High Efficiency Natural Gas Boiler or Furnace	$400
High Efficiency Air Source Heat Pump	$400
Ductless Heat Pump	$200
Variable Speed Motor	$100
High Efficiency Electric Water Heater	$50
High Efficiency Natural Gas Water Heater	$50
Weatherization and Shell Measures**	
Attic Insulation	$0.25 per sq. ft.
Wall Insulation	$0.50 per sq. ft.
Floor Insulation	$0.50 per sq. ft.
Fireplace Damper	Up to $100
Home Energy Audit Pilot	Discount/varies
Residential Electric-Only Programs and Measures	**Incentives**
Second Refrigerator and Freezer Recycling	$30
Space and Water Conversions	
Electric to Natural Gas Furnace	$750
Electric to Air Source Heat Pump	$750
Electric to Natural Gas Water Heater	$200
Simple Steps, Smart Savings	Upstream/varies
Geographic Saturation Events	Giveaway

* High Efficiency Equipment incentive levels are the same for existing homes and the New Construction program.

** In prior years, high-efficiency windows were incented at $3.00 per sq. ft., but Avista discontinued the window incentive as of March 30, 2011.

Appendix 1A briefly describes each program examined through this process evaluation.

1.1.3 Evaluation Methodology and Information Sources

Cadmus' approach to this portfolio-wide process evaluation relied on three main review and data collection efforts.

Document Review

Cadmus' document review focused on providing an up-to-date understanding of 2011program offerings, planning assumptions, participation, and marketing methods. Documents reviewed included:

- Avista's in-house tracking database;
- Home Energy Audit tracking database;
- JACO International's appliance recycling tracking database;
- Avista's 2011 DSM Business Plan;
- Avista's 2012-2013 Biennial Conservation Plan;
- Everylittlebit.com Website;
- Avistautilities.com Website; and
- JACO International marketing calendars.

Program Staff, Implementer, and Trade Ally Interviews

In-depth interviews with program and implementation staff provided detailed insights into design and delivery processes, and helped in interpreting gathered information. In staff interviews (and in selecting implementer and trade ally interviewees), Cadmus focused on high-savings programs such as High Efficiency Equipment and Simple Steps, Smart Savings.

Table 1-3. PY 2011 Residential Interviews

Role In Program Delivery	Number of Completed Interviews
Avista Program Implementation Staff	3*
Avista Policy, Planning and Analysis Staff	1*
Simple Steps, Smart Savings Implementer (FMS)	1
Second Refrigerator and Freezer Recycling Implementer (JACO)	1*
Simple Steps, Smart Savings Lighting Retailers	10
Weatherization and Shell Measure Program Contractors	10

* Multiple representatives present for interview

Cadmus interviewed seven members of Avista's program staff, including:

- Demand-side management (DSM) program managers; and
- Planning, Policy, and Analysis (PPA) team members.

Cadmus conducted these interviews by phone, using a prepared interview guide. When necessary, Cadmus requested clarifying information via phone or e-mail. Staff interviews addressed the following topics:

- Goals;
- Program design;
- Implementation:

  - Marketing
  - Target markets
- Tracking; and
- Quality assurance and control (QA/QC).

Cadmus interviewed one implementation staff member at Fluid Market Strategies (FMS), the company implementing Simple Steps, Smart Savings, and three representatives from JACO, the company implementing the Second Refrigerator and Freezer Recycling program. Conducted by phone, these interviews followed a prepared interview guide, addressing:

- Goals;
- Implementation processes; and
- Tracking.

Cadmus also contacted and interviewed 20 contractors and vendors operating in Avista's service territory. Interviews targeted 10 weatherization contractors and 10 lighting retailers. Weatherization contractors were identified using a list of Avista trade allies and an Internet search of appropriate contacts with businesses in Avista's service territory. Lighting retailers were identified using Simple Steps, Smart Savings program invoice materials (provided by FMS), an Internet search, and contacts provided by FMS.

Interviews used a prepared interview guide. Contractor and vender interview data, while not statistically representative of all participating contractors or venders, provided broad anecdotal insights into contractors' experiences with Avista's programs. Contractor interviews captured information addressing the following topics:

- Program awareness:
  - Contractor awareness
  - Customer awareness
- Effect of rebates on sales;
- Contractor marketing/outreach; and
- Program satisfaction.

Telephone Surveys

Telephone surveys constituted a large part of the 2011 evaluation activities, informing both impact and process evaluations for several programs. For general population surveys (e.g., participant and nonparticipant customers), special care addressed potential issues in the following areas:

- Sample selection (which customers to include in the survey sample frames);
- Responses (are customers answering the survey as a group representative of the sample frame); and

- Data analysis and reporting (analysis conducted with an appreciation for the sample selection and limitation of survey data collection).

We conducted all surveys using Discovery Research Group (DRG), a survey research and telephone data collection provider. Survey response and cooperation rates were calculated for participant and nonparticipant surveys. Survey response and cooperation rates were calculated adhering to American Association for Public Opinion Research (AAPOR) minimum definitions.[1]

Response and cooperation rates were calculated using the following equations:

participants to complete a survey, but also the design and implementation of the survey's calling effort, direct comparisons to other efforts can be difficult. However, recent participant survey efforts for other utilities in the Pacific Northwest showed cooperation rates ranging from 22% to 37%, indicating Avista's participant survey was comparable in terms of cooperation.

Table 1-4. Residential Participant Details and Survey Sample

	Unique Participants	Eligible Participants*	Participants Included in Sample Frame
ENERGY STAR Appliance Rebate	10,983	10,216	3,506
High Efficiency Equipment	4,156	3,267	1,101
Weatherization and Shell Measures	3,981	3,442	1,180
Home Energy Audit Pilot	664	663	663
Second Refrigerator and Freezer Recycling	1,903	1,903	1,903
Space and Water Conversions	314	282	282
Completed Surveys			464
Number of Calls Required to Achieve Sample			4,430
Response Rate			10.5%
Cooperation Rate			24.4%
Completed Surveys Included in Analysis			464

* Reasons for not including a participant in survey sample included: 1) incomplete contact information; 2) duplicate entries (participants were only included in a sample frame once); or 3) participants in program significantly exceeding the number required to achieve the target number of completes.

Cadmus designed participant survey sample to yield, in most cases, 90% confidence and ±10% precision levels, for program-level survey results. The participant survey sampling plan drew upon multiple factors, including feasibility of reaching customers, program participant populations, and research topics of interest.

Cadmus did not conduct participant surveys with Simple Steps, Smart Savings customers, as the program has an upstream focus, and therefore does not track participant contact information. Similarly, for ENERGY STAR New Homes, Cadmus did not survey residential customers purchasing rebated homes because rebates were paid to builders, not end-use customers.

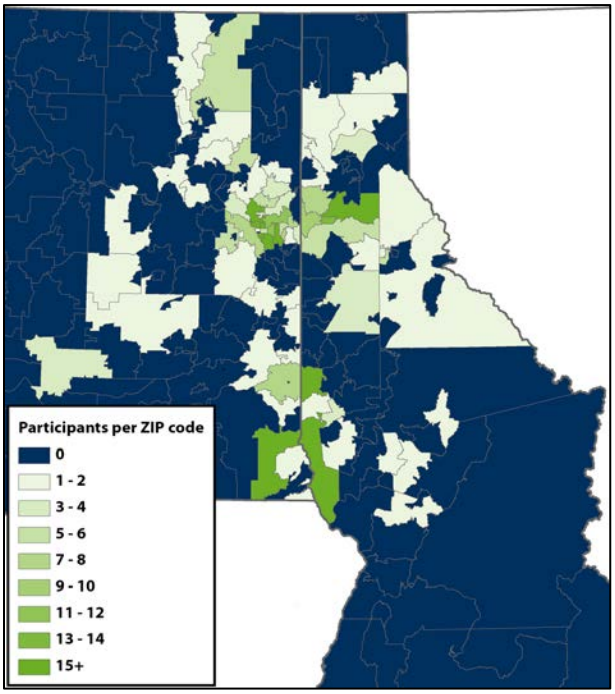
Table 1-5 shows the number of surveys achieved, and the resulting absolute precision of survey findings for each program.

Table 1-5. Participant Survey Sample Sizes and Precision Estimates by Program

Program	Total Program Participants	Survey Respondents	Absolute Precision at 90% Confidence
ENERGY STAR Appliance Rebate	10,983	79	±9.3%
High Efficiency Equipment	4,156	126	±7.2%
Weatherization and Shell Measures	3,981	72	±9.6%
Home Energy Audit Pilot	664	56	±10.3%
Second Refrigerator and Freezer Recycling	1,903	74	±9.3%
Space and Water Conversions	314	57	±9.1%
Overall	22,001	464	±5.2%

Program participant contacts included in survey sample frames were selected randomly within each program stratum. The geographic distribution of survey respondents clustered around urban centers, specifically the cities of Spokane, Pullman, Moscow, and Lewiston. This aligns with population distributions in the service territory.

Figure 1-1. Geographic Distribution of Participant Survey Completes



Given the wide range in program size, we weighted survey responses by participation when reporting responses in aggregate, ensuring feedback represented the overall population. Table 1-6 shows the weighting scheme.

Table 1-6. Participant Survey Sample Design Weights by Program

Program	Proportion of Total Participant Population	Proportion of Total Survey Respondents	Program Weight*
ENERGY STAR Appliance Rebate	49.9%	17.0%	2.93
High Efficiency Equipment	18.9%	27.2%	0.70
Weatherization and Shell Measures	18.1%	15.5%	1.17
Home Energy Audit Pilot	3.0%	12.1%	0.25
Second Refrigerator and Freezer Recycling	8.6%	15.9%	0.54
Space and Water Conversions	1.4%	12.3%	0.12

* Weights calculated to 15 places past the decimal were applied to survey frequencies.

Nonparticipant Surveys

Cadmus conducted telephone surveys with residential customers not participating in the programs. The nonparticipant survey call list included randomly selected gas and electric customers. Nonparticipant surveys collected the following information:

- Avista energy-efficiency program awareness;
- Participation barriers;
- Awareness of energy efficiency; and
- Customer characteristics.

The study selected nonparticipants by using screening questions to identify customers purchasing items or taking actions in 2011 that could have been eligible for rebates but did not apply for one. This included customers purchasing standard-efficiency versions of rebated measures. Table 1-7 details nonparticipant survey results. The 7.1% cooperation rate reflects Cadmus screened out customers who had not made energy-saving improvements in the past year.

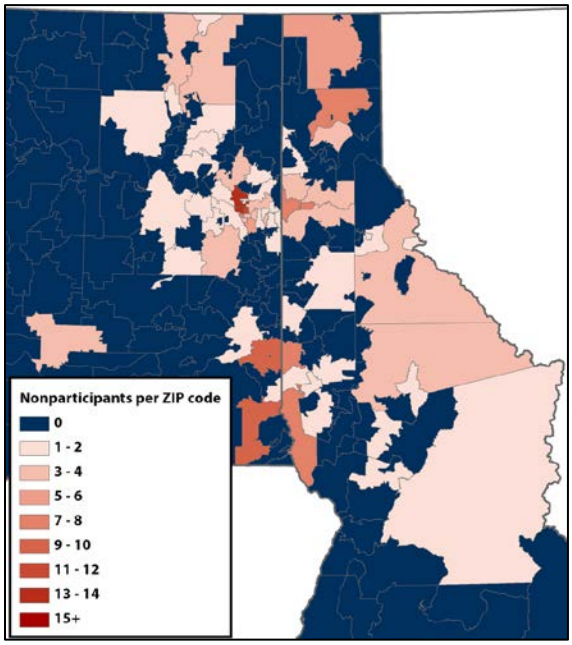
Table 1-7. Residential Nonparticipant Details and Survey Sample

	Number of Unique Nonparticipants	Number of Eligible Nonparticipants*	Number of Nonparticipants Included in Sample Frame
Total contacts	5,186	4,900	4,900
Completed Surveys			210
Number of Calls Required to Achieve Sample			12,879
Response Rate			1.6%
Cooperation Rate			7.1%
Completed Surveys Included in Analysis			210

* Reasons for not including a participant in survey sample included: 1) contact appeared in one or more 2011 participant database; or 2) incomplete contact information.

As with participant survey respondents, the geographic distribution of survey respondents clustered around urban centers (specifically, the cities of Spokane, Sandpoint, Pullman, Moscow, and Lewiston).

Figure 1-2. Geographic Distribution of Participant Survey Completes



Nonparticipant surveys results have been reported in aggregate, reflecting behaviors and attitudes of all Avista nonparticipant residential customers.

1.1.4 Organization of Key Findings

The key findings sections that follow are organized into the following major topic groups:

- Program Participation
- Program Design
- Market Characteristics
- Data Tracking
- Marketing and Outreach
- Participant Experience and Satisfaction
- Residential Program Freeridership
- Effectiveness of Implementers
- Trade Ally Participation and Satisfaction

1.2 Program Participation

1.2.1 Savings and Incentives

Table 1-8 provides adjusted gross savings and evaluated total realization rates for each program, not including the Home Audit program, as savings from that program have been included in other programs' totals.

The 2011 Avista Impact Report's explores the contents of Table 1-8 in detail. However, at a high level, adjusted gross savings realization rates for several programs are less than 1, and indicate issues with program participation and unit energy savings (UES). Both topics are explored in greater detail below.

Table 1-8. Adjusted Gross Savings and Evaluated Total Realization Rates

Residential Program	Adjusted Gross Savings		Evaluated Realization Rates	
	kWh	Therms	kWh	Therms
Residential Gas and Electric Saving Programs				
ENERGY STAR Appliance Rebate	3,623,509	22,185	121%	72%
ENERGY STAR Homes	406,972	25,006	59%	104%
High Efficiency Equipment	4,743,627	305,789	50%	84%
Weatherization and Shell Measures	2,164,907	157,874	24%	42%
Home Energy Audit Pilot	0	0	N/A	N/A
Residential Electric-Only Programs				
2nd Refrigerator and Freezer Recycling	4,054,783	N/A	90%	N/A
Space and Water Conversions	3,577,879	N/A	113%	N/A
Simple Steps, Smart Savings	24,601,728	N/A	136%	N/A
Overall	43,173,405	510,854		

1.2.2 Measure Quantities

Approximately 21% of program participants received more than one program incentive (not including the upstream Simple Steps, Smart Savings program), a finding in accord with observations from the 2010 program evaluation. Further, when comparing the 2010 and 2011 participant databases, 13% of 2011 program participants participated in at least one Avista energy-efficiency program in 2010. Such repeat participation rate is slightly higher than that observed in another, recent Pacific Northwest evaluation. We believe repeat participation indicates overall participant satisfaction with energy-efficiency rebate opportunities offered by Avista, as further supported by survey findings below.

Table 1-9. Number of Measures Installed

Total Number of Rebates	Participants in Category	Percentage
1	15,801	79%
2	3,279	17%
3	784	4%
4 or more	83	0%
Total Participants	19,947	100%

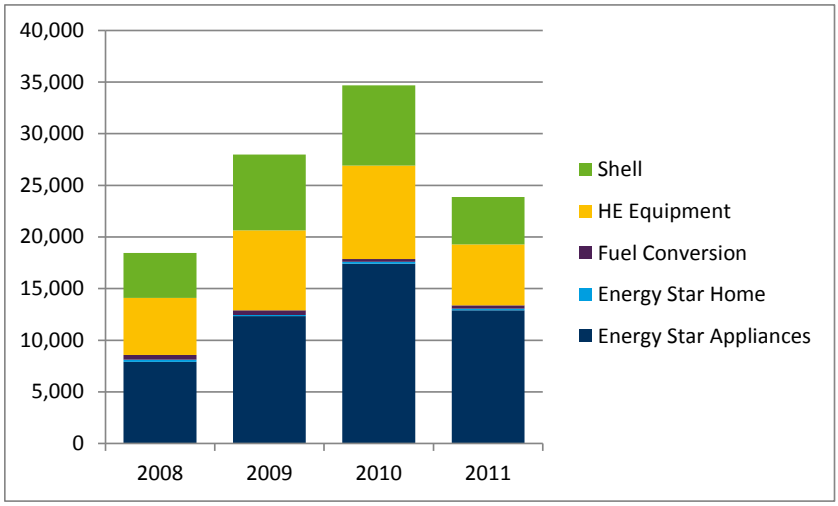
1.2.3 Participation Trends

In 2011, overall residential program participation fell to a 3-year low, reversing a 3-year trend of increased annual program participation. Number of measures installed in 2011 was 28% lower

than 2010 (26,573 versus 36,855 incented measures, not including the upstream program). In percentage terms, the largest participation decrease occurred in Weatherization and Shell Measures (59% of 2010 participation); and HE Equipment (65% of 2010 participation). Among programs with historical data tracked in Avista's central tracking database, only the fuel conversion program increased participation from 2010 to 2011. Figure 1-3 provides additional detail.

The drop in participation was not unexpected. Avista staff reported 2010 participation was likely buoyed by the presence of generous state and federal tax credits. In 2011, many of these tax credits expired. Program planning took this into account, and, while not desirable, is in accord with expectations. Avista's 2011 DSM Business Plan provides additional detail on this subject.

Figure 1-3. Reported Number of Rebates by Program: 2008–2011



Notably, federal tax incentives were not a primary motivator cited by participating survey respondents. Cadmus collected survey data on factors motivating participants to purchase their rebated equipment, both in 2010 and 2011. Less than 1% of respondents reported tax credits as a primary motivator in both years.

Home Energy Audit Participation

The Home Energy Audit Pilot Program operated in 2010 and 2011 years, seeking to achieve energy savings by helping home owners identify opportunities for energy-saving actions in their homes. Cadmus analyzed the Home Energy Audit tracking database to characterize audit participant follow-through. The evaluation team cross-referenced the Home Energy Audit database to the general program database, determining how frequently Audit participants installed and received incentives for additional measures. Table 1-10 summarizes Audit Program participation and follow-through over the 2010–2011 period.

Table 1-10. Home Energy Audit Participation and Follow-Through

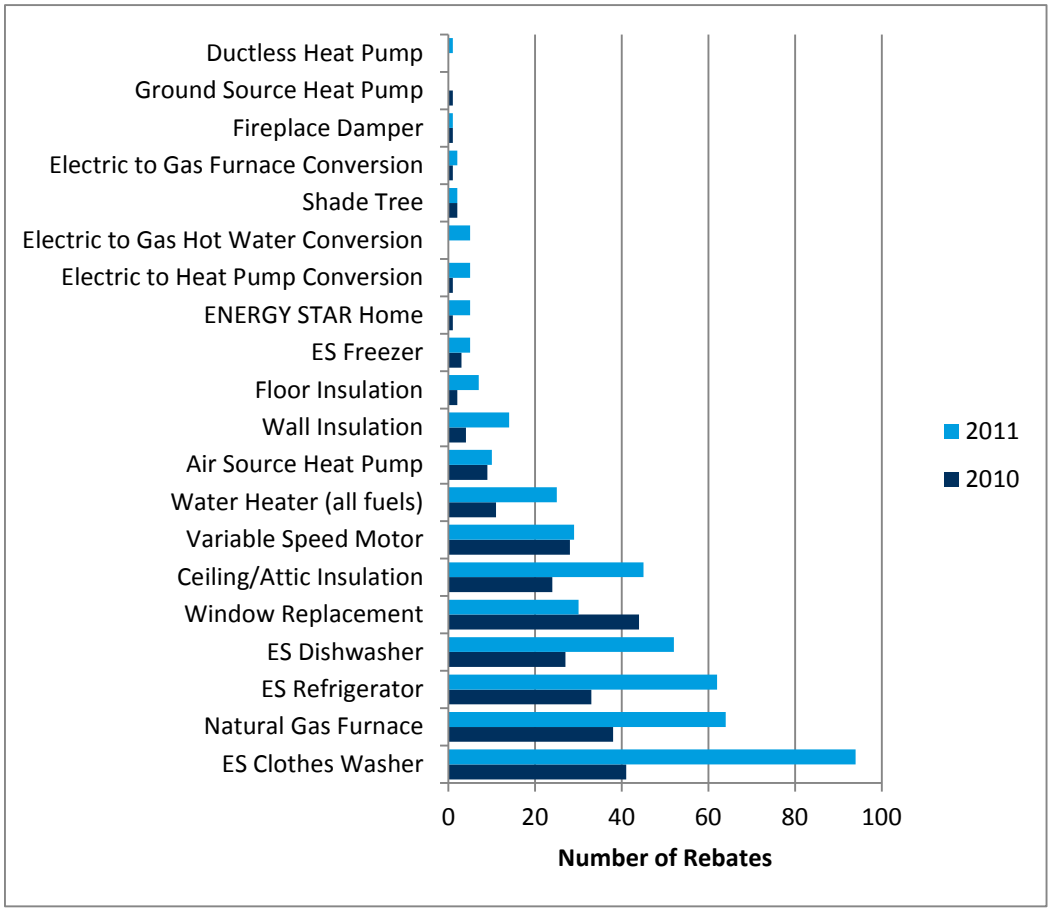
Program Year	Total Audit Participants	Participants Installing at Least One Rebated Measure	Percent of Participants Installing at Least One Rebated Measure
2010	269	111	41%
2011	659	223	34%
Total	928	334	36%

Though overall participation increased in the pilot program's second year, follow-through decreased, from 41% to 34%. Nevertheless, Avista's follow-through rates were comparable to similar single-family residential audit programs at other utilities, with follow-through achieved for:

- 20% of participants in a 2010–2011 audit program at a Pacific Northwest utility;
- 39% in a 2008 audit program at a New England utility; and
- 33% in 2009 and 12% in 2010 in an audit program at a Midwest utility.

Cadmus further analyzed participation data to determine measures most commonly installed. Figure 1-4 summarizes measure installations, showing clothes washers, gas furnaces, refrigerators, and dishwashers the most commonly installed measures among audit participants.

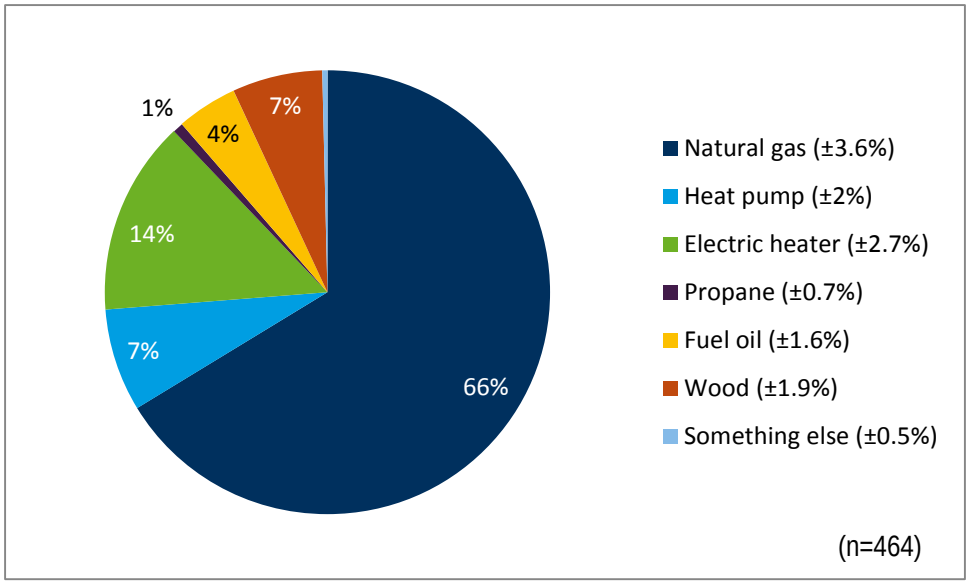
Figure 1-4. Additional Rebates Received by Home Energy Audit Participants



1.2.4 Participant Characteristics

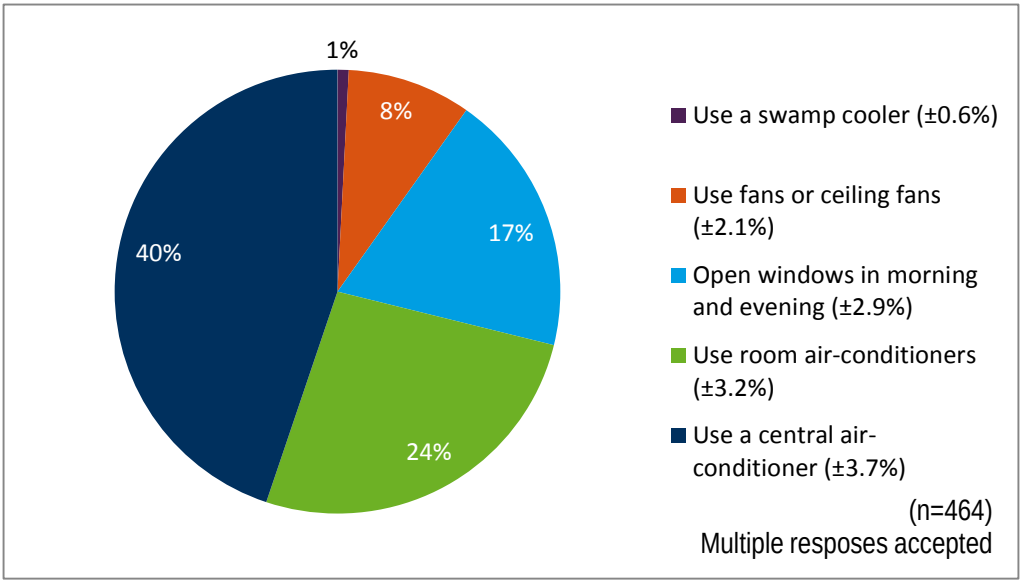
Weighted overall participant survey responses from the 2011 survey indicated over half of survey respondents (66%) heated their homes with natural gas. Electric heaters were the second most common responses, with 14% of respondents citing it as at least one way they heated their homes. The distribution of heating methods is correlated to the distribution of incented measures – for example, customers receiving gas furnace incentives would clearly report heating their home with gas. Since the measure mix varies from year to year, a direct comparison between the 2010 and 2011 heating method results is not appropriate.

Figure 1-5. Weighted Primary Participant Heating Methods



Participants reported cooling their homes with a variety of different technologies. Most common responses included: central room air conditioners (ACs) (40%) and room ACs (24%). These findings were very similar to the 2010 participant survey (37% central ACs, and 22% room ACs).[2]

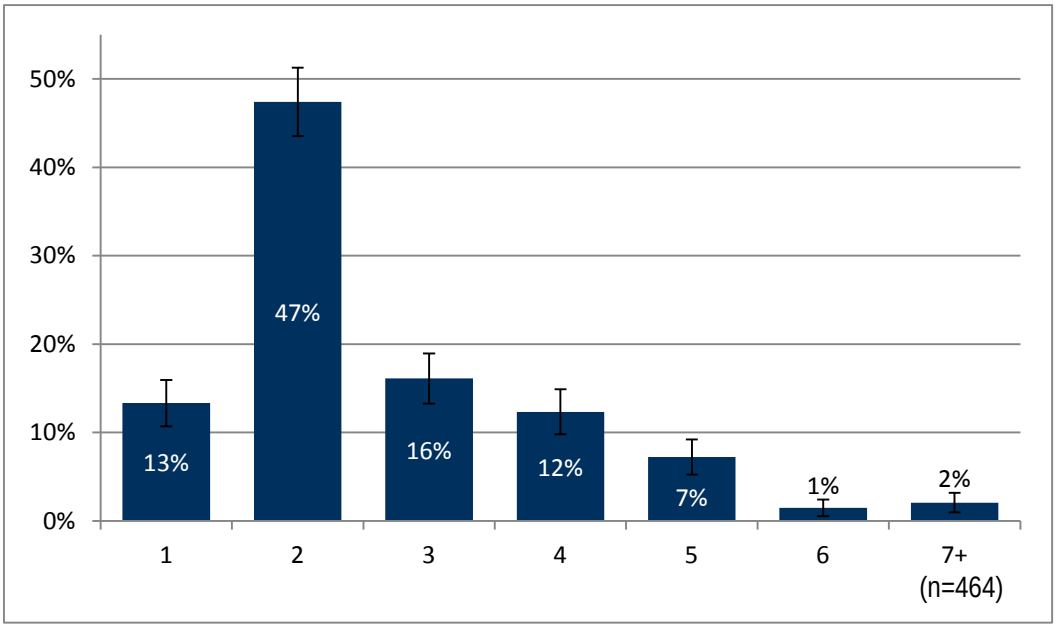
Figure 1-6. Weighted Participant Primary Cooling Methods



Similar to findings from the 2010 survey, nearly half of participant survey respondents (47%) reported two-person households.

[2] The previously mentioned concern about fuel mix is not applicable in this case because all cooling is electric.

Figure 1-7. Weighted Participant Household Size

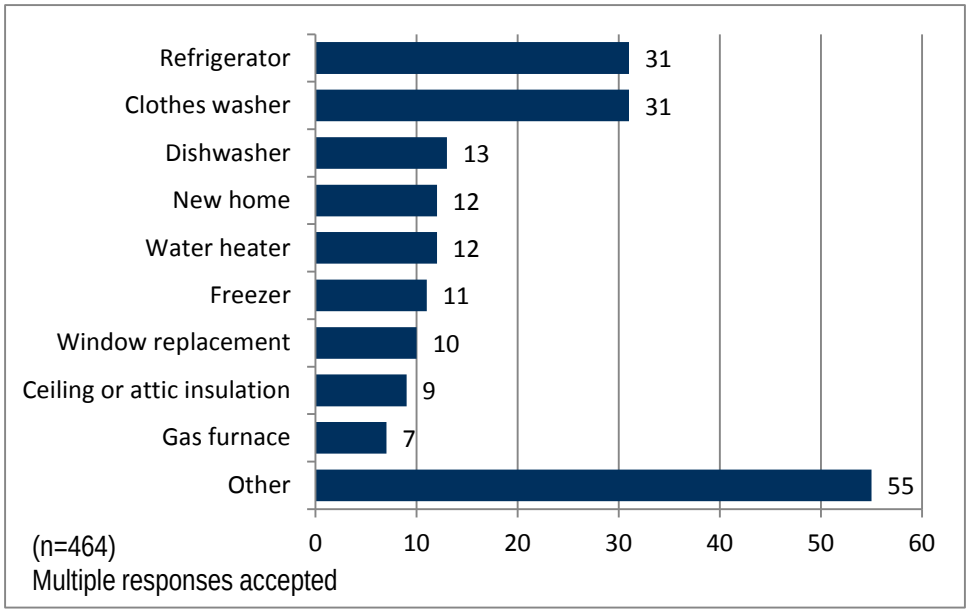


1.2.5 Nonparticipant Characteristics

Figure 1-8 shows distributions of the 10 most common measures among surveyed nonparticipants, resulting from randomly dialing Avista residential customers, and reflecting rates at which such purchases occurred, without intervention from Avista. Appliances made up approximately half of measures installed, aligning with high participation in the ENERGY STAR appliance rebate program. Following appliances, weatherization and heating, ventilation, and air conditioning (HVAC) measures were the most commonly installed measures.

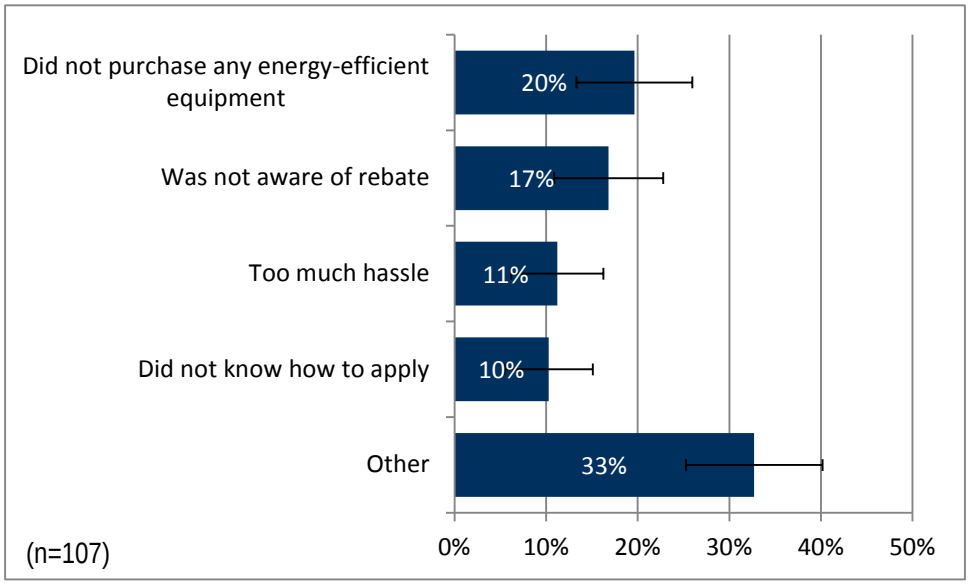
The most common equipment mentioned in the "Other" category included light bulbs (24), stoves (6) and heaters (4).

Figure 1-8. Measures Installed by Nonparticipants



Nonparticipants cited a variety of different reasons for not applying for Avista rebates regarding their newly installed equipment. Ineligible equipment (20%) and program awareness (17%) were most common reasons cited. These findings are in accord with responses from the 2010 nonparticipant survey (in which 27% cited equipment efficiency and 17% awareness). The only significant deviation from the 2010 survey findings was a decrease in the number of respondents reporting they knew about the rebates but did not know how to apply (a decrease from 27% to 10%).

Figure 1-9. Reasons for Nonparticipation



The nonparticipant survey contained a battery of home characteristic questions, which were used to help identify the ways program participants might differ from individuals installing new measures without seeking rebates and Avista's overall customer base.

Nonparticipants reported heating their homes in much the same ways as program participants, though nonparticipants were more likely to heat their homes with natural gas (50% compared to 66%), and more likely to use electric heaters (24% compared to 14%).

Nonparticipants reported cooling their homes in the same ways as participants, but the breakdown of responses differed appreciably, with notable differences including:

- Nonparticipants were less likely to use a central ACs (28% compared to 40%).
- Nonparticipants were more likely to open windows during cooler times of day (23% compared to 17%).

Nonparticipants were more likely to rely on fans (12% compared to 8%).

Figure 1-10. Nonparticipant Primary Heating Methods

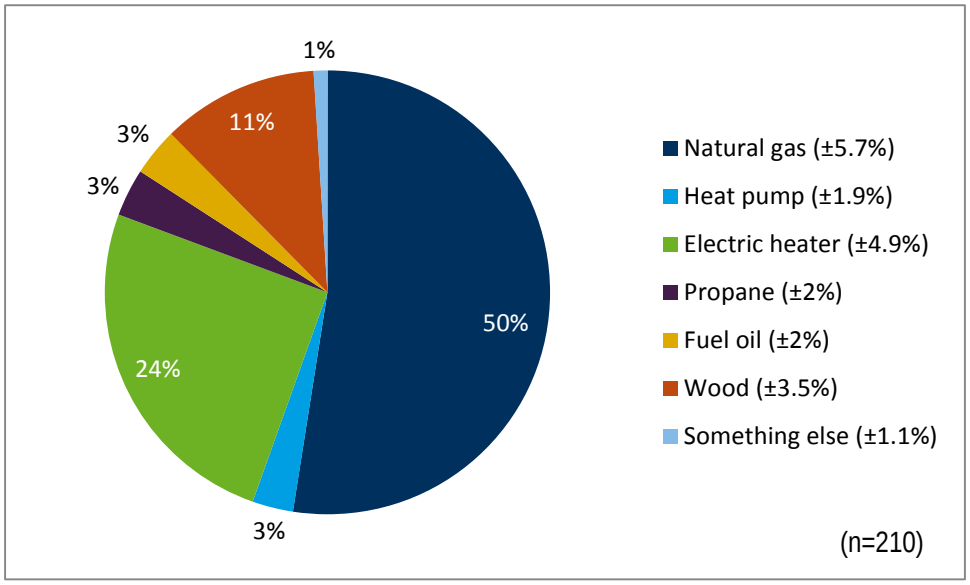
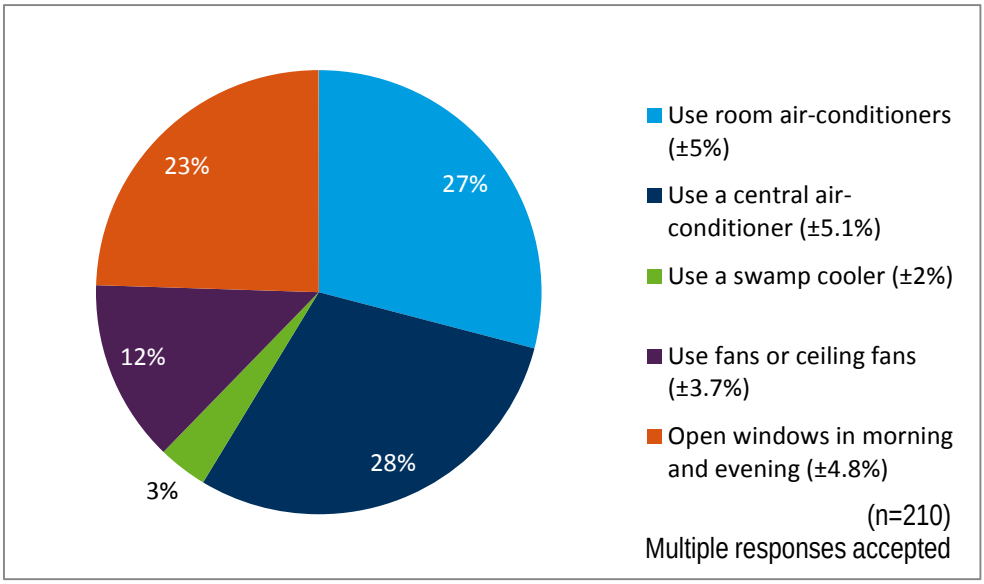


Figure 1-11. Nonparticipant Primary Cooling Methods



1.3 Program Design

This section discusses our observations regarding design of Avista's residential programs. No major program design changes occurred during the 2011 program year (excepting changes to program measure offerings), and the overall program design continued to work well in general. As Cadmus observed in the 2010 process evaluation, various descriptions and categorizations of the programs exist for different audiences. For example, the PPA team appears to consider programs on a measure-by-measure basis, while the customer-facing materials (such as online program descriptions and rebate applications) categorize measures into groups, including:

- ENERGY STAR Appliances;
- Home Improvement;
  - High-Efficiency Equipment;
  - Conversion from Electric;
  - Weatherization;
- New Construction;
- Second Refrigerator and Freezer Recycling; and
- Simple Steps, Smart Savings.

Cadmus finds the customer-facing program categories easy to understand and appropriate for program management and evaluation purposes, and this evaluation addresses programs according to these categories.

1.3.1 Changes to Program Offerings

Avista's residential program offerings have been designed to meet cost-effectiveness tests, and the PPA and implementation team elected to make a number of changes in program offerings

during the 2011 program year to reflect changes in measure cost-effectiveness. The following measures were discontinued, either during 2011 or at the end of 2011:

- Windows;
- Shade Trees;
- Fireplace Dampers; and
- Dishwashers.

The only measure added was for Simple Steps, Smart Savings, which added high-efficiency showerheads for the 2012 program year.

In the near future, the following additional program changes are anticipated:

- The Home Energy Audit Pilot Program is scheduled to terminate in 2012;
- Upcoming changes in Federal efficiency standards for natural gas furnaces will likely render that measure cost-ineffective; and
- The PPA team reported the ENERGY STAR New Homes program appeared marginally cost-effective, and may be considered for discontinuation.

Cadmus' impact evaluation findings indicated lower-than-expected saving for some measures; therefore, some measures previously deemed cost-effective may not continue to be cost-effective. In coming years, Avista's PPA and implementation teams may need to revisit program design to maintain the residential portfolio's cost-effectiveness, while still acquiring adequate energy savings to achieve conservation targets. This issue particularly becomes relevant for the natural gas portfolio, given measure savings have been lower than expected, and Avista anticipates lower avoided costs for natural gas this year.

1.3.2 Program Management and Implementation Approaches

Implementation of the residential programs all include internal program management and oversight, though two programs (Refrigerator and Freezer Recycling and Simple Steps, Smart Savings) are implemented externally, by third-party firms. Cadmus' interviews with Avista program managers and the PPA team gathered information about program management and implementation approaches. Overall, Cadmus found program management effective, and programs operated efficiently.

Two managers were responsible for the residential programs, including oversight of third-party implemented programs. The two program managers had responsibilities beyond residential program management, with each responsible for multiple programs. In addition to the two program managers, a team of rebate processing staff contributed to day-to-day program operations, including application review, processing, and QA/QC. Each program manager oversaw at least one externally-implemented program, and both reported conducting field visits to ensure these programs were implemented appropriately. For example, the program manager responsible for Simple Steps, Smart Savings regularly visited participating retail stores to ensure correct prices and correct display of point-of-purchase signage.

In addition to day-to-day processes, managers were involved in program planning and goal setting, in coordination with members of the PPA team. Staff statements differed regarding responsibility for planning and goal setting: program managers depicted the PPA team as the driver of the planning processes, while the PPA team noted program planning was the responsibility of the program managers. This disconnect appeared to result in unmet expectations for both teams, and may have impeded effective collaboration.

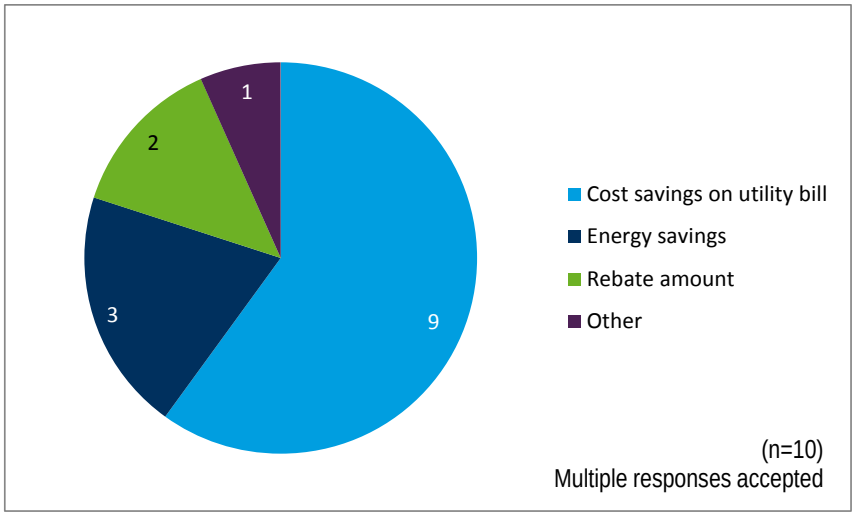
1.4 Market Characteristics

1.4.1 Customer Demand and Awareness

As part of the research effort, Cadmus asked a number of questions designed to understand customers' motivations for pursuing retrofits, and their understandings of the resulting benefits. As shown in Figure 1-12, the overwhelming response was: customers were driven by cost savings on their energy bills, followed by energy savings.

As cost savings primarily drove weatherization activities, one contractor recommended Avista periodically attach bill inserts to customers above a certain level of energy usage.

Figure 1-12. Customer Motivations for Weatherization Improvements



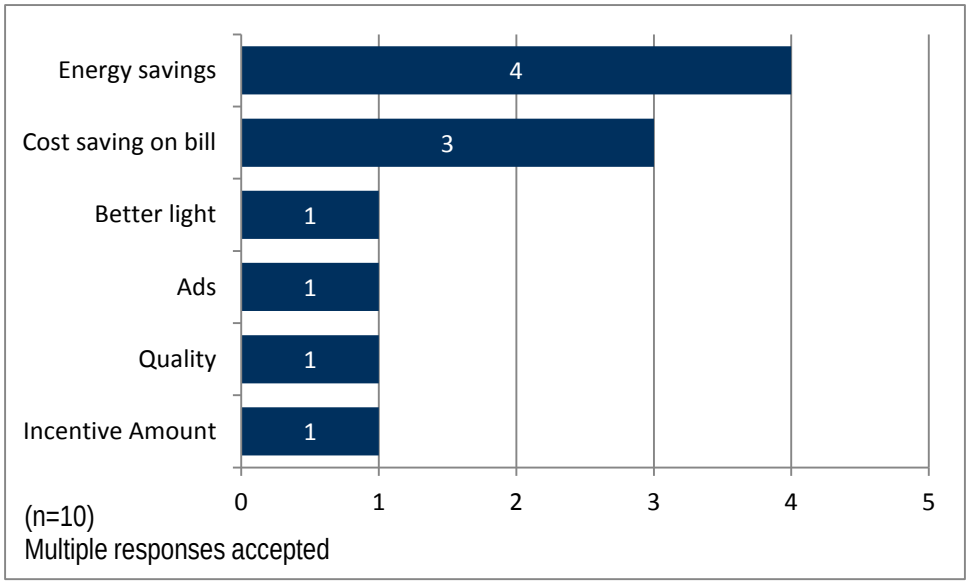
Weatherization contractors were asked to rank customer awareness using a scale ranging from "very aware" to "not aware at all" of weatherization benefits. The most common response (eight respondents) was: customers were "somewhat aware." However, the majority of contractors felt this awareness would likely increase in the future (six respondents). One contractor reported younger generations were more likely to become aware of the weatherization's environmental benefits. Two other contractors similarly indicated awareness would likely to increase due to general environmental awareness and rising energy prices.

Contractors were asked to rate customer demand for energy-efficiency measures using the same scale, ranging from "very high" to "no demand at all." The most common response was "somewhat high demand" (five respondents). Two respondents stated there was no demand or they did not know.

Six contractors believed demand would likely increase in the future. One contractor operating in Washington said that, if Avista ran more local advertisements, it would help, because very few people know about the program. Another contractor mentioned that, after Avista put up a billboard near the contractor's workplace, he would get two to three calls a week from customers asking about the rebate program. This contractor also said he could not tell customers whether or not they qualified, but, rather, directed them to visit Avista's Website. This contractor also mentioned his willingness to participate in any training Avista might put on, acknowledging Avista's rebate program likely increased his sales.

As shown in Figure 1-13, lighting retailers felt customers generally were motivated to purchase energy-efficient products to save energy and incur cost-savings on their utility bills.

Figure 1-13. Customer Motivations to Purchase High-Efficiency Products



1.4.2 ENERGY STAR Market Share

Despite decreases in program uptake, a review of available market share data indicated the market for many Avista's residential measures remained relatively untransformed, and significant opportunities for energy savings through these measures remain. Figure 1-11 provides market share estimates, by measure, from the Regional Technical Forum (RTF) and ENERGY STAR.

Table 2-11. ENERGY STAR Market Share for Residential Equipment

Measure	RTF Assumption*	ES Shipment Data 2009**	ES Shipment Data 2010**
Clothes washer	58%	N/A	64%
Dishwasher	56%	N/A	100%
Freezer	10%	N/A	25%
Refrigerator	32%	N/A	50%
Water heater	N/A	N/A	12%
Gas furnace	N/A	50%	61%
Window replacement	N/A	N/A	81%
Air Source Heat Pump	N/A	31%	46%

* RTF measure workbooks are found at: http://www.nwcouncil.org/energy/rtf/measures/Default.asp

** The 2009 ENERGY STAR Unit Shipment Data Summary Reports are found at: http://www.energystar.gov/ia/partners/downloads/unit_shipment_data/

1.5 Data Tracking

For each residential program evaluated, Avista provided Cadmus with tracking data, derived from four separate mechanisms:

- Internal, multiprogram tracking database;
- Home Energy Audit tracking spreadsheet;
- JACO Refrigerator Recycling database; and
- Simple Steps, Smart Savings invoice material.

Cadmus examined each database to: determine data fields tracked; inform process and impact evaluation activities; and assess the data-tracking processes' effectiveness. The assessment also sought to identify potential evaluability barriers presented by contemporary tracking processes.

1.5.1 Data Tracking Summary

The internal, multi-program tracking database included participant measure-level data for the following programs:[3]

- ENERGY STAR Products;
- HE Equipment;
- Weatherization and Shell;
- Space and Water Conversions; and
- ENERGY STAR New Homes.

[3] Fifty-two shade tree measures were also tracked.

The extract examined contained 22 fields, containing the following five kinds of information:

- Measure and program designation (*code, measure, fuel, program*);
- Payment and savings (*rebate, kWh, therms, cost*);
- Customer information (*account, customer, direction, house#, street, st sfx, unit, rural, city,*
  state, zip, phone number);
- Process date-stamps (*entry date, pmt date*); and
- Customer phone numbers (day area code, day phone ext, day phone#, home area code, home phone).

The internal, multi-program database served as an electronic repository for customer data, collected from program application forms, including data for programs Avista implements internally (excepting the Home Energy Audit Pilot Program, which is tracked in a separate database).

The Home Energy Audit Pilot Program tracking spreadsheet had eight fields, containing the following two kinds of information

- Customer information (*customer, direction, house#, street, st sfx, unit, rural, city, state, zip, phone number*); and
- Process date-stamps (*audit date*).

The Home Energy Audit database format differed from the internal, multi-program database. For example, in the Home Energy Audit database, the address field contained participant home addresses, but address formats did not appear standardized. This limited the data's usefulness, as nonstandardized addresses can be difficult to match to standardized addresses (such as those tracked in the multi-program database). The database also did not contain customer account numbers, which made it difficult to match customers to other utility tracking data. The Home Energy Audit data provided did not contain tracking of testing performed, recommendations, direct installation measures, or follow-through installations.

JACO, the implementer of the Refrigerator Recycling Program, also collected data on: participating customers; their pickup orders; and refrigerators and freezers recycled through the program. These data were provided in three separate, integrated spreadsheets, allowing comprehensive tracking of customers' and units' movements through the program. Avista provided Cadmus with unit and customer data. The customer data contained addresses in a nonstandard format, similar to that of the Home Energy Audit database.

Finally, Cadmus received invoice material for the Simple Steps, Smart Savings program, which tracks monthly reporting from FMS. Both Avista and FMS noted monthly reporting for this program often involved delays and adjustments, caused by difficulties in obtaining sales data from retailers in a timely manner. FMS monthly invoices contained detailed data at the measure level, reporting adjustments to previous months, and current monthly sales at each participating

retailer by Stock Keeping Unit code (SKU). Each monthly invoice included two spreadsheets, Sales Data Adjustments and Sales Data, containing the following, multiple data fields:

- Store
- Address
- Manufacturer
- SKU
- PTR Code
- Allocation
- Sales Month
- Sales Adjustment
- Prior Month Unreported Sales
- kWh Savings
- Incentive Amount
- Admin Fee
- Total

Aggregated into a final annual report, these data showed adjustment totals, made after the program year's close. Neither Avista nor FMS provided an aggregated year-end database of measure-level data.

1.6 Marketing and Outreach

Avista marketed its residential programs through multiple channels during in 2011. Cadmus' examination of marketing materials included reviewing information available online, as well as the 2011 calendars for the *Every Little Bit* campaign and JACO recycling program. Further, Cadmus interviewed Avista team members to understand processes, approaches, areas of achievement, and possibilities for improvements.

1.6.1 Marketing Approach

The *Every Little Bit* campaign served as Avista's main marketing driver. A broad-based marketing and outreach campaign, launched in 2007, it sought to raise customer awareness regarding energy efficiency and rebate availability.

The campaign launched after Avista conducted a residential baseline survey to identify barriers to purchasing efficient equipment. Marketing efforts included program-specific messages as well as more general messages about energy conservation. Avista continued to promote this campaign in 2011 as a primary means to reach customers with low-cost/no cost opportunities for saving energy through rebates. The approach used many broad-based channels, including: Avista's campaign Website (www.EveryLittleBit.com), direct mail, bill inserts, print advertising, TV advertising, radio spots, community events, promotions, competitions and social media outreach.

Avista program managers reevaluated the marketing approach every six months, using a seasonal approach for their marketing campaign. Geographic distribution of customers served as another strong driver of tactics.

For the recycling program, JACO created a marketing plan, consisting of bill inserts, newsletters, a Toyota Prius contest, search engine marketing, print ads, e-blasts, and collateral. Throughout the year, Avista program managers worked closely with the JACO team to make adjustments, as necessary.

Most rebate program marketing was done through retail point-of-purchase which identified discounted products and their sponsors. Rebate materials and participating retailers were also located online. Outreach to retailers used a one-on-one approach.

1.6.2 Marketing Materials Review

In evaluating the residential marketing program, Cadmus reviewed the following program materials:

- Rebate Forms
  - Home Improvement Rebate Form
  - New Construction Rebate Form
  - New Construction ENERGY STAR® Homes Rebate Form
- Advertising Materials
  - TV ads
  - Radio ads
- Website
- Facebook
- Marketing Calendars
  - 2011 Every Little Bit Plan At-A-Glance Calendar
  - JACO 2010–2011 and 2011–2012 Marketing Campaign Calendar

Rebate Forms

The rebate forms, located conveniently online, proved user friendly. They contained auto-complete formatting. which makes it easy for customers to fill out their information before printing. The forms offered clear, concise directions and steps for customers, and followed Avista's branding with a consistent look and feel throughout. Avista contact information was also provided, should a customer have questions. During 2011, Avista program staff began development of an online rebate application process, which launched in 2012.

Advertising Materials

All TV and radio spots, located on EveryLittleBit.com, included a variety of the following:

- Use of testimonials;
- Strong calls to action;

- Compelling messaging; and
- A sense of urgency driving traffic to the Website to download rebates.

All advertising materials contained energy-efficiency marketing best practices.

Website

Table 2-13 provides an overview of the EveryLittleBit.com Website, comparing best practice elements for energy-efficiency program Websites. Our findings indicate Avista used several best practice Web elements, but additional opportunities remain to boost awareness. Online messaging was strong, consistent, clear, and concise. The core messaging focused on saving energy and money through energy efficiency: "every little bit" adds up to bigger savings.

The uncluttered Website used a clear design, with consistent branding and positive imagery, conveying a simple, direct message. Subheadings break up page content, and help users find what they seek. The site also contains a number of interactive tools, such as: the House of Rebates, videos; and Efficiency Avenue. These helps keep customers engaged, and can help them maintain their presence on the page longer, where they can learn more.

Some Website links take the customer to the corporate Website (www.avistautilities.com), which can add confusion, as this does not pop up a new window; so users have to click "back" to return to the Every Little Bit site.

Table 2-12. Website Best Practices Used in Avista's Marketing

Category	Website Best Practice Element	EveryLittleBit.com	Rationale/More Information
Navigation	Programs highlighted on the utility's home page	Yes	Users often enter utility sites through the home page. Easy "one-click" access, a vanity URL, or microsite for a program makes participation easier and provides greater program exposure. AvistaUtilites.com has a direct link to EveryLittleBit.com. Consider adding additional creative elements of the Every Little Bit campaign to further enhance placement on the Avista Utilities homepage.
Content	Description leads with benefits (i.e., What's in it for the participant?)	Yes	The benefit statement is compelling and clear, and listed on the top of the Website; so it is highlighted on every page. ("When it comes to energy efficiency, every little bit adds up.")
Content	Clear call to action	Yes	The program's "why" for the program is clearly presented(as noted above). Action words are used, such as: "click to"; "read more"; and "find a rebate."
Marketing	Contact capture	Yes	A contact us page allows users to fill out basic information if they have additional questions. The "contact us" page on EveryLittleBit.com is effective as it only requires a certain amount of information. This reduced barriers for customers to reach out.
User Experience	Participant eligibility requirements	Yes	User experience refers to the online process and interactivity from the user's perspective. Easy downloads

Category	Website Best Practice Element	EveryLittleBit.com	Rationale/More Information
User Experience	Online registration process	Yes	
Marketing	Downloadable program information in print format	Yes	Rebate forms are present for easy downloads.
Marketing	Social media "share" elements	No	When marketing materials are easy and simple to share, "word of mouth" activity, in-person or online, increases. Consider adding a share toolbar to help customers virally share promotions and information online.

Facebook

Avista utilizes a "cause" Facebook page (https://www.facebook.com/everylittlebit). The EveryLittleBit.com displays the Facebook feed, and encourages customers to "like" the page by offering incentives to renters. Every renter becoming a fan of the page receives a PowerMonger Awareness kit, which contains energy-efficiency information and tools. Today, the site has over 2,000 fans, and utilizes best practice features of the Facebook Timeline.

Marketing Calendars

We reviewed the Every Little Bit Plan calendar, which provided an at-a-glance overview of 2011. It displayed outreach, campaigns, and projects as well as the media plan for each quarter. We also reviewed the 2011 JACO marketing plan for the appliance recycling program.

Table 2-14 compares elements identified by these two calendars, comparing them to best practice elements in energy-efficiency program marketing. Our findings indicate Avista currently uses several best practice marketing channels, but additional opportunities remain, and could be used boost participation.

Table 2-13. Website Best Practices Used in Avista's Marketing

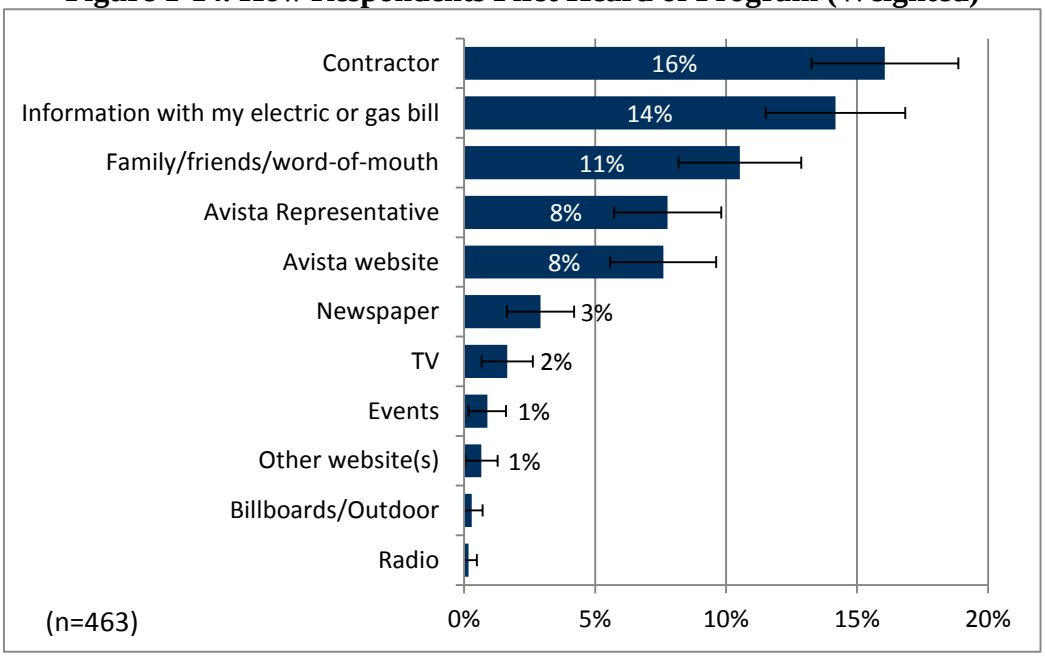
Best Practice Marketing Channels	Avista Residential Programs
Direct Mail	Yes
Newspaper Advertising	Yes
Radio/TV Advertising	Yes
Online Advertising	No
Website	Yes
Videos	Yes
Bill Inserts/Newsletters	Yes
Brochures	Yes
Presentations/Meetings	Yes
Events	Yes
Kiosks/Demonstration	Yes
Co-branding materials- Contractors, Partners, etc.	Only Simple Steps
Referral Program	No
Social Media Outreach (Facebook)	Yes
Mobile Application/Website	No, not for EE Programs

1.6.3 Sources of Participant Awareness

To help assess the effectiveness of Avista's and the implementer's marketing, we asked participants how they heard about the program they participated in. Respondents cited a variety of different sources, with responses fairly evenly distributed across: contractors (16%); information in utility bills (14%); and word of mouth (11%).

When compared to 2010 survey responses, the only significant change was in the proportion of respondents citing an Avista representative as their source of information (17% in 2010 dropping to 8% in 2011).

Figure 1-14. How Respondents First Heard of Program (Weighted)



1.6.4 Nonparticipant Awareness

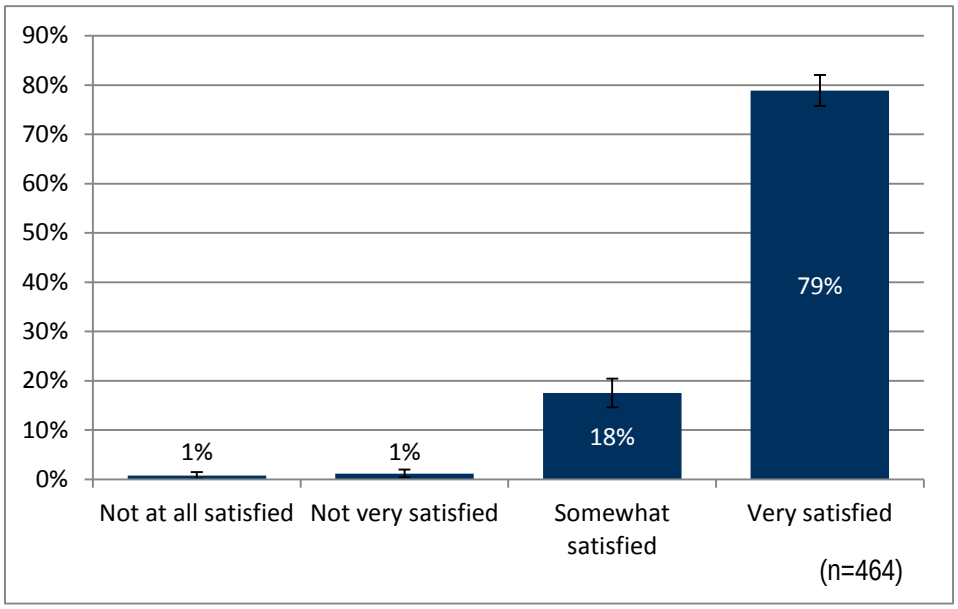
As cited above, lack of awareness among nonpartcipants proved to be the second-most common reason they did not seek program rebates for their newly installed equipment (17%). When asked if they are aware of Avista's energy-efficiency programs, only 54% answered in the affirmative, respresenting a statisitcally significant decrease from 2010 survey findings, which inidcated 67% of responses knew of Avista's programs. This appreaciable decrease in awareness indicates a renewed emphasis on mass marketing is appropriate.

1.7 Participant Experience and Satisfaction

Cadmus asked surveyed participants to rate their overall satisfaction with the program as well as their satisfaction with various program aspects. As shown in Figure 1-15, overall satisfaction with the programs was very high, with 96% of participants surveyed describing themselves as very or somewhat satisfied with the program in which they participated. This finding closely resembles 2010 survey findings, where 97% of respondents described themselves as very or somewhat satisfied with the program in which they participated, with 79% saying very satisfied.

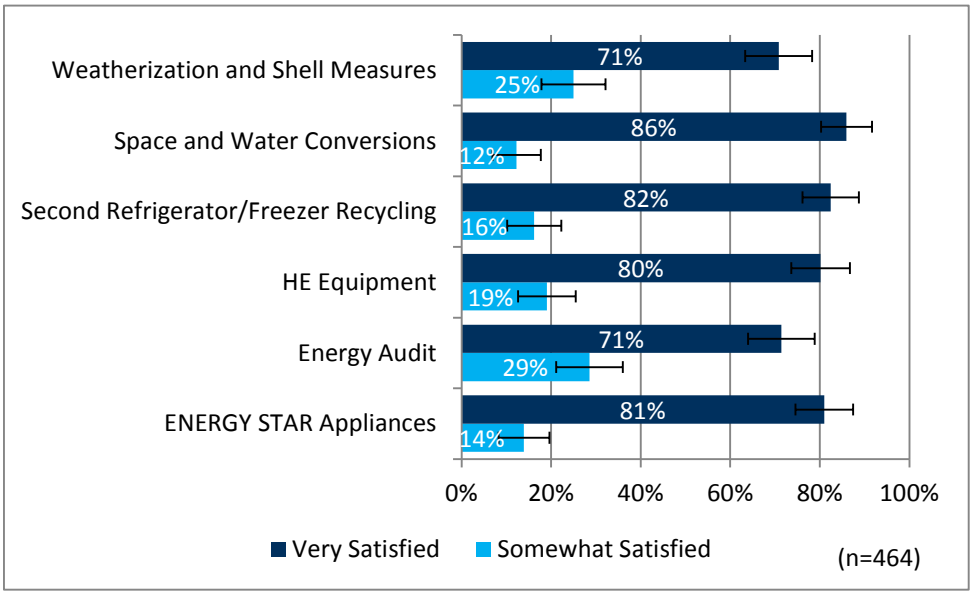
Avista's program satisfaction results compare favorably to those of a recently evaluated residential program in the Pacific Northwest: in the comparison program, only 56% of participants reported being very satisfied.

Figure 1-15. Weighted Average Overall Participant Satisfaction for All Programs



Program-level results, displayed in Figure 1-16, show satisfaction was high across all programs. Audit program results showed a comparatively lower percentage (71%) of audit participants reported being very satisfied. However, this increased from 2010 survey results, in which only 56% of audit participants indicated they were very satisfied.

Figure 1-16. Average Overall Participant Satisfaction by Program



1.7.1 Rebate Amount and Promptness Satisfaction

As shown in Figure 1-17, survey respondents reported slightly lower satisfaction levels with rebate amounts than with the overall program. As shown in Figure 1-18, participant expressed generally consistent satisfaction with rebate amounts across all programs. Similarly, when asked to rate their satisfaction with the time required to receive rebates, overall satisfaction was high across all programs (similar to 2010 survey findings). Figure 1-19 and Figure 1-20 provide additional detail.

Figure 1-17. Weighted Average Rebate Amount Satisfaction for All Programs

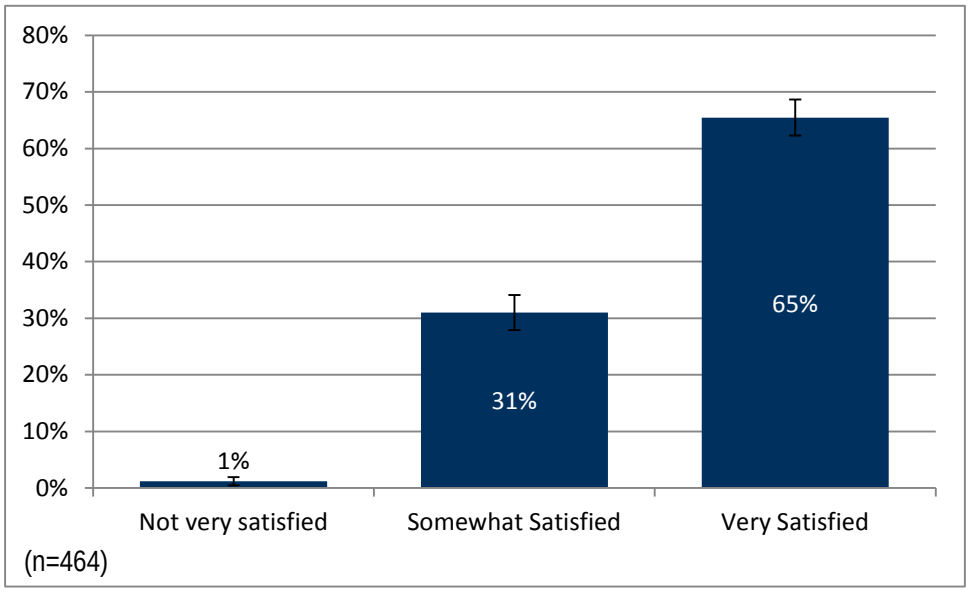


Figure 1-18. Average Rebate Amount Satisfaction by Program

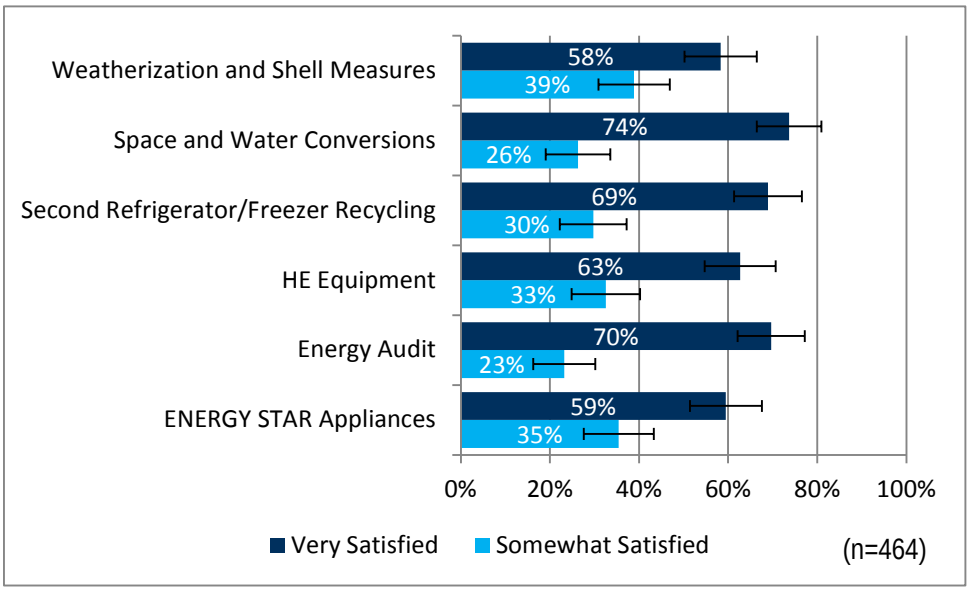


Figure 1-19. Weighted Average Rebate Promptness Satisfaction for All Programs

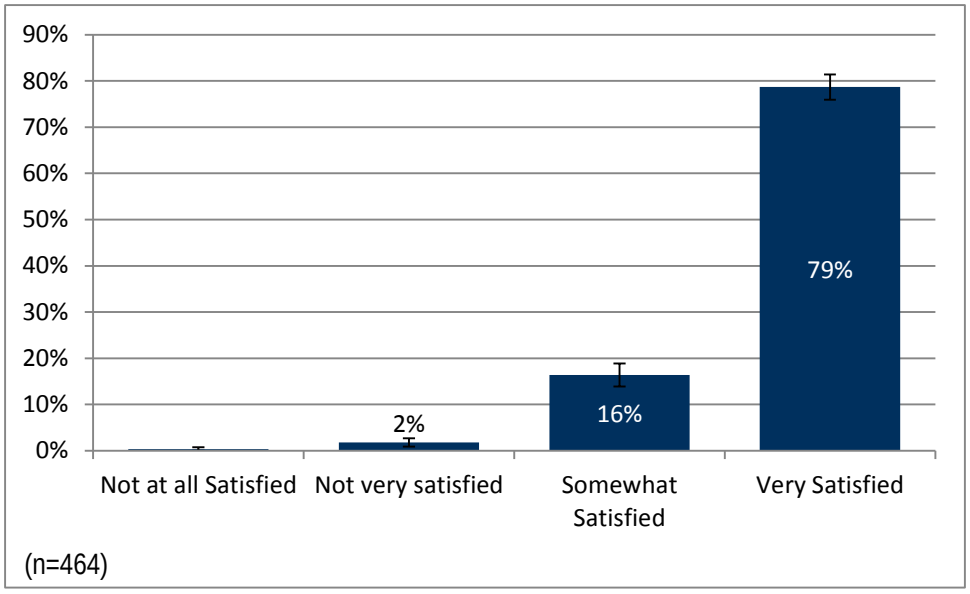
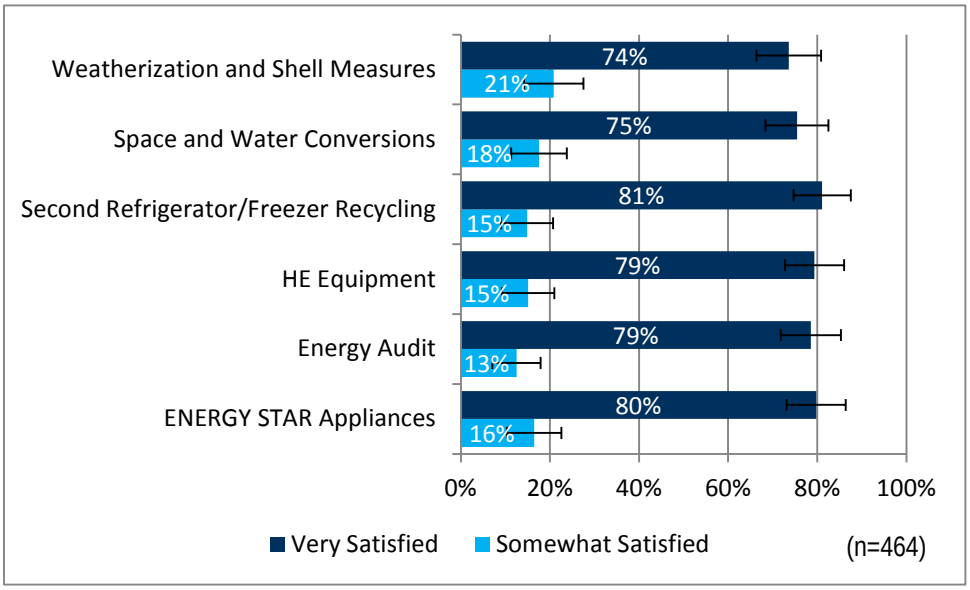


Figure 1-20. Average Rebate Amount Satisfaction by Program



1.7.2 Measure Satisfaction

The survey asked respondents participating in ENERGY STAR Appliance, HE Equipment, Conversion or Weatherization programs how they rated rebated products. Overall satisfaction was very high, with 1% and 4% of respondents indicating incented equipment was fair (depending on the program), and no respondents indicating a poor rating (a finding similar to 2010 survey responses).

Table 2-14. Measure Satisfaction Rating by Program (with 90% Confidence Intervals)

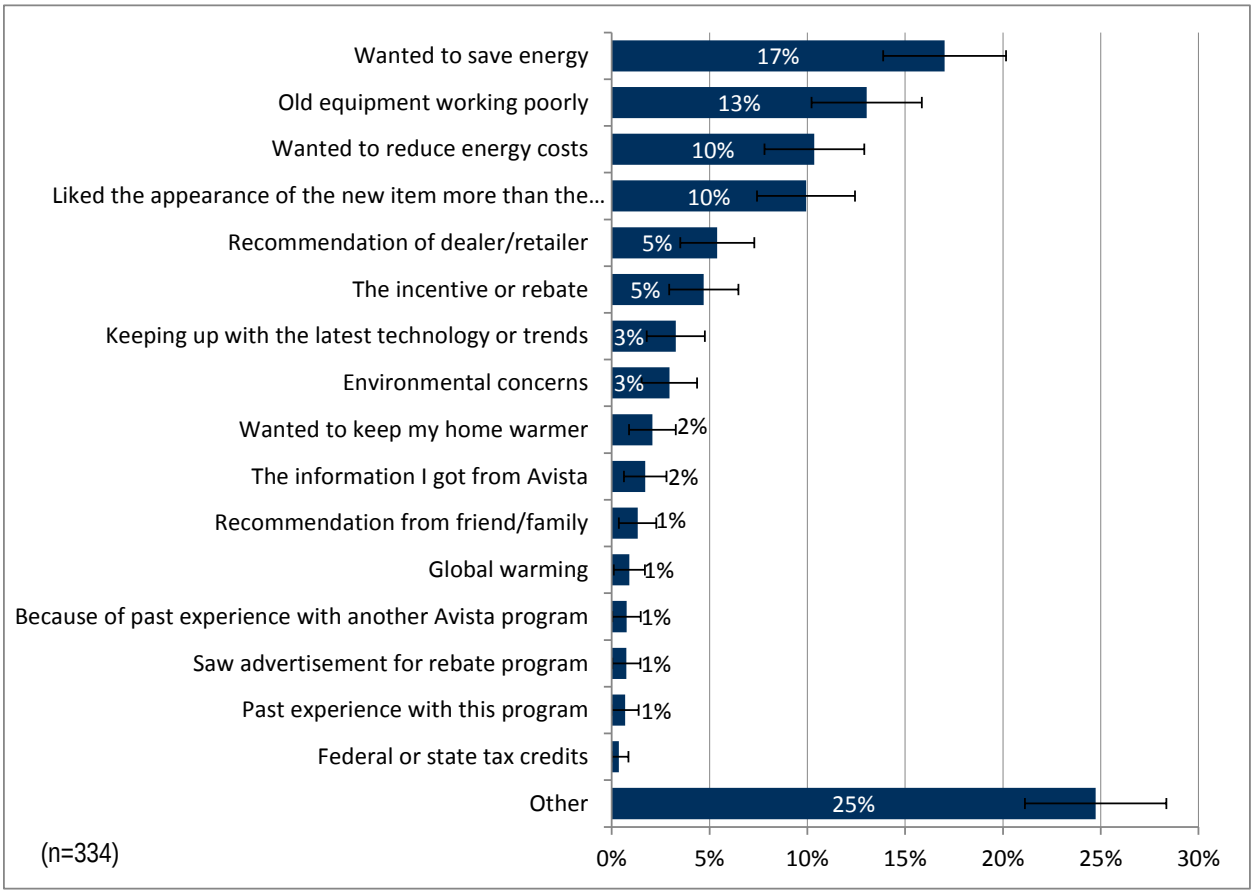
Rating	Percentage of Program Respondents*			
	ES Appliances (n=79)	HE Equipment (n=126)	Conversion (n=57)	Weatherization (n=72)
Excellent	76% ±7%	73% ±7%	74% ±7%	69% ±8%
Good	20% ±7%	25% ±7%	23% ±7%	24% ±7%
Fair	4% ±3%	1% ±1%	2% ±2%	4% ±3%
Poor	0% ±0%	0% ±0%	0% ±0%	0% ±0%

* Program columns do not add to 100%, due to respondents not knowing what rating to give, refusing to answer the question, or not installing the measure in question.

1.7.3 Motivation for Measure Purchases

Participant motivations for purchasing measures varied significantly. The most common responses were: a desire to save energy (17%); and to reduce energy costs (13%). These observations were similar to findings from the 2010 participant survey, with one appreciable difference: in the 2010 survey, replacing equipment because it did not work was the most common response (26%). In the 2011 survey, just 13% of respondents provided this response.

Figure 1-21. Weighted Average Motivation for Purchasing Measure



1.8 Residential Program Freeridership

Cadmus assessed freeridership for both the 2010 and 2011 program years. The methodologies and results of these studies are reported separately, however, this section discusses the ramifications of the findings on the residential programs. Freeridership can be indicative of the market dynamics within which programs operate, and as such, it can and should inform decision making on issues of program design and management.

1.8.1 Freeridership

Freeridership, the percentage of savings that would have occurred in the program's absence, was calculated based on surveys with program participants. Table 2-16 summarizes freeridership for the 2010 and 2011 programs, showing a notable increase in freeridership. The increase was statistically significant for two of the three program categories examined: High-Efficiency Equipment; and ENERGY STAR Appliances and Water Heaters.

Table 2-15. 2010 and 2011 Residential Program Freeridership

Program Group	2010			2011		
	n	FR	Absolute Precision	n	FR	Absolute Precision
HE Equipment	67	39%	±8%	155	60%	±4%
ES Appliances & Water Heaters	67	48%	±7%	107	63%	±5%
Weatherization	67	45%	±8%	72	48%	±6%
Residential Overall	201	44%	±4%	334	57%	±3%

The freeridership increase aligns with trends seen in other Pacific Northwest utilities in recent years. A comparable Pacific Northwest utility, for example, saw residential program freeridership increase from 29% in 2008 to 44% in 2009–2010. This trend likely indicates ENERGY STAR products' increase in market penetration (as shown in Table 2-12 and Table 2-17).

Cadmus reviewed the ENERGY STAR Unit Shipment and Market Penetration Report[4] summaries from calendar years 2009 and 2010 as well as assumptions currently used by the RTF. This review, discussed in the preceding Program Participation section, indicated notable increases in ENERGY STAR market share for a number of measures. Measures appearing to have the greatest impact on Avista's increased freeridership in 2011 were natural gas furnaces and air-source heat pumps, with market shares shown in Table 2-17.

Table 2-16. ENERGY STAR Market Share for HVAC Equipment

Measure	2009 ENERGY STAR Market Share	2010 ENERGY STAR Market Share
Residential Natural Gas Furnace	50%	61%
Air Source Heat Pump	31%	46%

[4] http://www.energystar.gov/index.cfm?c=partners.unit_shipment_data

1.9 Effectiveness of Implementers

Using third-party implementers presents advantages and disadvantages. Our research has led us to conclude Avista has thus far selected the appropriate programs for contracting to implementation firms (for appliance recycling and upstream lighting). Generally, utilities maintain direct implementation of programs requiring intimate knowledge of unique customers (e.g., large commercial and industrial customers). Programs benefitting from a uniform approach, which has been tried successfully elsewhere, involve national accounts, or require certain market expertise available from a third-party firm.

As savings goals increase and "low hanging fruit" of energy-efficiency measures become exhausted, it may be advantageous for utilities to consider increasing utilization of third-party implementers for certain programs. Avista may wish to consider the following questions in planning programs in coming years:

- Does the program's success depend heavily on the utility's relationship with the customer or institutional knowledge?
- Do third-party implementers bring specialized knowledge or skill sets exceeding those of Avista?
- Do third-party implementers offer program implementation cost savings?
- Do third-party implementers have established relationships with upstream distribution channels, trade allies, or customers that could increase program success?
- Does the third party present greater flexibility than the utility for issues such as delivery capacity or market intervention strategies?
- Are implementers willing to take on some of the risk for not meeting goals?

As noted, Cadmus considers the current split of delivery mechanisms appropriate. We have not found strong evidence indicating the need for sweeping changes. Still, rebate processing for two programs should be considered for potential outsourcing in the coming two years: the residential ENERGY STAR Products , and components of the High Efficiency Equipment program (e.g., water heaters). We believe Avista could benefit from concentrating on direct outreach and delivery of programs involving larger customers.

The evaluation's research into program processes included implementers' performance, with two firms identified for the residential portfolio:

- JACO, implementer of the refrigerator recycling program; and
- FMS, implementer of the Simple Steps upstream lighting program.

For the 2011 process evaluation, Cadmus conducted an in-depth interview with the JACO implementation team as well as with the FMS program coordinator, who is responsible for Avista's Simple Steps, Smart Savings program. Interview results informed the following sections.

1.9.1 JACO Environmental, Inc.

JACO partners with utilities in 28 states, operating turnkey appliance recycling programs. The 2011 Avista program did not meet its participation target, but participation increased over 2010. Cadmus' interviews with the JACO implementation team included:

- The program manager responsible for Avista's program;
- The Spokane facility manager;
- The call-center manager; and
- A representative of Runyon, Salzman, and Einhorn (RS&E), the marketing subcontractor.

These individuals provided information on: implementation processes, goal setting, barriers to program success, and the program's future.

Implementation Processes

The four interviewees represented four different implementation aspects:

- The program manager, in addition to being generally responsible for day-to-day program operations has responsibility for planning, goal-setting, contracting, and reporting to Avista.
- The facility manager has responsibility for the pickup staff, truck routing, and overseeing the recycling facility operations.
- The call-center manager has responsibility for managing the customer service center, which handles customer sign-up, eligibility verification (e.g., verifying customers are Avista electric customers), pickup scheduling, and subsequent customer service calls.
- RS&E has responsibility for all program marketing for Avista as well as for all of JACO's appliance recycling programs, nationwide.

JACO implements the program following its standard processes. Customers sign up for the program, either online via Avista's Website or by calling JACO's toll-free number. They are asked a few questions to verify eligibility (they must be Avista electric customers, and their refrigerator or freezer must meet certain criteria to participate). Next, the customer schedules a pickup appointment.

During pickups, a JACO team arrives at a customer's home to collect the refrigerator or freezer, again verifying eligibility and recording data on the unit, including its estimated size, age, and configuration. These data, which JACO tracks through its program database, are essential to maintaining the program's evaluability. Units are delivered to the Spokane facility, where they are processed and recycled. Using a combination of proprietary and non-proprietary techniques, JACO ensures at least 95% of materials in each unit are recycled or disposed of in an environmentally sound manner. Following pickup, JACO has responsibility for processing and mailing rebates to participating customers.

The JACO team reported implementation ran smoothly for the Avista program, and staffing levels were adequate. They also reported a strong relationship with Avista, on both the program management and marketing sides.

Goal Setting

JACO reported appliance recycling programs' goals nationwide typically are set with a 1% annual harvest rate from a customer base.[5] This participation level is considered achievable using a robust marketing campaign; however, beginning in 2008, when the economic downturn began, programs began to experience drops in participation. Since then, participation in Avista's program has been less than the 1% target harvest rate, but has remained steady and sustainable, in JACO's estimation.

Barriers to Program Success

JACO interviewees identified a few barriers to increased program participation.

First, geography plays a role: Avista has a somewhat rural service territory, which tends to have lower harvest rates. This can be attributed to factors such as greater prevalence of hunting and higher food storage needs, which can lead households to retain multiple refrigerators or freezers.

Second, the economic downturn reportedly had a strong impact on the Spokane area; consequently, customers became more likely to retain their existing appliances for longer periods before replacing them. Interviewees noted incentive levels can push against this tendency, but $30 may not be sufficiently high to counter the other issues. JACO noted the incentive level was likely appropriate for cost-effectiveness, and was in accord with similar programs in Washington and Idaho.

Finally, program awareness serves as an important participation driver, and JACO reported a need for increased marketing to improve awareness levels. Recognizing limited marketing resources, JACO has attempted to use marketing funding strategically, focusing on bill inserts, which tend to produce the strongest customer response.

Program's Future

The JACO team noted a possible future direction for the program would be to build retailer partnerships. A strategy applied in other JACO programs elsewhere in the country, these partnerships entail promoting the program through appliance retailers, where customers can sign up for the JACO program to collect their old units when they purchase a new unit. Avista reported they considered this option, but noted freeridership concerns; currently, the only interactions with appliance retailers involves distribution of program materials. JACO reported a more formalized partnership program would almost certainly increase participation by a few percentage points, and noted other utilities have not encountered freeridership issues.

1.9.2 Fluid Market Strategies

As the 2010 process evaluation contained a detailed profile of FMS, this evaluation focuses on program changes. Overall implementation process has remained the same: FMS works with

[5] The harvest rate is defined as the percentage of total residential customer households recycling an appliance through the program in a given year.

lighting and showerhead manufacturers to allow their energy-efficient products to be offered at reduced prices at area retail stores. FMS signs a three-way Memorandum of Understanding with each retailer and supplier, specifying products, incentive amounts, and retail price ranges for each product. FMS field representatives visit stores monthly, verifying retail prices fall within the specified range for each product. FMS consolidates monthly reports from all program retailers, dividing product sales between participating utilities, based on retailer locations. This process results in a monthly report to Avista, allowing program unit sales and savings to be tracked.

During 2011, planning for program changes occurred:

- Showerheads were added to Avista's Simple Steps, Smart Savings measure offerings (beginning in 2012); and
- The Bonneville Power Administration (BPA) began a planning process to determine the program's future, in light of changing Federal regulations addressing residential lighting products.

In the 2010 evaluation, Cadmus recommended adding showerheads to the program, and Avista and FMS collaborated to make this change during 2011.

With The Energy Independence and Security Act of 2007's (EISA's) limitations on high-wattage light bulbs to go take effect in October 2012, FMS reported BPA is working on a new or modified program design in the next few years. FMS was not familiar with process details or proposed modifications. The program coordinator thought the current incarnation of Simple Steps would likely continue for at least two years.

FMS noted 2011 was a fairly standard year for the Simple Steps program, with no major changes or barriers. Additionally, FMS reported the relationship with Avista continued to be positive, with the Avista program manager continuing to provide excellent program support, including making regular visits to participating retailers.

1.10 Trade Ally Participation and Satisfaction

The evaluation's research into program processes included trade allies'[6] roles, specifically two ally groups: weatherization contractors, and lighting retailers. This built on 2010 evaluation work, focusing on Home Audit field auditors and HVAC contractors.

To identify appropriate weatherization contractors to include in our interview efforts, we relied on contact information Avista provided. Avista maintains mailing lists of contractors and vendors involved with its programs. Over two weeks in March 2012, Cadmus completed interviews with representative from 10 weatherization contractor organizations. The interviews sought to achieve the following goals:

[6] For this report, Cadmus defines trade allies as organizations playing key roles in program operations, but not directly paid by the program's sponsoring utility.

- Collect information about test-in and test-out procedures for installing insulation during home weatherization retrofits;
- Gauge contractors' opinions regarding the inclusion of a preapproval step when applying for rebates;
- Assess customer demand for (and awareness of) of home insulation benefits;
- Gather contractor feedback on critical program elements, such as rebate levels and eligibility requirements; and
- Assess the effectiveness of outreach and marketing activities.

Lighting retailers selling incented bulbs through Avista's Simple Steps program proved difficult to reach. FMS provided retailer's names and addresses through lighting invoice materials. Cadmus used an Internet search to match phone numbers to stores. FMS also provided contact information for a limited number of stores likely to complete interviews. Over approximately three weeks, Cadmus completed interviews with representatives at 10 participating locations, assessing satisfaction, stocking practices, marketing efforts, and areas for program improvements.

1.10.1 Weatherization Contractor Profile

The majority of respondents reported residential insulation retrofits as a significant aspect of their work for several years. When marketing their services and performing retrofit work, most respondents promoted their experience and used professional relationships.

Weatherization retrofit survey respondents were distributed evenly across Avista's service territory. Table 2-18 shows numbers of completed surveys, by state.

Table 2-17. Geographical Distribution of Respondents

State	Numbers of Contractors Surveyed
WA	6
ID	4

Test-In and Test-Out Procedures

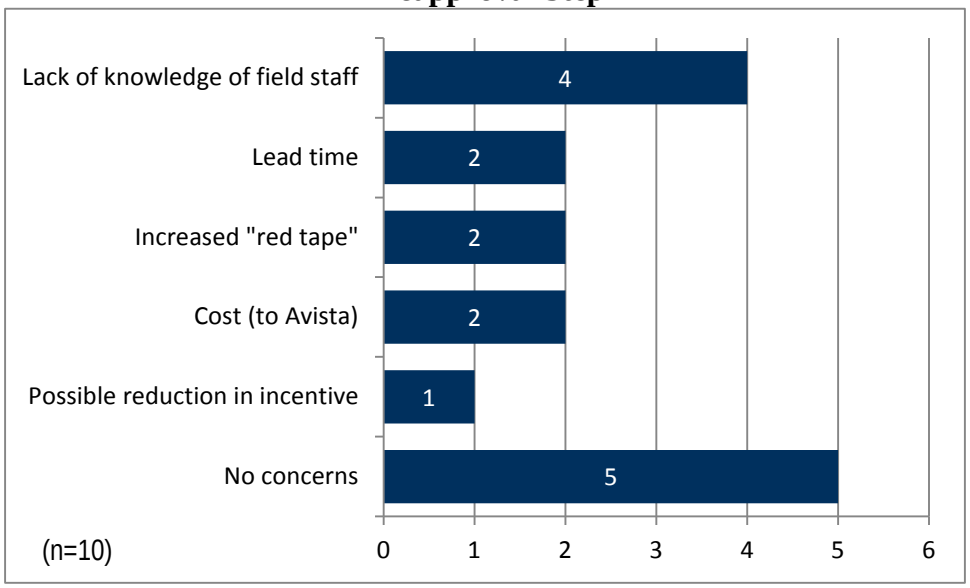
The test-in method most commonly used (seven respondents) was to measure the depth of insulation in attics. The remaining three respondents performed visual inspections before installation. Only one contractor reported using infrared thermal imaging to assess existing insulation in exterior walls.

In most cases, the same methods (measuring the depth and visual inspection) were reported as test-out procedures. Two contractors reported not performing any tests post-installation. One of these two reported his workers asked homeowner if they wanted to inspect attics for their work. However, homeowners reportedly often could not determine how a proper amount of insulation should look, or whether proper ventilation and other concerns had been addressed.

Attitudes Toward Preapproval

Contractors were asked their opinions regarding possible preapproval requirements before performing work. Contractors generally were receptive to the idea, but had concerns. Figure 1-22 shows common concerns voiced regarding preapproval (multiple responses allowed).

Figure 1-22. Contractor Concerns Regarding an Application Preapproval Step



All contractors operating in Washington said customers referred to audits as the reason for pursuing weatherization. No Idaho contractors reported customers receiving audits prior to weatherization work. Two contractors in Idaho said they were not aware of anyone performing residential audits in rural Idaho.

Common concerns among contractors in both states were knowledge levels among audit staff. An Idaho contractor cited quality as his selling point, and that you *"can't just run any minimum wage kid out there."*

Another contractor operating in Idaho volunteered to be the field auditor if Avista needed an experienced contractor to operate in rural Idaho. He also proposed that Avista compile a list of authorized contractors as an alternative to hiring a full-time individual to complete audits. He felt, with a simple form, contractors could do the audits themselves, and submit the form for Avista's approval.

One Idaho contractor stated he would like to have specific knowledge regarding which customers qualified for program incentives, noting a contact at another utility (Clearwater) helped him identify possible work in the Lewiston area, and he would find a similar relationship with Avista useful. Though it may not be appropriate for Avista to provide detailed information about its customers to contractors, an increase in communication and support for contractors interested in marketing the program might prove beneficial.

Program Elements

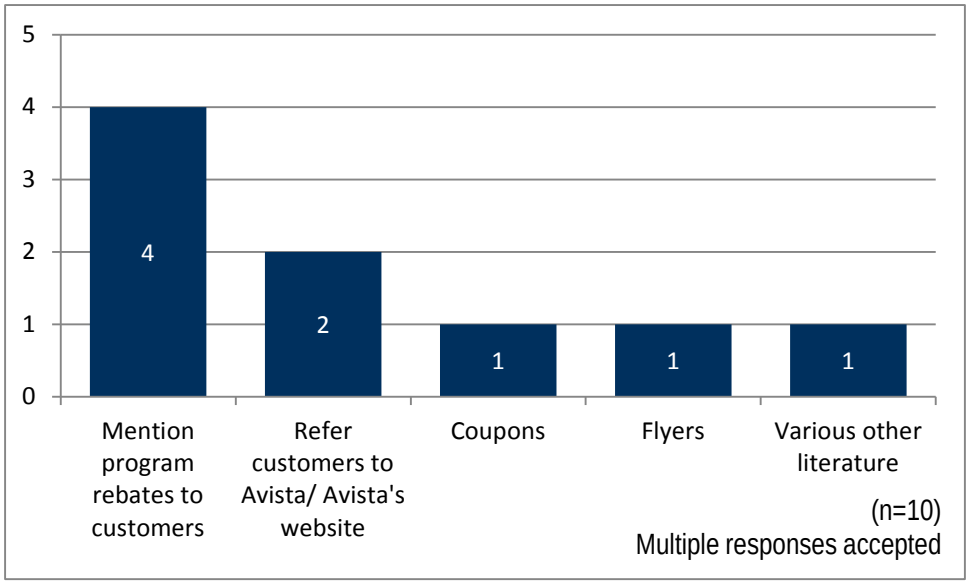
Cadmus asked contractors about the appropriateness of program rebate levels and requirements. Eight contractors surveyed reported rebate amounts were set at appropriate levels. The other two reported they preferred increased rebate amounts. One of these contractors said rebates for attic insulation should be increased as such work typically paired with remodels or other costly structural changes.

Only two contractors reported wanting changes in program requirements. Both contractors reported Avista should loosen the requirement that existing insulation be R-19 or less to qualify. They stated many customers had levels just above R-19, but should really be at R-49 to achieve comfort and affordable energy prices. One of these contractors suggested a prorated rebate as a solution to this perceived shortcoming.

Marketing and Outreach

Three contractors would like to see an increase in Avista's marketing efforts, saying customers simply did not know the program was available. Figure 1-23 shows outreach contractors reportedly engaged in.

Figure 1-23. Outreach Activities that Emphasize Rebates



Although some contractors engaged in promotional activities, the majority indicated they mentioned the rebate to customers *only after* customers made initial calls for consultations. All promotional outreach activities (coupons, flyers, and multiple literature sources) occurred in Washington. Contractors in Idaho did not discount the value of outreach and advertising. One respondent stated his company did not conduct outreach specifically around Avista rebates, but felt they should do so.

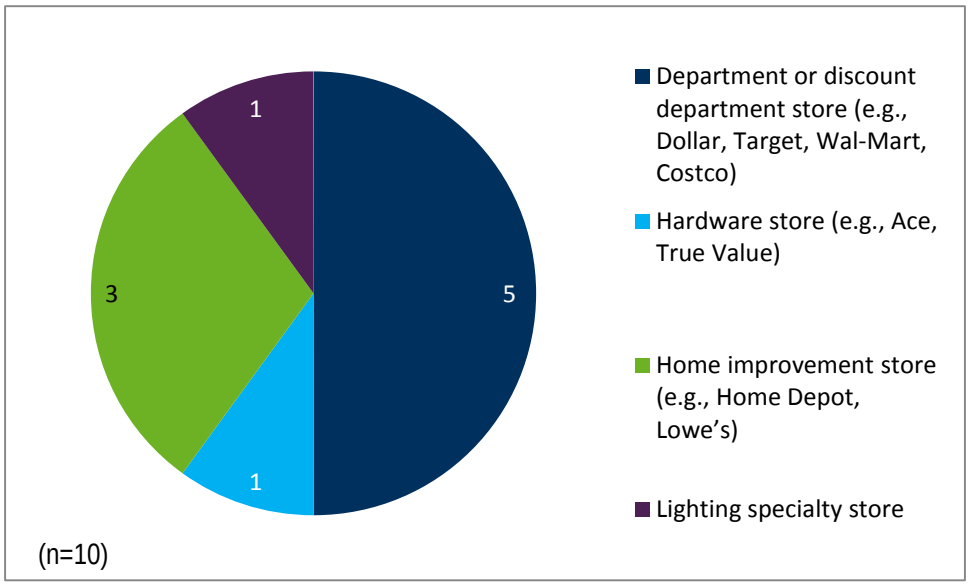
Responses indicate that when contractors mention the rebate program to customers, they then refrain from providing guidance through the qualification steps. Once respondent mentioned he did not have any handouts or program specific literature that could help him assist customers in this way, another directed customers to Avista's website for guidance. Only one out of four

respondents saying they "mention it to customers" included it in sales pitches and let customers know he could help them through the rebate process.

1.10.2 Simple Steps Lighting Retailer Profile

Simple Steps lighting retailer survey respondents represented several different market segments. As outlined in Figure 1-24, most respondents were employees of department or discount stores.

Figure 1-24. Lighting Retailer Market Segment



Interaction with Program Staff

Survey respondents were asked how they first heard about the program. For most respondents (four), this information came from their own company management or a corporate office. This is not surprising, as the retailer survey targeted store managers, and most retailers completing the survey had some regional affiliation. Other methods cited included: personal experience or past participation (two respondents); a lighting vendor or manufacturer (two respondents); and various other methods (two respondents).

Most respondents (six) never had direct interaction with Simple Steps field staff. However, the four respondents having contact with program staff indicated they were somewhat helpful (two respondents) or very helpful (two respondents). Only one indicated improvement may be possible, citing a better explanation of how the program works as helpful.

Interviewees generally found program participation very easy (five respondents) or somewhat easy (one respondent). Two felt it was not very easy, and two did not feel qualified to provide responses. Respondents indicating participation was not easy did not elaborate or provide context for their responses.

Regarding overall satisfaction with the program, responses followed a similar trend: six respondents were very satisfied with program participation; one was somewhat satisfied; and

three did not feel qualified to provide responses. When asked for program recommendations, respondents offered the following:

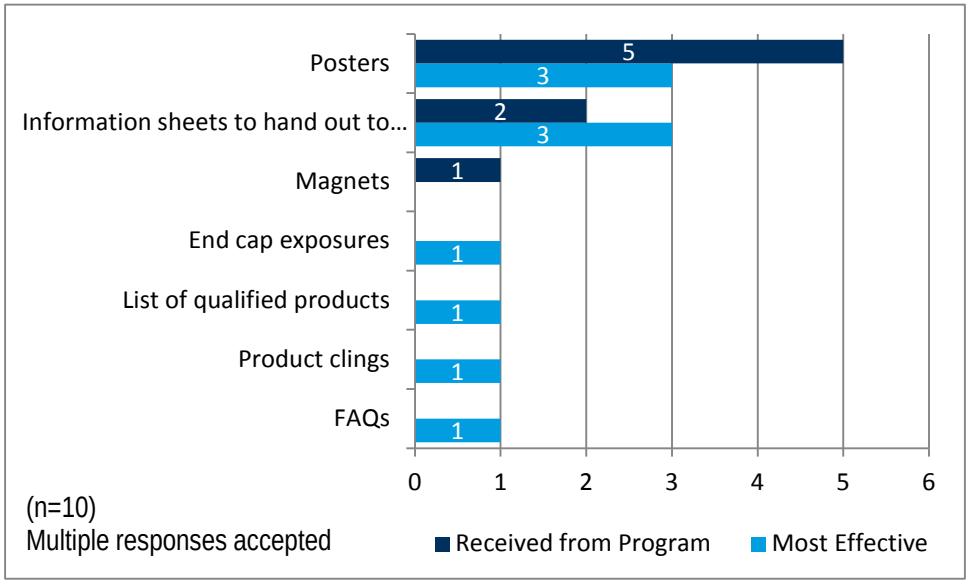
- Increase program attentiveness to changes in bulb type and technologies (and updating incentive offerings as appropriate); and
- Take steps to ensure retailers do not sell out of incented bulbs.

Program and product promotion

Respondents indicated effective marketing materials were available to program participants. The majority of respondents (six) received marketing or display material from Avista, BPA, or FMS. Five indicated satisfactory levels of information and material were provided. One respondent reported information and materials were provided, but were not enough. No respondents could point to specific areas where information was lacking.

Interviewees were asked what marketing materials they received from Avista, BPA, or FMS, and which materials they believed were generally most useful for product promotion. Figure 1-25 provides distributions of responses. While limited, responses suggest materials provided generally were also most commonly identified as the most effective.

Figure 1-25. Promotional Materials (Provided and Found to be Useful)



As shown in Figure 1-26, lighting retailers interviewed use a variety of different methods for informing customers of general product discounts, the most common of which were posters on retail floors; this was also identified as the most effective method for general product discount promotion, as shown in Figure 1-27, and was cited as the most useful and common marketing material provided for the Simple Steps program.

Figure 1-26. Advertising Methods (General Product Discounts)

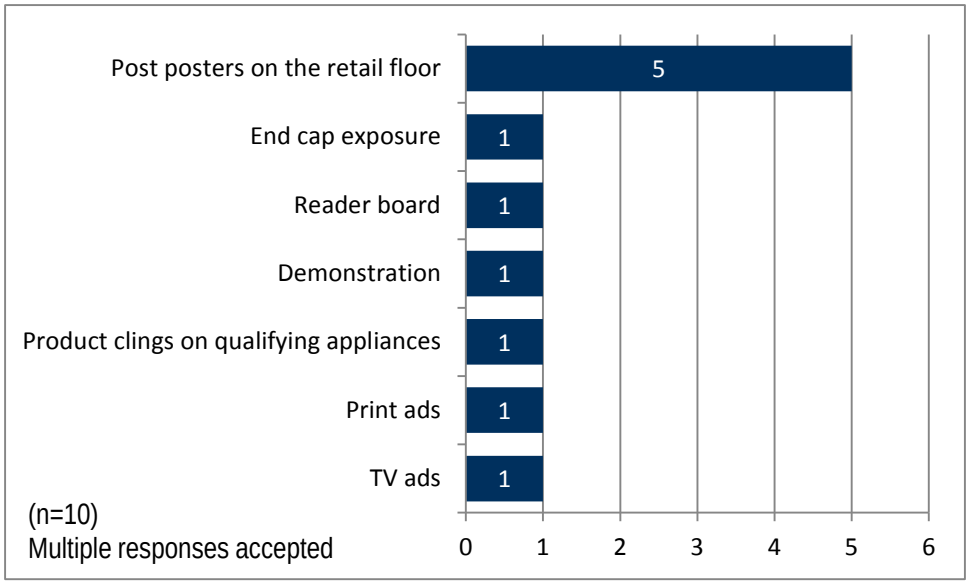
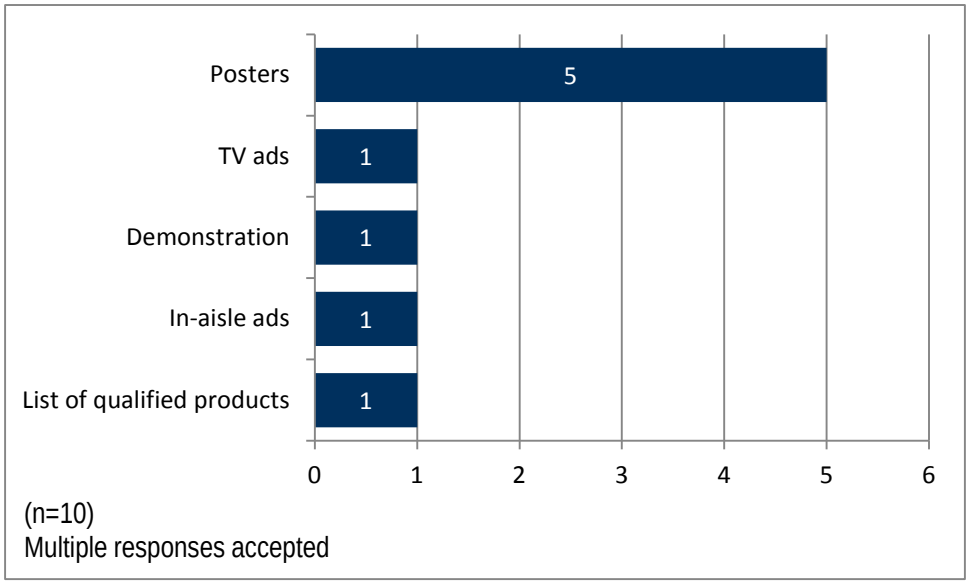


Figure 1-27. Most Effective Advertising Methods (General Product Discounts)



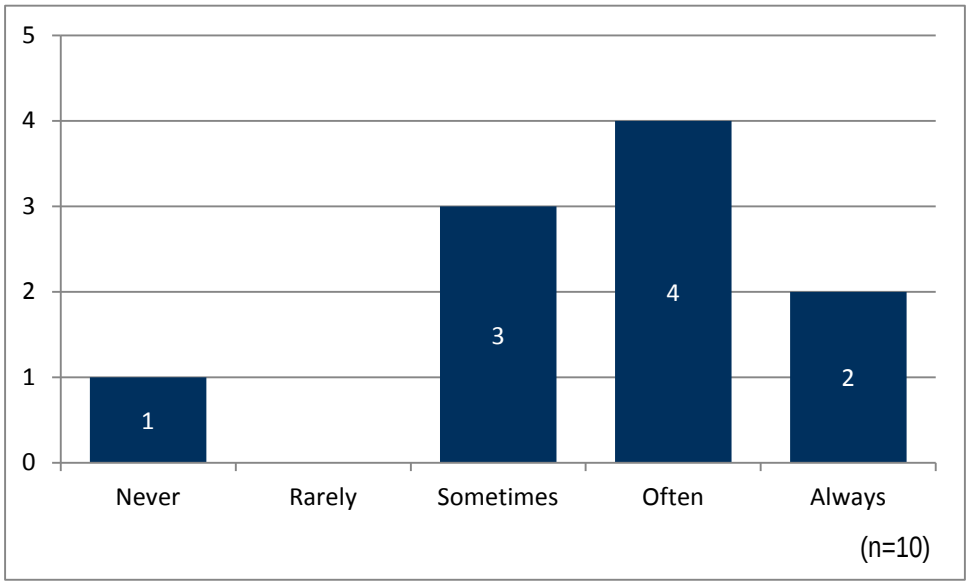
Customer Motivation

The availability of high-efficiency products proved an important motivator for CFL customers. Six out of 10 lighting retailer respondents indicated they used availability of high-efficiency products to attract customers to their business, three respondents were not sure, and only one respondent indicated they did not.

As shown in Figure 1-28, retailers also generally recommended offering more energy-efficiency equipment options to their customers. While these findings cannot be extrapolated to the

population of retailers (as they are not statistically significant), they indicate the importance these retailers placed on promoting energy efficiency and Avista's energy-efficiency programs.

Figure 1-28. Suggesting High-Efficiency Equipment to Customers



1.11 Conclusions, Recommendations, and Future Research

1.11.1 Program Participation

Conclusions

- Overall participation declined from 2010 to 2011. Decreased participation appeared most prominent in programs affected by American Recovery and Reinvestment Act (ARRA) tax credits.
- Program awareness among nonparticipants has declined from 2010 to 2011.
- Home Energy Audit Pilot Program participation exceeded expectations in 2011 and showed good levels of follow-through among participants.

Recommendations

- Renew emphasis on customer outreach and mass marketing, including refreshing campaign messaging and using trade allies.
- Consider using lessons learned from the Home Energy Audit Pilot Program to design and implement a full-scale program that employs audits or a similar whole-house approach.

1.11.2 Program Design

Conclusions

- Lower-than-expected evaluated per-unit savings indicate a need to review program eligibility criteria and measure offerings. Measure savings can be negatively affected when multiple HVAC measures are incented and installed together.
- Program managers' limited availability to focus on long-term program considerations may hinder program performance.

Recommendations

- Consider additional program requirements to ensure measure savings remain in line with expectations. For example, Avista should revisit program eligibility for multiple measures, where savings are interactive (particularly for HVAC equipment), and consider adjusting savings to reflect interactive effects, or incenting specific packages of complementary measures. Avista may also consider not offering heat pump incentives when natural gas is available.
- Explore possible benefits of outsourcing simple rebate processing for ENERGY STAR appliances and hot water heaters in order to allow program managers to focus on long-term program considerations.

1.11.3 Market Characteristics

Conclusions

- Avista's recent program changes have reflected documented nationwide market transformation.

Recommendations

- Ensure future program effectiveness by continuing to update program offerings and design to reflect changes in market conditions.

1.11.4 Data Tracking

Conclusions

- Program tracking has proved effective, but evaluability could be improved. Consistency across programs and tracking of follow-through for audit participants could be enhanced.

Recommendations

- Ensure consistency in data tracked across multiple databases including: the multiprogram database; the JACO database; the Home Energy Audit database; and Avista's central customer information database.
- If Avista continues the Home Energy Audit Program, audit tracking should be enhanced to include: integration into the central participant rebate database; and more robust tracking of data collected through the audit, and of follow-through installations.

1.11.5 Marketing and Outreach

Conclusions

- Avista adheres to best practices for energy-efficiency marketing and outreach. However, Cadmus identified opportunities for enhancing Avista Websites.

Recommendations

- Avista should maintain its multifaceted approach to reaching a broad range of customers, while targeting difficult-to-reach customers, where appropriate. Possible Website enhancements include:
  - Exploring relationships between the corporate Website and EveryLittleBit.com. Explore the Entrance-, Exit- and In- Page analytics to achieve a deeper understanding of the paths people take within the Website.
  - Adding a content-sharing toolbar to the EveryLittleBit.com Website to promote referrals. This toolbar would allow users to share content via email, RSS feeds, or social media platforms.

1.11.6 Participant Experience and Satisfaction

Conclusions

- Participant satisfaction remains high across all programs and program elements.
- The Home Energy Audit Pilot Program experienced a significant increase in participant satisfaction, compared to the 2010 program.

Recommendations

- Continue to prioritize customer satisfaction, and take advantage of high satisfaction by targeting past participants for future participation.

1.11.7 Residential Program Freeridership

Conclusions

- Avista's increasing residential freeridership indicates market transformation is occurring.

Recommendations

- Continue conducting research to inform decision making about future program improvements/continuation.

1.11.8 Effectiveness of Implementers

Conclusions

- Avista's use of third-party program implementers has been appropriate and effective.
- Avista's has strong, positive relationships with its implementation contractors in both programs.

Recommendations

- Explore possible benefits of third-party program implementation. Avista's newly launched online rebate application system may alleviate staff burden associated with rebate processing. However, that transferring responsibility for rebate processing to a third-party contractor could convey further benefits. Specifically, this option should be explored for the ENERGY STAR Appliance Rebate Program and water heaters, as the application reviews for these measures do not require a high level of expertise.

1.11.9 Trade Ally Participation and Satisfaction

Conclusions

- Trade allies remained key program messengers, and opportunities exist for increased involvement from them. Trade allies are looking for more support from Avista to provide them with program literature for their customers.

Recommendations

- Avista should investigate the possibility of a more formal relationship with trade allies. This would allow increased program marketing through trade ally channels, while ensuring accountability and professionalism. Disseminating simple program information sheets to contractors and retailers would be a low-cost, first step toward developing relationships with key trade allies. More involvement might include, for example, hosting trade-ally training events.

1.11.10 Future Research

Increasing freeridership, likely attributable to increasing market saturation of energy-efficient technologies, may threaten cost-effectiveness of many current measure offerings (a trend not unique to Avista's programs or service territory). Cadmus recommends a few areas of research that may inform future program direction:

- **Explore possibilities for new cost-effective measure offerings**. Emerging technologies may create new opportunities for cost-effective programs, and Avista should conduct research to identify potential for adding such measures to their existing offerings.
- **Review methods other utilities have used to address this issue.** Specifically, Avista should examine the activities of utilities serving mature energy-efficiency markets, such as California, Oregon, and Massachusetts.
- **Explore new program design possibilities, including deep home retrofitting**. This approach allows utilities to address all energy-saving opportunities within a home in single, cost-effective package. It can lower delivery costs, and improve tracking of measure interactive effects. Deep retrofit programs also can address unique customer needs, while supporting emerging technologies by pairing them with low-cost measures to maintain whole-home cost-effectiveness.
- **Conduct cost-benefit analysis on program design and implementation changes.** Through evaluation research, Cadmus identified two possible program changes that could benefit future program activities:

- Outsourcing some functions of program implementation currently conducted by Avista, such as simple rebate processing.
- Establishing a retail partnership component of the Second Refrigerator and Freezer Recycling Program.

Benefits and costs of these changes need additional examination prior to further consideration.

2 2011 NONRESIDENTIAL PROCESS REPORT

2.1 Introduction

2.1.2 Program Overview

This report provides findings and recommendations, drawn from a process evaluation of Avista's nonresidential energy-efficiency programs. These programs encourage commercial and industrial (C&I) customers to install more energy-efficient equipment in their facilities. To accomplish this, Avista offers cash incentives for installation of qualifying energy-efficient equipment. Incentives are organized by energy-efficiency measures, grouped into programs. Prescriptive programs include electric and gas measures, and may offer a single measure type or a group of measures. Eligibility of Prescriptive programs is based on installation of qualifying equipment.

The following section provides detailed descriptions of Avista's Prescriptive, Site-Specific, and EnergySmart Grocer programs. Excepting the EnergySmart Grocer program, Avista implements its nonresidential energy-efficiency programs.

Prescriptive Programs

Several of Avista's nonresidential programs were discontinued partway through the year, while a few new programs launched in 2012. Table 2-1 distinguishes existing programs from those discontinued in 2011. This section describes programs operating during the full year (and thus served as the focus of the 2011 process evaluation).

Table 2-1. Prescriptive Programs

Operated Throughout 2011	Discontinued in 2011	New Programs in 2012
Commercial Clothes Washer	Demand-Controlled Ventilation	Natural Gas HVAC
Food Service Equipment	LED Traffic Signal Program	Standby Generator Block Heater
Green Motors Rewind	Side-Stream Filtration	Variable Frequency Drives
HVAC Rooftop Maintenance	Steam Trap Replacement	Windows and Insulation Program
Lighting Incentives	Vending Machine Controls	
Power Management for PC Networks		
Premium Efficiency Motors		

Commercial Clothes Washer

To encourage customers to select high-efficiency clothes washers, this program targets nonresidential electric and natural gas customers in multifamily or commercial Laundromat facilities. The program's streamlined Prescriptive approach has been designed to reach customers

quickly and effectively in promoting ENERGY STAR or Consortium for Energy Efficiency (CEE)-listed units.[7]

Food Service Equipment

Applicable to nonresidential electric and gas customers with commercial kitchens, this program provides direct incentives to customers choosing high-efficiency kitchen equipment. Equipment must meet ENERGY STAR or CEE Tier levels to qualify for incentives. Measures eligible for rebates include: ovens, fryers, griddles, heat vent hoods, hot water heaters, refrigerators, freezers, dishwashers, and ice machines.

Green Motors Rewind

Operated in partnership with the Green Motors Practices group, this program provides education to foster organization and promotion of member motor service centers' commitment to energy-saving shop rewind practices for motors ranging from 15 to 500 HP.

HVAC Rooftop Maintenance Pilot

This pilot program encourages nonresidential electric customers to perform maintenance regularly on their rooftop HVAC units. To accurately determine energy savings of regularly maintained HVAC units, the program compares energy use of like rooftop units (one maintained and one not) on one rooftop. The decision whether to implement this program will be made after data have been analyzed; so the program has no associated savings goals at this time.

Lighting Incentives

As significant opportunities exist for lighting improvements in commercial facilities, this program offers direct financial incentives to customers increasing the efficiency of their lighting equipment. The program offers rebates to existing commercial or industrial facilities. Predetermined incentive amounts can be paid for a total of 38 individual measures, including T8, T5, induction lighting, compact fluorescents, and LEDs.

Power Management for PC Networks

This program provides incentives to install a network-based power management software solution for simplifying the process of implementing power management in large numbers of networked PCs. In addition to making a commitment that the software will remain in operation for a minimum of three years, the program offers a $10 incentive per controlled PC, meeting specific criteria.

Premium Efficiency Motors

This program provides an incentive for nonresidential electric customers purchasing premium-efficiency over standard motors. The incentive pays approximately 50% of incremental costs of buying premium-efficiency motors. To qualify for incentives, motors must meet listed, premium-efficiency National Electrical Manufacturers Association (NEMA) standards.

[7] Manufacturers submit energy and water use data for each model, as determined by test procedures set by the U.S. Department of Energy. Models are placed in a tier, based on their energy and water use. A list of qualifying commercial clothes washers and specification can be found at the CEE Website: http://www.cee1.org/com/cwsh/cwshspec.pdf, and ENERGY STAR Website: http://downloads.energystar.gov/bi/qplist/comm_clothes_washers.pdf?b17e-48a0.

Site-Specific Program

The Site-Specific program addresses energy-efficiency measures falling outside of Prescriptive applications, based on their project-specific information. The Site-Specific program is offered to all commercial, industrial, or pumping customers receiving electric or natural gas service from Avista, and choosing to undertake cost-effective, energy-efficiency improvements to their businesses. Based on their project-specific information, Site-Specific measures generally do not lend themselves to Prescriptive applications. Site-Specific measures consist of electric and gas-saving measure technologies, such as appliances, compressed air, heating and cooling equipment (HVAC), industrial processes, custom lighting, motors, shell, multifamily, and LEED. For a measure to be considered for the Site-Specific program, it must have demonstrable kWh or therm savings.

EnergySmart Grocer Program

The EnergySmart Grocer program, operated by Portland Energy Conservation Inc. (PECI) is Avista's only C&I program delivered by a third party implementer. The program offers a variety of energy-savings grocery and refrigeration equipment for nonresidential electric and gas customers, particularly grocery stores. Eligible equipment incentives include but are not limited to: compressors; controls; motors; night covers; case lighting; strip curtains; insulation for suction lines; and hot water tanks. The program assists customers with their refrigeration systems' technical aspects, while providing a clear view of achievable savings. A PECI field energy analyst provides customers with technical assistance, produces a detailed energy savings report regarding potential savings for their facility, and guides customers from enrollment to incentive payments.

2.1.3 Process Evaluation Objectives

This process evaluation primarily seeks to document and analyze how the program works in practice, and ascertain important influences on its operation and achievements.

Evaluation objectives include:

- Documenting and assessing program components and processes;
- Gathering opinions and program experience responses from customers and program partners;
- Reviewing primary data, reviewing secondary program information, and reporting on findings;
- Comparing program information to best practices; and
- Providing conclusions and actionable recommendations to improve program efficiency and effectiveness.

2.1.4 Evaluation Methodology and Information Sources

This process evaluation analyzes primary and secondary program data. Primary data have been gathered through interviews with: program staff involved in daily operations; program participants and nonparticipants; and market actors involved in promoting and implementing the programs.

Secondary data have included: program materials used to enroll participants and guide operations, marketing materials, reports for external stakeholders, and information about best practices.

2.1.5 Report Organization

This report contains the following sections:

- Introduction
- Key Findings
  - Program Management and Implementation
  - Customer Feedback
  - Trade Ally Feedback
  - Special Report: Lighting Market Changes
  - Marketing and Outreach
  - Application Processing and Data Tracking
  - Program QA/QC and Verification
- Conclusions and Recommendations

2.2 Program Management and Implementation

Avista's nonresidential energy-efficiency programs can be grouped into several program clusters, based on their delivery approach, eligibility, and evaluation, measurement, and verification (EM&V) requirements. To facilitate the 2011 evaluation, the programs were examined in three clusters: Prescriptive, Site-Specific, and EnergySmart Grocer.

Excepting the EnergySmart Grocer program, Avista implements all of its nonresidential rebate programs. Program staff plan, implement, and operate the Prescriptive and Site-Specific programs. Trade allies submit the majority of Prescriptive project rebate applications on behalf of customers. Account managers assist customers, and determine project eligibility for the Site-Specific programs, while engineers are responsible for evaluating, measuring, and verifying project savings and costs. PECI implements the EnergySmart Grocer program, a regional turnkey program.

This section examines the management and implementation of the nonresidential programs, and the planning, documentation, and processes involved in the program operations.

2.2.1 Research Objectives

Research objectives for the review of the nonresidential energy-efficiency programs' implementation sought to determine changes over the course of the year, along with goals and visions for the program's future. Review of program documentation helped evaluators understand management oversight, and the presence of operational procedures used to guide staff in implementation of nonresidential programs. The Cadmus evaluation team interviewed Avista program staff to attain a complete picture of program changes and feedback regarding program successes and challenges. Interviews also helped to refine the content of the program logic

models and process flows, and to solidify key researchable issues to be examined during the 2011 evaluation.

2.2.2 Methods

During the 2010 evaluation, Cadmus looked at a number of documents to understand the delivery approach, and to assess how the programs work in practice. These documents were drawn from a number of corporate reports, such as the DSM Business Plan, and other high-level documents. For the 2011 evaluation, Cadmus requested any new program manuals developed in the past year. Although some manuals were in the planning stages, none had been finalized during the course of the 2011 evaluation; therefore, Cadmus revisited reports and documents as needed to facilitate the evaluation. These included:

- 2011 DSM Business Plan
- EM&V Framework and EM&V Plan[8]
- Program data collection procedures for Prescriptive lighting and Site-Specific programs.

In addition to the materials review, Cadmus interviewed Avista staff by phone, in conversations lasting about 60 to 90 minutes, and speaking with program and policy staff, engineers, account managers, and the marketing team.

2.2.3 Research Results

Program Logic Models

During the 2010 evaluation planning, Cadmus developed logic models by program cluster, helping to guide evaluation research and discussions with program staff and implementers. Many utilities use logic models in program planning stages to identify program theory and assumptions leading to anticipated short- and long-term outcomes.

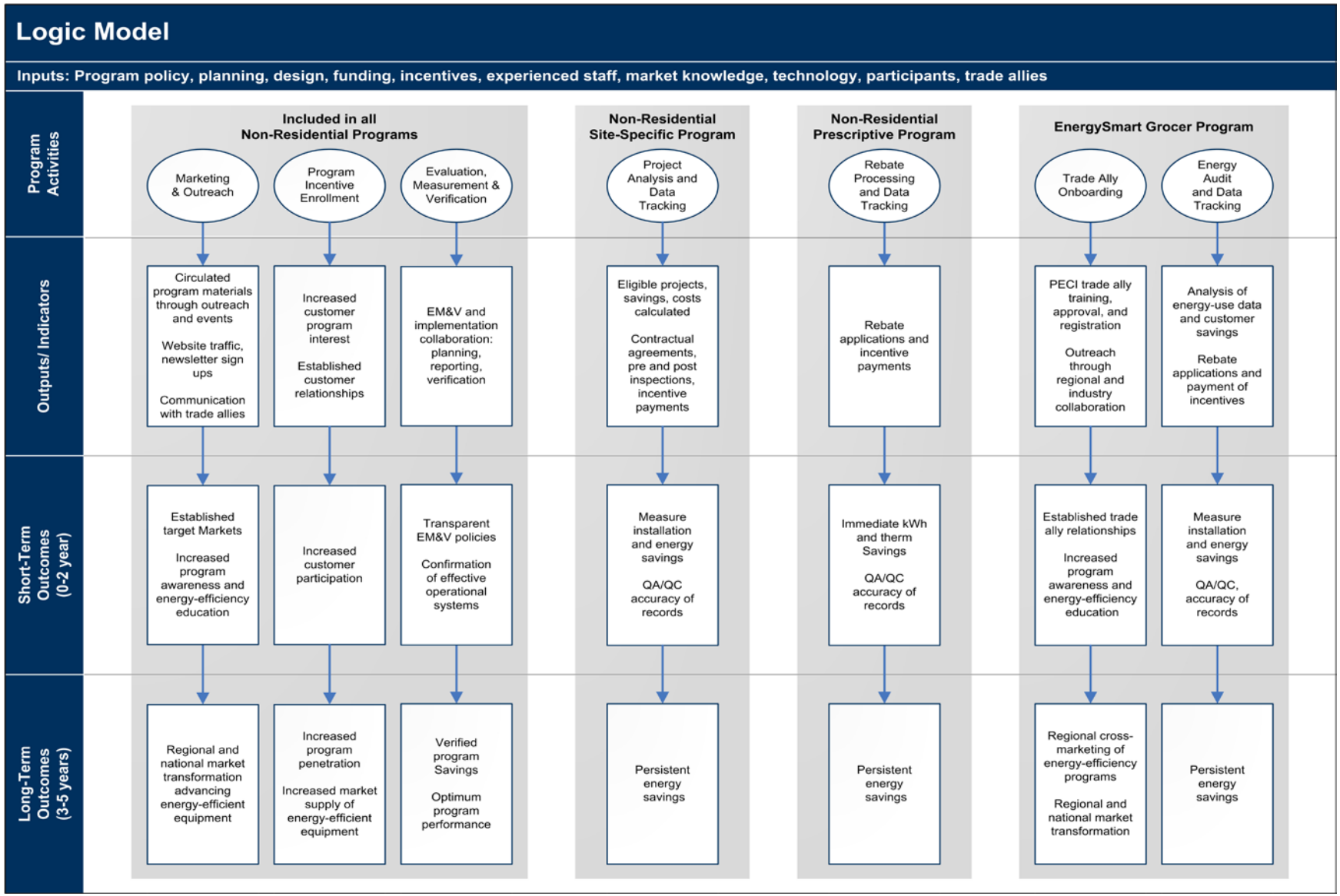
During the 2011 process interviews, Avista program managers noted the logic models, presented for the 2010 process evaluation, appeared somewhat generic across programs. Therefore, the logic models were perceived as tools to guide external evaluations, rather than for use in planning. Program managers felt more detailed flow diagrams could provide more useful tools for planning. Based on these responses, Cadmus developed process flow diagrams for each program cluster (Prescriptive, Site-Specific, and EnergySmart Grocer program), as presented in following sections. For future reference, the logic models were simplified and combined into a single format, shown in Figure 1-1.

The combined logic model has been organized to highlight similarities and differences between program activities, indicators, and anticipated outcomes. The logic flows for marketing and outreach, program incentives enrollment, and EM&V, were similar for all programs. Due to the

[8] Avista Utilities. Evaluation, Measurement and Verification (EM&V) Framework. In response to the Washington Utilities and Transportation Commission's Order from Docket Nos. UE-090134/UG-090135; and UG-060518, Consolidated. September 1, 2010. Avista Utilities' 2011 Evaluation, Measurement & Verification Annual Plan. November 1, 2010.

customized nature of Site-Specific programs, extensive project analysis and data collection were required to determine project eligibility, and to ensure persistent energy savings. Prescriptive program activities primarily focused on rebate processing activities, without lengthy project analysis and contractual arrangements, providing immediate energy savings for Avista customers. The EnergySmart Grocer program design has been based on the theory that these activities will enable industry-wide goals of regional market transformation. Therefore, activities have focused on collaborative outreach, trade ally training, and customer education through energy auditing.

Figure 2-1. Avista Nonresidential Program Logic Model



Program Planning and Documentation

Avista's program managers reported that time constraints of daily operations sometimes prevented a more active role in planning and documentation of program procedures. In addition, the implementation team expressed the need for more internal communications, and real-time feedback regarding the evaluation process.

During the 2010 process evaluation, the programs' complexity and lack of documented procedures made it difficult to understand the nonresidential program's delivery and operations. Consequently, Cadmus recommended Avista's implementation team compile operational procedures and verification guidelines into a program handbook. Best practice documentation for C&I programs typically provides an implementation manual, with a program overview, goals and theories, trade ally outreach strategies, and detailed operational procedures, with verification guidelines.

During 2011 evaluation interviews, program staff reported a great deal of written and unwritten procedures. Although keeping up with program delivery and operations over the past year has left little time to develop program handbooks, the implementation team noted a program manual is currently in development. Cadmus reviewed a first draft of Avista's DSM program manual, and found it provided a comprehensive portfolio overview. Operational details at the program level have yet to be completed.

To provide Avista with detailed examples of implementation guidebooks at the program level, Cadmus reviewed operational handbooks from other utility evaluations, conducted best practice research, and reviewed Websites of C&I energy-efficiency utility programs. We found a number of options available for comprehensive program manuals, depending on whether a utility wishes to present these as customer-facing handbooks, or use them as internal guidelines. Table 2-2 lists elements found in a comprehensive program handbook.

Table 2-2. Program Handbook Features

Handbook Topic Areas
Program staff and implementer roles clearly defined.
Other stakeholder's roles clearly defined (trade allies, etc.*).
Program overview and goals defined.
Presence of eligibility requirements.
Eligible program measures clearly defined.
Incentive structure clearly defined.
Presence of program processes' step-by-step instructions.
Customer touch points defined (including procedures for customer complaint resolution).
Trade ally requirements and guidelines defined.
All program systems clearly defined (for example any database software is mentioned by name, who will use it and when in the process).
Inspection and verification protocols included or referenced.
If applicable, reference to partnership with other utilities' programs.
Reference to program Website.
Presence of program staff contact information.
All acronyms clearly defined.
QA/QC & verification protocols included or referenced.

Handbook Topic Areas
Data collection protocols included or referenced.
Marketing materials included or referenced.

* This category refers to trade allies and other contractors participating in program delivery, but not part of a formal utility and implementation contractor program team.

Prescriptive Program Delivery

In 2011, the Prescriptive lighting program did not achieve forecasted program goals of 14 million kWh goals (as stated in the 2011 Business Plan). Lighting program changes in 2012 have been designed to enable meeting savings targets through increased incentives for T-12s, and investigations of additional lighting technologies. The lighting report section provides further details, following discussions of implementation.

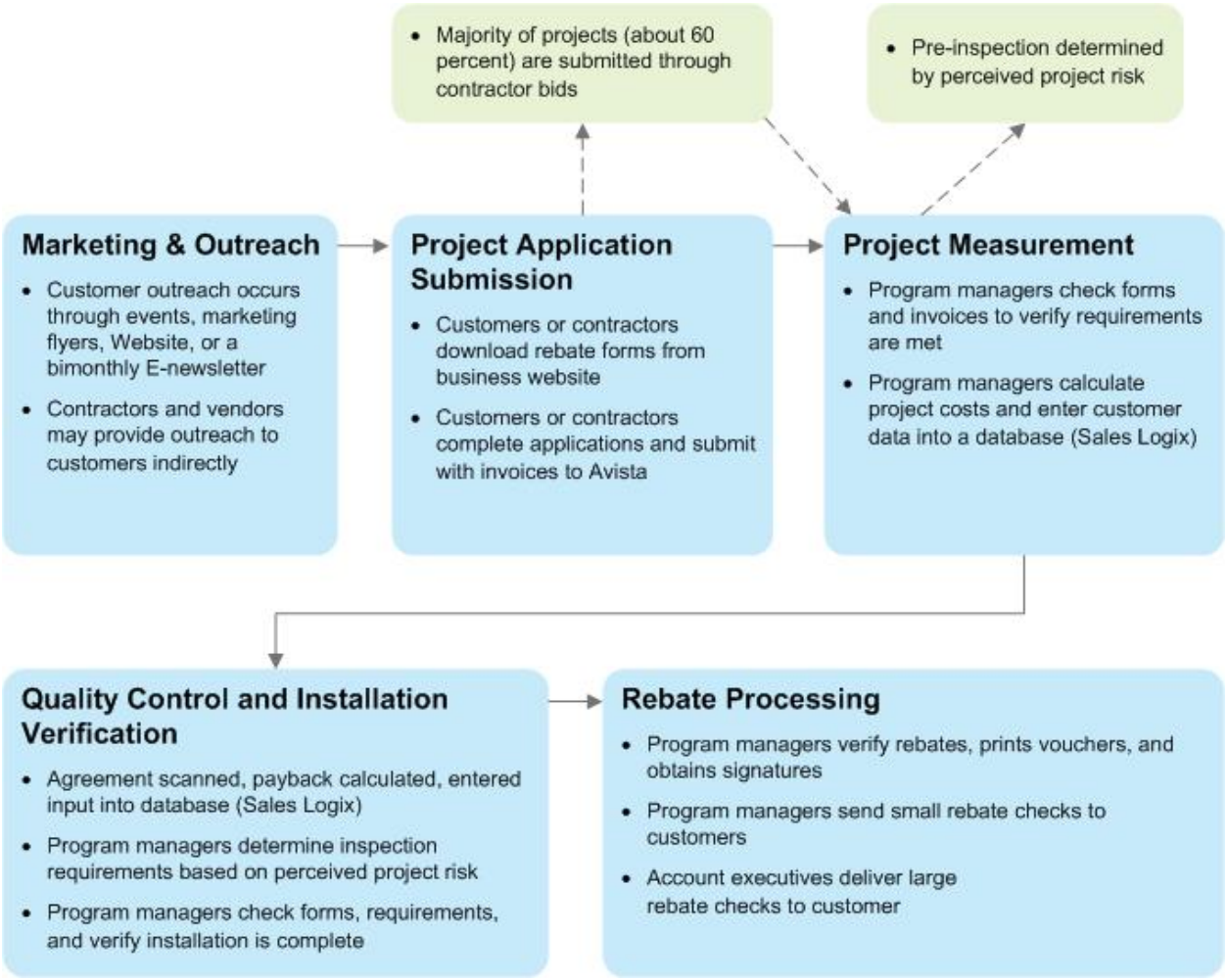
Program staff reported that some Prescriptive programs were discontinued about halfway through the year. These Prescriptive programs experience a large range of project savings, determined by the context of the site, and would be more appropriate for custom applications. Although discontinued under the Prescriptive programs, these measures may be installed by Site-Specific customers. Discontinued Prescriptive programs included:

- Prescriptive Demand-Controlled Ventilation
- Prescriptive LED Traffic Signal Program
- Prescriptive Side-Stream Filtration Program
- Prescriptive Steam Trap Replacement Program
- Vending Machine Controls

Management responsibilities for Prescriptive programs divided into two main energy-efficiency measure groups: lighting, and all other. Two Avista staff members managed delivery and operations of these distinct Prescriptive program groups. Both reported that, during the 2011 program year, they sought additional assistance to keep up with program changes and customer demands. An additional support staffer was hired to help with customer enrollment processes, data tracking, and QA, and additional support staff may be hired in the future.

Figure 2-2 illustrates the Prescriptive program's delivery process steps, from marketing and outreach to rebate payments.

Figure 2-2. Prescriptive Program Process Flowchart



Avista customers learned about the Prescriptive program rebates through: Avista-sponsored events, marketing flyers, the Website, or a monthly newsletter. Contractors also provided outreach to customers. Program managers reported, in response to customer feedback resulting from the 2010 process evaluation, more focused efforts began to provide direct outreach to customers and contractors through visitations, breakfast meetings, or focus group events.

Rebate enrollment processes were fairly straightforward, involving a number of steps to process rebates through documentation verification, and payment processing. Although pre- and post-inspections were determined through levels of project risk (by program managers), inspections were not required, and were not being routinely conducted, unless reason existed to believe a project's information may have been inaccurately reported.

Site-Specific Program Delivery

The Site-Specific program contributes a large portion of energy savings to Avista's nonresidential portfolio. Program goals of 27 million kWh (as reported in the 2011 Business Plan) were met, based on non-evaluated, year-end reported savings. The Site-Specific delivery

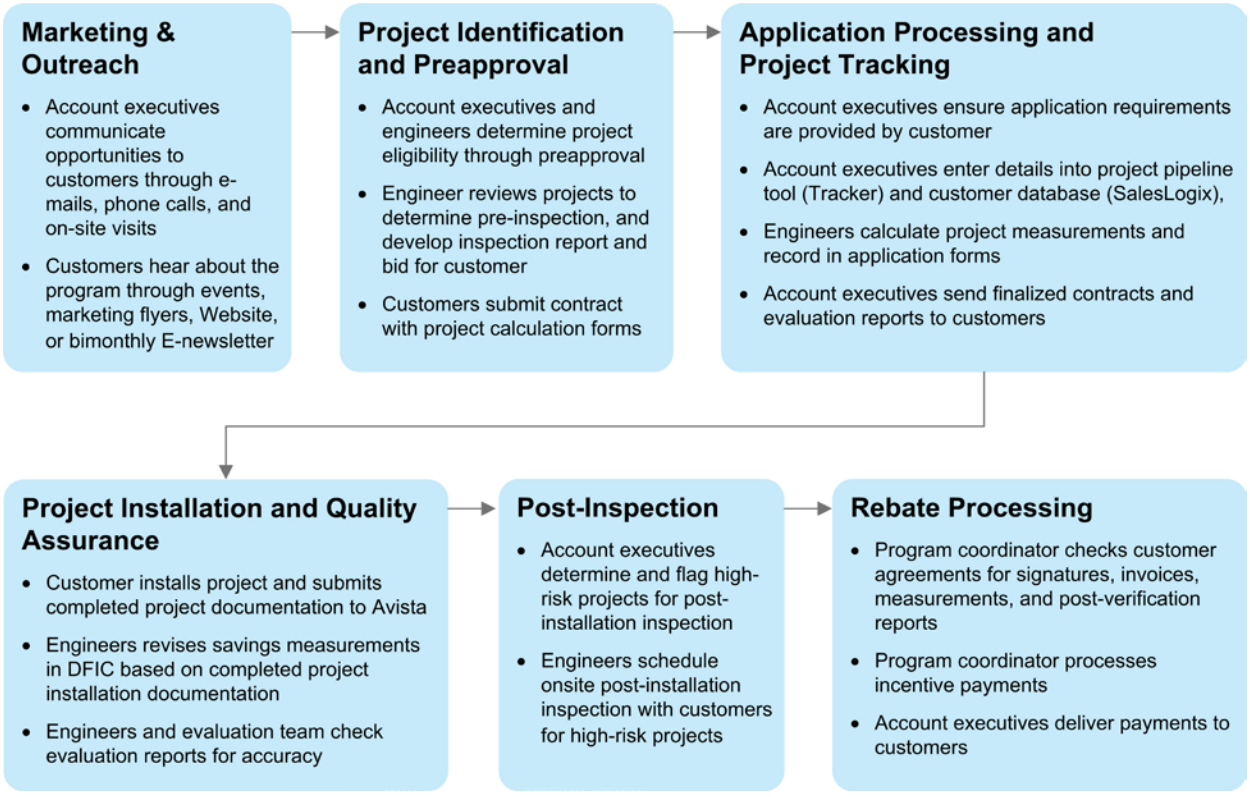
approach sought to enable a flexible customer response to any energy-efficiency project with demonstrable kWh or therm savings.

Avista's implementation team indicated several staff were responsible for managing individual program components. Account executives, designated as the contact point for C&I customers, were responsible for recruiting and maintaining customer accounts. The engineering group oversaw project installation, and was responsible for measurement and verification (M&V). Program support staff oversaw data tracking and contractual requirements.

Cadmus noted that no central leadership role exists for overseeing the Site-Specific program. Based on evaluation experience and best practice research, Cadmus has found typically large C&I programs—in particular those contributing significant energy savings to overall portfolios—have a central point of management to oversee planning, vision, and meeting future goals cost-effectively.

Steps involved in administering and implementing the Site-Specific program differed from Avista's Prescriptive programs by: the size of projects; incentive amounts; and the complexity of project-specific information. Figure 2-3 demonstrates process steps involved in delivering the Site-Specific programs.

Figure 2-3. Site-Specific Process Flowchart



Program staff reported customers learned about the program through their account representative, marketing events, the Website, or updates through Avista's bimonthly newsletter, offered to business customers. Once customer identified a Site-Specific project, account

executives and engineers determined preapproval and pre-inspection requirements. Customers worked with their account executives and engineers to submit project calculation forms and required documentation. Account executives noted customer assistance consumes as much as 50% of the work week.

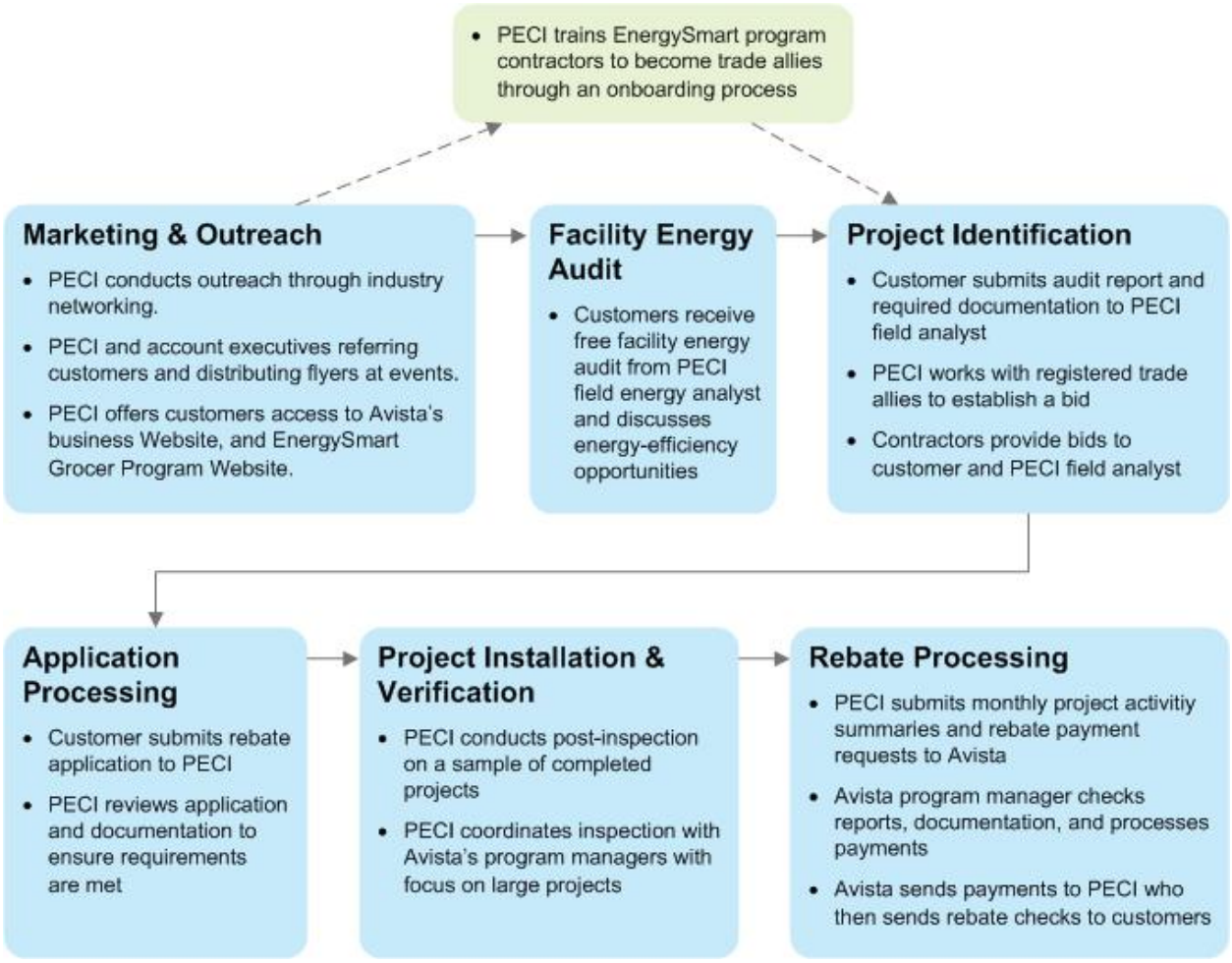
Avista engineers calculated total project costs, based on inputs from customers and contractors, and developed inspection reports and bids. Account executives then finalized contracts with customers. After project installation, account executives and engineers determined post-inspections, based on project risk. Once the installation inspection was conducted, and project documentation was completed through a final checklist, the program manager processed the incentive payment. The account executive could elect to hand-deliver the incentive check to the customer.

EnergySmart Grocer Program Delivery

PECI (a third-party implementer that has designed and delivered identical programs successfully throughout the Northwest) delivers EnergySmart Grocer program. Avista's energy smart grocer program is a customer-driven program, utilizing an extensive network of contractors, provided through PECI. For contractors to participate in the program and become a part of the trade ally network, they must sign a trade ally participation agreement outlining their roles and responsibilities. The program allows customers to choose their own contractors based on a competitive bid process. With customer approval, savings opportunities are referred to contractors, who then present customers with bids. With bid approval, customers implement the retrofit and incentives go to the customer, or directly to the contractor, if the customer chooses to release payment.

Figure 2-4 shows key enrollment and operational steps for the EnergySmart Grocer, demonstrating the unique features of this regional program, such as collaborative industry outreach activities, free energy audits, and trade ally networking.

Figure 2-4. EnergySmart Grocer Process Flowchart



During the 2011 process evaluation interview, PECI reported EnergySmart Grocer participants were typically chain retailers that, after experiencing success at one location, returned to duplicate measures at other facilities. Energy audits, required for program participants, provided an effective means for recruiting and identifying projects. Although regional marketing tactics have been very successful to date, a formal marketing approach, such as a newsletter or direct mail campaign, may also prove beneficial for keeping customers engaged and aware of other opportunities.

Overall, the approach for recruiting and adding installation contractors has been effective, but PECI recently has faced some challenges regarding contractors misrepresenting the program to customers. According to PECI, this can occur for a couple of reasons.

First, Avista requires pre-installation inspections for all EnergySmart Grocer projects, differing from other utilities involved in the regional program. Robust inspection procedures also require a sample approach to post-installation inspections. However, contractors do not always fully disclose differences in requirements by utility and region.

Second, customers can consent to have incentive payments go directly to contractors causing some overly assertive tactics by contractors. PECI voiced concerns that contractors misrepresent their roles in the program by not fully disclosing customer options.

PECI reported additional contractor challenges in 2011. The Washington Department of Labor and Industries (L&I) solicited permit information from EnergySmart Grocer program contractors, on approval from Avista. L&I found permit issues, and fined some contractors. PECI reported contractor tensions resulted, and many contractors claimed fines were unjustified. The implementer estimated this issue affected around 50% of participating contractors.

2.2.4 Findings Summary

Overall, the nonresidential program delivery strategies work well to meet the demands of implementation and operations. In many cases, programs meet or exceed savings goals. Although the lighting program fell short of goals, new program incentives in 2012 are designed to increase customer motivation. Implementation staff expressed concerns with time constraints preventing a more active role in planning and documentation of program procedures, and requested more real-time feedback during the evaluation process. The Site-Specific program, which contributes a large portion of savings to the nonresidential portfolio, lacks a central leadership role to oversee planning, vision, and meeting future goals. The EnergySmart Grocer program implementer experienced issues with contractors.

2.3 Customer Feedback

Customer feedback was obtained through surveys of program participants and nonparticipants. These groups included:

- Customers receiving rebates; and
- Eligible, nonresidential customers that did not participate in the programs during 2011.

2.3.1 Research Objectives

Participants

Cadmus designed the participant survey to inform the evaluation objectives discussed and agreed to during planning and kickoff meetings with Avista staff. Research questions (and areas of interest) emerged from interviews with implementation team, engineering staff, account executives, and policy and planning team members. Primary research objectives for participant surveys included:

- Determining participant satisfaction with key program components and delivery;
- Understanding participant decision-making influences;
- Identifying information sources and channels' effectiveness for outreach;
- Identifying participants' perceptions of market barriers;
- Identifying participant freeridership and spillover;
- Identifying potential areas for program improvements and future offerings;

- Compiling profile information about Avista's C&I target markets; and
- Assessing lighting trends in response to EISA regulations.

Nonparticipants

Understanding awareness and motivations of customers not participating in programs can provide insights that can be used for development of alternative strategies or programs to reach untapped energy-efficiency resource markets.

Primary research objectives for this year's study of nonparticipants included:

- Determining program awareness levels and information sources;
- Understanding decision-making influences regarding energy-using equipment;
- Identify information sources and channels' effectiveness for outreach;
- Identifying participation barriers or reasons customers aware of programs did not participate;
- Identifying nonparticipant spillover;
- Identifying potential areas for program improvements and future offerings;
- Compiling profile information about Avista's C&I target markets; and
- Assessing lighting trends in response to EISA regulations.

2.3.2 Survey Methods

Discovery Research Group (DRG)—a survey firm working regularly with Cadmus on similar evaluation projects—conducted participant and nonparticipant surveys. To minimize respondents' time requirements for the telephone surveys, the instrument was designed to take approximately 15 minutes to complete.

To streamline survey delivery, most questions utilized standardized, closed-ended responses. However, to capture subtle nuances and differences in decision-making patterns, the surveys included open-ended, "other" response options.

Participant Survey Instrument

Although administrators of Avista's commercial incentive programs make Prescriptive versus Site-Specific distinctions internally, differences proved insufficiently apparent from the participants' perspectives to warrant separate surveys for each program type. Therefore, the process evaluation team used a single survey instrument for participants, maximizing survey efficiency be combining process- and impact-related questions.

Process-related questions were designed using agreed-upon research objectives. Impact-related questions informed the net-to-gross (NTG) calculations and analysis. This survey also included questions regarding customers' currently installed lighting, future lighting installation plans, and awareness of lighting regulations; findings from these questions are included in a separate section of this report.

Table 2-3. Survey Design for Program Participants

Research Objective	Survey Elements
Determine satisfaction with key program elements and delivery	• Overall satisfaction • Satisfaction with program elements
Understand purchases and decision-making influences	• Decision influences • Program benefits perceived
Identify perceptions of market barriers	• Barriers to additional participation
Identify sources of information and effectiveness of channels for outreach	• Sources for information • Effectiveness of outreach methods
Identify potential improvements/future offerings	• Actions Avista could take to improve the program • Suggestions for new offerings
Compile customer and market profile information	• Ownership vs. leasing • Heating fuel type • Square footage of heated/cooled space • Number of employees
Assess freeridership and spillover impact	• Purchase history and budgeting • Program influence on purchase • Installation of energy-efficient equipment outside of the program
Assess lighting trends in response to EISA	• Awareness of lighting regulations • Sources of information • Saturation of T-12 lamps • Plans for future lighting projects

Participant Survey Sampling

Cadmus designed participant survey samples to represent reported savings by grouping similar program types. Survey targets were adjusted to account for numbers of survey respondents available.[9]

The survey sample was further refined to assign unique identification numbers, thus:

1. Ensuring an individual person would be contacted once, regardless of whether they participated in multiple programs; and
2. Identifying the top energy-saving measures, for reference in the NTG battery of survey questions

Each unique participant was then assigned to one of three survey groups: Site-Specific, Prescriptive, and EnergySmart Grocer. Survey grouping was based on the program type each customer participated to the greatest degree, excepting the EnergySmart Grocer program participants, who were prioritized, due to the small number of participants in the program. The

[9] Considering recent NTG surveys (conducted at the beginning of 2011), and other evaluation efforts requiring site visits and surveys with large commercial customers, Avista requested some participants be removed from the sample set to prevent potential survey fatigue.

survey team developed targets for these three program groupings, based on total populations in each group. Table 2-4 shows numbers of participants, projects, original targets and completed surveys.

Table 2-4. Participant Survey Summary of Details

Program Group	Total Number of Participants*	Total Number of Projects	Survey Targets	Survey Completes	Absolute Precision at 90% Confidence**
Prescriptive	637	1,036	85	73	8.6%
Site Specific	356	741	80	72	7.9%
Energy Smart Grocer	125	518	50	17	18.4%
Total	1,121	2,338	215	162	5.6%

*For participants in multiple programs, the customer was categorized by the measure yielding the highest savings.
**Confidence and precision are measures of the degree of accuracy resulting from the use of a statistical sample. In this table, all precision estimates refer to absolute precision and are calculated using the 90% confidence level. For example, if an estimate's reported precision is 8%, the meaning is that we have 90% confidence that the true value is within 8 percentage points of the estimate.

Each participant was contacted once per day, until a final disposition (e.g., complete, refusal, ineligible) could be achieved. Each contact received up to six or seven attempts before termination of the survey effort, approximately after one week of calling. Across program clusters, 162 participant surveys were completed, (75% of target sample size).

Nonparticipant Survey Instrument Design

Table 2-5 summarizes survey elements for each research objective defined for nonparticipants.

Table 2-5. Survey Design for Program Nonparticipants

Research Objective	Survey Elements
Determine program awareness and sources of information	• Level of awareness • Primary sources of awareness • Satisfaction with program information received
Understand purchases and decision-making influences	• Decision influences • Effectiveness of outreach methods
Identifying barriers or reasons customers aware of programs did not participate	• Reasons for not participating • Perceived market barriers
Identify sources of information and effectiveness of channels for outreach	• Awareness of Avista rebate programs • Information sources • Effectiveness of outreach methods
Identify potential improvements/future offerings	• Actions Avista could take to improve the program • Suggestions for new offerings
Compile market profile information	• Ownership vs. leasing • Heating fuel type • Square footage of heated/cooled space • Number of employees
Identify spillover impact	• Installation of energy-efficiency measures outside of the program
Assess lighting trends in response to EISA	• Awareness of lighting regulations • Information sources • Saturation of T-12 lamps • Plans for future lighting projects

Nonparticipant Sample Selection

To represent customer interests and decision making for small and large energy users, Avista selected a stratified random sample by rate schedules and geographical regions (by state). Table 2-6 summarizes samples and targets for each stratum.

Table 2-6. Nonparticipant Survey Summary*

State and Rate Schedule	Electric/Gas	Contacts in Sample	Survey Targets	Surveys Completed
ID_011	Electric	1,773	25	37
WA_011	Electric	2,401	30	39
ID_021	Electric	212	17	9
WA_021	Electric	403	22	8
ID_025	Electric	2	0	0
WA_025	Electric	7	1	0
ID_111	Gas	49	8	4
WA_111	Gas	126	16	4
WA_121	Gas	6	1	0
Total		4,979	120	101

* The following Websites provide Avista nonresidential customer rate class definitions, by state:
WA: http://www.avistautilities.com/services/energypricing/wa/gas/Pages/default.aspx;
ID: http://www.avistautilities.com/services/energypricing/id/elect/Pages/default.aspx

2.3.3 Research Results

Results, discussed in this section, address research objectives for each survey topic area.

Where respondents answered “don’t know,” “not applicable,” or refused to answer, responses were removed from the total, unless a high number of respondents fell in this category (for example, above 10% to 15%). In such cases, “don’t know” and “refused” responses have been included as meaningful indicators. Individual sections discuss instances where uncertainty represented a high percentage of overall responses.

Program Satisfaction

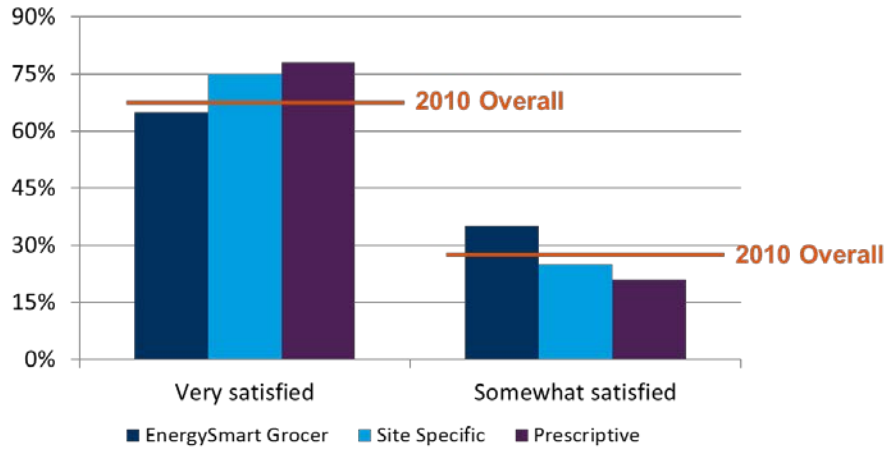
To provide insights about satisfaction with overall programs and specific program components, survey interviewers asked participants to rate each component on a four-point scale, ranging from very satisfied to very dissatisfied. A midpoint of neither satisfied nor dissatisfied was recorded only if the respondent stated this (this only happened in only one set of responses).

If respondents responded somewhat or very dissatisfied, they were asked why they gave that rating, and what Avista could have done to improve their experience. Not applicable responses were excluded from analysis.

Participant Program Satisfaction

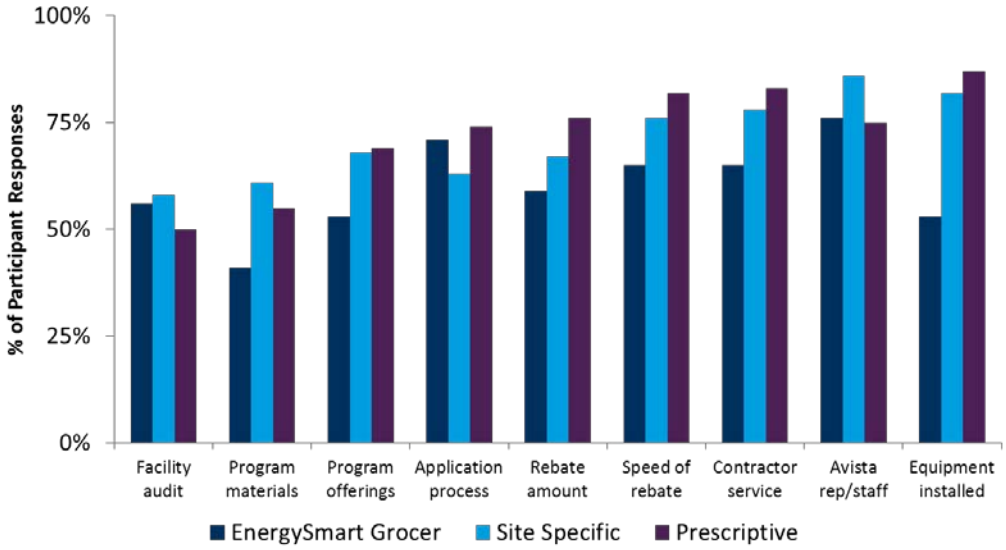
Overall program satisfaction is high, with only one of the 162 participants reporting being somewhat dissatisfied. The majority in each program cluster reported being “very satisfied,” as shown in Figure 2-5. In 2010, program satisfaction was assessed at the portfolio level. Although the Energy Smart Grocer program is slightly below the average for the prior year, the larger Site-Specific and Prescriptive programs showed higher levels of very satisfied participants.

Figure 2-5. Participant Satisfaction with the Program



For specific program elements, a large number of responses indicating a customer was only "somewhat" satisfied suggested areas possibly needing improvements. Figure 2-6 summarizes respondents very satisfied with each program element.

Figure 2-6. Percent of Participants "Very Satisfied" with Program Elements



Observations at the program component level indicated:

- Energy Smart Grocer participants were less satisfied across all elements, except the facility audit, particularly regarding program materials, offerings, and equipment installed.
- Participants in Site Specific and Prescriptive programs had relatively high levels of satisfaction (>75%) with equipment installed, Avista representatives or staff, contractor service, and speed of rebates.

- Nearly one-half of participants across programs were only somewhat satisfied with facility audits and program materials.
- Roughly one out of four participants was only somewhat satisfied with program offerings, application processes, and rebate amounts.

Although few participants expressed dissatisfaction, areas where this did occur aligned with the lower-rated program elements shown in Figure 2-6. The number of responses to the follow-up question, asking why they were dissatisfied, was small, but the nature of responses may provide directions for exploration. Table 2-7 shows program elements receiving negative responses, and a summary of reasons given.

Table 2-7. Program Elements Receiving "Dissatisfied" Responses

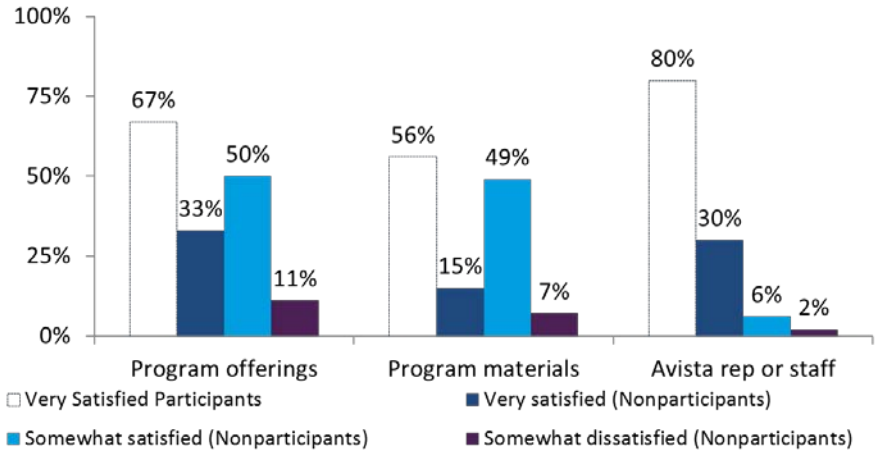
Program Element	% Somewhat Dissatisfied	% Very Dissatisfied	Total % Dissatisfied	Reasons Given for Rating
Facility scoping audit	7%	2%	9%	• Slow response • Time it took to get information • Did not understand information • Inconsistent messages • Did not do much/no additional help or tips
Program materials	3%	2%	5%	• Never received anything • Not very detailed • Prices were not clear
Application process	3%	2%	5%	• Forms/paperwork • Redundancy (multiple buildings) • Delay and loss of applications • Lack of follow-up • Massive confusion between residential and commercial
Speed of rebate	2%	2%	4%	• Lack of communication • Took too long • Required follow-up

* 1% were somewhat dissatisfied for Avista account rep or staff, rebate amount and program offerings

Nonparticipant Satisfaction with Program Elements

Forty-one percent of nonparticipants said they were aware of Avista's energy-efficiency rebate programs prior to being contacted for the survey. Those aware of the program (n=41) were asked to rate their satisfaction with Avista's program offerings and program materials. All nonparticipants were asked to rate their satisfaction with Avista account representatives or program staff. Figure 2-7 summarizes the responses, with the first column for each program cluster showing the percentage of program participants surveyed reporting being "very satisfied."

Figure 2-7. Nonparticipant Satisfaction with Program Elements (Compared to "Very Satisfied" Participants)

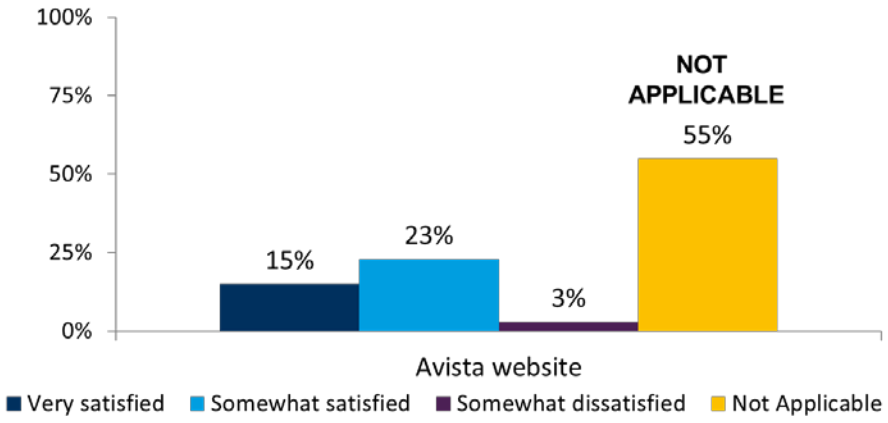


Nonparticipants clearly were less satisfied with program offerings, materials, and representatives or staff than participants. As with participants, if the customer indicated dissatisfaction, they were asked to provide reasons. Responses relating to program offerings and information suggested a lack of knowledge and not having seen information. (For example: "Avista has never laid it all out for me" and "I have not seen any program materials.") All dissatisfaction with Avista staff related to not having anyone contact them, except for one respondent, who was unhappy with their meter reader's inability to reach the property during winter months.

Nonparticipant Satisfaction with Avista's Business Website

All nonparticipants were asked to rate their satisfaction with Avista's Website for business customers. More than half (55%) stated this was not applicable to them, suggesting they had never accessed the Website or did not use the Internet. Only 15% nonparticipants reported being very satisfied with the Website, as shown in Figure 2-8.

Figure 2-8. Nonparticipant Satisfaction with Avista Business Website



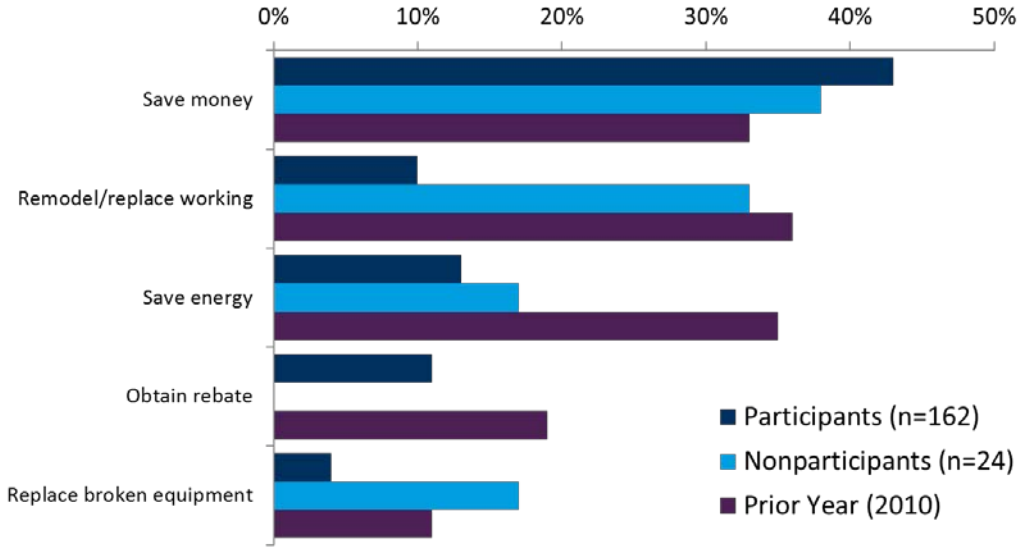
Purchases and Decision-making

Surveys again included questions to identify major influences and motivations for purchasing energy-efficient equipment. Participants and nonparticipants who installed energy-efficient equipment in the past year were asked about factors influencing their decisions, who they would turn to for more information, and, for nonparticipants aware of the rebate programs, why they had not participated.

Factors Influencing Installation of Energy-Efficient Equipment

Saving money was the reason most frequently cited for installing energy-efficient equipment this year, for both program participants and nonparticipants. In the prior year, more participants cited saving energy as an influence.

Figure 2-9. Factors Influencing Decision to Install Energy-Efficient Equipment



Freeridership

Cadmus estimated freeridership (the percentage of savings that would have occurred in the program's absence), based on 2011 participant responses. Table 2-8 compares nonresidential program freeridership scores for 2010 and 2011, finding most were similar, except for the Prescriptive program.[10] In 2011, Prescriptive freeridership jumped to 33%, compared to 13% in 2010.

Table 2-8. Nonresidential Freeridership Results*

Survey Category	2011 Evaluation			2010 Evaluation		
	n	FR	Absolute Precision**	n	FR	Absolute Precision
Prescriptive	70	32.6.0%	±7.9%	59	13.0%	±6.2%
-Lighting	37	19.2%	±10.5%	53	14.1%	±6.4%
-Non Lighting	33	44.6%	±11.9%	6	9.5%	±17.3%
Site-Specific	63	16.7%	±6.0%	61	26.0%	±7.2%
Energy Smart Grocer	17	4.0%	±13.2%	30	10.0%	±10.0%
Motors	12	47.0%	±18.9%	9	41.0%	±20.9%

* Results were weighted by each respondent's annual energy savings from the rebated energy-efficiency projects or measures.
** Confidence and precision are measures of the degree of accuracy resulting from the use of a statistical sample. In this table, all precision estimates refer to absolute precision and are calculated using the 90% confidence level. For example, if an estimate's reported precision is 8%, the meaning is that we have 90% confidence that the true value is within 8 percentage points of the estimate.

To benchmark Prescriptive program scores with comparable C&I programs at other utilities, Cadmus reviewed publicly available utility evaluation reports from 2010 and earlier. Table 3-9 demonstrates scores for Efficiency Main and PacifiCorp. In 2010, Efficiency Maine reported a 31% freeridership score with lighting (28% Efficiency Maine, and 20% for Avista) and non-lighting (50% for Efficiency Maine, and 54% for Avista), resulting in similar scores for both utilities. Overall Prescriptive freeridership estimate for Efficiency Maine increased in 2010 from reported estimates for 2003–2006, but not to the magnitude occurring between the 2010 and 2011 Avista evaluations.

Table 3-9. Prescriptive Program Benchmarking

Utility	Grouping	n	FR
Efficiency Maine 2010	Prescriptive–ALL*	131	31%
	Prescriptive–Lighting	99	28%
	Prescriptive–Non-Lighting	32	50%
Efficiency Maine 2003-2006	Prescriptive–ALL**	77	27%
PacifiCorp–UT - 2005–2008	Prescriptive–ALL (FinAnswer Express)***	68	21%
PacifiCorp–WA - 2005–2008	Prescriptive–ALL (FinAnswer Express)****	57	12%
PacifiCorp–ID - 2005–2008	Prescriptive–ALL (FinAnswer Express)*****	19	41%

* http://www.efficiencymaine.com/docs/reports/EMT-Business-Program-Report-FY2011-FINAL.pdf
** http://www.cee1.org/eval/db_pdf/545.pdf

[10] The difference between freeridership estimates for 2011 and 2010 evaluations was statistically significant (p-value = 0.012) for the nonresidential Prescriptive program category. The difference between freeridership estimates were not statistically significant (p-value > 0.10) between the two evaluation years for Site-Specific, EnergySmart Grocer, and Motors program categories.

*** http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/ DSM_UT_FinExp.pdf
**** http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/ DSM_WA_FinExp.pdfh ttp://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/ Demand_Side_Management/DSM_WA_FinExp.pdf
***** http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/ ID_FinAnswer_Express_Report.pdf

Spillover: Purchases of Energy-Efficient Equipment Outside the Program

As in the 2010 survey, the majority of participants (77%) and nonparticipants (80%) had not installed equipment outside of the program.

Of participants describing other energy-efficient equipment purchases, nearly half (20 of 37) were lighting measures, and four were water heaters. Other measures purchased included: high-efficiency motors and variable speed drives; HVAC equipment; manufacturing equipment; an air compressor; dry cleaning machines; and a demand control system. Thirty-eight percent (14) of these customers applied for rebates for these purchases as part of an Avista program. A few (4) had not installed the purchased equipment. Roughly half of the remaining customers (9 of 19) were not aware they could obtain a rebate for the purchase. Reasons given by others for not participating in the rebate program included:

- Not able to get the paperwork together.
- Too small a project to be worth the process.
- Equipment was not covered by a program (instant water heaters).
- Did not learn about the program until it was too late.

Spillover refers to additional savings generated by customers (participants or nonparticipants) that was influenced by program activities, but not captured by program records. In 2011, there was no quantifiable participant spillover that was attributable to nonresidential programs. Although a few participants made additional purchases without applying for rebates, only two stated they were highly influenced by the Avista programs. Both purchases were small, and had insufficient information to quantify energy savings. For 21 nonparticipants installing equipment outside the program, none knew of Avista's rebate programs. Lighting and HVAC measures were installed by over half of these respondents.

Why Customers Did Not Participate When They Purchased Energy-Efficient Equipment

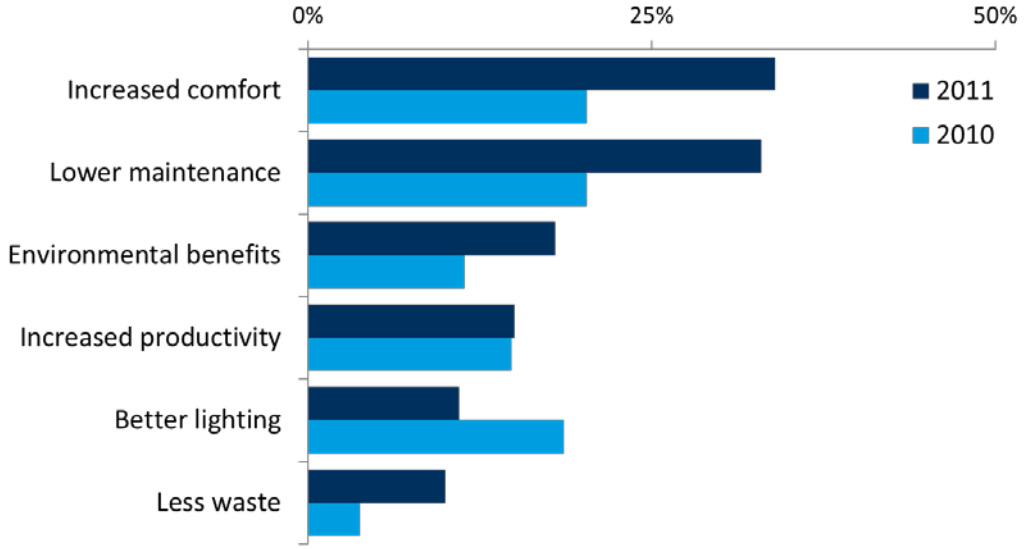
The survey also asked nonparticipants, aware of Avista's nonresidential rebate programs (41 of 101 total respondents), why they did not participate in the rebate program. In the prior survey, the majority (88%) listed reasons outside of Avista's control. This year, one-fourth of these nonparticipants cited time and money as reasons for not participating. Other reasons cited by multiple respondents included:

- Not enough information or knowledge about how to participate.
- Equipment they needed did not qualify for the program.
- Not seeing a reason to change until "the old one dies."
- Participation in prior years, but not last year.

Benefits Beyond Savings

To better understand motivating factors, in addition to energy savings, the survey asked participants whether the rebated energy project provided benefits beyond energy savings. Seventy-three percent believed it did (very similar to 75% responding positively in the 2010 survey). Most cited benefits included: increased occupant comfort; lower maintenance costs; increased productivity; better lighting; and less waste. These were not mentioned as factors in the decision to purchase energy-efficient equipment, summarized above in Figure 2-9.

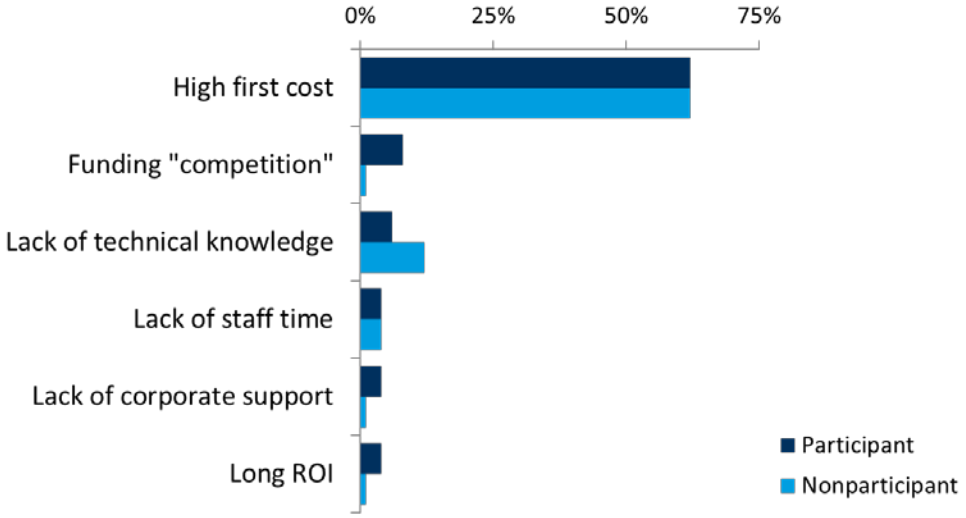
Figure 2-10. Benefits Beyond Energy Savings



Barriers to Participation

Surveys asked all customer groups what they saw as the most significant obstacles to installing energy-efficiency equipment for their company. The overwhelming majority (62% for participants and nonparticipants) identified high first-costs as the most significant obstacle. Figure 2-11 shows other barriers cited.

Figure 2-11. Barriers to Installing Energy-Efficient Equipment



How Avista Can Help Overcome These Barriers

Survey interviewers asked what Avista could do to help respondents' companies overcome the above-cited barriers. Suggestions frequently included:

- Continue/expand the rebate programs;
- Offer low-interest financing options/on-bill financing; and
- Provide more information (educate and communicate about programs).

Cadmus notes Avista offers financing through its Website; however, respondents were unaware of this at the time of the survey. Additional suggestions included:

- "Help us more clearly articulate the advantages of saving money over the long run as we go up through the hierarchy of our organization—at the engineering level we understand the need, but that does not necessarily translate through the higher administrative levels."
- "Have a better way to validate the savings…all the savings were on paper—nothing was substantive."
- "Just make the Website a little more user friendly."

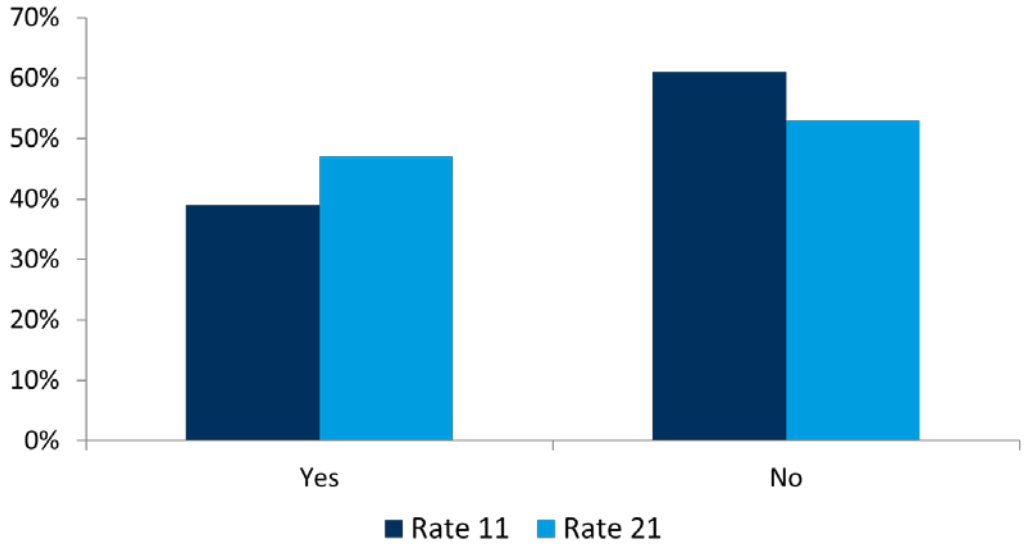
Outreach and Communication

Avista expanded efforts in 2011 to demonstrate a best practices approach to commercial programs, including "Power Breakfasts" (featuring customer testimonials), and case study print advertisements. In addition to examining survey responses to identify early results of these efforts, respondents were asked if expanded outreach and communication channels provided effective ways to reach them. This section highlights: changes in nonparticipant awareness; how customers learned about the programs; how effective information provided was; and perceptions on different ways to reach potential participants.

Nonparticipant Awareness

Program awareness among nonparticipants was higher this year, with 41% aware of the program, compared to 34% in the 2010 survey, although the majority remained unaware. Although fewer customers in the 2011 survey were on General Service Rate Schedule 21 (19%, compared to 64% in 2010), a noticeable increase occurred in the percentage aware of the program. This may indicate increased outreach and marketing by account executives to this target group have been effective. Figure 2-12 illustrates higher awareness among the larger Rate 21 customers. In 2010, no difference was found in awareness between the two rate classes.

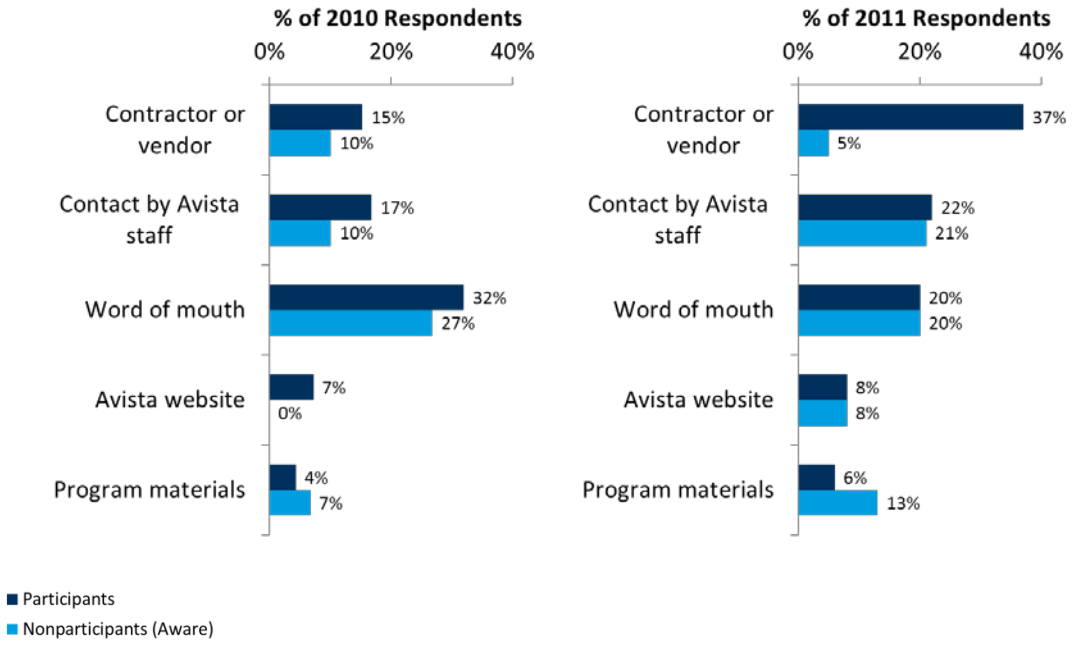
Figure 2-12. Nonparticipant Program Awareness, Comparing Schedule 11 and 21



Who Customers Talk to About Energy Efficiency

The survey asked customers who they would talk to about improving energy efficiency at their facilities. In the 2011 survey, participants and nonparticipants most frequently learned of programs through word-of-mouth, account executives, Avista staff, contractors, or vendors. Compared to the 2010 survey, the relative order of these responses reversed, with more customers learning about programs from contractors or vendors. Figure 2-13 shows results, by percentages of each customer group.

Figure 2-13. How Respondents Learned of Programs



Comparing responses regarding how customers learned about the programs between 2010 and 2011 suggest the following:

- The contractor and vendor role in communicating about the program increased significantly, with over one-third of participants (37%) crediting them for informing them about the program, compared to 15% in the previous survey.
- The gap in the proportion of participants learning from contractors, compared to nonparticipants, was quite large. This has not been observed in other sources, and suggests this may be a more effective channel, or the combination of contractors reinforcing messages from Avista could be a strong factor in decisions to participate.
- More customers learned about the programs in the last year from Avista account representatives and staff, up from 17% in 2010 to 22% for participants, and from 10% to 21% for nonparticipants.
- Few customers learn about the programs from Avista's business website, however it may be useful in the future to explore whether they use the website to obtain additional program information.
- Similarly, few customers learned about the programs from printed materials, receiving this information in mail or with bills, though more nonparticipants than participants learned about the program this way.

Sufficiency of Information When Customers Learned About the Program

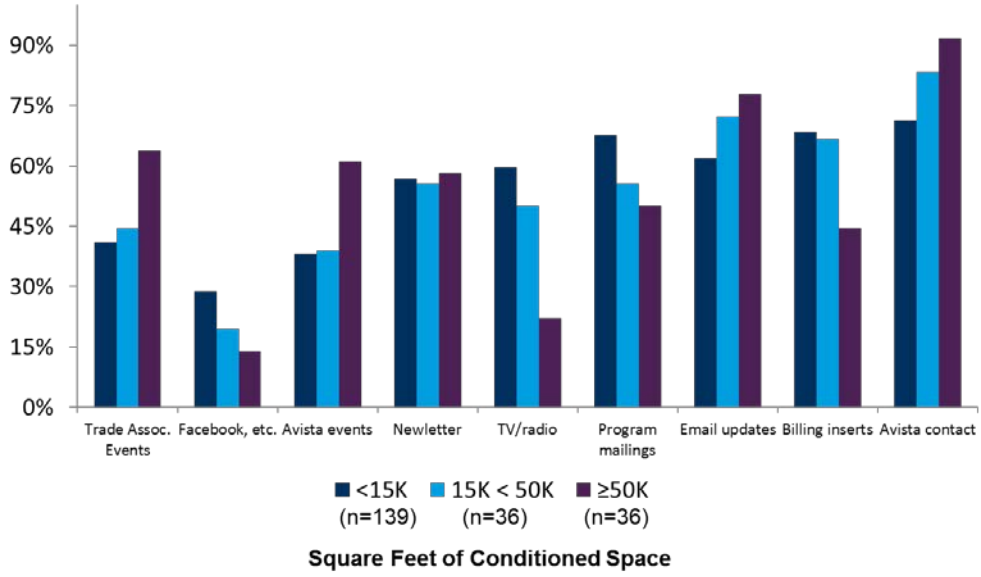
Customers were asked if the level of information they received when learning about the program proved sufficient for their needs. Nearly all participants (96%) responded it was, but one out of four nonparticipants reported not having sufficient information. Reasons provided through

follow-up questions focused on: more information about available programs; more detail about qualifying equipment and incentives; and a better understanding of processes to apply for and receive rebates.

Effectiveness of Different Marketing Channels

For outreach and marketing, Cadmus investigated additional marketing and communication channels, seeking to better understand their effectiveness in reaching customers. Few differences were observed by program; however, comparing responses by size of facility represented (square footage of heated and cooled space) determined some differences. Figure 2-14 shows the percentage of participants and nonparticipants, by facility square footage, responding as to which channel proved best for reaching them.

Figure 2-14. Most Effective Way to Reach Customers by Facility Size



Observations about responses to questions regarding different channels included the following:

- More respondents of all sizes believed direct contact from Avista was good, though this was less true for smaller-size facilities, where it also was less likely to be cost-effective (71% of facilities smaller than 15,000 square feet cited this as an effective way to reach them, compared to 92% of facilities 50,000 square feet and larger).
- On average, e-mail ranks second as a channel, although smaller customers rated program mailings and billing inserts slightly higher (68% each vs. 62% for e-mail).
- More than half of respondents in each size range responded favorably to a monthly newsletter communicating information.
- Large facility customers were less likely to be reached by billing inserts, program mailings, television, radio, or social media. They were, however, most favorable to events (Avista and trade associations) and e-mail updates (an in-person, personal theme).

- Customers in smaller facilities were more likely to respond to billing inserts, program mailings, TV/radio, a monthly newsletter, and direct contact.
- Social media, although not receiving a strong response (particularly from larger customers), still received favorable responses from 29% of smaller facility customers.

Potential Improvements and Additions to Programs

Participants and nonparticipants were asked what Avista could do to improve their program experiences. For the 16 participants who responded, the most frequently mentioned improvements included the following:

- Faster follow-up and response time/reduced delays in engineering and rebate processing;
- Better communications—in keeping the customer informed, and to provide consistent information;
- More in-depth auditing; and
- An individual to contact.

Nine of the 13 nonparticipant responses related to outreach and communications (being notified; receiving information in the mail, personal contacts). One suggested referrals to a qualified contractor, and one wanted help determining "where to start."

What Customers Want Added to Programs

Both participants and nonparticipants were asked if they wanted Avista to offer rebates for additional types of energy-efficient equipment or services. Fifty-two participants and six nonparticipants offered suggestions, with lighting and heating/HVAC equipment cited most frequently. Few were specific about technologies. Table 2-10 summarizes participant and nonparticipant responses. Respondents may not be aware of technology options in existing programs.

Table 2-10. Additional Equipment Rebates Customers Requested

Percentof Responses	Technology Type	Specific Equipment/Services
27%	Heating/HVAC/Boilers	• General heating • Gas heating • Radiant heat • Chillers
26%	Lighting	• "Anything lighting"/general response • LED • T8 replacement lamps • Exterior lighting • Street lights/parking lots • Horizontal case lighting
9%	Water heating	• General • Instant hot water heaters • Boilers

Percentof Responses	Technology Type	Specific Equipment/Services
9%	Gas	• Heating • Appliances/food service equipment
5%	Laundry equipment	• Washers and dryers
3%	Doors	• Exterior doors
3%	Insulation	• Insulation
3%	Renewable energy	• Solar, Wind, Water

Customer Profile

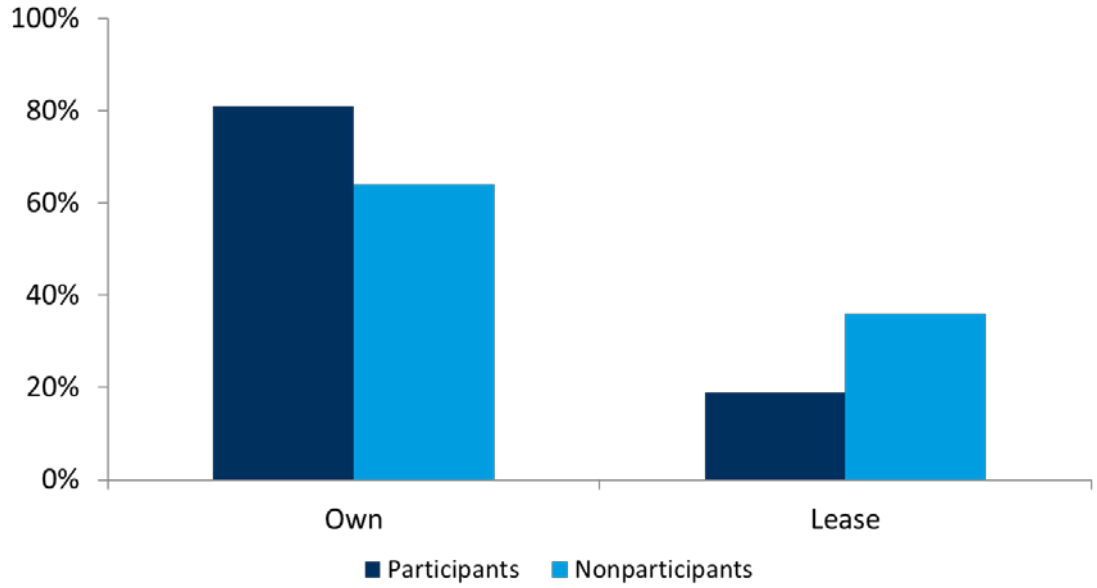
Understanding differences in customer profiles may help identify characteristics of customers effectively reached (or not reached) in current program outreach and delivery activities. The 2011 survey collected typical facility characteristics, such as: ownership versus leased space; square footage of conditioned spaces; fuel types used for space heating; and numbers of full-time employees.

Facility Ownership

Eight out of 10 participants surveyed reported owning their facilities, findings nearly identical to those in the 2010 customer survey (81%). By program cluster, 89% of participants in Site-Specific programs and 81% in Prescriptive programs owned their facilities. In the Energy Smart Grocer program, slightly more than half (53%) reported leasing their facilities. More nonparticipants in the 2011 survey reported leasing their spaces (36%, compared to 22% in 2010).

This finding is not surprising considering that leased facilities tend to be more challenging to reach and to persuade customers to make energy-efficient equipment investments. With more complex decision structures (and split-incentive challenges), owners and managers make capital investment decisions, while tenants typically pay electricity bills (and receive the investment's benefits).

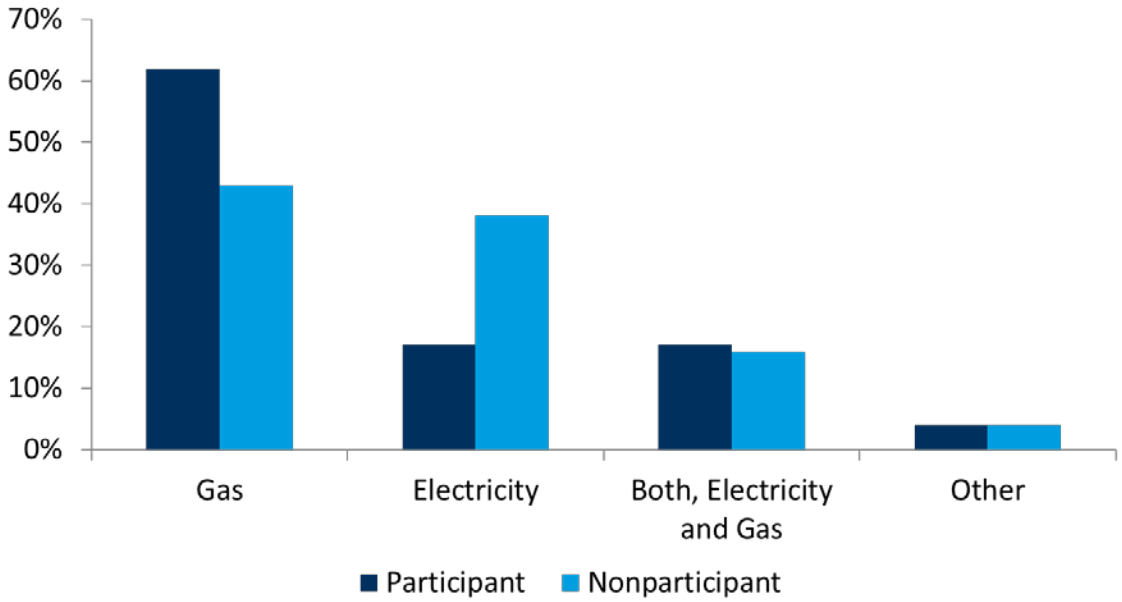
Figure 2-15. Percentage Ownership by Customer Facility



Fuel for Space Heating

Gas continued to be the dominant fuel used for heating by respondents, with higher program participation in facilities using gas for heating. Figure 2-16 illustrates fuel used for space heating for surveyed customers.

Figure 2-16. Fuel Use for Space Heating by Customer Group



Nonparticipants were twice as likely to use electric heating. Cadmus examined the breakdown by electric rate for this group, seeking to determine if smaller facilities weighted this result. Thirty-eight percent of the respondents in Rate 011, assumed to be smaller facilities, indicated

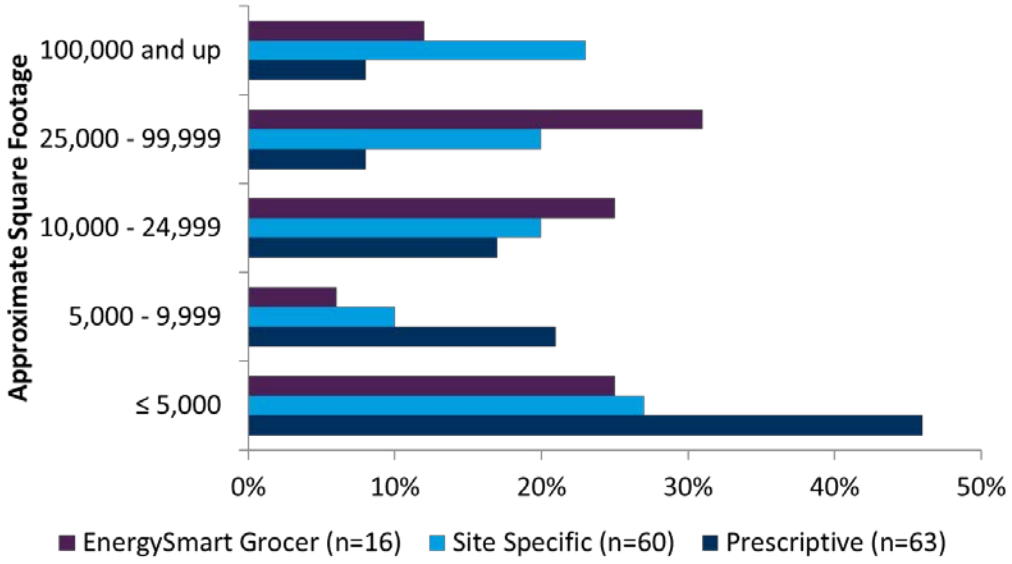
electricity as the fuel used for space heating. Close to one-half of respondents in Rate Schedule 21 indicated electricity (47%) as their space heating fuel.

Facility Size

More customized, Site-Specific programs appeared to effectively reach customers with larger facilities. Forty-three percent of participants in the Site-Specific program fell in the top two largest bands, with facilities larger than 25,000 square feet. Figure 2-17 illustrates distributions of participants across facility size ranges for program clusters.

All three program clusters reached small facilities. Nearly one-half (46%) of participants in the Prescriptive programs and 27% of those in the Site-Specific programs had facilities with less than 5,000 square feet of conditioned space. Including small facilities, which typically have much lower achievable energy and demand savings, may affect the program's cost-effectiveness.

Figure 2-17. Square Footage of Heated and Cooled Space in Facility
Percentage of Respondents by Program Cluster



2.3.4 Findings Summary

Program Satisfaction

Overall, awareness of Avista nonresidential programs appeared to increase, and participant satisfaction was very high. Certain program elements receiving a large share of only "somewhat satisfied" ratings, suggesting opportunities to improve, included: scoping audits, program materials, and application processes. Concerns identified focused on: needs for better managing expectations about the depth of audits; information customers would receive; and when they would receive it.

EnergySmart Grocer program participants were less satisfied, compared to the Prescriptive and Site-Specific programs. Lower satisfaction levels reported by nonparticipants suggested a need to

better understand why program offerings and materials did not meet their needs, or if outreach and marketing activities did not reach them.

Purchases and Decision Making

While saving money ranked as having the greatest influence on decisions to install energy-efficient equipment, the reported influence of "saving energy" declined from the 2010 survey, which could have implications for marketing messages.

Communications and Outreach

Increase in participants citing contractors and vendors as sources for learning about the programs increased from 15% in 2010 to 37% in 2011. Program information on Avista's Website may not be reaching across the market effectively, or be utilized to help customers. Over one-half of nonparticipants reported the business Website was not applicable to them, while citing the need for more information about programs.

Identification of effective ways to reach customers resulted in a variety of responses. Even personal contacts by Avista representatives did not please all respondents (but was most favored by three out of four).

Potential Improvements

Customers exhibited emerging concerns regarding response times for engineering analysis results and rebate receipts, with frustration also expressed about lack of communication from Avista in this regard.

Much energy-efficient equipment survey respondents identified as for possible rebates are (or could be) available in existing programs.

Customer Profiles

Cost-effectiveness of Site-Specific programs may be at risk if delivery costs are high for very small facilities (less than 5,000 sq. ft.); more than one in four participants surveyed belonged to this size range. Different outreach and delivery strategies may be needed to align costs to achievable savings.

The dominance of owned facilities represented by participants surveyed suggested Avista may not be reaching more challenging decision makers in leased facilities.

2.4 Trade Ally Feedback

Over several years, Avista has developed and maintained a mailing list of contractors and vendors providing services to residential and nonresidential energy-efficiency program customers. Avista uses this mailing list to inform trade allies of energy-efficiency program opportunities, changes, or upcoming events.

As such, the trade ally program serves as an informal network of participating contractors and vendors, which anticipate learning about energy-efficiency incentives, benefit from the business opportunities provided by the program, and interact with Avista's energy-efficiency program participants.

Avista also sponsors periodic technical training sessions for contractors interested in learning more about energy-efficiency programs through the Northwest Trade Ally Network (NW TAN), informing contractors and vendors of new program offerings. A recent addition to Avista outreach efforts has been the launch of power breakfasts, where customers and contractors are invited to learn more about Avista's spectrum of available energy-efficiency rebates.

2.4.1 Research Objectives

The trade ally research sought to gather responses from a representative sample trade allies for Avista's nonresidential energy-efficiency programs. For the 2011 evaluation, additional efforts were conducted to identify differences and similarities between general contractors and lighting contractors, and contributions towards promotion of nonresidential programs. Process evaluation objectives for the trade ally research included:

- Gathering information about contractor and lighting vendor target markets.
- Assessing awareness, experiences, and satisfaction with program design, enrollment processes, outreach, and communication.
- Identifying trade ally challenges, barriers, or recommendations for improvements.
- Understanding effects of upcoming changes to federal lighting standards on contractors and customers (discussed in a special report section).

2.4.2 Methods

The Cadmus evaluation team interviewed nonresidential program implementation staff, conducted interviews with trade ally participants, conducted best practices research, and reviewed the following materials:

- General contractor and lighting vendor mailing list;
- Lighting vendor handouts; and
- Lighting vendor communications and focus group meeting notes.

Promotional and training materials specifically targeting lighting contractors contained information regarding program updates, and sought to provide technical information about new program measures.

Cadmus interviewed 40 trade allies for the 2011 evaluation: 20 general contractors, and 20 lighting contractors selling or installing equipment to business customers receiving rebates through Avista nonresidential energy-efficiency programs. The interview guide included 37 questions, with topics addressing: program outreach and communication; satisfaction; application processing; market barriers; and recommendations for improvements. Due to the trade ally program's informal structure, nonparticipating trade allies could not be identified for the 2011 evaluation.

Contractors and lighting vendor mailing lists provided by Avista contained business names, but little contact information. Therefore, we compiled phone numbers from the Internet, and

gathered additional information from Websites, seeking to highlight types of contractor and confirm whether participants worked primarily with C&I customers.

Over a two week period, Cadmus contacted 189 contractors and vendors from the nonresidential trade ally mailing list. Fifty-five contractors contacted derived from the lighting vendor mailing list, while the rest derived from the general contractor list. Many contractors in the general contractor mailing list also served as lighting vendors. The following contacted could not complete interviews for the following reasons:

- Eight had limited to no involvement with the rebate programs.
- Two were involved with rebate programs in 2010, but did not continue in 2011.
- Seventeen were only residential contractors.
- Fifteen phone numbers had been disconnected.
- Seven had incorrect phone numbers.
- One refused an interview, and one terminated an interview.

Cadmus' effort to contact trade allies in varying fields sought to capture a representative picture of Avista's trade ally network. Table 2-11 lists trade allies interviewed by measure type, as a portion of overall, commercial energy savings.

Table 2-11. Trade Ally Respondent Comparison

Trade Ally Program Type	Number of Respondents	Portion of Interview Respondents	Portion of 2011 Portfolio Savings Represented*
Lighting	20	50%	29%
HVAC	11	28%	37%
Industrial processes	1	2%	11%
Motors	2	5%	7%
Shell	4	10%	9%
Energy Smart Grocer	2	5%	5%
Total	40	100%	98%

*Trade allies were not contacted for measure categories accounting for the remaining 2% of savings. Therm savings were converted to kWh for this comparison.

2.4.3 Research Results

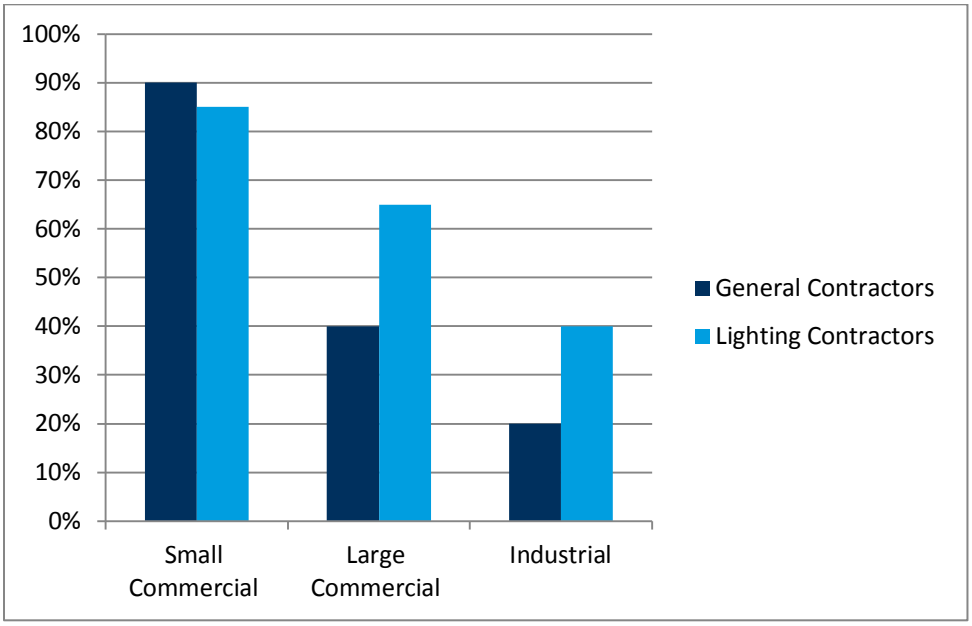
Participating trade allies provided insights into many program components, highlighting strengths and weaknesses from their direct experience with the nonresidential programs. This section summarizes trade ally interviews results. To gather insights into potential differences in experiences between lighting and non-lighting contractors, an even number of contractors were interviewed from the two groups. This section analyzes and compares interview observations from these groups (20 general contractors and 20 lighting contractors).

Trade Ally Profile

Trade allies provided services to a mix of customers, serving a variety of project types, and ranging from Prescriptive to Site-Specific programs. Most contractors reported working with

small commercial customers. Many lighting contractors also reported working with large C&I customers, though fewer general contractors did so. Figure 2-18 shows the customer base, reported by contractors interviewed.

Figure 2-18. Number of Trade Allies Working with Small, Large, and Industrial Customers



Contractors were asked how many projects they completed through Avista's rebate programs.

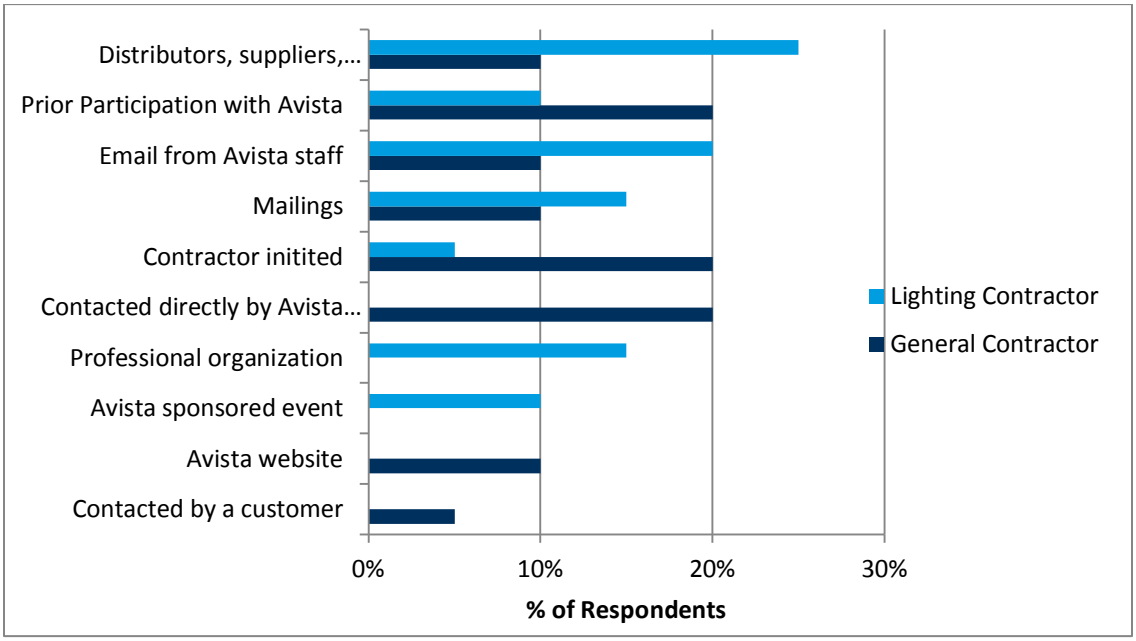
Table 2-12. Number of Avista-Rebated Projects Completed by Trade Allies

Completed Projects in 2011	General Contractors	Percentage General Contractors	Lighting Contractors	Percentage Lighting Contractors
1-10	11	55%	16	80%
11-20	5	25%	2	10%
20-50	1	5%	1	5%
51-100	1	5%	0	0%
>100	2	10%	1	5%
Total	20	100%	20	100%

Program Outreach and Communication with Trade Allies

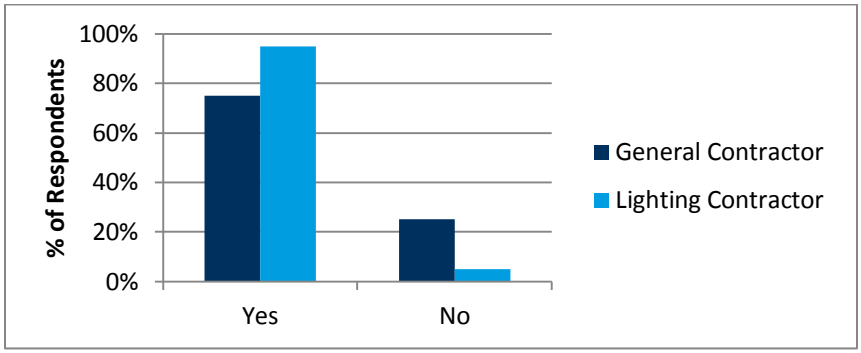
Answers varied when contractors were asked how they learned of Avista's rebate programs. An equal number of general contractors (4 of 20) heard about Avista through prior participation, by initiating communication, or were contacted directly by an Avista representative. Lighting contractors typically learned of the program through: distributors, suppliers, or industry contacts (5 of 20); by e-mail from Avista (4 of 20); or professional organizations (3 of 20). Two lighting contractors learned of the program through an Avista-sponsored event. Figure 2-19 shows additional ways trade allies learned about the program.

Figure 2-19. How Trade Allies Learned of the Programs



The majority of general contractors (75%) and most lighting contractors (95%) felt levels of information Avista provided about program opportunities was sufficient to meet their needs, as shown in Figure 2-20.

Figure 2-20. Was Information Sufficient to Meet Contractor Needs



Six respondents reported the information level was not sufficient to meet their needs. Two contractors reported it was difficult to reach representatives when calling Avista for assistance; both waited 20 minutes or more to speak with a representative.

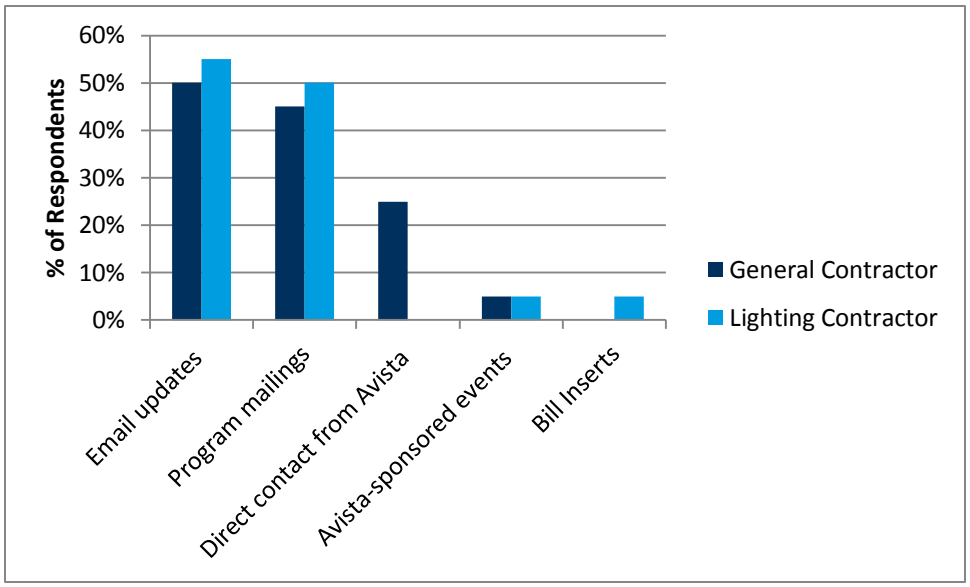
Trade allies provided a range of suggestions for meeting their communication needs:

- More direct (and frequent) communication from Avista representatives;
- Creating a designated contact person at Avista to field contractor questions;
- Providing more detail and guidance on program enrollment requirements, application processes, qualifying measures, and start and end dates;

- Supplying a brochure describing rebate programs, costs, and benefits that contractors could hand out to customers;
- Including easier access to Website forms, and providing more detailed information;
- Adding more detailed instructions regarding use of lighting calculators.

Figure 2-21, shows preferred ways of contractor communications.

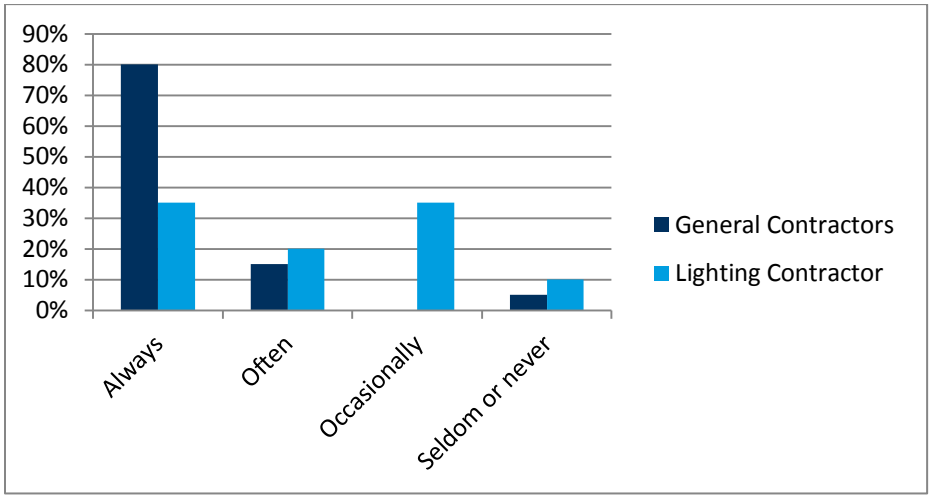
Figure 2-21. Most Effective Ways to Reach Contractors about Program Opportunities



Outreach to Customers

Most general contractors (80%) said they always promoted the program to Avista customers, while another 15% (3 of 20) often promoted it. However, lighting contractors less actively promoted the program. Thirty-five percent (7 of 20) always promoted the program, while 20% (4 of 20) often promoted the program. One high-efficiency windows contractor did not have enough information to promote the program. Figure 2-22 compares promotion activity trends of general and lighting contractor respondents.

Figure 2-22. How Often Contractors Promote the Program

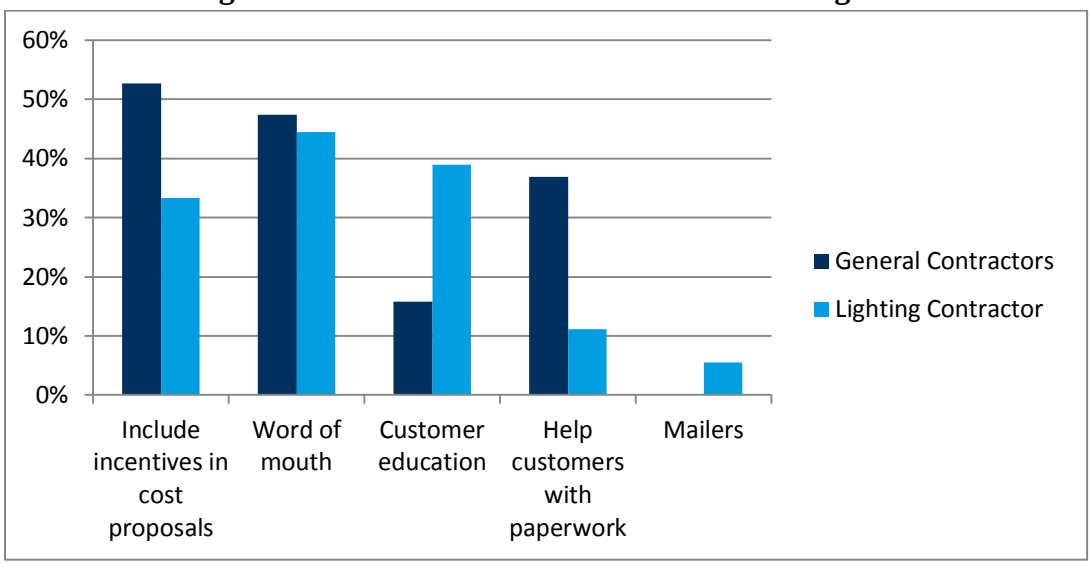


Lighting contractors promoting the program occasionally, seldom, or never, when asked why they did not promote the program more frequently, offered the following reasons:

- Some lacked time and resources;
- Many promoted the program mostly during slow times;
- Many promoted the program on a case-by-case basis, when appropriate for the customer; and
- A few reported they are gearing up to promote more in the future.

Figure 2-23 identifies contractors' promotion methods.

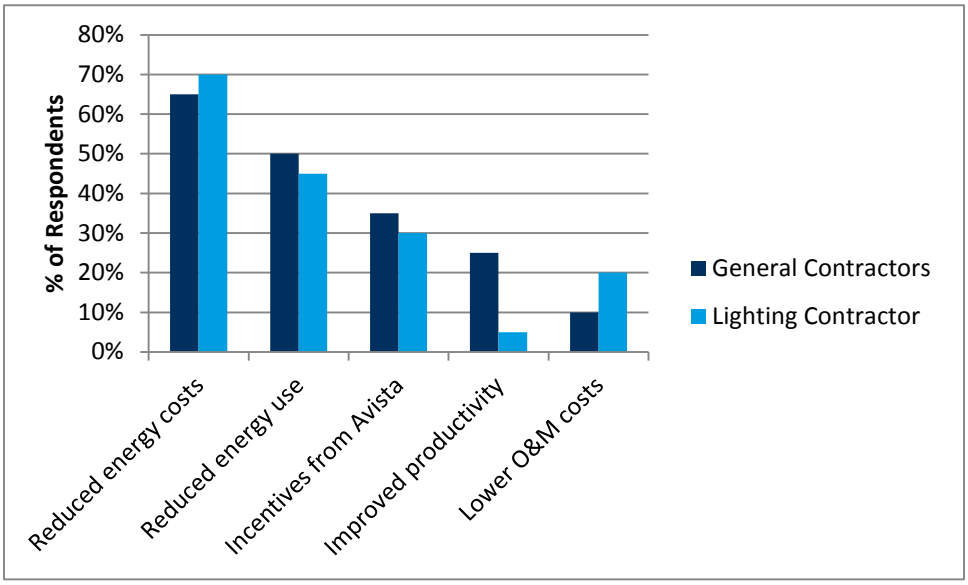
Figure 2-23. How Contractors Promote the Program



While more than one-half of general contractors (10 out of 19) including incentives in cost proposals, only one-third of the lighting contractors (six out of 18) used this approach. Next to word-of-mouth, the most common approach for general contractors (37%) was promoting through helping customers with paperwork. After word of mouth, the second most common approach taken by lighting contractors (39%) was to promote the program through customer education.

Sixty-five percent of general contractors (13 of 20) and 70% of the lighting contractors (14 of 20) more commonly promoted energy savings as a benefit, followed by reduced energy use and incentives offered by Avista. Figure 2-24 compares top benefits promoted by trade allies.

Figure 2-24. Which Benefits Trade Allies Promote to Customers

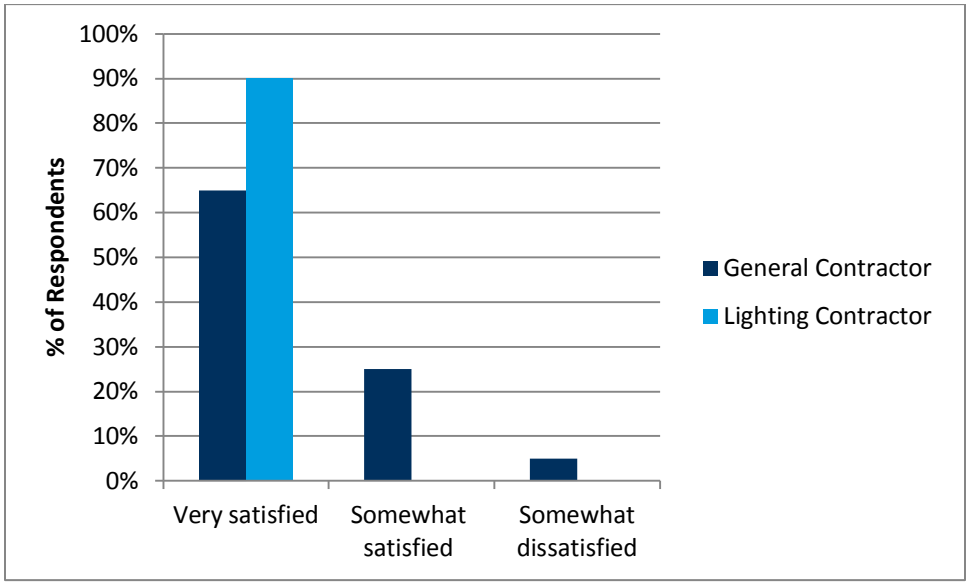


Satisfaction

The majority of lighting contractors (17 of 20) and general contractors (16 of 20) interviewed reported they were very satisfied with the overall program. Only one contractor was somewhat dissatisfied; a heating and ventilation (HVAC) contractor reported Avista should put more effort into educating contractors.

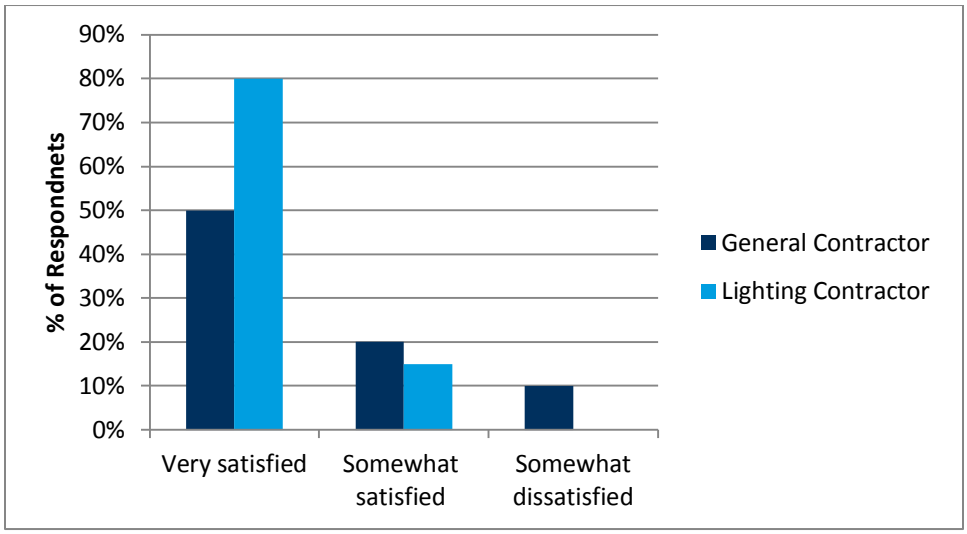
Ninety percent of lighting contractors (18 out of 20), and 65% of general contractors (13 of 20) were very satisfied with Avista representatives. Twenty-five percent of general contractors (5 of 20) were somewhat satisfied. But a few comments addressed room for program improvements. One contractor did not have an Avista contact; another reported a long wait time on the phone to get information; and another had mixed experiences (with more good than bad). One contractor was somewhat dissatisfied, reporting Avista should promote the program more. Figure 2-25 demonstrates distributions of responses.

Figure 2-25. Trade Ally Satisfaction with Avista Representatives



The majority of trade allies either received program information in the mail, through e-mail, or picked up materials at an event. Figure 2-26 shows lighting contractors expressed the highest satisfaction with materials received from Avista. While 80% of lighting contractors (16 of 20) were very satisfied, only 50% of general contractors (10 of 20) were very satisfied with program materials.

Figure 2-26. Contractor Satisfaction with Program Materials



Twenty percent of general contractors (4 of 16) were somewhat satisfied, and two were somewhat dissatisfied. Both dissatisfied contractors said detail levels provided in materials was insufficient to explain programs to customers. One commented that Avista could have done a better job letting contractors know the type of programs and incentives available.

Application Process

Most trade allies reported it fairly common to help customers fill out applications. Most general contractors (17 of 20) completed application paperwork, leaving customers to fill in personal information and submit applications to Avista. The three respondents typically not helping customers reported they believed the forms were easy to work with, and they referred customers to the Website.

General contractors who typically helped customers fill out the forms said, after several years of involvement with the program, they were familiar with the application process. One contractor noted Avista representatives did not consistently require invoices, while another contractor reported difficulty in identifying and recording efficiencies for older equipment.

The majority of lighting contractors (16 out of 20) helped their customers complete rebate applications on a regular basis. Two reported they typically tried not to get involved, while the remaining two said they did not help customers at all with the application process.

Lighting contractors indicated the application process was straightforward and easy to understand. One noted the application process became easier with the new forms. Almost all (19 of 20) reported no problems with the applications. The remaining lighting contractor did not know of application updates, and had to resubmit the updated version of the form.

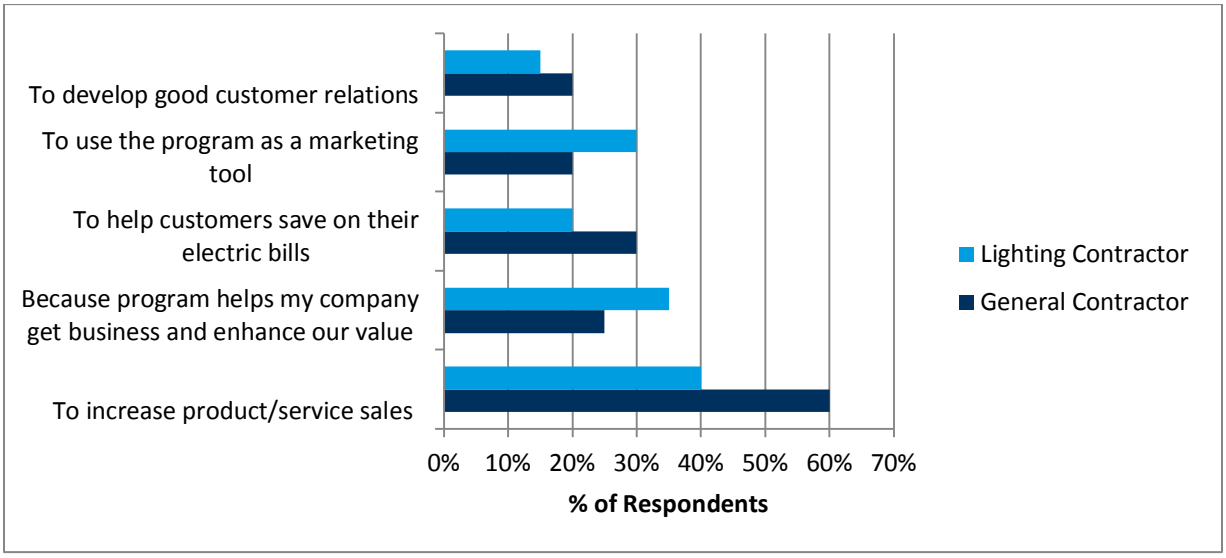
The survey sought to identify whether contractors could recommend changes to the application forms. None of the lighting contractors offered recommendations. Most general contractors (16 of 20) thought applications were fine as is; the remainder offered the following suggestions for improvements:

- Enable applications to be filled in and submitted online.\
- Applications could provide more clarity about high-efficiency window requirements.
- Overall paperwork could be reduced.

Perceived Value of Rebate Programs

When asked the Avista program's value to their businesses, trade allies agreed the primary benefit came through increased sales. As shown in Figure 27, the top three responses for general contractors were: increase in sales (12 of 20); helping customers save money on their electric bills (6 of 12); and enhancing company value (5 of 12). The top three responses for lighting contractors were: increase in sales (8 of 12), helping to add value to their business (7 of 12); and for use as a marketing tool (5 of 20).

Figure 2-27. Value Avista Programs Bring to the Company



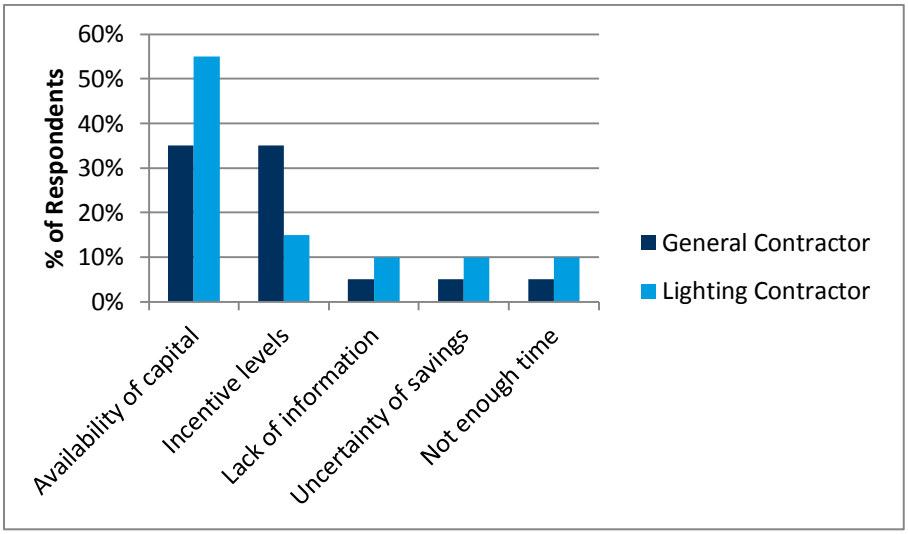
Additional points offered regarding value of programs included the following:

- There would be less business without the rebate programs.
- Customers were pleasantly surprised to hear about the rebate.
- Four general contractors reported good reputation was a selling point.

Participation Barriers

Trade allies were asked to speak about obstacles to installing energy-efficiency equipment for customers. More than half of lighting contractors (55%) cited availability of capital as the most significant obstacle, while only one-third of general contractors (35%) cited capital as an obstacle. Incentive levels proved equally relevant for general contractors. Figure 2-28 shows a range of additional responses to perceived customer participation barriers.

Figure 2-28. Trade Ally Perceived Barriers to Customer Participation



More than one-third of general contractors (7 of 20) also reported they did not perceive any obstacles to installing energy-efficiency equipment. The contractors felt that, if the customer needed to install equipment, and as long as rebates were available, the customer would not encounter obstacles. To a lesser extent, lighting contractors (3 of 22) reported incentive levels as an obstacle, while the remainder cited: lack of information, uncertainty of savings, and lack of time.

When asked how Avista could assist trade allies and customers in overcoming obstacles to financing energy-efficiency projects, not all trade allies had a ready answer. Some contractors felt there was little that could be done until the economy improves. However, contactors also offered a number of suggestions:

- Offer additional marketing to customers, particularly a handout to identify costs and benefits of upgrading to high-efficiency equipment.
- Increasing rebates, or include incentives to help pay for permit costs.
- Offer a more extensive financing program.
- Reduce waiting times for incentives, or establish a program similar to that developed by PECI for EnergySmart Grocer, which reduced customer upfront costs and wait times.

Final Thoughts and Recommendations from Trade Allies

Many trade allies working with Avista customers also had experiences with other utilities. Over one-half of general contractors (12 of 20), and just under one-half of lighting contractors (9 of 19), reported experiences working with nonresidential, energy-efficiency rebate programs at other utilities.

Comparing Avista's program with other utilities, trade allies provided unprompted, positive benefits. Of those experienced in working with other utility rebate programs, trade allies felt Avista offered the following:

- Rebate programs were straightforward and offered a relatively simple process;
- Less paperwork was required;
- Fewer barriers, such as complicated calculators or burdensome amounts of paperwork;
- Better communication, and representatives often had better responses to unusual situations; and
- Higher rebates.

More than one-half of general contractors (55%) believed Avista could offer additional energy-efficient equipment rebates. However, nearly half of the lighting contractors did not offer an opinion in this regard. Trade allies offered the following suggestions for new technologies or changes to existing technologies:

- Geothermal heat pumps;
- Tankless water heaters;

- Ductless mini-splits;
- Incentives for a resource conservation manager position;
- Incentives for long-term measurement and savings;
- Increased rebates for Powersaver capacitor to LEDs; and
- Remove cold cathode lighting products from rebate list.

A few contractors suggested incentives already offered by Avista (or offered in the past). These included: steam trap replacements; demand control ventilation; and retro-commissioning.

2.4.4 Findings Summary

Avista's informal network of trade allies works well, through word-of-mouth and strong communication with Avista representatives. Many trade allies have worked with Avista for several years or more. Overall, trade allies reported high satisfaction levels, with slight variations by contractor type. While lighting contractors indicated high satisfaction levels with program materials, they were also less likely to promote the programs than general contractors. Trade allies made suggestions for improvements in program promotions to assist customers, through additional materials or more information available online. Trade allies wanted more one-on-one communication with Avista representatives, or dedicated assistance to answer questions about the programs.

2.5 Special Report: Lighting

New federal regulations and efficiency standards will affect Avista's nonresidential customers and their lighting incentive programs. Customers will no longer be able to buy or replace widely used lighting technologies, including: magnetic ballasts; T-12 fluorescent tubes; and high-wattage, conventional incandescent light bulbs. As lighting represents a major portion of Avista's commercial portfolio electricity savings, this increase in standards (and associated non-program baselines) could significantly impact future energy savings Avista will be able to achieve.

To better understand the current status and perceptions in the market related to these changes, Cadmus added a focused set of research questions to this year's evaluation activities. These questions were integrated into planned data collection activities, and were supported by secondary research. Understanding impact levels these changes will have, and how the lighting market is changing, will prove critical for future program planning.

2.5.1 Research Objectives

Specific research objectives for this investigation, developed with Avista, included the following:

- Assess awareness of T-12 phase-outs and new lighting standards;
- Understand current use of T-12 tubes and inventories in facilities;
- Gauge customer sentiment surrounding increased standards from Energy Independence and Security Act (EISA) legislation;

- Identify trends in near-future plans for installing energy-efficient lamps and fixtures; and
- Identify the most important factors influencing lighting purchases at this time.

2.5.2 Methodology

Cadmus conducted primary and secondary research to expand our existing knowledge of the lighting market to specifically include the Avista markets. A multifaceted approach included: staff interviews; trade ally interviews; site-visit surveys; telephone surveys with participants and nonparticipants; and secondary research related to the regulations and relevant best practices.

Cadmus reviewed EISA and U.S. Department of Energy (DOE) commercial lighting regulations, and scanned publicly available information to identify trends regarding new federal lighting regulations and the lighting baseline.

Customer Data Collection

Customer data collection was integrated with other evaluation activities. All participants and nonparticipants responding to telephone surveys were asked a standard battery of lighting questions, which were more quantitative and direct (close-ended). Cadmus field technicians conducting on-site surveys asked more in-depth, lighting-specific interview questions. Table 2-13 summarizes topics included in the surveys.

Table 2-13. Research Focus for Surveys

Participant and Nonparticipant Phone Survey (n=263)	On-Site Surveys (n=41)
• Awareness of lighting regulations and the phase-out of less-efficient lighting • Sources customers rely on to procure information about energy-saving lighting technologies • Factors customers consider in purchasing lighting • Perceived benefits of higher-efficiency standards • Presence of T-12 lamps installed and in storage in the customer's facility • Plans for lighting upgrades within the next year	All questions asked in the phone survey, plus: • Specifically, which lighting types customers plan to remove or replace • Specifically. which lighting types customers plan to install in upcoming lighting projects

Sampling

Samples for telephone and on-site surveys were selected based on the impact evaluation sampling methodology. Overall, Cadmus conducted 50 site-visit surveys during the last round of the impact evaluators' scheduled verifications. Of these, Cadmus completed 21 on-site lighting surveys. Some on-site contacts were not lighting decision makers, or did not know the information required to complete the survey. Cadmus completed another 20 lighting interviews through follow-up phone calls, producing 41 in-depth surveys. In the remaining cases, customers did not have the time to go beyond site-visit engineering requirements, already required for the on-site visit.

Sampling methodologies for the telephone surveys can be found in this report's Participant Survey Sampling and Nonparticipant Survey Sampling sections.

2.5.3 Research Results: Customer Perspectives

Background: Federal Lighting Regulations

The lighting market is in early stages of a major transformation, driven largely by federal actions, in combination with recent years' new lighting technology developments. The DOE began phasing in new efficiency standards for magnetic ballasts in 2005, with additional rules created by the Energy Policy Act of 2005 going into effect between July 2009 and July 2010, and resulting in a shift to higher-efficiency ballasts (i.e., electronic). Recently enacted DOE regulations to eliminate most T12 and some low-color-rendering 4-foot T8 lamps will take effect on July 14, 2012, for new products manufactured in the United States. Although the share of T12 lamps sold has declined, in late 2011, they still accounted for 30% of sales.[11]

Conventional incandescent light bulbs also must use less energy, following a bipartisan energy bill passed by Congress and signed by President Bush. EISA took effect January 2012, with a goal of reducing the nation's dependence on foreign energy sources by increasing production of clean renewable fuels within the United States. Part of this effort includes establishing new, federally mandated, energy-efficiency standards.

Within the new standards, ranging from fuel economy targets to training a "green collar" workforce, EISA establishes consumption limits for appliances and lighting. Lighting standards place restrictions on incandescent and fluorescent lamps. Specifically, EISA sets forth a schedule for phasing out incandescent lamps of a given wattage, and replacing them with lower-wattage lamps with a minimum lamp life. EISA also sets minimum average lamp efficacy standards, measured in lumens per watt. Finally, EISA establishes requirements for ballast efficiency in new metal halide luminaires for 150- to 500-watt fixtures.

Implications for Avista

Lighting measures comprise a significant portion of program offerings. Due to the number of lighting incentives and the frequency of lighting projects, this branch of Avista's nonresidential efficiency program accounted for approximately 40% of 2011 gross savings.[12] These savings can be broken down as follows:

- Over 80% of the savings from nonresidential Prescriptive programs relate to lighting measures, equating to 18% of savings across the entire portfolio.
- Thirty percent of the savings from nonresidential, Site-Specific programs relate to lighting measures, equating to 20% of savings across the entire portfolio.

Avista currently offers numerous nonresidential rebates for interior and exterior lighting retrofits. These include incentives: of up to $500 for complete retrofits from high-intensity discharge (HID) lamps to qualifying light-emitting diodes (LEDs), induction lamps, and digital HID lamps. Replacement of incandescent lamps can qualify for rebates, when replaced with qualifying

[11] NEMA News. December 22, 2011. "Linear Fluorescent Lamp Shipments Increase During Third Quarter." http://www.nema.org/media/pr/20100831a.cfm

[12] Non-evaluated totals from Avista's program database extract (including multifamily participants).

fluorescent lamps or LEDs. Avista also provides varying rebates on custom or Site-Specific retrofits from T-12 fixtures to T-8, T-5, or qualified LED fixtures.

Implementation of efficiency standards resulting in the phase out of T-12 lighting in commercial applications has created ambiguity surrounding the new baseline for lighting measures once T-12s are removed from the market. This uncertainty about baseline efficiency assumptions directly affects future lighting program design savings projections.

Currently, the RTF is developing protocols for monitoring and verification of commercial lighting; these should be available by July 2012 to provide guidance on this issue to utilities and stakeholders.

In addition to baseline and savings potential concerns, a better understanding of customer awareness and plans in response to these changes will help Avista design and plan for future program success.

Avista Lighting Program Delivery Changes

Cadmus interviewed Avista's lighting program manager to identify any changes introduced in the past year, and to understand future goals and vision for the program. Actions taken this year include:

- Aggressive efforts to replace and remove T-12 lamps from customer facilities;
- Phase outs of HID technologies with low participation levels;
- Introduction of a more detailed rebate form;
- Expanding outreach activities to lighting vendors focused on regulated changes; and
- Updating the Website to reflect program changes.

Regarding lighting technologies affected by the new regulations and standards, Avista launched a "fire sale," offering substantially higher incentives (up to $4 per foot of T-12 removed) to remove as many T-12s from customer businesses as possible.

Avista staff also noted increased outreach activities in 2011, when they began offering additional lighting vendor training morning meetings, and focus groups, informing vendors of changes, raising awareness, and gathering trade ally feedback. Avista is drawing upon standardized industry lighting information (offered through the Bonneville Power Administration and the Northwest Energy Efficiency Alliance) to develop marketing materials for use in lighting vendor outreach. Avista has been able to offer a more formalized network to lighting vendors, with the help of events sponsored by NW TAN; however, improving overall contractor and vendor outreach remains an ongoing goal.

Finally, the Website will be updated to reflect program changes. The interviewees expect this recharged advertising approach to have a positive effect on the program, resulting in savings of 15 million kWh for the program year.

The program manager noted a consistent barrier in meeting program goals has been lack of awareness and participation among customers, which partly may be due to a struggling economy.

Customer Awareness of T-12 and Incandescent Phase Out

Cadmus asked all customers whether they were aware of the new EISA lighting standards and the required phase-out of T-12s and certain incandescent lamps. Majorities in all groups were aware, particularly Avista program participants surveyed by telephone (86%, or 139 of 162). In on-site surveys, 65% of 41 were aware of these changes; however, five of the 16 participating in a lighting rebate program were not aware.

Customer Attitudes

Customers in the telephone survey were asked what benefits they saw to the higher-efficiency standards. Nonparticipants placed significantly less emphasis on saving energy (24% of nonparticipants, compared to 41% of participants). Fewer, but multiple mentions of other benefits included: better lighting quality, and quality products.

Table 2-14 summarizes benefits identified by at least 10% of respondents. Slightly more than one-half of all respondents (participants and nonparticipants) expected to save money. Nonparticipants placed significantly less emphasis on saving energy: 24% of nonparticipants, compared to 41% of participants. Fewer, but multiple mentions of other benefits included better lighting quality and quality products.

Table 2-14. What Customers See As Benefits of New Efficient Lighting Standards

	Participant Telephone Survey	Nonparticipant Telephone Survey
Saving money	53%	55%
Saving energy	41%	24%
Lower maintenance costs	15%	~
Increased productivity	13%	~

Negative benefits identified by multiple respondents included:

- Higher costs;
- Concern that new lighting would be more hazardous;
- “No benefit to us at all”; and
- “More government controls…don’t like the government telling us to do anything.”

Cadmus also asked on-site respondents if they had concerns about the new standards’ impacts on their facilities. A strong majority (14 of 19) said they were not at all worried, with only two managers stating they were concerned. They identified costs to comply and mercury as primary issues for their concerns.

Current Use of T-12 Tubes and Inventory In Facilities

T-12s have been widely used in nonresidential facilities for decades. As part of this study, Cadmus posed a series of questions related to current and future usage of T-12 lamps. When asked if they had T-12 lamps currently installed:

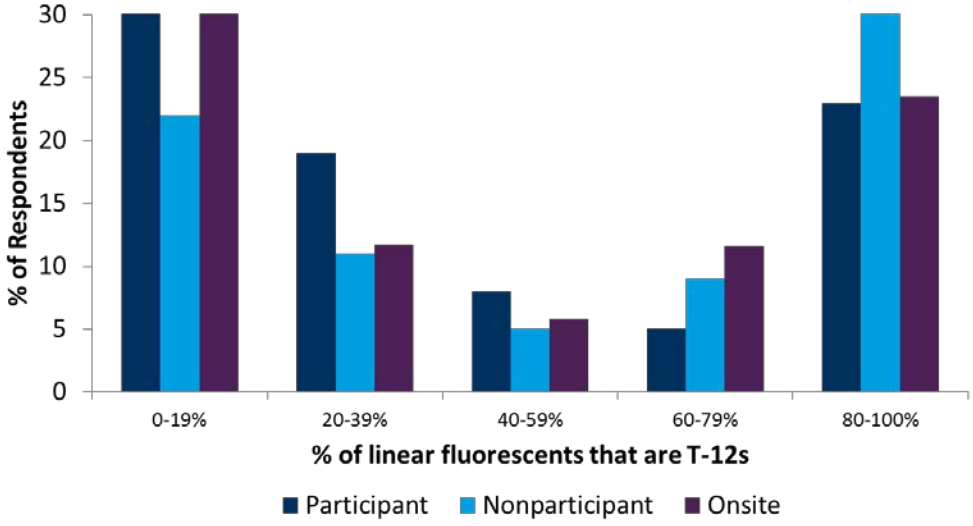
- Forty-three percent (69 of 162) of participants were sure they had T-12s installed.
- Fifty-five percent (55 of 101) of nonparticipants knew they had T-12s installed.
- Forty-one percent (17 of 41) of on-site respondents had T-12s in their facilities.

Some telephone survey respondents could not answer the question. One-quarter of nonparticipants stated they were unsure whether they had this lamp type, a significant response compared to participants, where less than 7% were unsure. Cadmus has observed communications from other utilities, distributors, and energy-service providers explaining how customers can determine if they have T-12 lighting. Several make effective use of circles drawn to "actual size" showing the 1.5" diameter for a T-12, compared to a 1-inch circle for a T8.

Respondents who knew their facilities had T-12s were then asked what percentage of all linear fluorescent lamps in their facilities were T-12s. Responses across the survey groups were polarized, showing some customers with 80% or more of T-12s and, at the other end, a majority with less than 20% of their lighting utilizing T-12s. Figure 2-29 summarizes the percentage of lamps installed in customer facilities.

- Avista program participants were less likely to have a large share of T-12s remaining in their facilities: 39% of participants (27 of 69) compared to 22% (17 of 55) of nonparticipants reported less than 20% of their fluorescent lighting had T-12s.
- Conversely, more nonparticipants had higher percentages of T-12s in their fluorescent lighting (31% had more than 80% T-12s, compared to 23% of participants).

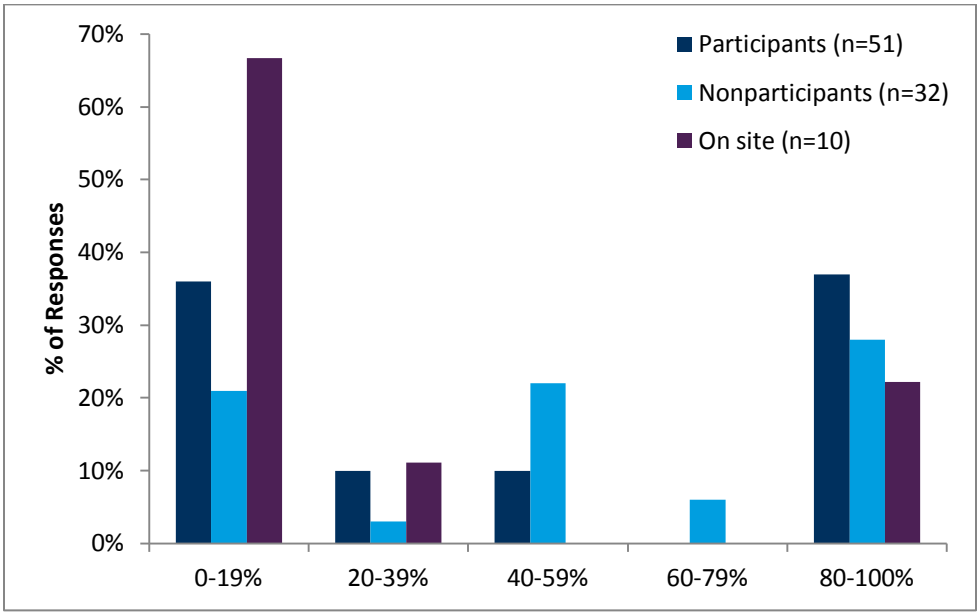
Figure 2-29. What percentage of all linear fluorescent lighting in your facility is T-12s?



In follow-up questions for those knowing they used T-12s, customers were asked whether they had T-12s in storage, and, if so, what percentage of their current T-12s could be replaced with those in storage. The majority of customers surveyed kept replacement T-12s in inventory in preparation for future burn-outs. Figure 2-30 summarizes the percentage of installed lamps that could be replaced by stock in inventory.

- Overall, 74% (51 of 69) of participants using T-12s had replacement lamps available. Approximately equal numbers had significant stock as those with only had a few extra lamps: 36% said they could replace either 0% to 9% or 10% to 19% of their T-12s, while 37% could replace 90% to 100% of their T-12s.
- Fifty-eight percent of the 55 nonparticipants using T-12s had more T-12s in storage. The other 23 nonparticipants will have to change bulb types when their currently installed T-12s burn out. Of the 32 with T-12s in storage, nine said they had enough to replace 90% to 100% of currently installed lamps.
- Fifty-nine percent of on-site survey respondents (10 of 17) had replacement T-12s in storage, but only two respondents said they had enough to replace all T-12s in their facilities; the other eight respondents only had enough T-12s in storage to replace 20% or less.

Figure 2-30. What percent of T-12s currently installed could be replaced by T-12s in storage?



In the on-site surveys, customers were asked about ballast types. The most common responses from managers were: they did not know (33%); or they only had magnetic ballasts (33%). As EISA has separate standards for magnetic and electronic ballasts, it will be necessary to ensure customers learn about their ballast types to know whether they can replace their fixtures with the same types.

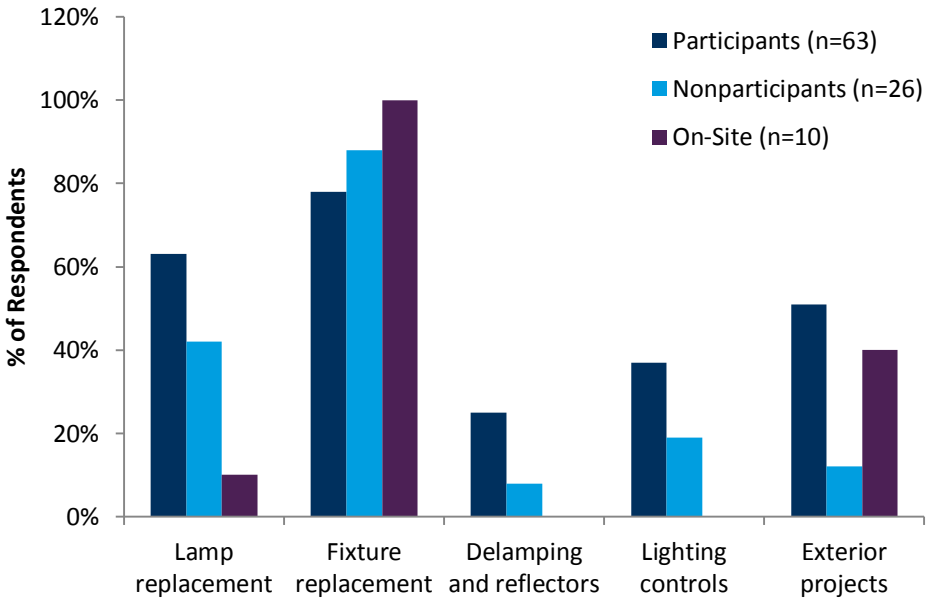
Future Lighting Projects

Cadmus asked customers whether they planned on upgrading their lighting, and if so, what types of changes such projects would include. Despite the phase-out of T12s and changing standards, nearly two-thirds of all customers surveyed did not have plans for lighting upgrades. More program participants (40%) planned upgrades than nonparticipants (28%) or on-site survey respondents (24%).

As shown in Figure 2-31, the majority of those planning projects will include indoor fixture replacements. All respondents to the on-site survey included fixtures in their plans. The majority of these were removing T-12s with magnetic ballasts, with other planned lighting removals including: high-pressure sodium bulbs; HIDs; T-5s; T-8s; and T-12s with electronic ballasts. For replacement fixtures and bulbs, the most common response was to use T-8s. Other responses included: T-5s; LEDs; and ceramic metal halide HIDs. According to facility managers, fixtures replaced tend to be in high- or medium-use areas.

Exterior lighting upgrades were planned by four of the 10 respondents in the on-site survey. Each of these four respondents planned to replace a different type of bulb (HID, CFL, LED, and other).

Figure 2-31. Which of these do you think the project will include?

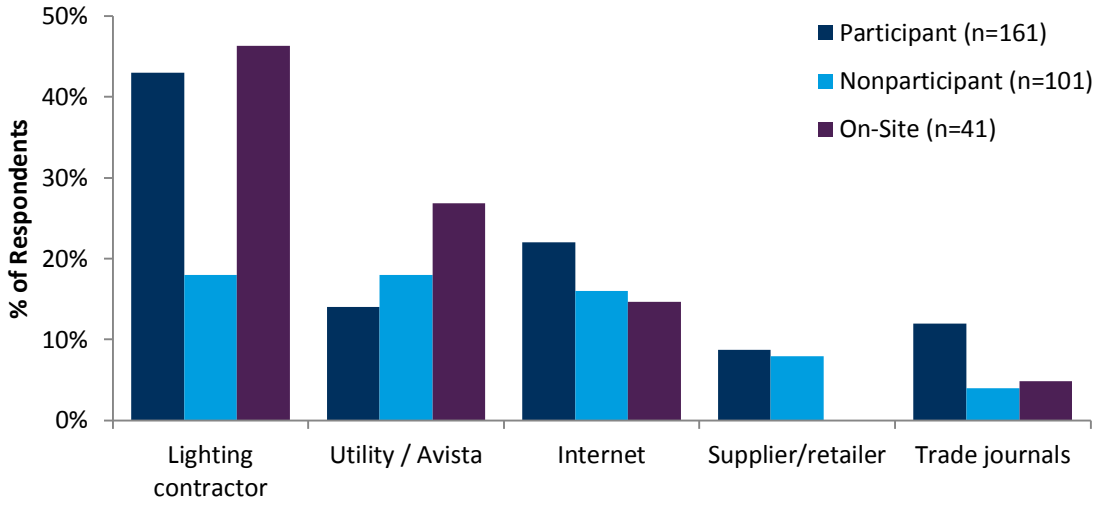


Information Sources

Cadmus asked customers and facility managers where they typically received information about energy-efficient lighting. As shown in Figure 2-32, the most common response was: lighting contractors provided the best source for learning how to save money on lighting-related energy costs. For program participants, the high percentage (43%) identifying lighting contractors was partly influenced by participation in Prescriptive programs. Fifty-three percent of participants in Prescriptive programs (37 of 70) cited lighting contractors as information sources. Avista and the Internet were also mentioned as information sources.

Nonparticipant responses show less consensus regarding information sources, with approximately equal numbers of nonparticipants identifying utilities, contractors, and the Internet.

Figure 2-32. Where do you usually get information about lighting technologies that could save energy and money for your business?



Respondents were asked the most important factors they consider when purchasing lighting. Results included:

- Overall, total project costs and energy efficiency of equipment were most frequently mentioned.
- Lighting quality was mentioned by more than 20% of respondents, the only non-cost related factor mentioned frequently.
- Achieving energy savings sufficient to pay for the project and return on investment were mentioned more frequently in the on-site surveys.
- Other factors receiving multiple mentions included: aesthetics, reliability, and codes and regulations.

These responses indicate that, while energy efficiency certainly matters, cost continues to be a dominant factor in purchasing decisions.

2.5.4 Research Results: Trade Ally Perspectives

Cadmus interviewed 40 contractors, 23 of whom worked on lighting projects, and were asked four questions related to EISA legislation. Specifically, Cadmus inquired about: their awareness of the near-future phase-out; whether their customers' were informed; what the reactions have been; and how the new standards might affect their businesses.

Awareness of DOE and EISA Changes

A significant majority of the lighting contractors (19 of 23, or 83%) knew (and were knowledgeable) about EISA legislation concerning phasing-out of T-12s and incandescent bulbs. Only two respondents did not know of the upcoming changes; and two had heard something about EISA, but did not know any details.

Cadmus probed further to find out what these contractors had heard about the new standards. Contractors generally said they were familiar with the changes, and were planning ahead, moving customers away from T-12s, and targeting additional projects for removals of T-12s. One respondent stated some general confusion existed about the date of enforcement, and he had heard it was being postponed. Another contractor commented he did not think T-12s would suddenly disappear. He predicted stockpiling would become common, and the bulbs would be traded around the market for several years.

Discussions and Reactions with Customers

When asked whether they had discussed the new lighting standards with their customers, about one-half of lighting contractors (13 of 23, or 57%) confirmed they went over the details of the changes, and suggested alternatives for future installation. Four contractors stated they had mentioned it to customers, but not discussed it. Six contractors (26%) had not brought the topic up with customers. These results show most contractors have been explaining the issue to customers, but a notable proportion has not passed on the information. Further, in expanding on this issue, contractors identified other obstacles related to customers. Contractors said, when bringing the standards up with customers, customer responses included:

- Thinking they were being forced to use CFLs, and not being pleased with that option;
- Being concerned about the quality, dimming, and cost of new bulbs; and,
- Disliking federal regulations on lighting, and worrying about the limited lighting alternatives.

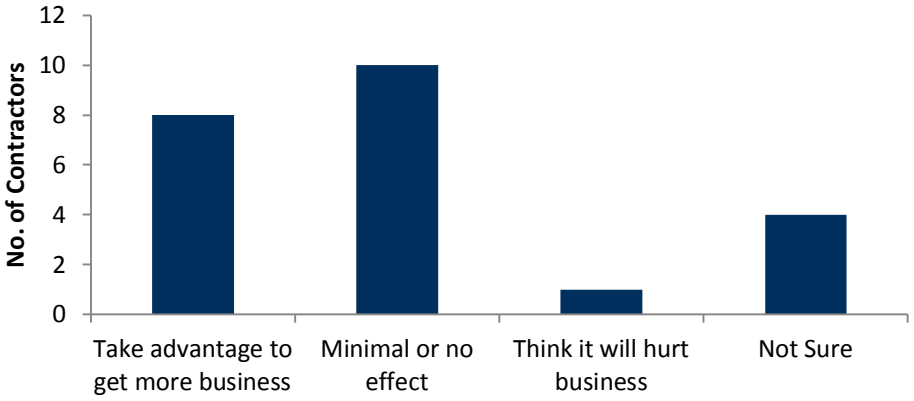
Some contractors noted some customers “are in for a rude awakening,” particularly those uninformed and “who are not forward thinking” (putting off upgrading). Two contractors specifically stated their customers were worried they would upgrade to T-8s, and then those would be phased out as well.

Only two contractors noted positive feedback from customers regarding the new standards, with both saying their customers generally wanted to get the conversion over with, and take advantage of rebates while they remained available.

Effects on Contractor Business

Given the reach of changing standards and the recent flood of newly available rebates, Cadmus asked contractors if they have adjusted their business approaches to account for the changes. Responses are shown in Figure 2-33.

Figure 2-33. How do the changing standards affect your business approach, products, or promotions?

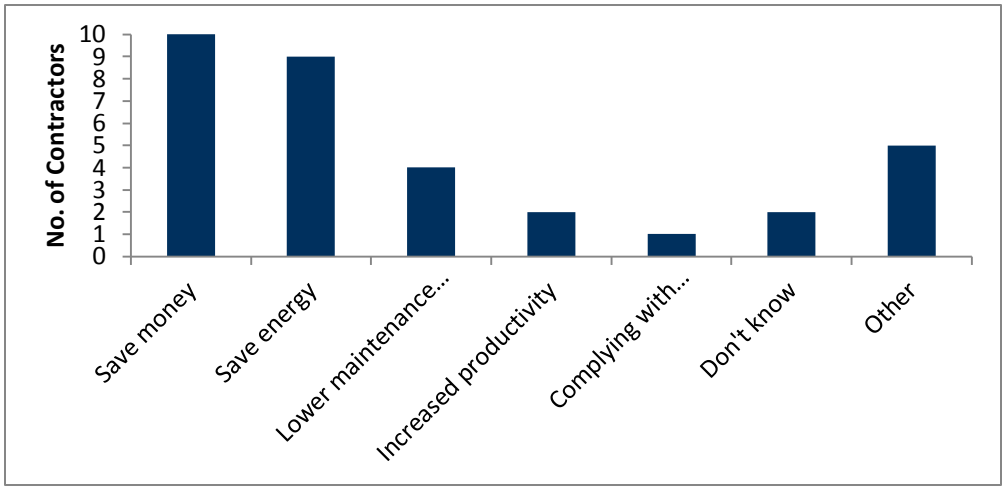


The largest group (10 of 23, or 43%) stated the new standards would have minimal or no effect on their business plans. These contractors stated the phase-out does not come up in their work, or they might suggest some new bulb types, but leave most decisions to customers, without additional marketing.

Eight contractors (35%), however, said they planned to use or are already using the new standards to their advantage. This group actively markets required upgrades, promoting specific lamps and bulbs as part of their sales pitches, and using the rebate opportunities to push and create new projects. A much smaller group (4 of 32, or 17%) were unsure, and said they may figure out methods for incorporating the phase-out into their business plans, but had not yet done so. Finally, one contractor was concerned the changes would hurt his company, and might put him out of business.

In a final question, Cadmus gave contractors the opportunity to comment on any benefits they saw to the higher-efficiency standards. Responses were coded, based on a predetermined list of potential answers, as shown in Figure 2-34.

Figure 2-34. What benefits do you see to these higher-efficiency standards?



Contractors generally noted higher standards would save money and energy. Among those providing an "other" answer, responses identified the possibility of better products being offered, easier installations, and more work for contractors.

Response by Other Utilities and the Lighting Industry

The response to the new lighting standards and regulations varies across the United States. Many utilities have offered enhanced incentive programs, typically high-level incentives or a bonus program with an extra percent added to the incentive (i.e., 10%). Many of these have time limitations or have already ended. SMUD took a slightly different approach, offering a special "Large Prescriptive Lighting Program," with incentives up to 50% of the project cost, paid only to lighting contractors or Energy Services Companies doing the installations, with a requirement that all T-12 general lighting fixtures in a facility had to be upgraded.[13]

Table 2-15. Example of T-12 Rebate Communication via Trade Ally

PG&E extends rebates past federal deadline on lamp efficacy standards

Are you still using T12 linear fluorescent lamps? If so, please read the following information about new laws, rebates, and deadlines!

You may already be aware that new general service fluorescent lamp efficacy standards will take effect on July 14, 2012. This comes as a result of the legislation from the DOE, and will impact the availability of many of the 4-foot T12 and 2-foot T12 U-shaped lamps, 8-foot T12 lamps and some 4-foot T8 lamps in the marketplace.

PG&E understands the significant impact this will have on the industry and in particular customers who plan to use PG&E's existing incentives. In an effort to support their business customers and facilitate a smooth transition to the new standards, PG&E will continue to offer incentives until 12/31/12 for the following energy efficiency improvements:

- Upgrade from T12 to a T8 lamp and electronic ballast
- De-lamp T12s
- Upgrade T12 fixtures to more efficient interior fixtures

After December 31, 2012, PG&E will no longer offer incentives on these specific measures. Lighting projects must be completed by the end of the year and related applications submitted by March 1, 2013 to qualify for a rebate.

Please contact me if you are interested in seeing how you can take advantage of the rebates temporarily available before it's too late! The cost of T12 lamps after they are no longer manufactured will be dramatically higher and there will be no rebates to help you switch over to energy-efficient T8 systems

Notice sent out by Sales Manager
American Wholesale Lighting

Some companies, such as Duke Energy in Indiana, have already ended rebates for replacements of T-12s by T-8s in Prescriptive programs. Duke allows customers to continue to apply for incentives for T-8s through its custom program, which requires pre-approval and additional process steps. PG&E, on the other hand, is communicating about changes to customers through

[13] https://www.smud.org/en/business/save-energy/rebates-incentives-financing/documents/Commercial-Prescriptive-Lighting-Large.pdf

trade allies, and offering additional time beyond the date when the new standards take effect, and a nearly a year's notice that the incentive program will end.

Utilities have adopted different communications strategies regarding the upcoming changes. As with Avista, many are first communicating with lighting contractors and trade allies. Some utilities are also calling explicit attention to upcoming changes through Websites and newsletters, taking a more proactive and informing role, to make sure customers know the utility offers help in incentive programs (for a limited time).

With the obvious concern about the baseline to be used in future energy calculations, debate exists about when the shift should take place. For example:

- Wisconsin regulators and evaluators determined there would not be a T-12 baseline after 2010.
- Mass Save, the state-wide Massachusetts program, proposed to regulators that they should not account for the shift immediately. They proposed delaying the decision until more is known in 2013 about the installed base, stockpiling, prevalence of exempt lamps, and other factors.
- Vermont regulators and evaluators initially directed there should no longer be a T-12 baseline after 2011. Efficiency Vermont renegotiated and proposed a baseline shift to occur in 2015, on the basis of installed base lamp life, exempting lamps and price/scarcity concerns with rare earth phosphors.
- The Energy Trust of Oregon contends programs should be able to claim market transformation savings for the standard itself until 2017, crediting the efficiency programs for the successful penetration of higher-efficiency T8s and HPT8s.

Presently, the RTF is in the process of developing protocols for the evaluation, measurement, and verification of commercial lighting. The project has been defined to include: "definition of best practices and analysis of baselines under new state building codes and federal lighting equipment standards."[14] This work should become available by July 2012 to provide utilities and stakeholders with guidance regarding this issue.

2.5.5 Findings Summary

- T-12 lamps remain present in significant numbers, both in facilities and in inventory stock for replacements within Avista's territory.
- Although some customers have already taken action to upgrade lighting fixtures, many have not. With one in three nonparticipants unaware of upcoming changes, and only 57% of lighting contractors talking to their customers about these changes, a substantial portion of customers may not understand the need to act or the options available.
- One-fourth of nonparticipants and 7% of the participants were unsure whether they had T-12s in their facilities. Reviews of industry and other utility promotions used pictures

[14] http://www.nwcouncil.org/energy/rtf/subcommittees/comlighting/SOW_ERS_RTFLightingProtocol_020912.pdf

and explanations to describe T-12s. This suggests this may be a common problem in some parts of the nonresidential market.

- Customers who have not participated in Avista energy-efficiency programs are more likely to have higher percentages of T-12s in their facilities, and more than half of these have T-12s in inventory for replacements.
- Although survey respondents most commonly cited total project, lighting quality also rated highly as an influence in lighting purchase decisions, and should be addressed in communications about new technology.
- Lighting contractors were most frequently cited as the sources where customers received efficient lighting information from, yet not all contractors surveyed were communicating about the upcoming changes in the lighting market.

2.6 Marketing and Outreach

Avista utilized a variety of marketing and outreach channels to promote its programs to business customers in 2011. These included: a Website; a monthly newsletter; direct communications; collateral; and print ads. A new marketing campaign was launched during the 2011 program year, and continues throughout 2012, with additional dedicated marketing funds for nonresidential programs. This stands in contrast to prior years, where marketing funds primarily were focused on residential programs. These new marketing efforts have included a Power Breakfast series, followed by: a print advertising campaign; Website improvements; updated program handouts; and targeted outreach efforts, designed to provide more face-to-face communications with customers and trade allies.

2.6.1 Research Objectives

Research objectives for the marketing and outreach component included gathering information about how programs are promoted to nonresidential customers. Research included the following objectives:

- Identifying marketing strategies;
- Identifying how accessible customers and trade allies found the program;
- Identifying marketing and outreach efforts for leveraging the existing supply chain;
- Determining marketing strategy's ability to target C&I audiences; and
- Gaining insights into marketing efforts to remove participation barriers and to facilitate customer communication.

2.6.2 Methods

Cadmus' review of marketing and outreach has been based on interviews with Avista's marketing team, program staff, account executives, customer surveys, trade ally interviews, and a review of marketing resources online and in print. Marketing materials reviewed for the 2011 evaluation included the following:

- 2011 ELB Plan At-A-Glance
- Business customer Websites (including Efficiency Avenue)[15]
- Print advertisement, featuring Jack and Jerry
- Business Incentives Brochure
- Power Breakfast materials (workshop presentation and E-blast)
- Commercial Lighting Incentives Program Announcement Flyer
- Commercial Lighting Focus Group Meeting Notes

2.6.3 Research Results

Marketing Strategy

During process evaluation interviews, Avista's marketing team highlighted the successful launch of a new nonresidential program marketing campaign, featuring:

- Customer testimonials during a Power Breakfast series;
- Development of print advertisements with case studies; and
- Planned improvements to the business Website.

Marketing staff will also allocate more time in the coming year to enable updates and improvements to the nonresidential Website. While a detailed marketing plan exists for the residential programs (under the umbrella of the Every Little Bit campaign), no detailed strategy was identified for the nonresidential programs. The marketing team collaborated with the nonresidential program staff to determine expanded marketing efforts in 2011, including the following activities:

1. Website use for provision of key program information and forms;
2. Collateral (newsletter and brochures) development and dispersal;
3. Print advertising campaign, featuring business case studies;
4. Direct communications with new and existing business customers via face-to-face meetings, phone, and e-mail;
5. Customer outreach through Power Breakfast series; and
6. Trade Ally outreach, divided into non-lighting and lighting categories.

Direct Outreach

Avista account managers are responsible for recruiting and assisting large customers with nonresidential energy-efficiency programs. Direct outreach is provided consistently through daily contact, e-mails, phone calls, and personal visits. Account managers report that much of their work, including providing assistance with the enrollment application process, helps

[15] http://www.avistautilities.com/business/pages/default.aspx

customers identify project opportunities. Through these efforts, account staff generate interest in the programs, and maintain long-term relationships with customers. This approach ensures high customer satisfaction, and often encourages repeat program participation.

Program staff reported a number of efforts currently underway to increase outreach efforts to customers through face-to-face meetings, focus groups, breakfast meetings, and other featured events. The Prescriptive lighting program manager reported a launch of focus groups at the end of 2011, continuing throughout 2012. The focus groups seek to inform lighting vendors of new program changes, and gather direct feedback regarding the proposed changes. Avista's lighting program manager noted that, although the first meeting resulted in a small turnout, the informal meeting was well received by lighting vendors.

Power Breakfast Series

Avista conducted a Power Breakfast series to reach out to business customers and trade allies. On separate occasions, the meetings were held in Spokane Valley, Washington, and Moscow, Idaho. This series was promoted with an E-blast and mail invite, encouraging business customers to attend. The meetings showcased successful projects presented by Avista business customers. Customers shared their stories about selected projects, and how their businesses benefited from Avista's energy-efficiency programs.

A total of 66 customers attended the Spokane Valley Power Breakfast, and 48 customers attended the Moscow Power Breakfast. The marketing team, program staff, and account managers reported the Power Breakfast meetings were well received by attendees, and considerable positive feedback was gathered. The majority of attendees found the meetings useful or very useful.[16] Attendees provided feedback on topics of interest for future meetings and types of energy-efficiency programs they would like to see offered.

The marketing team noted that, although they could show anecdotally an increase in program interest following these breakfast meetings, they have yet to find a way to track these metrics.

Print Advertisements

During the 2011 program year, Avista launched a business-focused print advertising campaign, spotlighting the testimonials gathered for the Power Breakfast events. The case studies featured in the print ads highlighted program benefits and easy steps to program participation. Images of facility managers were large and engaging, creating an emotional connection for viewers. These and other case studies will continue to be developed for print advertisements throughout 2012.

Program Brochure

Avista's Business Incentives Brochure was updated in 2011, and provides key energy-saving information and benefits for the C&I customer. Messaging on the cover—"Cut Costs, Minimize Impact, Meet Growing Energy Demand through Efficiency"—quickly and clearly emphasized benefits. The messaging is overlaid with photographs of people in business settings, providing information about Avista's standard and custom program offerings. The interior of the brochure highlighted energy-saving tips for commercial customers. Bold headlines emphasized key topics,

[16] Information provided *Energy Solutions Power Breakfast Series*, October 4 & 5, 2011.

and enabled the reader to scan the program information quickly. The evaluation team did not find the program brochure on the business Website.

Business Website

During 2011, Avista updated the business Website's content and organization, reflecting program changes, adding new forms, and featuring customer testimonials highlighted during the Power Breakfast series.[17] The business Website opens to an example of a successful customer project, and five easy steps to reduce energy and save money. The business Website visitor can then: choose from a variety of links, identifying energy-efficiency options by state; review a number of nonresidential project case studies; or visit Efficiency Avenue. Efficiency Avenue—a feature of the Every Little Bit residential program campaign Website, where customers can tour an imaginary business park, and click on pop-outs, demonstrating energy-efficiency opportunities and rebates by sector (for example, mixed use, agricultural, industrial, warehouses, and schools).

The Washington and Idaho Commercial Energy Efficiency Programs Webpage (linked from the business Webpage) provides a hyperlinked list of all available programs.[18] The Prescriptive programs include downloadable application forms for each program, with detailed program information, benefits to customers, and eligibility requirements for each program. The Site-Specific Webpage contains a description of the program, but no detailed guidelines.

Findings Summary

Avista's expanded marketing campaign, and increased number of outreach events, indicate a focused strategy for nonresidential programs in 2011, with plans for continuation of these efforts in 2012. Using a wide variety of marketing channels and strategies, Avista's marketing team and program staff are pursuing more direct outreach opportunities with customers and trade allies through: Power Breakfast meetings; developing customer success stories through testimonials; and updating the Website to be more user friendly for business customers. Many of Avista's marketing strategies align with best practices for C&I energy-efficiency programs.[19] Through these outreach events, Avista staff can gather direct feedback from customers, enabling more targeted marketing opportunities.

2.7 Application Processing and Data Tracking

During the 2010 process evaluation, Avista's implementation team and account managers indicated they wished to learn more about the ease of enrollment processes from participants' perspectives. Feedback gathered from customers and trade allies indicated that, in some cases, additional assistance or guidelines would be helpful, especially for complex projects requiring more documentation. With this information, Avista updated some application forms (and

[17] avistautilities.com/business

[18] http://www.avistautilities.com/business/rebates/washington_idaho/Pages/default.aspx

[19] Best Practices Benchmarking for Energy Efficiency Programs; http://www.eebestpractices.com/index.asp Study managed by Pacific Gas and Electric Company, under the auspices of the California Public Utility Commission and in association with the California Energy Commission, San Diego Gas and Electric, Southern California Edison, and Southern California Gas Company.

corresponding worksheets), and instituting these changes on the Website. This section discusses some changes made to the application forms, and revisits participant data tracking issues identified during the 2010 evaluation.

2.7.1 Research Objectives

For the 2011 evaluation, research topics were gathered from staff to assess the ease of forms' use, and any changes instituted with participant tracking systems over the past year. Therefore, the application form and database review sought to achieve the following objectives:

- Assess the ease of use of program enrollment forms and data processing;
- Assess completeness, accuracy, and consistency of forms and the data tracking database; and
- Assess the ability to provide useful information for tracking and evaluation.

2.7.2 Methods

Methods used to assess the application processing and data tracking components for the nonresidential energy-efficiency programs included: review of application forms and data tracking systems; and collection of feedback from staff interviews. Feedback collected from customers and trade allies have been discussed in previous sections.

To better understand and assess the enrollment forms and data tracking procedures, the evaluation team reviewed the following materials:

- Prescriptive rebate applications;
- Site-Specific contracts and worksheets; and
- Database participant extracts.

2.7.3 Research Results

Review of Prescriptive and Site-Specific Application Forms

To enroll in nonresidential programs, customers must fill out application forms or contractual agreements to apply for Prescriptive and Site-Specific rebates. The number and type of required application forms and documents varied, depending on program types, eligibility requirements, and types of measures installed.

For projects eligible for a Prescriptive rebate, customers complete and submit one application for each measure type, following the project's completion. Avista provides measure-specific rebate forms on its Website (downloadable as PDFs), with each providing instructions and specifying eligibility requirements, payment amounts, payment procedures, and terms and conditions. Typically, Prescriptive enrollment forms provide Avista customers and contractors with the information necessary for completing a program-qualifying project. Upon project completion, customers or contractors submit rebate applications with necessary materials, outlined in the forms.

In contrast to Prescriptive program requirements, customers receive Site-Specific forms, once contact has been established between an account executive and a customer, determining eligibility for program rebates. Site-Specific projects usually are more complex, and require supplemental forms, such as calculation worksheets and customer contracts. Avista's business home Website provides basic, Site-Specific program information to customers, including incentives and eligibility requirements. However, by design, Site-Specific forms are not included on the Website.

Changes to Forms

Avista's account executives reported they spend a fair amount of time helping customers fill out application forms for the program's contractual requirements. Some customers indicated the forms contain some redundant questions. Based on this feedback, account managers noted the Site-Specific forms particularly could be streamlined. However, the engineering team noted the difficulty in balancing the customer desire to streamline Site-Specific forms when all fields are needed to collect necessary project information and ensure accuracy of savings estimates.

Avista updated and revised some application forms, based on input from the 2010 evaluation. These included: lighting incentive forms; and the new programs for 2012, including the Natural Gas HVAC, Standby Generator Block Heater, and Window and Insulation programs. The revised and newly added program forms use a new format, with the changes enabling customers to fill in the information electronically, print the document, and mail it to Avista.

At Avista's request, Cadmus' engineering team revised several project calculation worksheets at the end of the 2011 program year, including updated measures, corrections, and other improvements. Cadmus recommended form changes to correspond with the calculation worksheets, and improve accuracy of savings estimations.[20] Such adjustments included questions collecting additional data points for lighting incentives, food service equipment, and premium efficiency motors forms; these address: operating hours and days per year, holiday hours, confirmation of usage variables differing by measure type, and other measurements to improve savings estimates. During the review of updated forms online, Cadmus found these additional data points had not been incorporated in the forms.

The lighting program manager reported that several changes were made to the lighting forms, launched in 2012, which enabled Avista to separate lighting incentives into two forms, and to incentivize different configurations. One form, established to promote a "fire sale," sought to motivate customers to change out as many T-12s as possible through increased incentives, paying $4 per linear foot of T-12s replaced. The second form lists all other interior and exterior lighting, including some new incentives added for digital HID and LED lighting measures. The program manager explained that, as a part of this upgrade, some of the prior 400-watt HID to 200-watt HID forms were discontinued, due to low participation.

[20] Specific recommendations were outlined in a memo from Cadmus to Avista: "Suggested Changes to Forms." November 23, 2011.

Review of Participant Tracking Processes

Avista maintains two primary databases for tracking participants and projects:

- Sales Logix tracks program participant activity; and
- Tracker follows Site-Specific projects through the pipeline, from eligibility and installation, to inspection.

Program staff uses Sales Logix to enter customer participant information, following engagement in the enrollment process. Account managers or program staff enter names of eligible participants and installed measures into the database, and record savings, costs, and incentive payments. Avista's Prescriptive program manager reported a new system was instituted in 2011, which checked for missing data on a weekly or monthly basis. At the time of this evaluation, documentation of these procedures were still in development.

Participant Database Review

The 2010 evaluation of Avista's database sought to ensure necessary information existed in the forms and databases. During the review, Cadmus found a number of data inconsistencies, and missing data fields, which presented evaluation challenges. To assist Avista's implementation team's understanding of the information required to ensure program information could be evaluated, Cadmus provided an evaluability assessment table. (Appendix 2A presents the evaluability checklist provided in the 2010 process evaluation report.)

During the 2011 database review, Cadmus found many similar issues. Several data fields, identified as existing in Sales Logix, and participant extract database fields contained incomplete or inaccurate data. In many cases, data simply were missing (as in account and phone number fields); in other cases, a zero or a series of zeros was entered to fill empty cells. Nuances in contact name spellings, phone numbers, and e-mail addresses caused evaluation challenges, such as in comparing of participant and nonparticipant databases, and difficulties in developing survey and site-visit samples.

To specifically highlight some data tracking issues problematic for the 2011 evaluation, Table 2-16 lists the most critical data types where information has not been collected or reported, or where inconsistencies appeared. The middle two columns indicate whether the data field exists in Sales Logix and the extract database. The last column provides an explanation of specific issues.

Table 2-16. Prescriptive and Site-Specific Data Tracking

Data for Tracking and Evaluation	Sales Logix	Field in Extract Database	Explanation
Customer Acct Number	No	Yes	Inaccurate or Missing Data
Project Site Address	No	No	Not in Sales Logix or Extract
Contact Name (first, last)	No	Yes	Not in Sales Logix & Inconsistent in Extract
Phone	No	Yes	Inaccurate or Missing Data
Fuel Type	Yes	Yes	Missing Data
Program Type	Yes	No	Missing Field in Extract
Measure Type	Yes	Yes	Need Separate Field with More Detailed Measure Type
Measures Quantity Installed	No	No	Collected in Forms but Not in Sales Logix or Extract
Equipment Details (Manufacturer, model…)	No	No	Collected in Forms but Not in Sales Logix or Extract
Installation/Completion Date	Yes	No	Tracked in Sales Logix but not in Extract

2.7.4 Findings Summary

From the review of application forms and databases, interviews with staff, and survey results, Cadmus concludes some data fields needed for program evaluation are not being tracked or are being reported inconsistently. Data tracking improvements could enhance data quality and ensure programs can be evaluated. Although improvements have been made to some application forms, participant and tracking databases still exhibit a lack of integration. As Avista moves toward integrating these databases over the next few years, this integration may reduce errors resulting from data transfer and reporting. Having an integrated customer information system may also reduce the burden of data requests for evaluations.

Evaluation of the participant database resulted in the following, specific observations:

- Missing or inconsistent data were found in the following fields:
  - Customer Account Number
  - Contact Name
  - Phone Number
  - E-mail Address
  - Fuel Type
- Fields critical to the evaluation are not being tracked in Sales Logix or being reported in extract databases. Inability to identify specificity of program and measure detail created challenges in selecting unique participants for survey sampling. Lack of business or site addresses created additional challenges for site-visit sampling. Missing fields include:
  - Business Address
  - Program Type

  - Measure Descriptions
  - Measure Quantity
- Updated application forms do not account for some data points, added to revised program worksheets. Adding these fields would enhance the accuracy of savings estimates.

2.8 Program QA and Verification

Avista's QA and inspection procedures for nonresidential projects differ by program size and type. Site-Specific projects in particular, and projects that require measurement, verification, and evaluation require more rigorous QA processes. Avista's account managers and engineers use a database called Tracker to follow these type of projects throughout the pipeline, checking that program requirements are met, flagging high risk projects for inspection, and reviewing M&V. A project authorization protocol for Tracker enables communication regarding the approval process.

Database QA is handled through a separate process. As discussed in the previous section, program staff enters participant data into SalesLogix, the program database used for tracking enrollment, installation, and incentive payments. Data is checked periodically to ensure more accurate reporting. This section discusses Avista's QA and inspection requirements for nonresidential programs.

2.8.1 Research Objectives

Reviewing Avista's QA and verification procedures sought to determine the extent and documentation of systems used to track and verify program savings. Research objectives included:

- Identifying and documenting procedures for determining program eligibility;
- Identifying and documenting procedures for pre- and post-project inspections; and
- Identifying and documenting QA procedures for data collection, large project calculations, and rebate processing.

2.8.2 Methods

For the 2011 QA research, Cadmus interviewed Avista program staff, account managers, engineers, and members of the PPA team. We reviewed specific materials outlining QA and verification procedures, including:

- Energy Solutions DSM Portfolio Process Analysis, and other reports;[21]
- E-mail communications from staff, discussing verification requirements and procedures; and
- Dual Fuel Incentive Calculation (DFIC) policy procedures.[22]

[21] Energy Solutions DSM Portfolio Process Analysis.

[22] DFIC Version T: Policy Rules for the Calculation of Customer Incentives.

2.8.3 Research Results

Pre- and Post-Inspections

Program staff reported Prescriptive programs had no specific requirements for pre-inspections, and post-inspections were only conducted for projects perceived as high risk. These could include programs undergoing recent changes or projects with new contractors. For example, additional post-inspections are being conducted in 2012 for lighting projects, due to recent changes to the lighting program, and identification of new lighting contractors.

Though Site-Specific projects did not require pre-inspections, in contrast to Prescriptive programs, all Site-Specific projects required post-inspections. Program staff indicated facility scoping audits, conducted for about 20% of Site-Specific projects, also served as informal pre-inspections. Account executives helped to determine which projects should receive pre-inspections. This information was flagged and communicated in Tracker, the project database enabling program staff and engineers to follow Site-Specific projects (or projects requiring evaluation reports) throughout the pipeline.

Cadmus researched industry standards regarding project inspections for C&I energy-efficiency programs, identified by reviewing best practice reports at the Best Practice Benchmarking for Energy Efficiency Programs Website.[23] Table 2-17 lists best practices identified for pre- and post-inspections for lighting, HVAC, large comprehensive projects, and new construction programs.

Table 2-17. Pre- and Post-Inspection Best Practices

Category	Best Practice	Rationale
Frequency of inspections	Based on a program's relationship with vendors, numbers of vendors, types of measures, project volumes, variability, and project sizes.	• Prescriptive rebate programs without control over vendors may need to require greater quality control. A turnkey program training a small pool of vendors and using a pre-screened list of products may require less post-product quality review.
Inspection sampling	Obtain a random sample of vendor and measure types.	• A stratified random sample ensures different job types, measure and vendors are inspected.
Pre- and post-inspections	Clearly define inspection policies and procedures.	• Policies and procedures should address issues such as: when and how to sample, how to address data gaps, etc.
Pre-inspections	Require pre-project inspections for all large projects with highly uncertain baseline conditions.	• Pre-project inspections play an important part of developing defensible savings for projects such as complex compressed air and industrial process retrofits.
Post-inspections	Conduct on-site, post-installation inspections. Random inspections of 10% to 20% of projects are usually adequate for Prescriptive programs.	• On-site inspections discourage vendors from failing to fully and properly install all rebated measures. The fraction of on-site inspections should be higher for direct installation programs, and may need to be increased for any program as conditions warrant.

[23] Best Practices Benchmarking for Energy Efficiency Programs; http://www.eebestpractices.com/index.asp Study managed by Pacific Gas and Electric Company, under the auspices of the California Public Utility Commission, and in association with the California Energy Commission, San Diego Gas and Electric, Southern California Edison, and Southern California Gas Company.

Category	Best Practice	Rationale
Post-inspections	Govern post-inspection by cost-effectiveness, and results from initial set of inspections early in the program's implementation process.	• A rule of thumb is post-inspection for 10%–20% of the projects for a high-volume program, and 100% for very large projects and problem vendors.
Post-Inspections	Consider using third-party M&V contractors to oversee or conduct M&V	• Contracting out the M&V task for an entire program can free program participants from the responsibility and financial burden of M&V, achieve consistency in M&V procedures, and produce results more cost-effectively.

Project QA

During the 2010 process evaluation, Cadmus reviewed QA recommendations made by a third-party evaluator, Moss Adams.[24] Based on these recommendations, Avista implemented improvements to Tracker to integrate robust QA procedures. In 2011, interviews with program staff and the policy and planning team identified ongoing processes to ensure review and approval for small and large project QA.

Over the past year, a number of issues have been identified through performance reviews of large projects. The PPA staff reported these issues are undergoing review and resolution by the engineering team. Identified issues primarily have to do with:

- Missing data;
- Lack of detailed costs, savings estimations, and calculation assumptions;
- Discrepancies found during site visits; and
- Inconsistences with applications of DFIC policies.[25]

Avista developed DFIC policies to ensure consistent approaches for data collection, incentive calculations, and determination of project eligibility for projects typically requiring M&V.

Avista's engineers have developed and documented QA procedures to reduce risks of customer contracts being issued for incomplete or non-compliant evaluation reports.[26] QA procedures require two engineers review and approve projects. While small projects can be reviewed and approved by a second engineer, large projects require review by a PPA team member.

2.8.4 Findings Summary

Avista's QA procedures for Site-Specific projects are well documented, requiring second-party approval of evaluation reports. Tracker protocols, a system established to track projects through the pipeline, govern the review process, which is supported through ongoing efforts with the engineering team, program, and policy staff. However, pre- and post-inspections requirements

[24] Avista Utilities and Moss Adams. May 2011. *Data Management Review for Demand Side Management Programs*.

[25] DFIC Version T: Policy Rules for the Calculation of Customer Incentives.

[26] Energy Solutions DSM Portfolio Process Analysis.

and procedures would benefit from greater definition and transparency. While post-installation inspections are routinely required for Site-Specific projects, pre-inspections are not. Further, pre- and post-inspections are not required for Prescriptive programs. Post-inspections may be conducted for programs undergoing changes or for projects with new contractors.

2.9 Conclusions, Recommendations, and Future Research

2.9.1 Program Management and Implementation

Conclusions

- In many cases, programs met or exceeded savings goals. Although the lighting program fell short of its goals, new program incentives in 2012 seek to increase customer motivation.
- Avista implementation staff expressed concerns with time constraints sometimes preventing them from having a more active role in planning and documentation of program procedures, and requested more real-time feedback during the evaluation process.
- The site-specific program, which contributes a large portion of savings to the nonresidential portfolio, lacks a central leadership role.
- The EnergySmart Grocer program implementer experienced issues with contractors.

Recommendations

Cadmus recommends Avista consider the following improvements to the nonresidential program implementation:

- Consider method for prioritizing management tasks, thus enabling allocation of more time for planning and development of program documentation.
- Revisit the staffing needs of delivering the current programs.
- Revisit the option of using third party implementers for some programs.
- Consider round tables with the program implementation, management, and policy team to facilitate additional communication regarding planning and evaluation.
- Consider designating a central leadership role for the Site-Specific program to oversee future planning and vision, and ensure that it continues to deliver cost effective energy savings to the C&I portfolio.
- Further investigate contractor issues to ensure high satisfaction levels of EnergySmart Grocer program participants

2.9.2 Customer Feedback

Conclusions

Program Satisfaction

- Overall, awareness of the Avista nonresidential programs appears to be increasing, and participant satisfaction levels have been very high.
- Certain program elements receive a large share of "somewhat satisfied" ratings, suggesting opportunities for improvements. These include: scoping audits, program materials, and application processes.
- EnergySmart Grocer program participants expressed lower satisfaction levels than the prescriptive and site-specific programs, across various delivery elements. Better understanding of the causes of this and addressing solutions may prove important for the program's continued success.
- Lower satisfaction levels reported by nonparticipants suggest a need to better understand why program offerings and materials have not met their needs.

Purchases and Decision Making

- While saving money ranked as the most influential factor regarding decisions to install energy-efficient equipment, the decline in reported "saving energy" influence from the prior 2010 survey should be noted, and could have implications for marketing messages.
- Learning of programs through contractors and vendors (37%) compared to nonparticipants (5%) suggests the contractor and vendor community may strongly influence participation, and may be able to intervene at critical decision moments (remodeling and replacing working equipment ranked as the second-highest factor influencing purchases).

Communications and Outreach

- The increase in participants citing contractors or vendors as a source for learning about the programs (from 15% in 2010 to 37% in 2011) suggests trade allies should be leveraged as part of the nonresidential program's outreach and communication strategies.
- Program information on Avista's Website may not effectively reach across the market or be utilized effectively to help customers. Over half of nonparticipants reported the business Website did not apply to them, and cited the need for more information about programs.

Customer Profiles

- The Site-Specific programs' cost-effectiveness may be at risk if the delivery cost becomes too great for very small facilities (less than 5,000 sq. ft.): more than one in four participants surveyed fall within this size range. The program may require different outreach and delivery strategies to ensure costs aligned with achievable savings.
- The dominance of participant-owned facilities in the surveys suggest Avista may not be reaching the decision makers in leased facilities—a more challenging target, but one

which may offer large opportunities for growth or for meeting program goals in future years.

Recommendations

- Continue to leverage contractors to reinforce the program's messages, particularly in communicating program offerings to small-to-medium customers. Further explorations could determine if contractors offer better market coverage, are more likely to connect with customers when purchases are being contemplated, provide a more compelling value proposition, or offer other lessons Avista could apply, both with contractors and across other communications channels.
- Strategies should be developed to penetrate leased C&I spaces, targeting building owners, managers, and brokers of leased space. Examples could include:
    - Tailored messages, delivered through presentations or workshops in conjunction with the Building Owners and Managers Association and commercial real estate associations.
    - Designated point-of-contact and Web information for building managers and brokers.
    - Incentive and financing solutions, such as on-bill financing, green lease arrangements, and bonus incentives targeting retrofits when new tenants move in.
- Cadmus recommends Avista evaluate alternative strategies for reaching small-to-medium businesses cost-effectively via contractors, direct install or more prescriptive, "self-serve" options via the Avista Website. Such strategies could include:
    - Promote newsletter sign-ups and exploration of program information on the Website.
    - In program information, cross-reference sources or the availability of answer lines.
    - Evaluate measures installed by small customers in the site-specific program for inclusion in a prescriptive program.
- Where customers expressed lower satisfaction levels, program elements should be investigated. Such investigations might include:
    - Review audit program communications and supporting collateral to improve customers' understanding of the depth of audits, and recommendations. Consider providing information about economic advantages to energy efficiency such as improved benefits to costs ratios, and simple payback.
    - Determine/track cycle times for customer follow-up after audits and for rebate applications; if reasonable times are exceeded, consider implementing follow-up communications to keep customers informed and ensure internal follow-up, if needed.
    - Confirm issues identified in the EnergySmart Grocer program have been resolved.

2.9.3 Trade Ally Feedback

Conclusions

- Avista's informal network of trade allies works well to promote the programs through word-of-mouth and strong communications with Avista representatives. Many trade allies have worked with Avista for several years or more. Overall, trade allies reported high satisfaction levels with the programs, with slight variations by contractor type. While lighting contractors indicated a high satisfaction level with program materials, they were less likely to promote the programs than general contractors.
- Trade allies suggested improved program promotions to assist customers, providing additional materials or information online. Trade allies requested greater one-on-one communication with Avista representatives, or dedicated assistance to answer questions about the programs.

Recommendations

- Explore more formalized ways to aid trade allies in promoting nonresidential programs to customers. Avista should continue efforts to expand outreach to trade allies, through sponsored events and workshops, breakfast meetings, focus groups, and other targeted communications.
- Given trade allies' requests for a dedicated Avista contact, more one-on-one communication, and additional materials to inform customers about the programs, more timely feedback could be achieved through online resources. These resources may also help to reinforce the program's messages, offering resources through multiple channels by providing the following services:
    - Offering a dedicated Website, containing guidance through Webinar and video presentations.
    - Online registration for events or information requests.
    - An online help desk or phone hotline, which would direct customers to answers for frequently asked questions, or would reserve more complicated questions for program staff.
    - Other, additional promotional materials, posted online, such as handouts regarding costs and benefits of energy-efficiency equipment.

2.9.4 Special Report: Lighting

Conclusions

- T-12 lamps and fixtures remain in many customer facilities, and customers retain many T-12 lamps in inventory for replacements. Although customers report awareness of new regulations phasing out most T12s and incandescent light bulbs, most customers do not have a sense of urgency with regard to replacing affected lighting equipment.
- Contractors are highly aware of the upcoming changes, but at least half do not discuss this with their customers, and most are not changing their business approaches or carrying out any promotions. This offers Avista with an opportunity to play a helpful role

in informing and preparing customers for upcoming changes, while accelerating installation of more efficient equipment in the market.

Recommendations

- Take a more proactive role in communicating with customers: upcoming changes in lighting product availability; Avista's program availability to offer them help; and when the T-12 program will end. Communications should also offer help in identifying T-12 lamps (descriptions or illustrations of size), and inform customers about the lighting quality of alternatives.
- To motivate contractors and accelerate customer action, Avista may consider creating a lighting contractor partnership program, with incentives paid to contractors (or rebates paid directly to contractors) for encouraging customers to update lighting fixtures while incentives remain available.
- Avista should consider a new program, targeting replacements of T-12s in inventory, to help customers upgrade to more efficient new fixtures and lamps, and to move toward realization of energy savings in their facilities.

2.9.5 Marketing and Outreach

Conclusions

- Avista's expanded marketing campaign and increased outreach events indicate a focused strategy for nonresidential programs used in 2011 will continue in 2012. Using a wide variety of marketing channels and strategies, Avista's marketing team and program staff are pursuing more direct outreach opportunities with customers and trade allies, through Power Breakfast meetings, developing customer success stories through testimonials, and updating the Website to be more user friendly for business customers.
- Many Avista marketing strategies align with best practices for C&I energy-efficiency programs. Through these outreach events, Avista staff gather direct feedback from customers to enable more targeted marketing opportunities.

Recommendations

- To ensure the recognition and longevity of focused outreach efforts, Cadmus recommends Avista continue expanded annual market campaigns to enable more focused targeted marketing for the nonresidential programs. In addition, nonresidential programs may benefit from these additional suggestions:
    - Develop a detailed marketing plan, enabling annual tracking and assessment of activities. The marketing plan would identify target audiences, clarify marketing objectives, and identify evaluation metrics.
    - Continue efforts to enhance the business Website through promotions and featured business information tools (such as Efficiency Avenue), testimonials, general program brochures; and encourage easier access for trade allies through featured guidelines and tips.

2.9.6 Application Processing and Data Tracking

Conclusions

- From the review of application forms and databases, interviews with staff, and survey results, Cadmus concludes some data fields needed for program evaluation are not being tracked or are being reported inconsistently.
- Improvements to participant tracking, and data integration could enhance data quality and ensure programs can be evaluated.
- Although application forms have been improved somewhat, some data points added to revised program worksheets currently are not accounted for in updated application forms. Adding these fields would enhance the accuracy of savings estimates.
- As Avista moves toward integrating these databases over the next few years, integration may reduce errors resulting from data transfer and reporting. An integrated customer information system may also reduce the burden of data requests for evaluations.
- Fields critical to evaluation are not being tracked in Sales Logix or reported in extract databases. Inability to identify specificity of program and measure detail created challenges in selecting unique participants for survey sampling. The lack of business or site addresses created additional challenges for site-visit sampling. Missing or inconsistent data were found in the following fields:
    - Customer Account Number
    - Contact Name
    - Business Address, Phone Number, E-mail
    - Program Type
    - Measure Descriptions, Measure Quantity, and Fuel Type

Recommendations

- Drawing upon the review of application forms and databases, interviews with staff, and survey results, Cadmus recommends the following:
    - Track missing data fields in Sales Logix, and include these in extract databases.
    - Document QA procedures or checklists to reduce missing or inconsistent data entry.
    - In addition to checking for missing data, Avista staff may benefit from developing a checklist for staff entering participant data into databases, ensuring all data are collected consistently.
    - Work toward integrating customer information tracking databases, thus enhancing efficiency and reducing error.
    - Consider incorporating changes to forms to account for new data collected through calculators.

2.9.7 QA and Verification

Conclusions

- Avista's QA procedures for Site-Specific projects have been documented well, requiring second-party approval of evaluation reports. The review process is governed through Tracker protocols, a system established to track projects' progress through the pipeline. This process is supported through ongoing efforts with the engineering team, program, and policy staff.
- Pre- and post-inspection requirements and procedures would benefit from better definition and transparency. While post-installation inspections are routinely required for Site-Specific projects, pre-inspections are not.
- Pre- and post-inspections for Prescriptive programs are not required. Post-inspections may be conducted for programs undergoing changes or projects with new contractors.

Recommendations

- Cadmus recommends Avista continue strengthening feedback loops for performance review of large projects. To achieve greater consistency, Avista should consider documenting pre- and post-inspection protocols, which could include the following, recommended, industry best practices for C&I programs:
    - Establish inspection frequency, based on a program's relationship with vendors, number of vendors, types of measures, project volume, variability, and size of projects.
    - Obtain a random sample of vendor and measure types.
    - Clearly define pre- and post-inspection policies and procedures.
    - Require random, on-site inspections of 10% to 20% of projects in lower-incentive Prescriptive programs.
    - Require pre-project inspections for all large projects with highly uncertain baseline conditions.

2.9.8 Future Research

The 2011 process evaluation research expanded from the previous year, examining important program influences, achievements, and experiences of customers and trade allies. In subsequent process evaluations, Avista may consider additional comprehensive research or market studies to determine the feasibility of new, cost-effective programs and offerings. Research areas Avista may consider as starting points include:

- Examine top incentive offering (such as lighting, boilers, burners), and determine how these will change over the next few years.
- Identify the quantity of water heating and steam systems in Avista's service territory to determine the potential for replacements.
- Examine natural gas conversions for new construction and multifamily facilities

- Identify new, cost-effective measures (such as lighting, cooking, and heating technologies).
- Assess the feasibility of new lighting programs such as an audit assessment that provides educational and outreach opportunities for the lighting program's T-12 phase out, and examine the feasibility of removing T-12 lamps from storage.

  Assess the feasibility of strategies for reaching managers and tenants of leased spaces. Avista may have a large market opportunity to evaluate and explore, which will require determining the market's size and the applicability of best practices from other utilities. Examples include audit and direct-install programs, on-bill financing, and energy-aligned or "green" lease arrangements.[27]

[27] See The Green Lease Library at http://www.greenleaselibrary.com/index.html, a collaborative effort of DOE, EERE, the Commercial Real Estate Energy Alliance, and others to provide examples and resources for implementing lease arrangements that enable investments in energy-efficiency improvements.

3 CFL Contingency Plan Process Evaluation

3.1 Program Description

This program was designed to provide highly cost-effective energy-efficiency resources to Avista's customer base (both residential and small commercial), while simultaneously offering the flexibility to meet anticipated energy-acquisition targets, established under Washington I-937. Actively developed from April to June 2011, the program was implemented from July through November 2011. Through the program, eligible residences and business, within Avista's territory, were sent a box of eight CFLs of varying sizes, accompanied by literature describing the benefits of using CFLs and method for their proper installation and disposal.

The box also included information on how to return the CFLs, at no cost to the customer, should the customer not want to keep them. Returned CFLs provided a ready source for customers desiring more CFLs than their initial allotment, or for physical distribution through other Avista programs.

3.2 Survey

In addition to surveying participants in Avista's residential programs, Cadmus surveyed 676 residential recipients of CFLs and 361 small commercial recipients of CFLs. The main aim of these surveys was to determine program impacts. However, the surveys also asked a number of questions related to process metrics. This section reports process findings for the CFL Contingency Program, and additional findings from the surveys are reported in the 2010-2011 Electric Impact Evaluation.

Table 3-1 and Table 3-2 show the survey sample and response for the residential and small commercial surveys.

Table 3-1. CFL Contingency Program Residential Survey Sample and Response

	Number of Unique Recipients	Number of Survey-Eligible Recipients	Number of Recipients Included in Sample Frame
Residential Customers	279,890	254,802	7,500
Completed Surveys			676
Number of Calls Required to Achieve Sample			5,226
Response Rate			9.0%
Cooperation Rate			29.0%
Completed Surveys Included in Analysis			676

Table 3-2. CFL Contingency Program Small Commercial Survey Sample and Response

	Number of Unique Recipients	Number of Survey-Eligible Recipients	Number of Recipients Included in Sample Frame
Small Commercial Customers	17,275	17,061	4,000
Completed Surveys			361
Number of Calls Required to Achieve Sample			3,919
Response Rate			9.6%
Cooperation Rate			16.0%
Completed Surveys Included in Analysis			361

3.3 CFL Contingency Plan Survey Results

Results from the residential CFL Contingency Plan phone survey reveal the majority of respondents (90%) supported Avista's giveaway. Ninety-two percent were satisfied with the CFLs they installed.

Sixty-nine percent of respondents already used CFLs in their home at the time they received the eight bulbs from Avista.

Program boxes included a brochure, addressing the benefits of using CFLs. Sixty-one percent of respondents reported reading the brochure included in the box. Among those reading the brochure, 23% said, after reviewing the material, they turned off lights when leaving rooms.

Table 3-3. Ways Respondents has Changed the Way they Used Lights After Reading Program Brochure (n=461)

Means	Percent
None/Have not changed use of lights	47%
Turn out lights when leaving room	23%
Replace incandescent with CFLs	17%
Rely on natural light when available	8%
Use task lighting instead of overhead lighting	3%
Use lighter colored lamp shades	1%
Other	2%

When asked whether or not they purchased additional CFLs after receiving the giveaway from Avista, 11% said they had. Among those individuals, 71% said the giveaway influenced their decision to do so.

Seventy-nine percent of respondents said they were aware Avista offers rebates for equipment that can help them use less energy in their home. Over one-third (36%) of these respondents reported having used an Avista energy-efficiency rebate. Among those aware of the rebates, 71% said they would likely apply for an Avista energy-efficiency rebate in the future.

3.4 Commercial Survey Results

Among commercial survey respondents, less than half (41%) had already been using CFLs in their businesses at the time they received the eight program bulbs from Avista.
A little over one-half (55%) of respondents said they read the brochures included in the box of CFLs sent to their business. Among those respondents, 39% said the material influenced them to turn out lights when leaving rooms, and 31% said they replaced incandescent bulbs with CFLs.

Table 3-4. Ways Respondents Changed the Way they Use Lights After Reading Program Brochure

Means	Percent
Turn out lights when leaving room	39%
Replace incandescent with CFLs	31%
Rely on natural light when available	8%
Use task lighting instead of overhead lighting	2%
Other	20%
Total	49

Ten percent of respondents said they purchased additional CFLs since receiving the giveaway from Avista. Among those respondents, 65% said the giveaway was influential in their decision to purchase those bulbs.

The majority of respondents said expressed support of Avista's giveaway, and were satisfied with CFLs they installed (87% and 94%).

Similarly to residential respondents, 80% of commercial respondents know Avista offered rebates for equipment that can help them use less energy in their business. Among these respondents, 25% had used an Avista energy-efficiency rebate. Additionally, 72% said they would likely apply for an Avista energy-efficiency rebate in the future.

3.5 Key Findings and Conclusions

- Before receiving program bulbs, CFL usage was reported higher among residences than businesses.
- Over one-half of all respondents read brochures sent with the CFLs. This provides an avenue for educating customers about energy-saving opportunities.
- The majority of respondents expressed support for Avista's giveaway and satisfaction with the CFLs they installed. This could indicate Avista's customers would be open to adopting additional energy-saving measures.

Appendix 1A. Residential Program Descriptions

ENERGY STAR Appliance Rebate

This program offers direct financial incentives to motivate customers to use more energy-efficient appliances. The program indirectly encourages market transformation by increasing demand for ENERGY STAR products.

ENERGY STAR New Homes

This program offers builders incentives to construct single-family or multifamily homes complying with ENERGY STAR Homes criteria. One incentive targets Avista electric or Avista electric and natural gas for space heat and water heat, and a lower incentive targets homes using only Avista natural gas (for both hot water and space heating).

High Efficiency Equipment

This program combines the 2010 Heating and Cooling Efficiency and Water Heater Efficiency programs, which are combined in customer-facing materials to help simplify the application process. This program offers incentives for electric and gas customers seeking to purchase:

- High-efficiency natural gas furnaces or natural gas boilers;
- High-efficiency air-source central heat pumps;
- Ductless heat pumps;
- Primary heating systems incorporating a variable speed motor; and
- High-efficiency water heaters.

Weatherization and Shell Measures

This program incents three measure categories, available to residential electric and gas customers with homes heated by an Avista fuel:

- Ceiling and attic insulation (both fitted/batt type and blown-in);
- Floor and wall insulation (both fitted/batt type and blown-in); and
- Upgrades of windows with low u-factors (available only through April 1, 2011).

Home Energy Audit Pilot

This pilot program, launched in May 2010, seeks to determine home energy audits' cost-effectiveness for capturing electric and gas savings. Eligible Avista customers must reside in single-family homes, duplexes, and manufactured homes, located in the Spokane area. The program offers energy audits, conducted by Building Performance Institute-certified auditors, at a reduced cost to eligible customers. An Energy-Efficiency Community Block Grant, under ARRA, partially funded this program.

Geographic Saturation Events

Targeting Washington and Idaho electric and gas customers, this program promotes energy-efficiency measures in homes by providing energy-efficiency education, distributing measures

(such as CFLs and weatherization products), and promoting options and rebates available through Avista and state programs.

Second Refrigerator and Freezer Recycling

This program, applying to Washington and Idaho electric and electric/gas customers, provides financial incentives to customers recycling refrigerators and freezers. The program seeks to reduce energy consumption by recycling up to two inefficient refrigerators or freezers per home. JACO Environmental, Inc., serves as the implementation contractor, responsible for program scheduling, pickup, recycling, rebate payment, and data tracking.

Space and Water Conversions

This program offers Avista customers incentives for two types of fuel conversion:

- Replacement of electric straight resistance as a primary heat (either electric forced air furnaces or electric baseboard heat), with central, natural gas heating systems, or central heat pumps; and
- Replacement of electric water heaters with new, natural gas water heaters.

Simple Steps, Smart Savings Program (CFLs)

Avista sponsors an upstream, buy-down CFL program, administered by the BPA and implemented by FMS. The program, available to electric customers in Washington and Idaho, offers discounted twist and specialty CFLs at most big-box stores.

CFL Contingency Plan Program Description

This program was designed as a scalable means to deliver highly cost-effective, energy-efficiency resources to Avista's customer base (both residential and commercial), while simultaneously offering the flexibility to meet anticipated energy acquisition targets, established under Washington I-937, at a lower ratepayer cost and a minimum of uncertainty. From April to June 2011, the program was actively developed. Through the program, eligible residences and business within Avista's territory received sent a box of eight CFLs of varying sizes, accompanied by literature on the benefits of using CFLs and methods for properly disposing of them. Information also included instructions regarding how to return the CFLs at no cost to the customer, should the customer not want to keep the CFLs.

Appendix 2A. Participant Database Evaluability

Table 2A-1 provides a checklist for identifying data fields necessary to evaluate programs. The first column lists kinds of data typically required to enable a comprehensive evaluation. The second, third, and fourth columns indicate whether the data field has been requested in the application forms, and whether data appeared to be consistently collected in database extracts received throughout the evaluation. Inconsistencies in data tracking can be identified where the first and second columns do not match. Discrepancies where fields do not exist, but where their addition would prove beneficial, have been marked in bold.

Table 2A-1. Prescriptive and Site-Specific Data Tracking

Data for Tracking and Evaluation	Sales Logix	Field in Database Extract	Collected in Prescriptive Forms	Collected in Site-Specific Forms
Customer Acct Number	No	Yes	Yes	Yes
App Number	Yes	Yes	No	Yes
Tracker Number	Yes	No	N/A	N/A
Business Name	Yes	Yes	Yes	Yes
Business Mailing Address	No	No	Yes	Yes
Project Site Address	No	No	Yes	Yes
Contact Name (first, last)	No	Yes	Yes	Yes
Phone	No	Yes	Yes	Yes
E-mail Address (Fax on some)	No	Yes	Yes	No
Fuel Type	Yes	Yes	Yes	When applicable
Program Type	Yes	No	Rebate Forms are specific for each measure	Rebate Forms are specific for measures, Asks for description
Project Type	Yes	Yes		
Measure Type	Yes	Yes		
Measure Description	Yes	No		
Measures Quantity Installed	No	No	Yes	Yes
Equipment Details (Manufacturer, model…)	No	No	Yes	Yes
Type of Facility	No	No	When applicable	When applicable
Total square feet affected by measure	No	No	When applicable	When applicable
Occupancy	No	No	When applicable	When applicable
Site verified/inspected	Yes	No	NA	NA
Account Executive	Yes	Yes	No	No
Tech Lead	Yes	Yes	N/A	N/A
kWh/Therm	Yes	Yes	No	No
Incentive Electric/Gas	Yes	Yes	No	No
Measure Cost	No	Yes	Yes	Yes
Incentive Cost	Yes	Yes	Yes	No
CE Cost	Yes	Yes	N/A	N/A
Phase	Yes	Yes	N/A	N/A
Measure Life	Yes	Yes	N/A	N/A
Program Participation Year	No	No	No	No
Customer Signature	NA	NA	Yes	Yes
Installation/Completion Date	Yes	No	Yes	Yes

Data for Tracking and Evaluation		Sales Logix	Field in Database Extract	Collected in Prescriptive Forms	Collected in Site-Specific Forms
Site-Specific Information only	Rate Schedule	No	Yes		Yes
	Tier	No	No		Yes
	Existing Equip Details	No	No		Yes
	Contractor Name	No	No		Yes
	Contractor Contact	No	No		Yes
	Taxpayer ID No.	No	No		Yes
	Contract No.	Yes	No		Yes