

Appendix D:

2018 Interim Process Evaluation



Appendix D to the 2018 Washington Annual Conservation Report

Process Evaluation Report

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Executive Summary

Cadmus conducted process evaluation activities for 2018 as part of the Avista 2018–2019 DSM portfolio evaluation. This process evaluation focused on four fundamental objectives:

- Assess program delivery channel and marketing methods
- Assess participant and market actor program journey including barriers to participation, satisfaction with the program, and effectiveness of rebate levels
- Assess Avista and implementer staff experiences including organizational structure, communication, and program processes
- Document areas of success, challenge, and changes to the program

The report describes our data collection and process methods, presents analysis results, summarizes findings, draws conclusions, and recommends possible improvements for all of Avista’s nonresidential programs (except Energy Smart Grocer) and Avista’s residential HVAC, Shell, and Fuel Efficiency programs.

Summary of Milestones and Deliverables

Cadmus conducted the evaluation by reviewing documents, interviewing program and implementation staff and contractors, and surveying participants. Table 1 lists the process evaluation activities.

Table 1. 2018 Completed Milestones and Deliverables

Milestones and Deliverables	2018			
	Q1	Q2	Q3	Q4
Process				
Document and Database Review	✓			
Avista and Implementer Interviews	✓			
Contractor Interviews			✓	
Participant Surveys	✓	✓	✓	✓
Multifamily Direct Install (MFDI) Pilot				
Scope of Work	✓			
Avista and Implementer Interviews		✓		
Participant Interviews		✓		

Key Findings

Nonresidential

- **Two-thirds of nonresidential survey respondents have participated in past business energy-efficiency programs.** Most site specific (17 of 19) survey respondents have previously participated in an Avista business energy efficiency program compared with 56% of prescriptive respondents (23 of 41).

- **Participants most often learn about the program from Avista or a contractor, vendor, or retailer.**
 - Most site specific survey respondents (32%; n=13) first learned about the program from their Avista account executive or from an Avista email
 - Prescriptive survey respondents first learned about the program from a contractor, vendor, or retailer (50%; n=44).
- **Participants are motivated by saving energy and money.**
 - The top two motivators that both site specific and prescriptive survey respondents (n=19 and n=46, respectively) cited for participating were to save energy (42% and 67%, respectively) and save money (37% and 83%, respectively).
 - Participants of both programs said saving money and using less energy were the top benefits of program participation.
- **Most survey respondents (89%; n=56) received a check directly from Avista rather than an instant discount from their contractor.**
 - Six of the respondents (two of 19 site specific and four of 37 prescriptive) received an instant discount from their contractor.
 - Two of them said this was an easier way to receive the rebate, one was not given a choice in how to receive the rebate, and three did not provide a reason.
- **Participants are highly satisfied with the program, but a small number did indicate some dissatisfaction.**
 - All site specific survey respondents (n=19) and 91% (n=46) of prescriptive survey respondents were satisfied with the program overall.
 - Site specific respondents were satisfied with all components of the program except for the time it took to process the application; two of 19 were *not too satisfied* with this component because of delays caused by incorrect rebate calculations and the time it took to complete site inspections.
 - Prescriptive survey respondents were highly satisfied with the pre-project inspection, the rebate amount, and the process of completing and submitting their application. Several survey respondents provided reasons for their dissatisfaction with the program and some of its components. They stated they were dissatisfied with communication with an account executive and their trade ally because there was not enough communication (4 responses). One respondent expressed dissatisfaction because the rebate check had not yet arrived at the time of the survey and one felt the equipment was not as effective as expected, which led to low energy savings. One respondent reported concerns about their contractor that Avista did not address.

- **Site specific survey respondents said the program was successful because of Avista staff (7 of 12) while prescriptive survey respondents said the program was easy to use (31%; n=29).**
 - Site specific program participants also cited the rebate (two of 12); rebate delivery time (two of 12); and overall process, communication, and energy savings (one response each) as working well.
 - Prescriptive survey respondents also cited quick turnaround (28%) and customer service (24%) as program elements that were working particularly well.
- **Participation challenges differed by program.**
 - The top challenge for participating in the site specific program was determining whether a project was eligible for a rebate.
 - Prescriptive survey respondents said their top challenges were knowing about the program and its offerings, completing application paperwork, and finding the time needed to apply and complete the project. The application paperwork was of particular concern among lighting participants.
- **Avista’s rebate was important in the decision to complete the energy efficiency project.** All site specific and all but one prescriptive survey respondent said the rebate provided by Avista was important in their decision to complete the project.
 - The most important criteria for making energy efficiency improvements for site specific respondents were return on investment (14 of 19) and initial cost of equipment (14 of 19).
 - Prescriptive survey respondents said the most important criteria were maintenance costs (77%; n=43) and energy or operating costs (74%; n=43).

Residential

- **Residential program delivery went smoothly, per both Avista and implementer staff.** Except for a couple of small changes to the rebate levels outlined in the 2018 DSM Business Plan, the HVAC, Shell, and Fuel Efficiency programs were delivered and performed as expected.
- **More than half of residential program participants heard about the program in which they participated through their contractor, installer, or trade ally (53%, n=73).** Although a significant portion of respondents (n=60) said contractors are the best way to spread information about Avista programs (27%), more respondents said bill inserts are the best way to spread information (32%).
- **Residential program participants were motivated to participate primarily to save money (56%, n=75).** Survey respondents reported that the main benefits of Avista’s residential programming were saving energy (83%, n=72), increasing the comfort of their homes (78%), lowering maintenance costs (74%), and taking advantage of Avista rebates (72%).
- **At least 93% of survey respondents were *very satisfied* or *somewhat satisfied* with every element of the program in which they participated as well as with Avista overall.** Rebates received the lowest satisfaction rating, specifically among survey respondents who participated

in the Shell program (n=28), who were much less satisfied with rebate levels than were survey respondents in the HVAC (n=32) and Fuel Efficiency (n=16) programs.

- **HVAC contractors Cadmus interviewed said the HVAC Program plays an important role in “leveling the playing field”** because it enabled them to install more costly high-efficiency equipment in the homes of customers who might otherwise not be able to afford them.
- **HVAC contractors took varying approaches to helping customers complete their rebate application forms.** Some contractors completed forms entirely on their own, some worked with customers to complete their forms, and some provided no help to customers. Contractors reported occasional issues with submitting applications online because Avista’s website could not verify customers’ mailing addresses.
- **The eight HVAC contractors Cadmus interviewed rated their satisfaction with various elements of the HVAC Program from 4.4 to 4.8** on average, on a scale of 1 to 5. They also provided an average rating of 4.6 for the program’s ability to influence customers’ decisions to purchase new energy-efficient equipment.

Multifamily Direct Install Pilot

- **Avista facilitated the MFDI Pilot delivery by mimicking the design of the Small Business Direct Install (SBDI) program and recruiting its implementer to assume the same role for the pilot.** According to Avista and implementer staff, the pilot, like Avista’s residential program, was delivered smoothly and as expected. Avista overcame barriers to participation by engaging in a highly targeted marketing campaign.
- **Pilot participants were generally highly satisfied with the pilot and direct-install measures provided to their tenants,** per Avista reports and direct feedback from multifamily residence property managers. Although some property managers relayed to Avista reports by tenants of problems with certain measures installed through the pilot, these issues occurred very infrequently and were all resolved by the implementer.
- **Participating property managers were unclear about the timing of the supplemental lighting phase of the pilot** at the time of interviews with Cadmus. Interviewees were not dissatisfied with the supplemental phase but expressed confusion about the timing of its rollout.
- **Pre- and post-pilot per-unit energy savings differed significantly because of substantial differences in algorithm inputs such as hours of use (HOU).** Avista originally calculated energy-savings estimates using broad characterizations of building stock in its service territory and intended to use the pilot to collect more refined information about its customers’ households. Thus, differences between estimated and finalized energy savings were not an unexpected outcome for Avista.

Recommendations

Nonresidential

Nonresidential Recommendation 1: A small number of survey respondents said they received an instant discount from their contractor because it was easier to have their contractor apply the discount to the total cost of the project. If Avista wants to promote the instant discount option to nonresidential customers, it should educate customers about the ease of using this option.

Nonresidential Recommendation 2: While Avista is implementing a new tracking database, it should review the data that are being recorded in the database from prescriptive lighting participants to determine if the data are sufficient for accurate planning in the future. If current data being gathered are not sufficient, Avista should review what data are needed for planning purposes and modify the database to include these detailed measure-level data.

Nonresidential Recommendation 3: According to some prescriptive survey respondents, the lighting application paperwork was challenging because it was confusing and did not provide precise instructions for completing the application. Although the Avista website provides several ways for customers to contact Avista for additional information, Avista should create and post a document on its website with answers to frequently asked questions about the application to decrease customer challenges. The FAQ document could focus on ways to avoid the application being rejected.

Residential

Residential Recommendation 1: Consider adjusting the constraints used to verify mailing addresses for customers trying to submit their rebate application forms online. Although this system works most of the time—according to HVAC contractors interviewed by Cadmus, it was usually a non-issue—it can create frustration for customers who ultimately cannot complete the process online and must mail in their forms. A system that relies on something simpler, such as account number and/or mailing zip code or house number, could still validate customer eligibility without rejecting certain mailing address formats.

Multifamily Direct Install Pilot

MFDI Pilot Recommendation 1: Increase communication with participants to sustain interest in the pilot to prepare for a possible full program rollout that includes a supplemental lighting phase as well as in general for similar future pilots.

Introduction

In 2018, Avista provided rebates and services to its nonresidential and residential electric and natural gas customers throughout its Washington and Idaho service territories. The purpose of the 2018–2019 portfolio process evaluation was to identify and document areas of success and challenge for the programs by reviewing program materials, conducting interviews with program and implementation staff and residential HVAC contractors, and conducting surveys with nonresidential and residential program participants. The evaluation focused on all nonresidential programs (except Energy Smart Grocer) and the residential HVAC, Shell, and Fuel Efficiency programs.¹ Cadmus also evaluated the Multifamily Direct Install (MFDI) pilot, designed to benefit hard-to-reach customers.

Methodology

This section describes the interview and survey methodology.

Program Administrator and Implementer Interviews

Cadmus conducted five telephone interviews with program staff and two with third-party implementers as listed in Table 2. The interviews focused on these program topics:

- Program roles and responsibilities
- Program goals and objectives
- Program design and implementation
- Data tracking
- Program participation
- Marketing and outreach
- Program successes
- Market barriers
- Program impact on the market
- Future program changes including redesign

¹ Cadmus did not evaluate the residential ENERGY STAR® Homes program, the third-party “Simple Steps, Smart Savings” regional program, or the Community Energy Efficiency Program (CEEP) in 2018.

Table 2. Stakeholder Interviews

Program	Avista Staff	Implementer Staff
Nonresidential		
Lighting	✓	N/A
HVAC, Shell, VFD, Food Service Equipment		N/A
Green Motors	✓	*
AirGuardian		✓
Fleet Heat		N/A
Site Specific	✓	N/A
Residential		
HVAC	✓	N/A
Shell		
Fuel Efficiency		
Multifamily Direct Install	✓	✓

* Cadmus was unable to reach the Green Motors implementer in Q1 despite support from Avista.

Residential HVAC Contractor Interviews

Cadmus conducted eight interviews with contractors who specialize in HVAC equipment and serve residential customers.² Avista provided to Cadmus a list of 76 contractors, eight of whom Avista had highlighted as high-volume contractors for Cadmus to prioritize. Cadmus successfully contacted five of the eight high-volume contractors and also spoke with three other contractors to meet the target quota of eight interviews.

The telephone interviews focused on these HVAC program topics:

- Program awareness and motivation
- Program benefits
- Program delivery experience, including marketing and fulfilling rebates
- Effects of program on success of business
- Interaction with Avista staff
- Perception of customer experience, including awareness and satisfaction
- Successes and challenges
- Feedback and recommendations
- Demographic information

Multifamily Residence Manager Interviews

Cadmus conducted 10 interviews with managers of multifamily residences that participated in the MFDI Pilot. Cadmus met its target quota of 10 interviews from a list of 36 pilot participants provided to Cadmus by Avista.

² Seven of the eight contractors Cadmus interviewed also serve commercial customers.

The telephone interviews focused on these pilot topics:

- Pilot awareness
- Satisfaction with pilot elements
- Pilot benefits
- Successes and challenges
- Additional energy efficiency actions taken because of pilot participation
- Feedback and recommendations
- Demographic information

Participant Surveys

Cadmus completed 76 phone residential participant surveys and 65 online nonresidential participant surveys. Residential surveys were completed in May and October 2018 and nonresidential surveys were completed from May through August 2018 and February through March 2019. Cadmus relied on site visits to increase nonresidential survey participation.

The participant survey guides gathered critical insights into participants' program journey, covering the following topics:

- Program awareness
- How respondents learned about the program
- General program participation
- Reasons for participation
- Program benefits
- Program delivery experience
- Overall program satisfaction
- Satisfaction with Avista
- Current energy-efficient behaviors and purchases
- Suggestions for program improvements

Sampling

To prepare the contact lists for each of the nonresidential and residential surveys, Cadmus removed duplicate records and records with incorrect or missing email addresses. Cadmus sent an email invitation to a census of all participants in each program except nonresidential prescriptive exterior and interior lighting participants. Because of the larger number of participants in these two programs, Cadmus randomly selected a sample of 20 participants and sent email invitations in batches of 20 records until the target was met. Following the initial email invitation, Cadmus sent a reminder email. To increase the number of survey responses, the field engineers urged participants during on-site visits to complete the survey if they had not yet done so.

Nonresidential Sampling

As shown in Table 3, of the 138 surveys targeted for the 2018 evaluation year, 65 were completed. Cadmus made several efforts to reach nonresidential participants. First, we sent email invitations to all eligible participants and one reminder email to any participants who did not respond to the initial email invitation. Cadmus field engineers also encouraged participants to complete the survey following the site visits. Despite these efforts, we did not meet the survey target. We will review the 2019 evaluation plan with Avista to determine whether efforts such as telephone calls or enlisting Avista’s help with outreach should be considered to increase response rates within individual nonresidential programs.

Table 3. Nonresidential Participant Survey Sample Frame, Target, and Completes by Program

Program	Wave 1 (May and June 2018)			Wave 2 (Feb. and March 2019)			2018 Total		
	Sample*	Target	Completes	Sample*	Target	Completes	Sample*	Target	Completes
Nonresidential Site Specific									
Electric	56	7	7	71	20	10	127	27	17
Gas	2	2	0	3	3	2	5	5	2
Nonresidential Prescriptive									
Exterior Lighting	133	4	6	169	12	9	302	16	15
Interior Lighting	173	4	5	226	12	9	399	16	14
HVAC Motor Controls	7	3	2	3	5	0	10	8	2
Food Service Equipment (Electric)	8	5	0	4	4	1	12	9	1
Food Service Equipment (Gas)	21	6	1	38	16	3	59	22	4
Commercial HVAC	18	6	4	17	12	2	35	18	6
Green Motors Rewind	2	2	1	8	6	0	m10	8	1
Fleet Heat	0	0	0	1	1	0	1	1	0
AirGuardian Compressed Air	0	0	0	0	0	0	0	0	0
Insulation	3	3	2	7	5	1	10	8	3
Total	423	42	28	547	96	37	970	138	65

*The sample population included only 2018 nonresidential participants.

Residential Sampling

Cadmus completed the targeted number of surveys for each program in both May and October: 16 for HVAC, 14 for Shell, and eight for Fuel Efficiency. Overall, Cadmus collected 76 responses for process evaluation purposes, as shown in Table 4, and 114 responses for installation verification purposes in 2018.

Table 4. Residential Process Evaluation Participant Survey Sample Frame, Target, and Completes by Program

Program	Wave 1 (May 2018)			Wave 2 (Oct. 2018)			Total		
	Sample	Target	Completes	Sample	Target	Completes	Sample	Target	Completes
Residential									
HVAC	2,094	16	16	2,097	16	16	4,191	32	32
Shell	277	14	14	335	14	14	612	28	28
Fuel Efficiency	459	8	8	323	8	8	782	16	16
Total	2,830	38	38	2,755	38	38	5,585	76	76

Description of Programs

Table 5 provides a summary of the programs included in this evaluation of Avista’s 2018 DSM portfolio.

Table 5. 2018 Evaluated Program Descriptions

Program	Measure(s)	Implementer	Program Summary
Nonresidential			
Site Specific	Custom measure(s)	Avista	Customers design energy efficiency projects with documented energy savings and a minimum 10-year measure life for a technical review and possible rebates.
Prescriptive	Lighting, HVAC, VFDs, food service equipment, and shell	Avista	Customers identify potential energy efficiency projects, submit paperwork and receive prescriptive rebates for projects.
Fleet Heat	Smart block heating system	Avista	Electric customers are provided with a smart block heating system to install on vehicles. The device controls both the water temperature in the block and the air temperature outside the block. Installation help is available from HOTSTART.
Green Motor Rewind	Repair/rewind of motors	The Green Motors Practices Group (CMPG)	Electric customers who receive a green motor rewind at a participating service will receive a rebate. The rebate applies to 15 HP to 5,000 HP industrial motors.
AirGuardian Compressed Air	Compressed air leak reduction device	Sight Energy Group	Direct installation of compressed air leak reduction device to electric customers following a compressed air audit
Residential			
HVAC	Space heat, water heat, and smart thermostats	Avista	Customers identify potential energy efficiency projects, submit paperwork, and receive prescriptive rebates for projects.
Shell	Standard and storm windows		
Fuel Efficiency	Natural gas space and water heat		
Multifamily Direct Install Pilot	Lighting, water-saving measures, water heater insulation, VendingMisers	SBW Consulting	Direct installation of energy-saving measures, on-site audits to identify opportunities and interest in existing Avista programs, and follow-up visits to install supplemental lighting measures.

Findings

Nonresidential Site Specific

This section describes the findings from the interview Cadmus completed with the program manager and the surveys completed with 19 site specific participants.

Program Changes

No design, implementation, or rebate changes were made to the site specific program in 2018. The program manager did not report any problems or issues of concern implementing this program. She noted that communication between implementation staff, account executives, and engineers who provide technical guidance has been working very well. Engineers were involved in the initial and final

cost and savings reports, which provided customers with more accurate predictions of expected rebate levels.

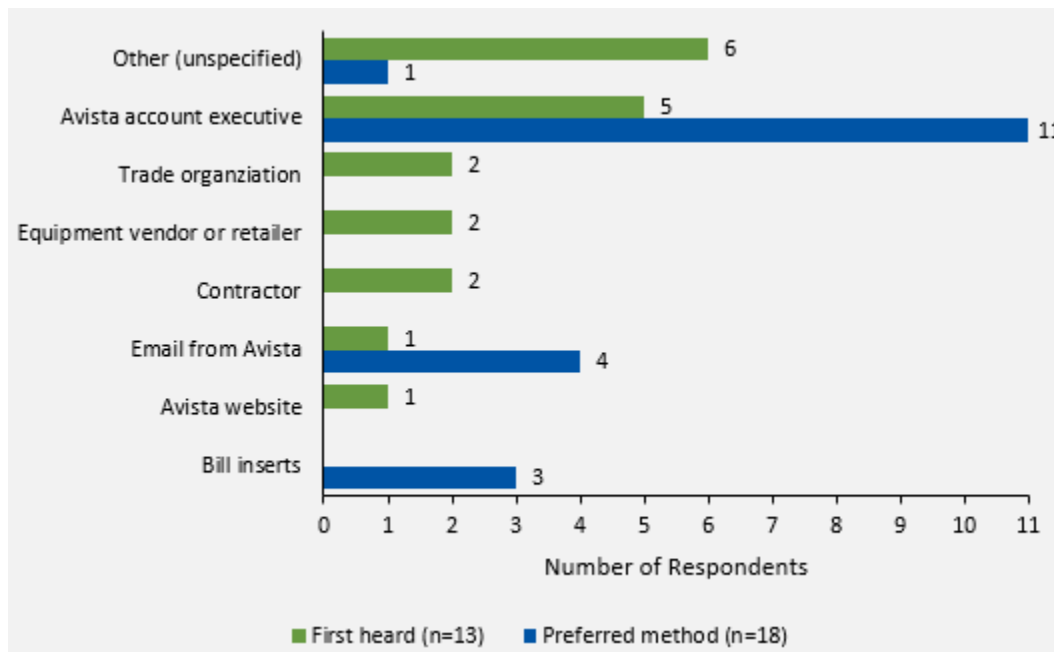
Marketing and Outreach

The program used a direct, customer-centered approach for outreach: marketing the program through established relationships with account executives (AE). AEs most commonly reach out to customers through email blasts. In addition, the Avista website provided preliminary information about the site specific program and encouraged customers to reach out to their account executive or a trade ally when they had questions. In 2018, the program created and published on the Avista website a case study targeted at the multifamily sector as a method of engagement. AEs and trade allies cross-promoted all nonresidential programs when discussing energy efficiency improvement projects with customers. To answer questions and promote all nonresidential programs to trade allies, Avista hosted informational breakfasts throughout the year. In April and May of 2018, Avista uploaded the existing trade ally databased into the Trade Ally Module (TAM) system which is used to communicate with trade ally’s through email messages. In 2019, Avista will implement Trade Ally Connect (TAC) which will provide more more opportunities to connect with trade allies.

Customer Awareness

Seventeen of the 19 survey respondents previously participated in an Avista business energy efficiency program. As shown in Figure 1, survey respondents learned about the site specific program from a variety of sources. Most respondents indicated that the best way for Avista to inform customers about rebate amounts and rebate programs is via their Avista account executive (11 responses).

Figure 1. Program Awareness

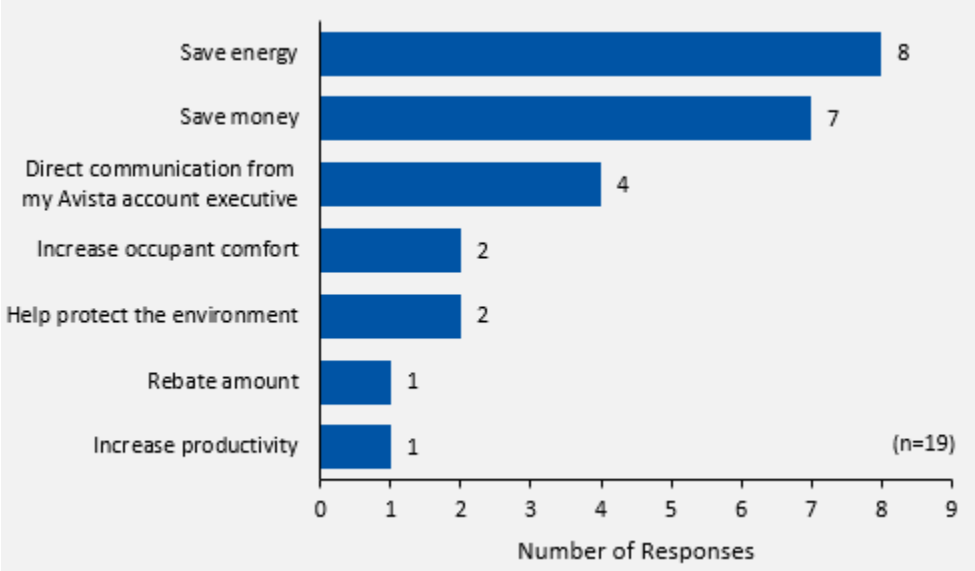


Source: Site specific survey questions C2 and C3: “How did you first hear about the site specific program?” and “What is the best way for Avista to inform commercial customers like you about their rebates and incentives for energy efficiency improvements?”

Motivation and Benefits of Participation

As shown in Figure 2, survey respondents said they were motivated to participate in the site specific program to save energy (8 responses) and save money (7 responses).

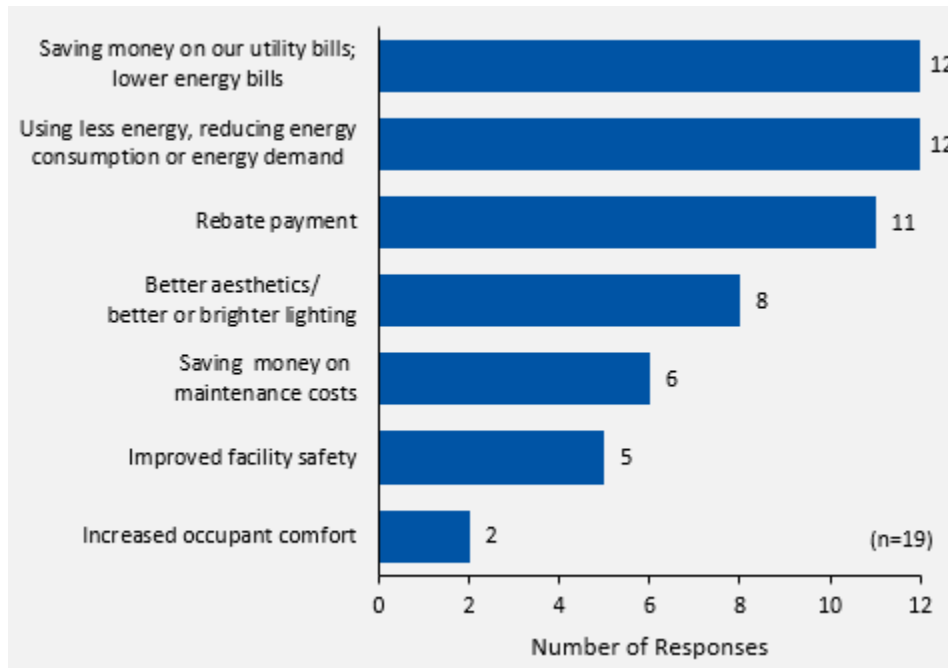
Figure 2. Site Specific Participation Motivation



Source: Site specific survey question C4: “What motivated you to participate in the Site specific Program?” Multiple responses allowed.

Additionally, survey respondents said the main benefits for participating in the program are to save money (12 responses), use less energy (12 responses), and receive a rebate (11 responses) as shown in Figure 3.

Figure 3. Site Specific Participation Benefits



Source: Site specific survey question C5: “What would you say are the main benefits your company has experienced as a result of participation?” Multiple responses allowed.

Customer Experience

Program Delivery

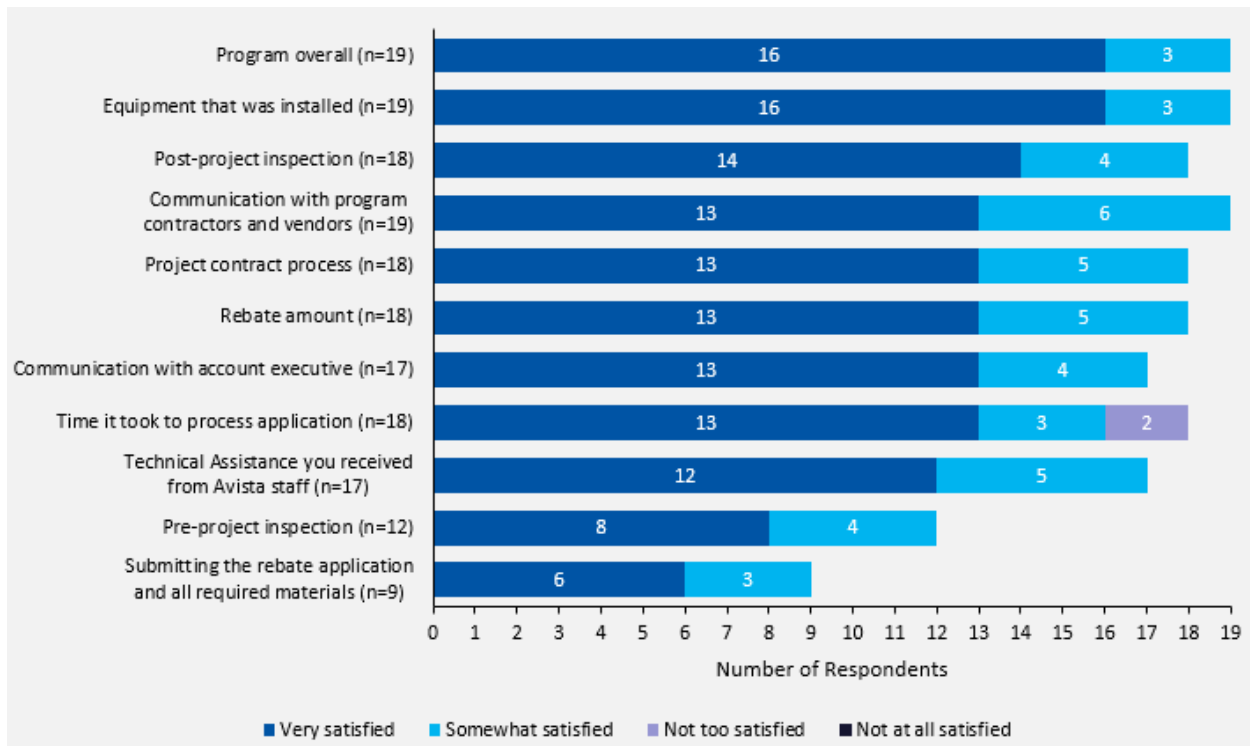
Survey respondents answered questions about how they designed and implemented their projects. Eight survey respondents (n=19) said they received design and implementation support from their contractor; four said they received support from Avista staff; two said they relied on internal resources for design and implementation; and five said they received support from both Avista staff and a contractor, vendor, or retailer.

Two of the 19 survey respondents said their contractor provided an instant discount toward the cost of the project. One of them said they requested the instant discount because it was easier to have their contractor handle the details. The other respondent did not provide a reason.

Program Satisfaction

All respondents (n=19) were satisfied with the program overall and satisfied with Avista (n=19). Respondents were most satisfied with equipment that was installed, as shown in Figure 4. Two respondents were *not too satisfied* with the time it took to process their application: one reported issues with correct calculations during the rebate process and one said the check was delayed because of delays with site inspections.

Figure 4. Satisfaction with Site Specific Program Components



Source: Site specific survey question E1: “In terms of the site specific program, how satisfied were you with the following aspects? Please think about each item individually as you select your answer.”

All survey respondents reported being either *very* or *somewhat satisfied* (n=19) with the rebate amount and all respondents (n=19) said the rebate was *very* or *somewhat important* in their decision to complete the project as it was implemented. Additionally, the program manager said the program was more attractive to customers because Avista is using a flat rebate structure rather than a tiered rebate structure.

Program Challenges and Successes

Twelve respondents reported a variety of program participation challenges (Table 6). Two respondents said they did not encounter challenges with the program, and the remaining five did not provide a response to this question.

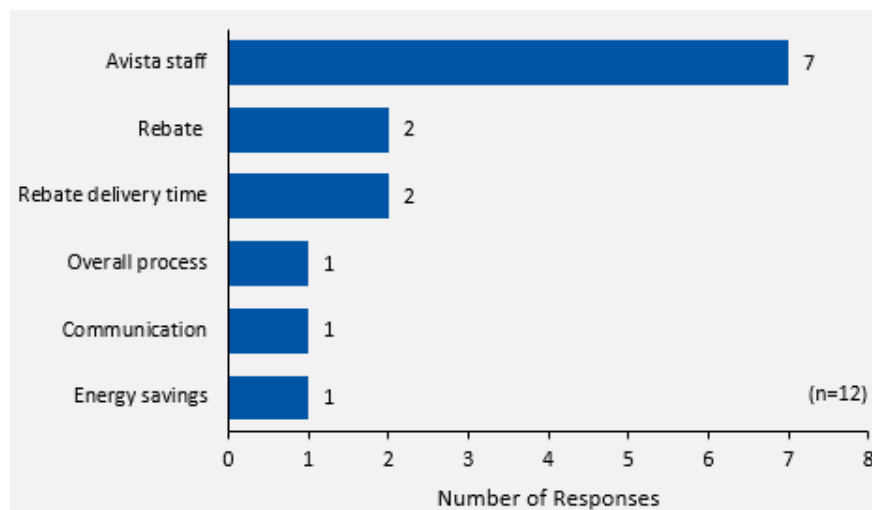
Table 6. Participation Challenges

Challenge	Number of Responses (n=12)
Determining program eligibility	3
Determining the correct rebate amount	1
Deciding when to engage Avista engineers and vendors	1
Cost of the project	1
Getting internal buy-in	1
Reminding installers about taking pre- and post-installation photos	1
Vendor availability	1
Working with multiple internal and external staff to complete the project	1
Time needed to complete the project	1
Rebate availability for large, multi-year projects in apartment complexes	1

Source: Site specific survey question E3. What do you see as the biggest challenges to participating in Avista’s site specific program?”

Despite these issues, 12 respondents called out several program areas that they viewed as working well (Figure 5).

Figure 5. Site Specific Program Successes



Source: Site specific survey question E5: “What would you say is working particularly well with Avista’s Site specific Program?” Multiple responses allowed.

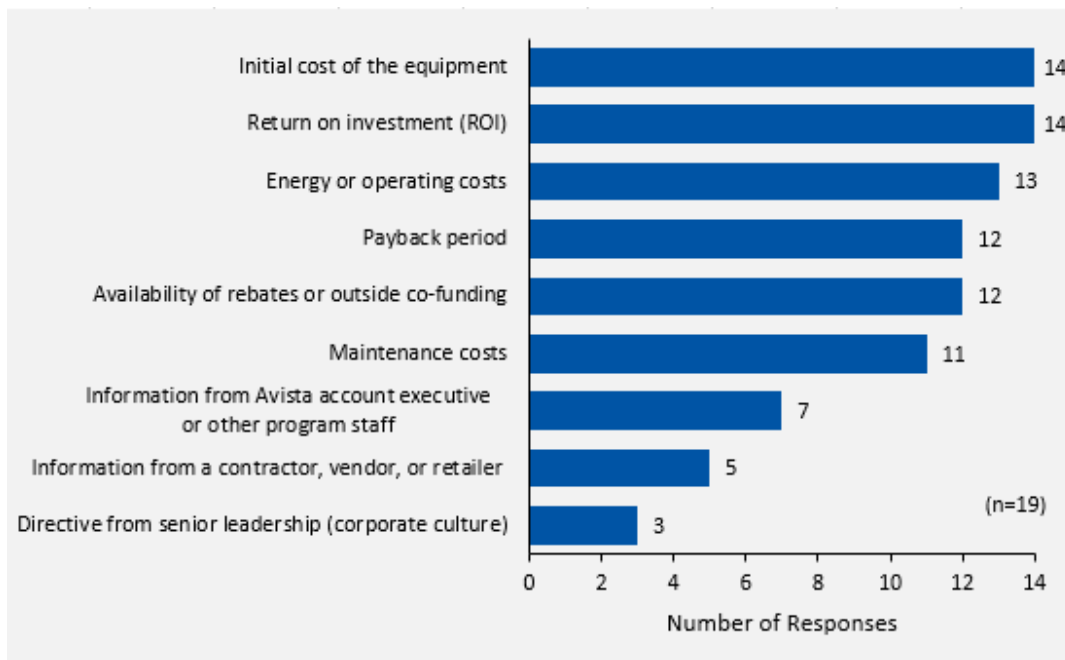
Five survey respondents provided recommendations to improve the program:

- Provide more education about the program
- Come to a final agreement about the rebate amount at the beginning of the project
- Less cost
- Pay rebates more quickly
- Guarantee that rebate money would still be available when the project is completed because making improvements to an apartment building can take multiple years to complete

Energy Efficiency Attitudes and Behaviors

All respondents (n=19) said the rebate provided by Avista was *very* or *somewhat important* in their decision to complete their project, and almost all respondents (18 of 19) said energy efficiency was *very* or *somewhat important* when making capital upgrades or improvements. As shown in Figure 6, initial equipment cost and return on investment (ROI) were the most important criteria in the decision to make energy efficiency improvements.

Figure 6. Important Criteria for Making Energy Efficiency Improvements



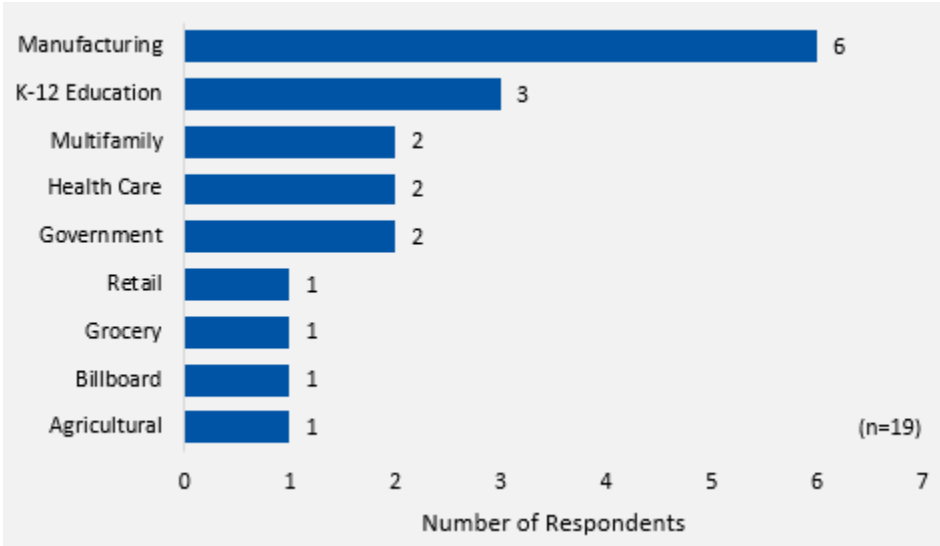
Source: Site specific survey question F3: “Which of the following criteria are important in deciding whether your company makes energy efficiency improvements?” Multiple responses allowed.

Since participating in the site specific program, four respondents have purchased energy-efficient equipment: two have installed more boilers, one has completed an LED lighting project and one did not provide details about the project. Two respondents have adopted new protocols such as staging start and end times on production and using unspecified energy-management protocols.

Survey Respondent Profile

Three respondents lease their facilities while 15 own their facility. The number of employees at each facility ranged from one to 3,500: eight had between one and 200 employees, three had between 200 and 500 employees, and three had more than 500 employees (n=14). Eleven facilities primarily used gas to heat their facility while two used electricity and one used steam. As shown in Figure 7, the largest group of survey respondents completed a manufacturing project.

Figure 7. Site Specific Project Type

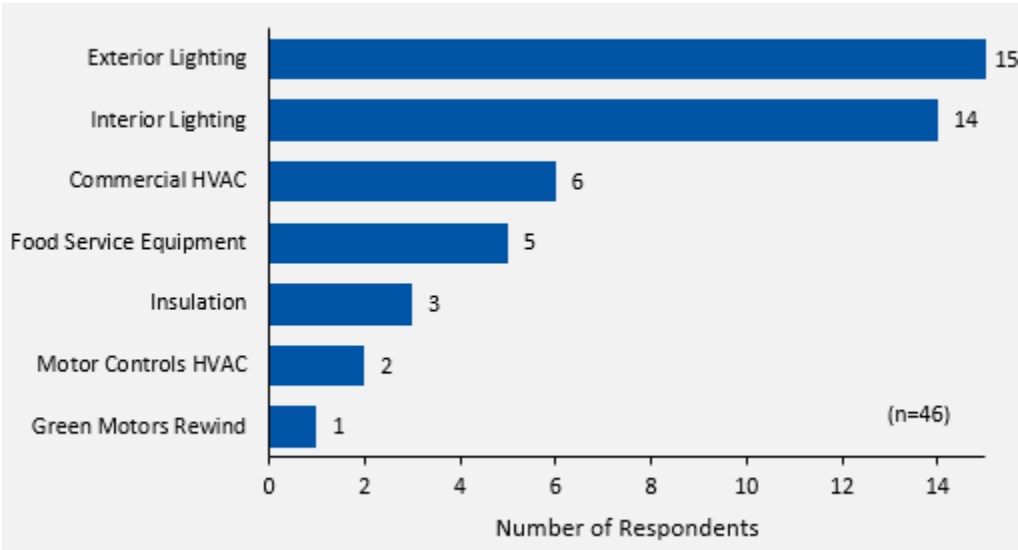


Source: 2018 Program participant data.

Nonresidential Prescriptive

This section describes the findings from the three interviews Cadmus completed with Avista and implementation staff and the 46 online surveys completed with prescriptive participants. Figure 8 lists the prescriptive programs in which survey participants participated.

Figure 8. Prescriptive Programs



Source: 2018 Program participant data.

Program Changes

Avista made several changes to the food service equipment program and commercial lighting program rebates in 2018, as summarized in Table 7. In addition to the changes to the rebate amounts, Avista modified the wattage range on most interior and exterior lighting products.³ Additionally, the rebate amount for every industrial motor ranging from 15 HP to 5,000 HP in the Green Motors Initiative doubled from 2017 to 2018. The 2017 incentives ranged from \$15 to \$5,000 per unit while the 2018 incentives ranged from \$30 to \$10,000 per unit.

Table 7. 2018 Prescriptive Program Rebate Changes

Program	Change	2017	2018
Food Service Equipment	Natural Gas Commercial Fryer	\$300 each	\$1,000 each
Lighting	Interior 4-Foot 4-Lamp T12/T8 Fixture to 2-Lamp HP T8 Fixture or Retrofit Kit	\$35	\$0 ^a
	Interior 4-Foot 3-Lamp T12/T8 Fixture to 2-Lamp HP T8 Fixture or Retrofit Kit	\$25	\$0 ^a
	Interior 4-Foot 2-Lamp T12/T8 Fixture to 1-Lamp HP T8 Fixture/Retrofit Kit	\$18	\$0 ^a
	Interior 250 watt HID to ≤ 140-watt DLC approved LED Fixture	\$180	\$155
	Exterior New Construction 320 & 400 Watt HID to ≤ 175-watt DLC LED Fixture	\$175	\$250

^a Measure discontinued.

Source: 2017 Avista DSM Standard Operating Procedures Manual and 2018 Avista DSM Standard Operating Procedures Manual.

When rebates or other program changes occur, Avista holds webinars or other events to explain the changes. Avista also alerts lighting and HVAC contractors about program changes by using the Trade Ally Module (TAM) to send email messages. Additionally, program staff for the lighting program attend trade ally meetings to discuss program changes with contractors and vendors.

Program managers said Avista planned to revise the customer relationship management system, InforCFM, in mid- to late-2018 but this had not happened at the time of the program staff interviews. The current tracking system was working well for most programs; however, the lighting program manager indicated that being able to track more measure level detail would be helpful for future planning purposes.

Marketing and Outreach

According to the program and implementer interviews, most customers learn about the program from the contractor or vendor they work with to implement the project, from Avista’s account executives, or from email messages sent to customers. Customers may also learn about energy efficiency programs through Avista’s monthly newsletters targeted at commercial customers. Bill statements also include messages about energy efficiency in general and sometimes highlight specific energy efficiency

³ A comparison of 2017 and 2018 Prescriptive Lighting rebates is found in the 2018 Avista DSM Standard Operating Procedures Manual, p. 36–37.

programs. To answer questions and promote all nonresidential programs to trade allies, Avista hosts informational breakfasts throughout the year.

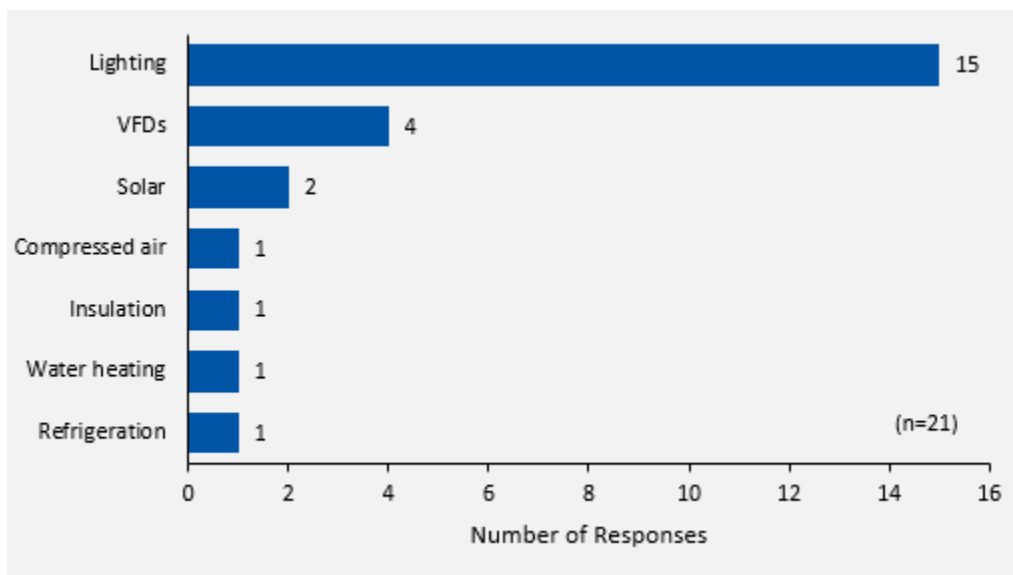
While outreach remained the same for most 2018 nonresidential programs, the implementer said a slight change was made to outreach for the Green Motors Initiative in 2018. In the past, the implementer, Green Motors Practice Group (GMPG), placed cold calls to Avista customers to find and recruit participants. In 2018, it focused outreach efforts on interested and eligible customers identified by Avista account executives.

Customer Awareness

Over half of survey respondents (58%; 23 of 40) have previously participated in an Avista business energy efficiency program. None of the 2018 insulation program survey respondents (n=3) had participated in an Avista business energy efficiency program before 2018.

Twenty-one of the 23 respondents who had participated previously provided details about the types of equipment they installed. The most common type of equipment respondents installed while participating in an Avista business energy efficiency program was lighting (Figure 9; 15 responses). No notable differences emerged across participant types.

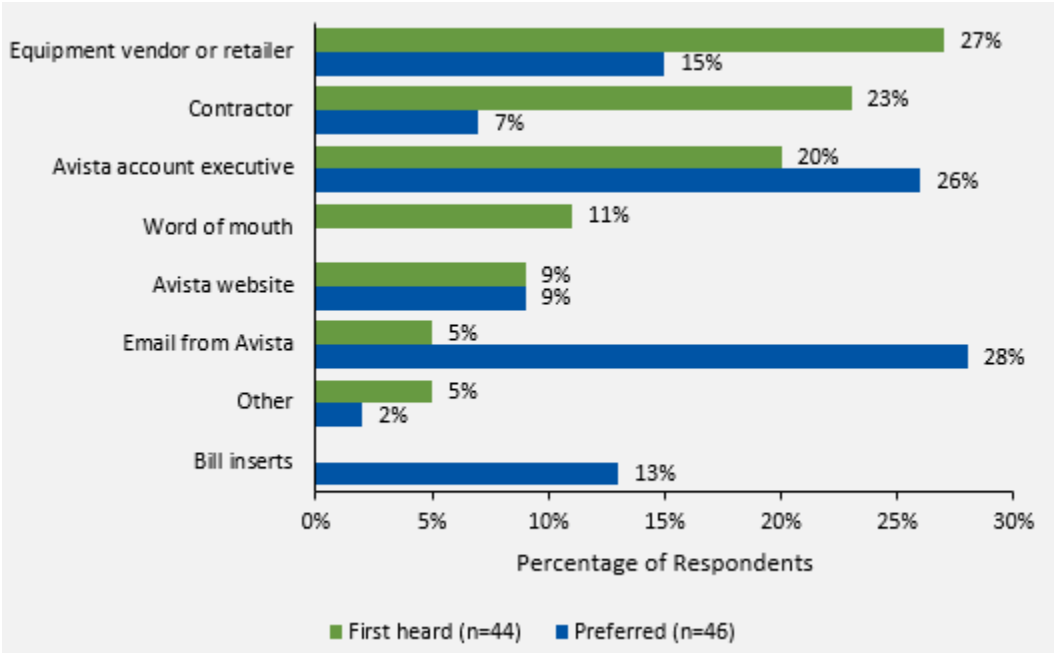
Figure 9. Equipment Installed by Previous Avista Program Participants



Source: Prescriptive survey question C1.2: “What other Avista nonresidential energy efficiency programs has your business participated in?” Multiple responses accepted.

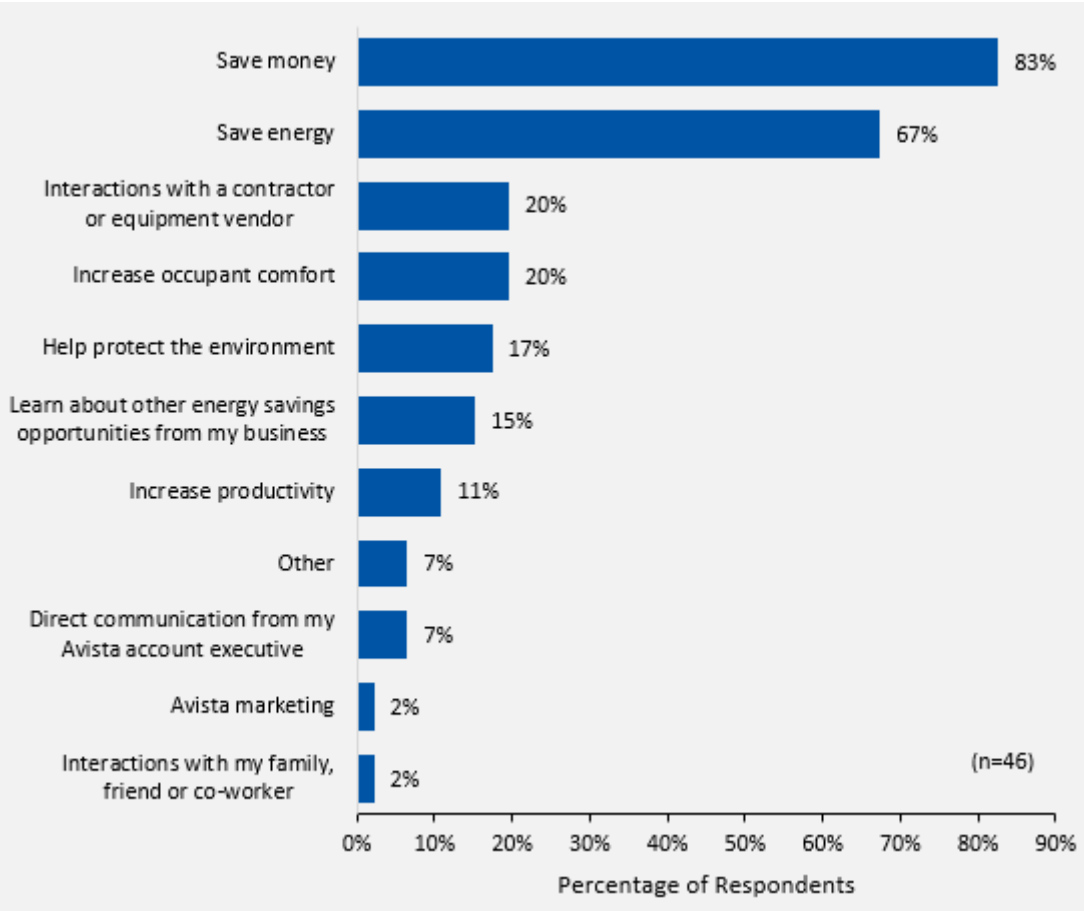
As shown in Figure 10, the most common way survey respondents first learned of the program was from an equipment vendor or retailer (27%). Over one-quarter of respondents indicated that the best way for Avista to inform them about rebate programs is by email from Avista (28%) or directly from their Avista account executive (26%).

Figure 10. Program Awareness



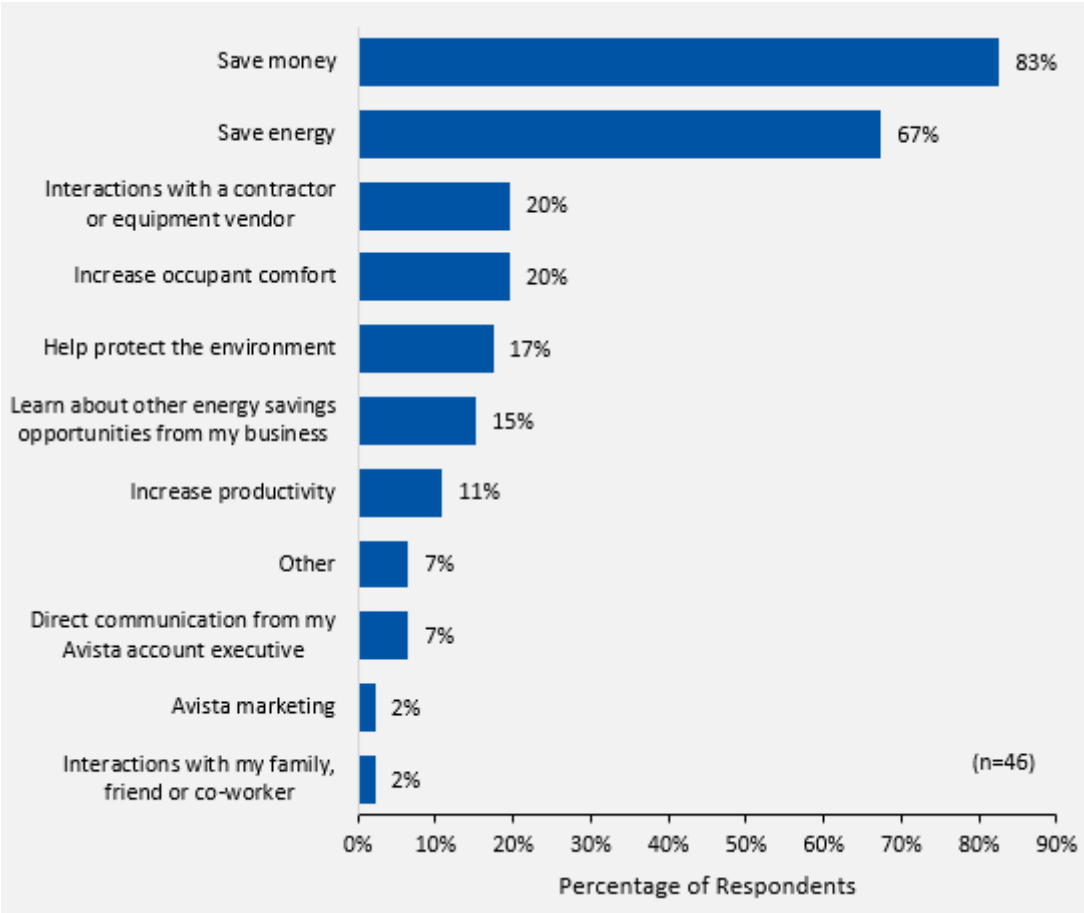
Source: Prescriptive survey questions C2 and C3: “How did you first hear about the program?” and “What is the best way for Avista to inform commercial customers like you about their rebates and incentives for energy efficiency improvements?” Percentages may not total 100% due to rounding.

Motivation and Benefits of Participation



As shown in , survey respondents said they were motivated to participate in the program to save money (83%) and save energy (67%). The Green Motors Rewind respondent was motivated by his interactions with the contractor or vendor, and respondents in the food services equipment program were motivated by saving energy. There were no other notable differences among participant groups.

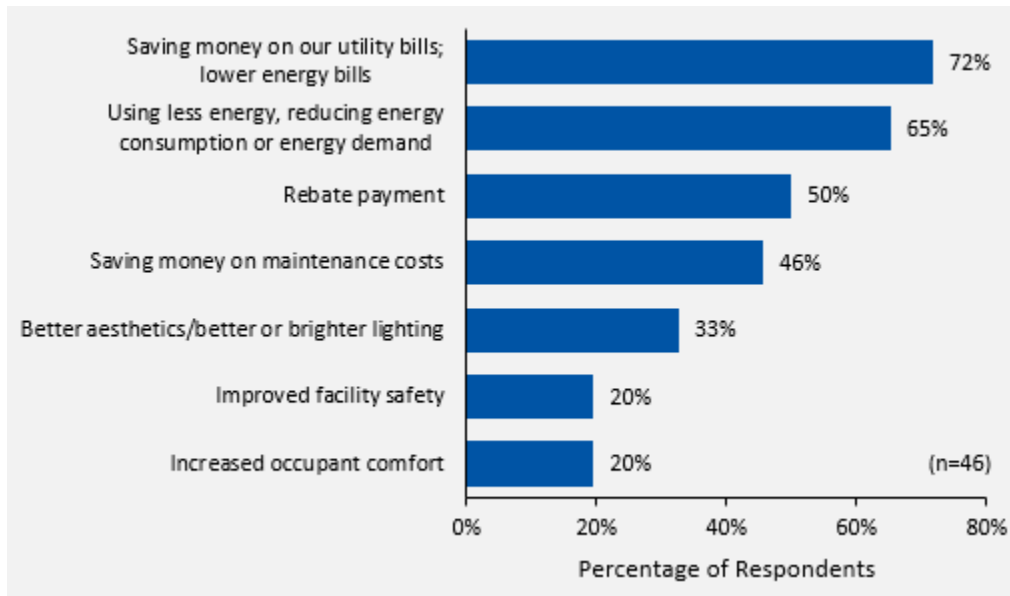
Figure 11. Prescriptive Participation Motivation



Source: Prescriptive survey question C4: “What motivated you to participate in the program?”
Multiple responses accepted.

Additionally, survey respondents said the main benefits for participating in the program were to save money on utility bills (72%) and use less energy (65%), as shown in Figure 12. These top benefits were consistent across all programs with the exception of one Green Motors Rewind participant who said the main benefit was saving money on maintenance costs.

Figure 12. Prescriptive Participation Benefits



Source: Prescriptive survey question C5: “What would you say are the main benefits your company has experienced as a result of participation?” Multiple responses accepted.

Customer Experience

Program Delivery

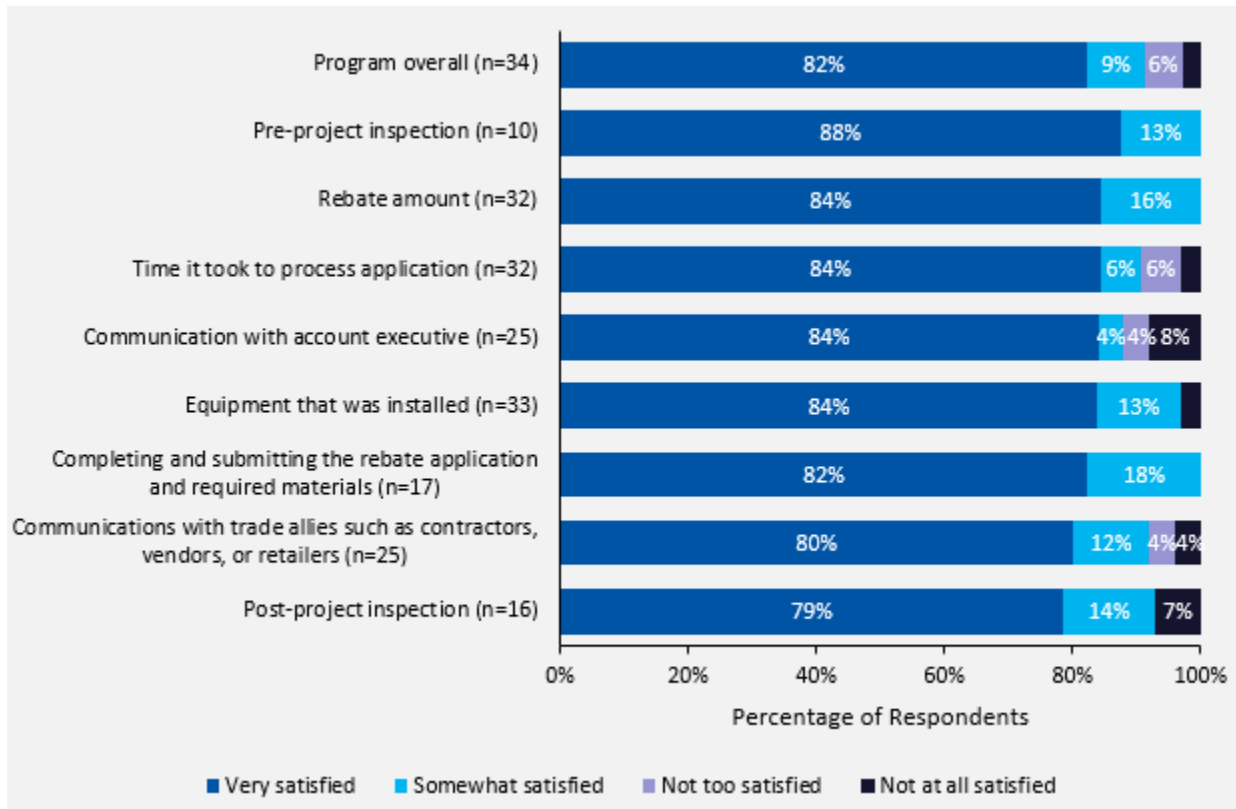
Most survey respondents (82%; n=38) used a third-party consultant such as a contractor or vendor to design or implement their project while 18% used only internal resources. In addition to using a contractor or vendor, 13% used Avista staff to design or implement their project. Over half of the organizations (68%; n=38) in the survey took the lead role in completing the application for the rebate.

Most respondents received the rebate check directly (89%; n=37); however, 11% (4 of 37) received an instant discount from their contractor. Two respondents who received an instant discount from their contractor said they opted for this method of payment because their contractor did not offer another option for receiving the rebate, one respondent said it was easier to have the contractor submit the necessary paperwork, and one respondent did not provide a reason for selecting this option.

Program Satisfaction

Almost all respondents (98%; n=45) were satisfied with Avista, and 91% (n=34) were satisfied with the program. All respondents were *very* or *somewhat satisfied* with the pre-project inspection and the rebate amount, as shown in Figure 13. Program staff said that if rebate levels were reduced, participation would decrease, especially in the lighting and insulation programs. The lighting program manager said current rebates for exterior lighting motivated customers to participate while current interior lighting rebates were less motivating.

Figure 13. Satisfaction with Prescriptive Program Components



Source: Prescriptive survey questions H1 and H7: “In terms of the [PROGRAM], how satisfied were you with the following aspects? Please think about each item individually as you select your answer.”

Although almost all survey respondents were satisfied with the program and its components, four respondents provided reasons for their dissatisfaction as shown in Table 8. Other respondents who were dissatisfied with a program component did not provide a reason for their dissatisfaction.

Table 8. Reasons for Program Dissatisfaction

Component	Reason for Dissatisfaction	Program
Communication with account executive	Have not received the rebate	HVAC
	Very little communication	Interior Lighting
	Have not received much email communication and it takes a long time for rebate to be approved	Exterior Lighting
Communication with trade ally	Unresponsive and misled organization about effectiveness of the equipment	Interior Lighting
Equipment installed	Equipment not as effective as the lighting it replaced	Interior Lighting
Overall satisfaction	Have not received the rebate	HVAC
	No energy reduction	Interior Lighting
	Concerns with contractor that were not addressed by Avista	Interior Lighting

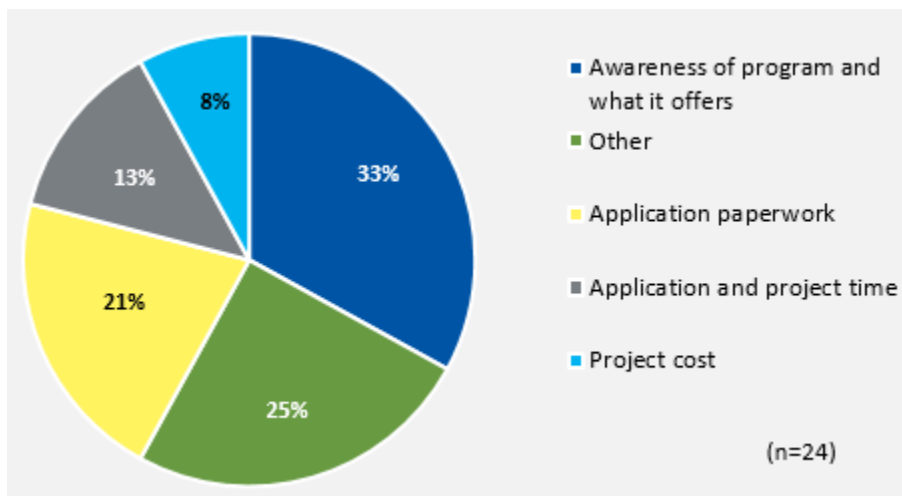
Program Challenges and Successes

Over half of respondents (52%; n=46) reported program participation challenges. The most common challenge, as shown in Figure 14, was being aware of the program and what it offers. “Other” responses

include contractor availability, receiving rebate, getting buy-in, prioritizing projects, getting a quality result, and no more improvements to make.

Five of the eight respondents who said program awareness was a challenge were interior or exterior lighting participants. Three lighting participants said the rebate paperwork was challenging. They said the form was confusing and it did not provide precise directions. Additionally, they said identifying fixtures that qualified for the program was challenging. These customer challenges were reinforced by the program manager who said the biggest challenge for lighting participants was understanding the terminology, especially around DesignLights Consortium certification. The program manager also said there have been fewer application rejections in the past year or two because of an improved rebate application form. The AirGuardian implementer said the biggest challenge for this program is assuring participants that there is no cost to them to participate. When customers are skeptical, the implementer refers them to Avista for confirmation.

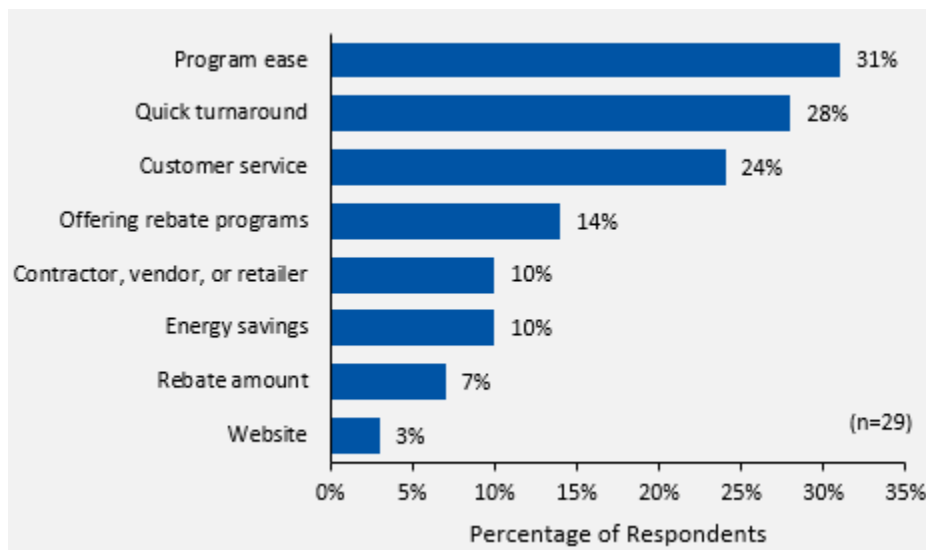
Figure 14. Participation Challenges



Source: Prescriptive survey question H9: “What do so see as the biggest challenges to participating in Avista’s [PROGRAM_NAME]?”

Despite these issues, 29 respondents called out several program areas that they viewed as working well (Figure 15).

Figure 15. Prescriptive Program Successes



Source: Prescriptive survey question H11: “What would you say is working particularly well with Avista’s Program?” Multiple responses allowed.

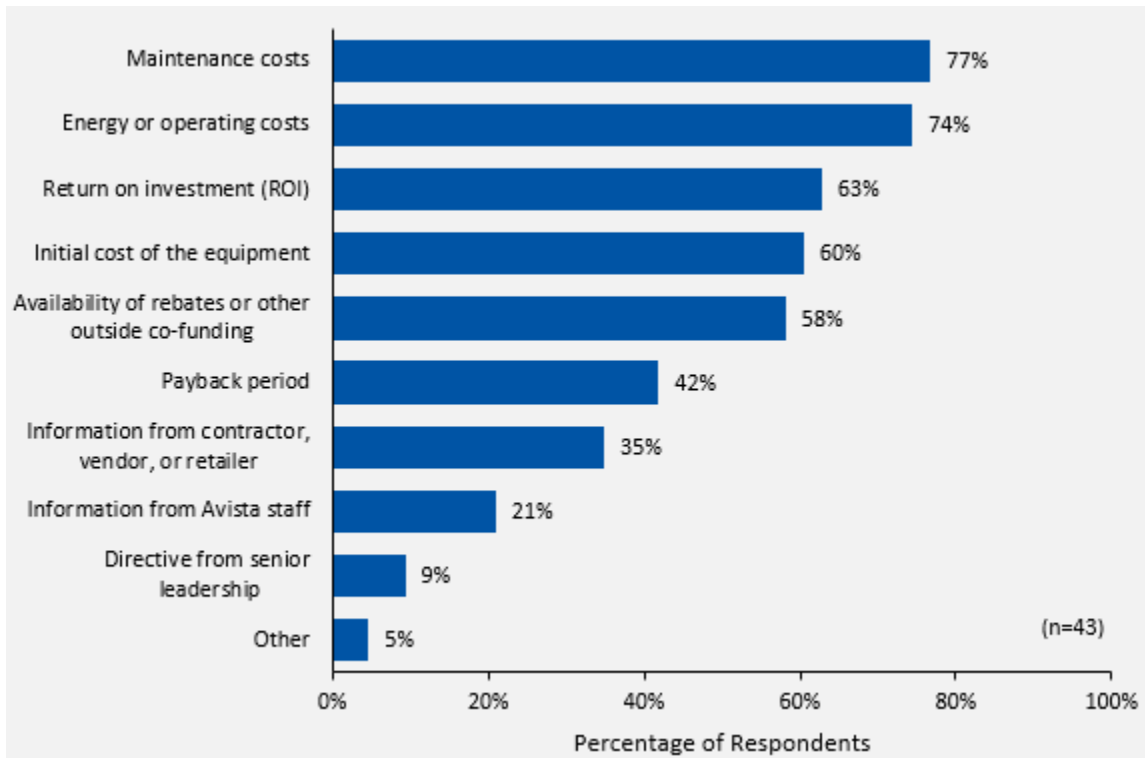
Sixteen participants provided recommendations to improve the program. Six of these participants suggested more outreach or different types of outreach, two would like the programs to continue, and two suggested Avista provide more information when program changes are made. Additional responses (one each) included:

- Better communication
- Easier application process
- Allow online application submittal
- Do not allow contractors to receive the rebate
- Provide a contractor list
- Electronic reporting

Energy Efficiency Attitudes and Behaviors

All but one of the respondents (n=46) said the rebate provided by Avista was *very* or *somewhat important* in their decision to complete their project. As shown in Figure 16, maintenance costs (77%) and energy or operating costs (74%) were the most important criteria in their decision to make energy efficiency improvements. Although maintenance costs were the most important criteria among all prescriptive program participants, the most-important criteria differed by program (Table 9).

Figure 16. Important Criteria for Making Energy Efficiency Improvements



Source: Prescriptive survey question K2: “Which of the following criteria are important in deciding whether your company makes energy efficiency improvements?” Multiple responses allowed.

Table 9 shows the criteria most commonly selected when deciding whether to make energy efficiency improvements for each of the prescriptive programs.

Table 9. Important Energy Efficiency Project Criteria by Prescriptive Program

Program	Most Selected Criteria	Percentage of Respondents
Commercial HVAC (n=6)	Maintenance costs	100%
Food Service (n=5)	Initial cost of the equipment	100%
Green Motors (n=1)*	ROI, payback period, availability of rebates, and information from Avista staff	100%
Insulation (n=3)	Energy or operating costs	100%
Exterior Lighting (n=14)	Maintenance costs	79%
Interior Lighting (n=12)	ROI, energy or operating costs, and maintenance costs	67%
HVAC Motor Controls (n=2)*	ROI, payback period, availability of rebates, energy costs, maintenance costs and availability of rebates	100%

*Multiple criteria selected by 100% of survey respondents.

Nine respondents suggested other energy-savings programs Avista could offer:

- Solar for commercial and residential customers (2 responses)
- Energy audit (2 responses)
- Multi-stage air conditioning (1 response)
- Scheduling evening/weekend setbacks and HVAC schedule improvements (1 response)
- Equipment performance improvements (1 response)
- Energy efficient windows (1 response)
- Renewal energy projects for rural customers (1 response)

Survey Respondent Profile

Most survey respondents' primary heating fuel was electricity (83%; n=41), and 70% own their facility. Facility sizes ranged from 1,600 square feet to 550,000 square feet with an average of 60,617 square feet (n=36). Number of employees ranged from three to 500 with an average of 77 employees (n=34).

Residential Programs

For its 2018 process evaluation, Cadmus conducted stakeholder interviews with Avista and implementer staff, phone interviews with HVAC contractors, and phone surveys with residential program participants. Each data collection task informed its own set of research objectives and covered the HVAC, Shell, and Fuel Efficiency programs together.

Stakeholder Interviews

Cadmus interviewed Avista program staff about its residential programming in April 2018. Avista staff said the HVAC, Shell, and Fuel Efficiency programs ran smoothly and were delivered mostly as described in Avista's 2017 Plan Washington & Idaho Demand Side Management Standard Operating Procedures, with the following small changes to rebates:⁴

- **HVAC:** Staff reduced rebates for smart thermostats to \$60 if self-installed (originally \$75) and \$75 if contractor-installed (originally \$100) to stay within budget. Despite lower rebate levels, rebate applications increased from those in 2017, according to Avista staff.
- **Fuel Efficiency:** Staff increased rebates to \$500 for ductless heat pumps (originally \$450). Avista discontinued stand-alone rebates for natural gas water heaters because of a lack of interest in the measure but still incentivized them as part of a \$2,250 combined rebate for converting to natural gas for both space and water heating.

At the time of the interview, the Avista team said customers had responded most strongly to smart thermostats during Q1 despite reduced rebates. Conversely, Shell program participants had been

⁴ These changes are reflected in the Avista 2018 Washington & Idaho Demand Side Management Standard Operating Procedures.

inclined to replace existing windows with regular windows rather than storm windows, leading Avista to consider but ultimately not follow through on retiring rebates for storm windows.

Avista staff did not note any structural barriers to participation or challenges in delivering the programs.

Participant Phone Surveys

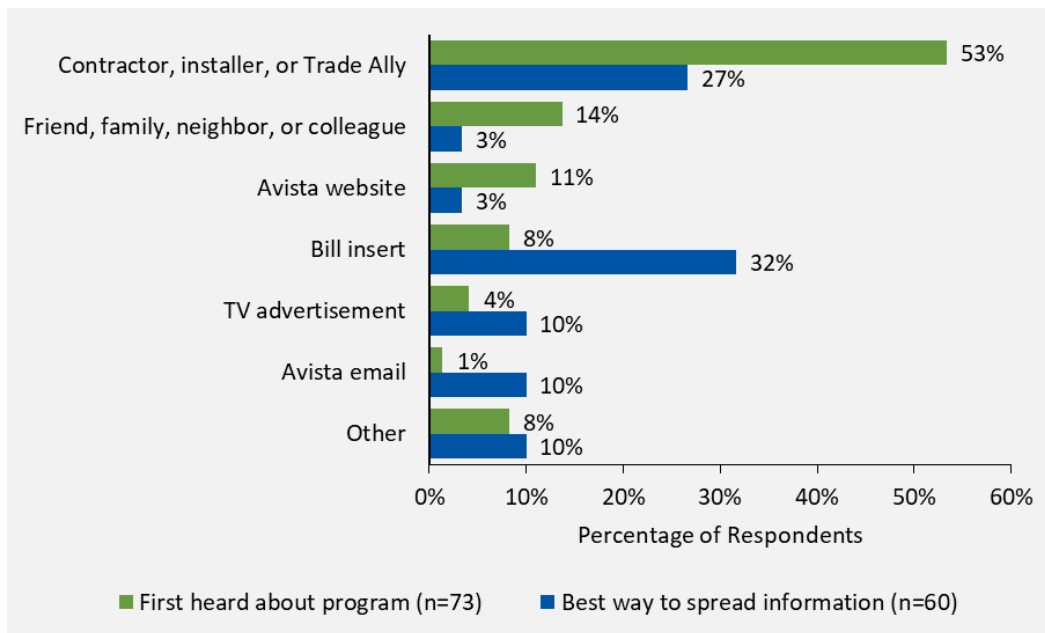
Cadmus completed 76 phone surveys with HVAC, Shell, and Fuel Efficiency program participants in May and October 2018 (38 respondents each month). The following sections synthesize the results from both waves of surveys and detail the findings below.

Customer Awareness

Cadmus asked survey respondents where they remembered learning about the program in which they participated.

Respondents most commonly learned about Avista programs through contractors (53%), followed distantly by word of mouth (14%) and Avista’s website (11%), as shown in Figure 17. Respondents preferred to hear about Avista energy efficiency programs through word of mouth (27%) but also cited bill inserts (32%) as an effective way to spread information. A small portion of respondents also preferred to learn about programming via Avista emails (10%) or TV advertisements (10%).

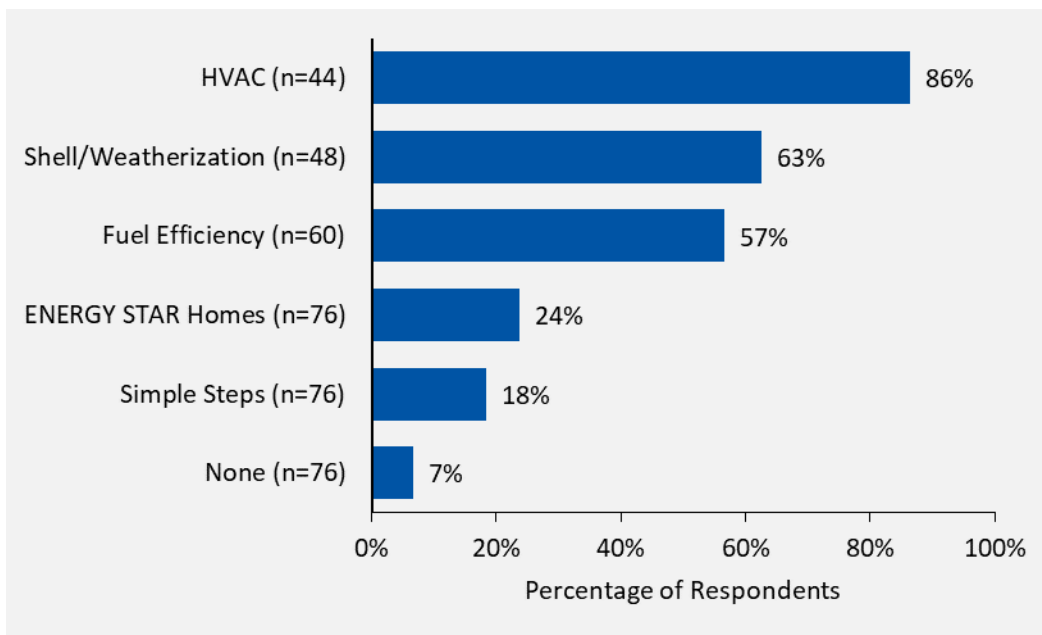
Figure 17. Awareness of Avista Energy Efficiency Programming



Source: Residential Programs Participant Survey, Question B1: “How did you first hear about the [PROGRAM NAME] Program?”; Question B2: “What is the best way for Avista to inform residential customers like you about their energy efficiency improvement rebates?”

Ninety-three percent of respondents reported that they had heard about at least one Avista energy efficiency program in 2018, other than the program in which they participated. Respondents most frequently reported hearing about the HVAC program (86%), followed by the Shell (63%) and Fuel Efficiency (57%) programs,⁵ as shown in Figure 18. ENERGY STAR® Homes and Simple Steps, Smart Savings, two programs run by third-party implementers, garnered much lower levels of awareness from survey respondents (24% and 18%), respectively.

Figure 18. Awareness of Other Avista Residential Programs



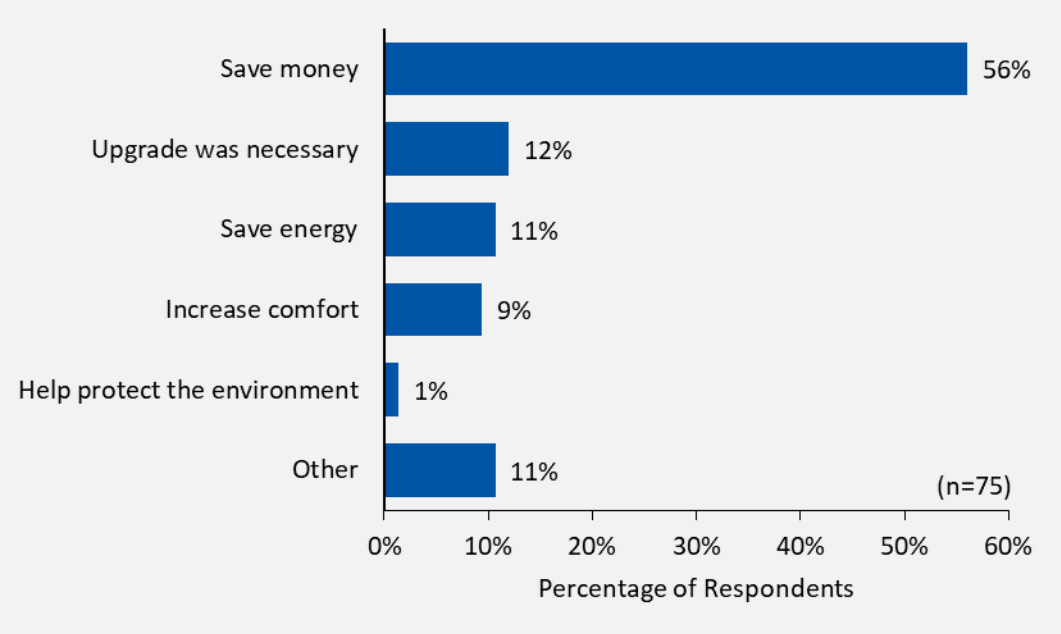
Source: Residential Programs Participant Survey, Question D1: “What other Avista energy efficiency programs have you heard of?”

Motivation and Program Benefits

As shown in Figure 19, more than half of respondents said their primary motivation to participate in Avista residential energy efficiency programming was to save money (56%). Respondents also wanted to save energy (11%) and increase the comfort of their homes (9%). Twelve percent said they participated only because it was necessary (for example, the existing furnace or windows were broken).

⁵ Cadmus did not ask respondents about programs in which they participated (e.g., no Shell participants were asked cross-promotion questions about Shell). Multiple responses were allowed.

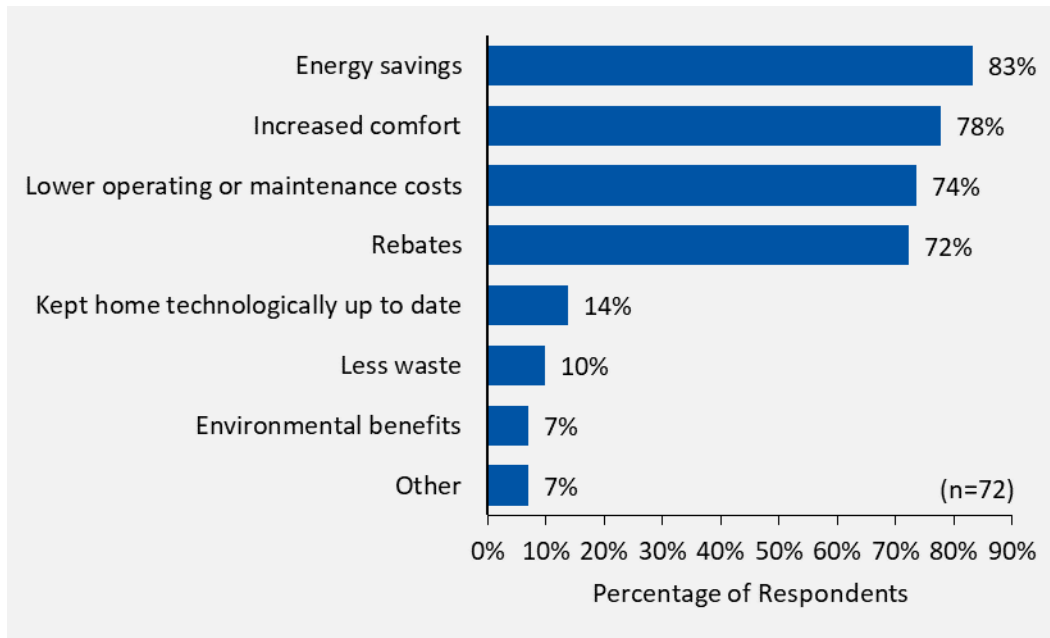
Figure 19. Motivation to Participate in Residential Programs



Source: Residential Programs Participant Survey, Question B3: “What motivated you to participate in the [PROGRAM NAME] Program?”

Cadmus asked survey respondents a multiple-response question about what benefits were associated with participating in Avista residential programs. Most respondents cited energy savings (83%), increased comfort (78%), lower operation/maintenance costs (74%), and rebates (72%) (Figure 20). A small portion of respondents like keeping up with technological trends, and another 7% to 10% saw value in producing less waste and better environmental outcomes.

Figure 20. Benefits of Participation in Residential Programs



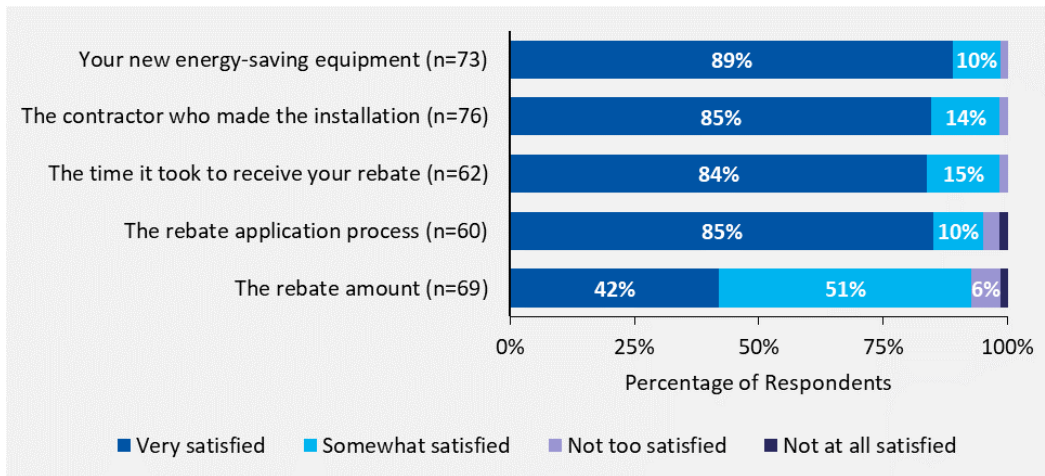
Source: Residential Programs Participant Survey, Question B5. “What benefits come to mind when thinking about your participation in the [PROGRAM NAME] Program?” Multiple responses allowed.

Program Satisfaction

Cadmus asked survey respondents to indicate their levels of satisfaction with various program elements associated with their rebate, their new equipment, and the installing contractor. Respondents were anywhere from 93% to 99% satisfied⁶ with the five program elements shown in Figure 21. Respondents were least satisfied with the rebate amount, measured by the percentage of *very satisfied* responses (42%, whereas *very satisfied* percentages for other program elements were at least twice as large). Lower satisfaction with rebates, as self-reported by customers via survey, is a common trait among prescriptive programs; Cadmus does not find this result out of the ordinary.

⁶ The combination of *very satisfied* and *somewhat satisfied* responses.

Figure 21. Satisfaction with Residential Program Elements

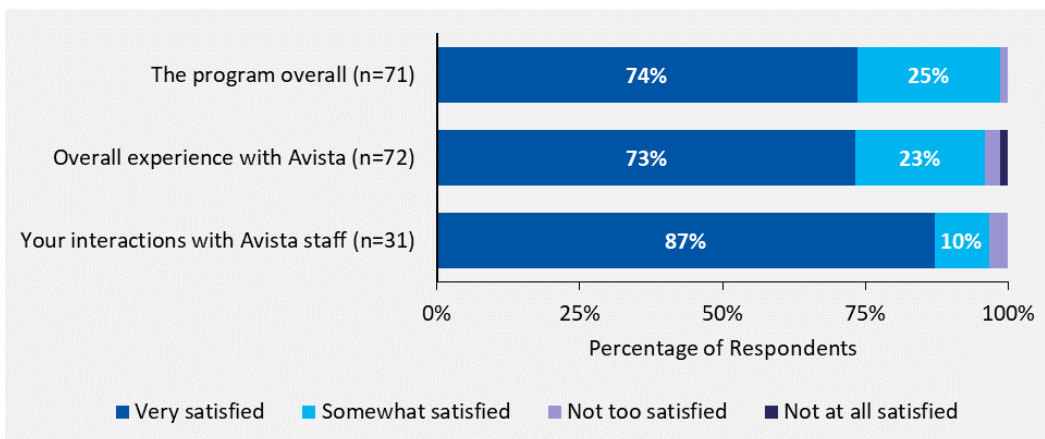


Source: Residential Programs Participant Survey, Question C2: “How would you rate your overall experience with...”

Cadmus found detectable differences in rebate satisfaction by program. Despite small sample sizes, only five of 28 Shell program participants were *very satisfied* with the rebate amount (18%), compared with 16 of 32 HVAC and eight of 16 Fuel Efficiency program survey respondents (50% each). Cadmus found each of these differences to be statistically significant at 95% confidence. It is not clear, beyond feedback that rebates were “too low,” why the percentage of *very satisfied* respondents was dramatically lower for Shell program rebates than for HVAC and Fuel Efficiency program rebates.

Overall, 96% to 99% of respondents were satisfied with their residential program participation and experiences with Avista (Figure 22).

Figure 22. Satisfaction with Avista and Residential Programs Overall



Source: Residential Programs Participant Survey, Question C2: “How would you rate your overall experience with...”

After asking respondents about their satisfaction with the programs and their elements, Cadmus solicited recommendations and feedback from respondents regarding possible program improvements. Across both survey waves, 62% of respondents (47 of 76) provided feedback, consisting mostly of the following recommendations:

- Increase rebates (23 of 47)
- Increase advertising (16 of 47)
- Simplify rebate applications (7 of 47)

Energy Efficiency Behaviors

Eleven of 75 survey respondents (15%) purchased and installed other high-efficiency equipment after participating in an Avista residential program in 2018. Four of the 11 respondents considered their program participation a *very important* influence on their purchasing decisions. Among the four respondents, two purchased tankless water heaters and applied for rebates. One respondent installed a natural gas furnace and also applied for a rebate. The fourth respondent installed lighting and reported not applying for a rebate because the equipment was ineligible.

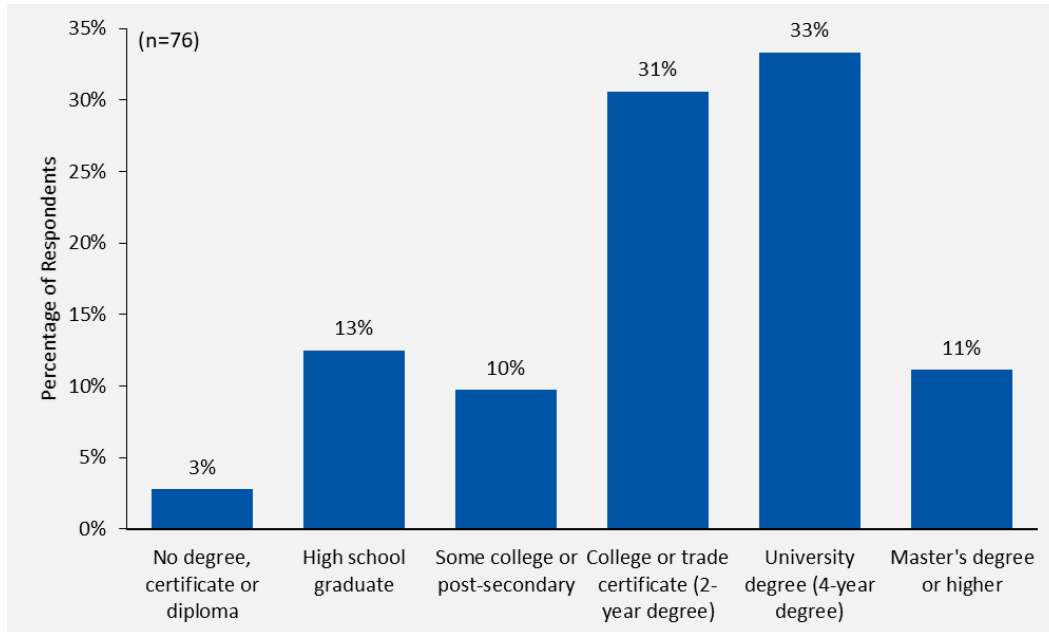
One respondent purchased two rebate-eligible appliances (a tankless water heater and a natural gas furnace) and applied for rebates for both measures. The respondent said the program was *somewhat important* to the decisions to purchase and install these appliances.

The remaining six respondents who purchased efficient equipment did not apply (or did not know if they applied) for Avista rebates. Installed equipment, as self-reported by the respondents, included a smart thermostat, natural gas stoves, a dishwasher, a water heater, and connected LED lighting. None of the six indicated their participation in Avista programming was *very important* to their purchases.

Survey Respondent Profile

As shown in Figure 23, most survey respondents completed a two- or four-year college or university degree (31% and 33%, respectively).

Figure 23. Residential Program Participant Education

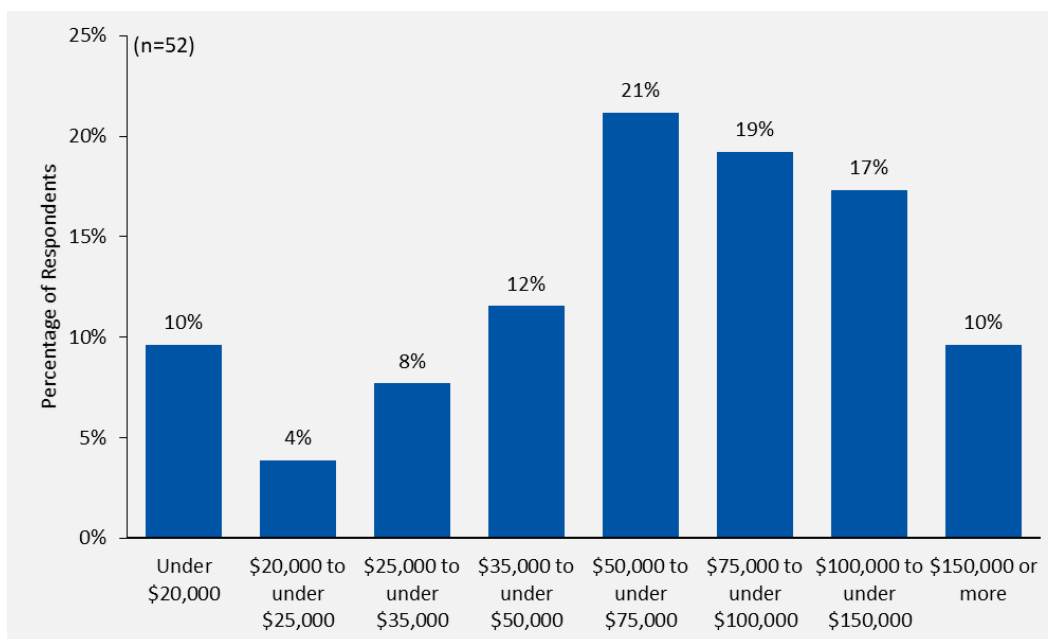


Source: Residential Programs Participant Survey, Question F1: “What is the highest level of education that you have completed?”

Two-thirds of respondents earned at least \$50,000 annually, with most respondents earning between \$50,000 and \$75,000 (21%). Figure 24 shows the breakdown of income.

The average household size among survey respondents was roughly 2.5 residents (n=73). Almost 99% of respondents owned their homes (n=73), and 85% have wireless internet access (n=74).

Figure 24. Residential Program Participant Income Ranges



Source: Residential Programs Participant Survey, Question F8: “Please tell me which of the following categories applies to your total household income for the year 2017.”

HVAC Program Contractor Interviews

In October 2018, Cadmus interviewed eight HVAC contractors to collect information about their awareness of and motivation to participate in the HVAC program as well as their standard business practices, experiences with the program, and perceptions of customers’ experiences with the program.

Program Awareness

Six of the eight contractors were unsure how they heard about the HVAC program. Often, their firms were involved with the program before they joined the company. The last two contractors heard about the program through an Avista employee and a local heating association.

Motivation to Participate

Seven contractors were involved with the program so they could help their customers afford heating by getting the best deals on high-efficiency equipment. Two contractors said the program drove business for the company.⁷

Program Benefits

Six contractors said the program benefitted their customers by allowing them to upgrade to more efficient equipment that provided greater comfort and savings for the price of standard equipment. Two contractors emphasized that the program particularly benefitted lower-income customers by making

⁷ One contractor mentioned both helping customers and driving business as motivations.

equipment more affordable and by lowering energy bills. One contractor said energy savings generated by the program benefitted the community, and another said the program proved very profitable for his or her firm.

Marketing

Five contractors said most of their business was generated through word-of-mouth, supplemented by a social media presence or by traditional advertising through newspapers, radio, and television. Three contractors relied on traditional advertising such as television and radio advertising, fliers, and door hangers. None of the contractors promoted Avista’s HVAC program exclusively; their marketing included information about Avista programming alongside rebates from manufacturers and other utilities. Every contractor mentioned the HVAC program to customers who qualified to participate in it.

Rebate Application Process

Five contractors handled the entire rebate application process for their customers; two other contractors had customers complete their applications but provided help during the process. Only one contractor had his customers complete and submit their rebate applications entirely on their own.

Contractors offered a variety of ways for customers to redeem their rebates:

- **Direct discount:** The contractor subtracted the rebate amount up front and invoiced the customer for remaining costs, and the contractor then kept the rebate.
- **Contractor-delivered rebate:** The contractor invoiced the customer for the full project cost, received the rebate from Avista, and passed the amount of the rebate along to the customer after the work was completed.
- **Utility-delivered rebate:** The contractor invoiced the customer for the full project cost, and Avista delivered the rebate directly to the customer.

Contractor Experience

Cadmus spoke to contractors about their satisfaction with various program elements and how much the program influenced their businesses’ success.

Satisfaction

Contractors rated all program elements shown in Table 10 with high satisfaction marks, ranging from 4.4 to 4.9 on a scale of 1 to 5, where 1 meant *not at all satisfied* and 5 meant *very satisfied*.

Table 10. Satisfaction Ratings by Program Element

Program Element	Satisfaction Ratings					Average
	1 – Not at all Satisfied	2	3	4	5 – Very Satisfied	
Interaction with Avista	0	0	0	1	7	4.9
Rebate application process	0	0	1	1	6	4.6
Rebate levels	0	0	0	4	4	4.5
Equipment covered by rebates	0	0	2	1	5	4.4
Program overall	0	0	0	2	6	4.8

Additional details related to contractors' ratings for each program element above include the following:

- **Interaction with Avista:** Contractors rated their interactions with Avista the highest of the five discussed program elements (4.9), although some said they did not contact Avista very often. The one contractor who did not give a "5" rating still praised Avista's customer service team but said it seemed understaffed at times.
- **Rebate application:** All contractors said the application process was simple, straightforward, and user-friendly. Three contractors experienced problems submitting applications online, primarily because the website could not verify a customer's mailing address, so they submitted application forms by mail instead.
- **Rebate levels:** Contractors were generally satisfied with the rebate levels, although four said they could be higher to provide further benefits to customers.⁸
- **Equipment:** Contractors were mostly satisfied with equipment covered by the program's rebates but suggested other types of high-efficiency equipment (such as air conditioners, water heaters, and side-arm heat exchangers for boilers and furnaces) that could benefit customers.

Program Influence

Contractors were anywhere from neutral to very positive about the program's influence on driving business. Two contractors said the program enabled them to sell more higher-efficiency equipment, and two other contractors said customers more frequently upgraded or bought new equipment specifically to take advantage of program rebates. No contractors reported negative impacts on their businesses.

Perceived Customer Experience

Cadmus asked contractors about their perceptions of customers' experiences with the program, including its influence on customers' decisions to purchase high-efficiency equipment.

Awareness

The eight contractors Cadmus interviewed estimated that, on average, 59% of customers already knew about the program and, of the customers who were already aware, roughly 89% qualified for a rebate. An estimated 79% of all customers (those who were aware of the program and those who were not aware of the program) qualified for and received a rebate.

Influence on Purchases

Contractors rated the HVAC program's influence on a customer's decision to purchase new equipment as a 4.6 on average, using a scale from 1 to 5, where 1 meant *not at all influential* and 5 meant *very influential*. Contractors who gave a "5" rating said the program provided incentives to offset job costs

⁸ This feedback is commonly provided regarding prescriptive rebate programs like Avista's HVAC program.

and educated customers about energy efficiency.⁹ Contractors who provided a “4” rating said Avista branding increased the program’s effectiveness, and the rebates sold customers on the program.

Feedback and Recommendations

Six contractors provided the following recommendations:¹⁰

- Increase rebate amounts (n=4)
- Provide rebates for air conditioners, water heaters, and side-arm heat exchangers for boilers and furnaces (n=2)
- Hire more customer service representatives to answer rebate questions (n=1)
- Provide contractors with a list of customers to target (n=1)

Contractors praised the program’s ability to help customers, especially those who are low-income or elderly. They provided the following recommendations to improve the contractor and customer experiences:

- Increase rebates (n=2)
- Inform contractors better and work with them more (n=2)
- Include reference numbers with or on rebate checks to make it easier for contractors to assign rebates already processed to specific projects and disburse those rebates to the appropriate customers (n=1)
- Broaden the requirements to qualify for a rebate (n=1)
- Make it easier for customers and contractors to find information about rebates and the status of their applications through Avista’s website (n=1)
- Simplify the application process/paperwork (n=1)

Multifamily Direct Install

For its process evaluation of the MFDI Pilot, Cadmus conducted stakeholder interviews with Avista pilot and implementer staff as well as phone interviews with multifamily property managers who participated in the pilot.

Stakeholder Interviews

Cadmus interviewed Avista and program implementer staff about the MFDI pilot in April 2018. The 2018 DSM Business Plan specified that the program implementer would recruit MFDI Pilot participants through door-to-door visits, as with the SBDI program that preceded it but was discontinued. Instead, Avista targeted multifamily property managers based on SBDI program rosters. The implementer noted that the success of the targeted marketing made it difficult to control recruitment efforts. Some

⁹ One contractor made a distinction that the program was a “5” when influencing customers to install new equipment, but only a “2 or 3” when influencing customers to upgrade.

¹⁰ Two contractors were satisfied with the program and declined to provide feedback.

property managers oversee multiple properties, making it difficult to anticipate the scale of individual projects. Ultimately, Avista and the program implementer established a waitlist from which it selected new projects. The design of the MFDI Pilot closely resembled Avista’s SBDI Program, helping pilot delivery to run smoothly.

The program implementer reported high levels of satisfaction for direct-install measures. Avista staff thought the program implementer used good judgment in choosing the best measures to install based on each unit’s or property’s characteristics (such as building age or existing measure vintage).

The implementer faced challenges managing the large amounts of data used to refine *ex ante* energy savings and demand reduction estimates for the direct-install measures. Although the pilot achieved its initial participation and therms savings targets, it did not meet its kWh savings targets.¹¹ The implementer attributed this to its use of rough characterizations of the building stock in Avista’s territory. The implementer used the pilot to collect more granular building stock data to improve multifamily sector estimates of per-unit savings for direct-install measures. The implementer designed forms that installers used in individual units and common areas to record details—such as the upgrade measures installed, retrofit (baseline) measures replaced, and hours of use (HOU)—used in energy savings algorithms. Overall, these data collection challenges did not inhibit the pilot’s success.

Following the initial phase of the pilot—accepting Avista’s offer to participate, scheduling and completing an on-site audit, and installing select direct-install measures as appropriate—Avista and the implementer initiated a supplemental lighting phase for the pilot. Installers subcontracted by the implementer revisited multifamily properties to install additional common area lighting with participants who expressed interest. While completing installations of direct-install measures, the implementer identified and reviewed opportunities for common area lighting with Avista and the pilot participant, all subject to Avista’s approval. At the time of the interview, the supplemental phase was in progress and running smoothly.

Throughout the MFDI Pilot, Avista and the implementer met weekly to discuss the progress of and issues with the pilot’s delivery. Both were highly satisfied with their working relationship.

Participant Interviews

In May 2018, Cadmus interviewed 10 multifamily residence managers who participated in the MFDI Pilot to ascertain their awareness of, motivation to participate in, and satisfaction with the pilot as well as barriers to participation and the pilot’s influence on other energy-saving behavior.

Awareness and Motivation

Nine of the 10 participants Cadmus interviewed learned that the properties they managed were participating in the MFDI Pilot through their corporate offices. The last interviewee learned about the pilot directly from Avista.

¹¹ Because of its status as a pilot, the MFDI pilot did not set formal annual energy-saving goals.

In terms of motivations, three participants said they pay attention to ways to save energy, including one who looked out for flyers and mailings from Avista. Four participants make energy-saving changes to their properties when instructed to do so by their corporate offices. The remaining three generally do not think about or conduct research on ways to save energy.

Four participants responded to awareness questions Cadmus asked. Three respondents were aware of other Avista incentives or rebate programs.¹² Two of the four planned to install other energy efficiency measures or equipment through the supplemental lighting phase of the MFDI Pilot, which at the time of interviews, was still in its initial phase.

Measure Satisfaction

Eight participants were *very satisfied* with the energy-saving measures installed at their multifamily properties. Three participants noted the benefit of saving energy and reducing utility costs, and six were excited about the brightness and longevity of the LED bulbs installed. The two participants who were less than *very satisfied* (one *somewhat satisfied*, one *not at all satisfied*) with certain water-saving measures provided feedback regarding their satisfaction ratings, outlined below:

Showerheads

- Disliked the water pressure (n=2)
- Measure broke (n=1)

Kitchen faucet aerator

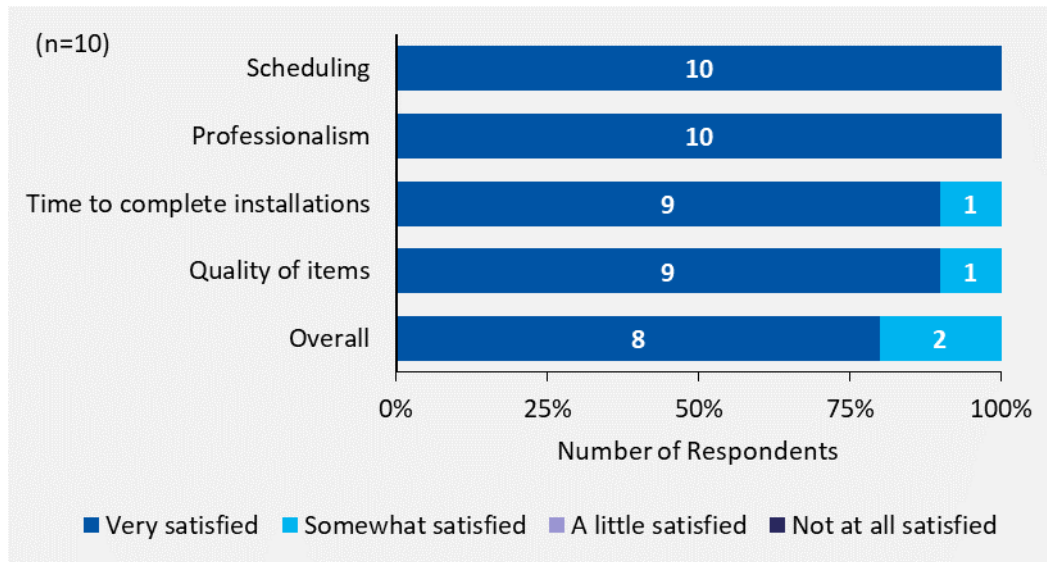
- Disliked the water pressure (n=1)
- Incompatible with the sinks (n=2)
- Measures broke (n=1)

Satisfaction

All 10 participants were *very satisfied* or *somewhat satisfied* with their MFDI Pilot experiences. Similarly, all but one or two participants were *very satisfied* with every element of the pilot, as shown in Figure 25. (These results were also supported anecdotally by the follow-up survey Avista administered to property managers. At the time of Cadmus' interviews with participants, Avista's survey had collected four responses. All four respondents rated their experience with the installer as *excellent*.)

¹² Respondents were not asked to identify programs by name or description.

Figure 25. Satisfaction Ratings with Pilot Elements and Overall



Source: MFDI Pilot Participant Interview, Question C3:
 “Using the same scale as before, how satisfied were you with...”

Barriers to Participation

No participants Cadmus interviewed reported any barriers to their participation in the pilot. One reported having difficulty scheduling the assessment and installation appointment but eventually worked out the timing with the implementer. Avista and the implementer also did not observe significant barriers preventing multifamily property managers or tenants from participating in the MFDI Pilot. By using targeted marketing to approach a select group of multifamily properties for the pilot’s launch, Avista effectively prescreened properties as potential participants, thereby eliminating barriers to participation in advance.

Pilot Influence

Cadmus asked participants if they took energy-saving actions after participating in the MFDI Pilot and, if so, how important the pilot was in influencing that behavior. Three participants installed additional energy-saving items and said the pilot was *very important* in influencing their actions,¹³ all stating they were only *a little likely* to pursue energy-saving actions in the absence of the pilot.¹⁴ The other seven participants had not taken additional energy-saving actions, but all said they were *very likely* to seek out energy-saving items.

¹³ Using the following scale: *not at all important, a little important, somewhat important, very important.*

¹⁴ Using the following scale: *not at all likely, a little likely, somewhat likely, very likely.*

Successes

Cadmus identified three areas of success for the MFDI Pilot through its interviews with Avista, the implementer, and participating property managers:

- **High customer interest** generated through a targeted outreach campaign was enough to require a waitlist for program participation.
- **High participant satisfaction** reported by participating property managers on the direct-install measures and general elements of the pilot. The implementer said only a small number of tenants requested returns of their original items, confirming the high satisfaction ratings reported by the interviewed participants.
- **Enhanced relationship with multifamily sector** through the successful launch and delivery of a no-cost, direct-install pilot. Avista thought the pilot's delivery, which carefully targeted multifamily properties, branded installers as Avista representatives, and obtained approval from property managers, helped build trust among multifamily tenants.

Challenges

Cadmus identified four minor challenges for the MFDI Pilot through its primary data collection:

- **Delayed pilot launch** to finalize important elements such as marketing collateral, on-site audit content and structure, and field data collection forms. The delay was slight; Avista planned to launch the pilot in early January but formally launched in late January.
- **Unexpected demand for pilot services** made it difficult for Avista to accommodate all interested property managers in a timely manner and resulted in a waitlist for participation. For example, some property managers manage or own several properties, which made it more difficult than with the SBDI Program to anticipate the scale of individual projects.
- **Inaccurate initial per-unit measure savings assumptions** caused the pilot to not meet its estimated energy (kWh) savings per measure unit. The implementer said it produced rough calculations based on broad characterizations of measure-level details and the building stock in Avista's service territory. The implementer intended to use the pilot to compile more granular data regarding household characteristics and measure-level details (such as baselines and HOU for all measure types) from every multifamily property unit and common area to improve *ex ante* savings estimates for a full program rollout.
- **Unclear lighting phase communication.** Two multifamily property managers Cadmus interviewed said they had yet to hear from the implementer's subcontractor regarding the supplemental lighting phase of the pilot. Although not necessarily dissatisfied with the delay, they were growing impatient having no further correspondence about a follow-up appointment at the time of Cadmus' interviews with participants.

Despite these minor start-up challenges, the pilot ran smoothly.

Conclusions

Nonresidential

- **Two-thirds of nonresidential survey respondents have participated in past business energy-efficiency programs.** Most site specific (17 of 19) survey respondents have previously participated in an Avista business energy efficiency program compared with 56% of prescriptive respondents (23 of 41).
- **Participants most often learn about the program from Avista or a contractor, vendor, or retailer.**
 - Most site specific survey respondents (32%; n=13) first learned about the program from their Avista account executive or from an Avista email
 - Prescriptive survey respondents first learned about the program from a contractor, vendor, or retailer (50%; n=44).
- **Participants are motivated by saving energy and money.**
 - The top two motivators both site specific and prescriptive survey respondents (n=19 and n=46, respectively) cited for participating were to save energy (42% and 67%, respectively) and save money (37% and 83%, respectively).
 - Participants of both programs said saving money and using less energy were the top benefits of program participation.
- **Most survey respondents (89%; n=56) received a check directly from Avista rather than an instant discount from their contractor.**
 - Six of the respondents (two of 19 site specific and four of 37 prescriptive) received an instant discount from their contractor.
 - Two of them said this was an easier way to receive the rebate, one was not given a choice in how to receive the rebate, and three did not provide a reason.
- **Participants are highly satisfied with the program, but a small number did indicate some dissatisfaction.**
 - All site specific survey respondents (n=19) and 91% (n=46) of prescriptive survey respondents were satisfied with the program overall.
 - Site specific respondents were satisfied with all components of the program except for the time it took to process the application; two of 19 were *not too satisfied* with this component because of delays caused by incorrect rebate calculations and the time it took to complete site inspections.
 - Prescriptive survey respondents were highly satisfied with the pre-project inspection, the rebate amount, and the process of completing and submitting their application. Several survey respondents provided reasons for their dissatisfaction with the program and some of its components. They stated they were dissatisfied with communication with an account executive and their trade ally because there was not enough communication (4 responses). One respondent expressed dissatisfaction because the rebate check had not yet arrived at

- the time of the survey and one felt the equipment was not as effective as expected, which led to low energy savings. One respondent reported concerns about their contractor that Avista did not address.
- **Site specific survey respondents said the program was successful because of Avista staff (7 of 12) while prescriptive survey respondents said the program was easy to use (31%; n=29).**
 - Site specific program participants also cited the rebate (two of 12); rebate delivery time (two of 12); and overall process, communication, and energy savings (one response each) as working well.
 - Prescriptive survey respondents also cited quick turnaround (28%) and customer service (24%) as program elements that were working particularly well.
 - **Participation challenges differed by program.**
 - The top challenge for participating in the site specific program was determining whether a project was eligible for a rebate.
 - Prescriptive survey respondents said their top challenges were knowing about the program and its offerings, completing application paperwork, and finding the time needed to apply and complete the project. The application paperwork was of particular concern among lighting participants.
 - **Avista's rebate was important in the decision to complete the energy efficiency project.** All site specific and all but one prescriptive survey respondent said the rebate provided by Avista was important in their decision to complete the project.
 - The most important criteria for making energy efficiency improvements for site specific respondents were return on investment (14 of 19) and initial cost of equipment (14 of 19).
 - Prescriptive survey respondents said the most important criteria were maintenance costs (77%; n=43) and energy or operating costs (74%; n=43).

Residential

- **Residential program delivery went smoothly, per Avista and implementer staff.** Except for a couple of small changes to the rebate levels outlined in the 2018 DSM Business Plan, the HVAC, Shell, and Fuel Efficiency programs were delivered and performed as expected.
- **More than half of residential program participants heard about the program in which they participated through their contractor, installer, or trade ally (53%, n=73).** Although a significant portion of respondents said contractors are the best way to spread information about Avista programs (27%, n=60), more respondents said bill inserts are the best way to spread information (32%).
- **Residential program participants were motivated to participate primarily to save money (56%, n=75).** Survey respondents perceived the main benefits of Avista's residential programming to be saving energy (83%, n=72), increasing the comfort of their homes (78%), lowering maintenance costs (74%), and taking advantage of Avista rebates (72%).

- **At least 93% of survey respondents were *very satisfied* or *somewhat satisfied* with every element of the program in which they participated as well as with Avista overall.** Rebates received the lowest satisfaction rating, specifically among survey respondents who participated in the Shell program (n=28), who were much less satisfied with rebate levels than HVAC (n=32) and Fuel Efficiency (n=16) program survey respondents.
- **HVAC contractors Cadmus interviewed said the HVAC Program plays an important role in “leveling the playing field”** by installing costlier high-efficiency equipment in the homes of customers who might otherwise not be able to afford them.
- **HVAC contractors took varying approaches to helping customers complete their rebate application forms.** Some contractors completed forms entirely on their own, some worked with customers to complete their forms, and some provided no help to customers. Contractors reported occasional issues with submitting applications online because Avista’s website could not verify a customer’s mailing address.
- **The eight HVAC contractors Cadmus interviewed rated their satisfaction with various elements of the HVAC Program from 4.4 to 4.8** on average, on a scale of 1 to 5. They also provided an average rating of 4.6 to the program’s ability to influence customers in their decisions to purchase new energy-efficient equipment.

Multifamily Direct Install Pilot

- **Avista facilitated MFDI Pilot delivery by mimicking the design of the SBDI program and recruiting its implementer to assume the same role for the pilot.** According to Avista and implementer staff, the pilot, like Avista’s residential program, was delivered smoothly and as expected. Avista overcame barriers to participation by engaging in a highly targeted marketing campaign.
- **Pilot participants were generally highly satisfied with the pilot and direct-install measures provided to their tenants,** per Avista reports and direct feedback from multifamily residence property managers. Although some property managers relayed to Avista reports by tenants of problems with certain measures installed through the pilot, these issues occurred very infrequently and were all resolved by the implementer.
- **Participating property managers were unclear about the timing of the supplemental lighting phase of the pilot** at the time of interviews with Cadmus. Interviewees were not dissatisfied with the supplemental phase but expressed confusion about the timing of its rollout.
- **Pre- and post-pilot per-unit energy savings differed significantly due to substantial differences in algorithm inputs such as hours of use (HOU).** Avista originally calculated energy savings estimates using broad characterizations of building stock in its service territory and intended to use the pilot to collect more refined information about its customers’ households. Thus, differences between estimated and finalized energy savings, while not intended, were not an unexpected outcome for Avista.

Recommendations

Nonresidential

Nonresidential Recommendation 1: A small number of survey respondents said they received an instant discount from their contractor because it was easier to have their contractor apply the discount to the total cost of the project. If Avista wants to promote the instant discount option to nonresidential customers, it should educate customers about the ease of using this option.

Nonresidential Recommendation 2: While Avista is implementing a new tracking database, it should review the data that are being recorded in the database from prescriptive lighting participants to determine if the data are sufficient for accurate planning in the future. If current data being gathered are not sufficient, Avista should review what data are needed for planning purposes and modify the database to include these detailed measure-level data.

Nonresidential Recommendation 3: According to some prescriptive survey respondents, the lighting application paperwork was challenging because it was confusing and did not provide precise instructions for completing the application. Although the Avista website provides several ways for customers to contact Avista for additional information, Avista should create and post a document on its website with answers to frequently asked questions about the application to decrease customer challenges. The FAQ document could focus on ways to avoid the application being rejected.

Residential

Residential Recommendation 1: Consider adjusting the constraints used to verify mailing addresses for customers trying to submit their rebate application forms online. Although this system works most of the time—per HVAC contractors interviewed by Cadmus, it was usually a non-issue—can create frustration for customers who ultimately cannot complete the process online and must mail in their forms. A system that relies on something simpler, such as account number and/or mailing zip code or house number could still validate customer eligibility without rejecting certain mailing address formats.

Multifamily Direct Install Pilot

MFDI Pilot Recommendation 1: Increase communication with participants to sustain interest in and satisfaction in the event of a full program rollout that includes a supplemental lighting phase as well as in general for similar future pilots.