Process Evaluation of the Electric Small Business Services Program for Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid")

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NMR Group, Inc.

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ES Executive Summary

National Grid contracted with NMR Group, Inc., to conduct a process evaluation of the Electric Small Business Services Program in New York (also known as Small Business Direct Install or "SBDI") to assess the effectiveness of the program and identify opportunities for ongoing improvement. The SBDI program is designed to help small- and mid-sized business customers with an average monthly kW demand of 110 kW or less to improve their building's electric energy efficiency. National Grid provides the funding and oversight for the program, while third-party vendors deliver services to customers. The SBDI program manager is responsible for all aspects of day-to-day operations and is also involved in longer-term planning for the future direction of the program. The program offers two main channels for customers to participate: the Turnkey Direct Installation (DI) channel with program-approved vendors that conduct the audits and install the equipment, and a Customer Directed Option (CDO) channel with the participating customers choosing the trade ally to perform the audit and installation. The CDO trade allies are managed by one CDO implementation vendor, which National Grid's SBDI program manager contracts with and oversees. This report presents the results of the process evaluation of the SBDI program.

OBJECTIVES

The objectives of the process evaluation are to:

- Assess the benefits, challenges, and relative effectiveness and efficiency of the DI and CDO delivery approaches from the perspectives of customers, vendors, and program staff.
- Assess customer experiences and satisfaction overall and by delivery approach.
- Identify opportunities to collect additional data that could be used to assess program progress on an ongoing basis (in real time).

APPROACH

NMR collected and analyzed data from several sources. The main data collection tasks involved the following:

- Initial planning and program overview meetings with the SBDI Evaluation Study Manager
- A detailed review of program data and documents
- In-depth interviews with nine program stakeholders, including the SBDI program manager, the three DI vendors, the CDO implementation vendor, and a sample of four CDO trade allies
- In-depth interviews with six customers
- Surveys with 286 customers who have participated in the program

OVERALL ASSESSMENT

The SBDI program manager oversees many components of the SBDI program. During interviews, the program manager stated that there were many challenges with the way the SBDI program is structured and the way tasks need to be managed. Based on separate interviews, the DI vendors and the CDO implementation vendor were generally satisfied with the management and delivery of the SBDI program and believed that the program manager provided sufficient information regarding program procedures and protocols. The CDO trade allies generally spoke favorably about the CDO implementation vendor's management of the CDO channel, but noted specific areas that could be improved. These improvements included a need for structured training and support as well as a desire for greater clarity regarding program requirements and procedures.

Overall, the findings from the customer survey show that participants had positive experiences with the SBDI program. Customers reported high levels of satisfaction with and loyalty to the program. Regardless of the delivery channel, customers see the burden of participation as low, indicating that the DI vendor or trade ally handled the majority of program-related tasks. Customers noted that the equipment recycling and disposal services were important in their decision to participate. The results from the customer survey also revealed that customers highly value payment options offered through the program. However, customers who reported receiving a discount by using the lump sum one-time payment were more likely to have efficiency measures installed that they had not planned on installing than customers who used the no-cost financing. The greatest strengths of the program, according to participants, were the energy savings and ease of participation.

While customers in both channels reported positive experiences with SBDI, customers who participated with a DI vendor were considerably more likely than those who participated with a CDO vendor to say that the participation process was easy, they would use the same vendor or trade ally again, and they would recommend the program to others. Customers who participated with a CDO trade ally said that the CDO trade ally approached them about the program at rates nearly twice as high as DI customers said that the DI vendor approached them. The CDO trade allies were much more likely than DI vendors to provide services to customers who used the lump sum one-time payment. While both channels provide program service to a wide variety of businesses, each seems to also have a niche, with DI more likely to provide services to full-service restaurants and CDO more likely to provide services to retail stores. If either channel were to be eliminated from the program, the program would need to work with program implementers in the remaining channel to ensure that they improve their performance in the areas in which the eliminated channel was stronger. In the absence of a compelling budgetary or management reason to whittle the program down to just one channel, it is prudent to maintain both in order to maximize the likelihood of the program achieving its savings and participation goals.

KEY FINDINGS

The key findings from this evaluation are summarized below. They are presented in the same order as in the body of the report. Statistically significant differences between CDO and DI customers are emphasized where appropriate.[1]

Program Participation Trends

Incentive and budget reductions in recent years have negatively affected participation. Between 2012 and 2015, the overall program expenditures fell by nearly 20%. According to program data, during this period completed projects also decreased by more than 40%. At the same time, the incentive offering decreased substantially. Despite reductions in budget and incentives, the SBDI program has been able to maintain strong customer satisfaction and customer loyalty.

The majority of customers own the facility that received upgrades. Eighty-three percent of the customers surveyed own the premises where upgrades were made (83%), and three-fourths of respondents (74%) indicated that they are owner-occupants.

The program reaches a range of business types. Combining program data with survey results reveals that the most common business types included are retail businesses (22%), offices (20%), and warehouse or automotive spaces (17%). Overall, the program services a wide range of business types. The data did not reveal any markets that appeared to be under-served. However, the customer survey showed a few notable differences between the market served through the DI and CDO channels:

- The CDO channel (30%) was significantly more likely than the DI channel (20%) to have treated retail businesses.
- The DI channel (12%) was significantly more likely than the CDO channel (3%) to treat restaurant respondents—in particular, this difference was noticeable among full-service restaurants (10% versus 1%, respectively).

SBDI generates repeat business. Roughly one-third of survey respondents (34%) reported having previously participated in the SBDI program.

Program Strengths

High customer satisfaction. The average satisfaction rating for all customers surveyed was 4.4 on a 5-point scale.

High levels of customer loyalty. Customers were asked a question designed to measure loyalty to the program. Loyalty reflects the likelihood of repeat participation and word-of-mouth endorsements by customers. The Net Promoter Score (NPS) for all customers was 67. DI vendors received a substantially higher NPS than CDO vendors (72 versus 51).[2]

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[1] Statistically significant at the 90% confidence level.

[2] The NPS is calculated by subtracting the percentage of detractors from the percentage of promotors and presented as a whole number. The NPS was not tested for statistical significance; however, as explained in Section 4.2.1.1 on Program Strengths, DI vendor customers were significantly more likely to be program promoters.

SBDI offers an effective process for customers to achieve energy savings.

- *Customers' Perspective*. Customers see the greatest strengths of the SBDI program as being the energy savings the program provides them (48%) and ease of participation (27%).
- *Implementers' Perspective.* From the perspective of program implementers, lump sum one-time payment and the availability of program incentives are the program's greatest strengths.

Program Challenges

Customers recommended a higher incentive. When asked if they could change one thing about the program, customers most frequently suggested increasing the incentive (26%). Other recommendations were to pick up the replaced equipment more quickly (10%), include a greater variety of equipment (10%), and include more free equipment (9%). CDO customers (6%) were significantly less likely to than DI customers (12%) to suggest that the replaced equipment be picked up more quickly.

Implementers cited reduced incentives and data collection as significant challenges. The top two program challenges, according to implementation stakeholders, were the decrease in incentives over time and using InDemand, the program tracking software. Interviews with implementers revealed considerable barriers to using InDemand effectively. The difficulties fell into three main categories: software and technical issues, inefficient systems, and inconsistencies with data entry. These problems negatively affect their productivity and experience with the program.

Marketing and Outreach

Vendor and trade ally outreach are the most effective means of recruitment. Customers were most likely to learn about the program from vendors either calling or visiting in person. One-fifth of customers also reported that they had heard about the program through word-of-mouth advertising—almost as many as had heard about it from National Grid's marketing. options were 4.0 and 4.3, respectively.

The discounted lump sum one-time payment option facilitates upgrades that customers would not otherwise make. Customers were asked if they would have moved forward with the program upgrades if the form of payment or discount that they used had not been available. More than two-thirds of customers who used the lump sum one-time payment (69%) said they would still have moved forward with the installations even if they had not received the 15% discount associated with this option. In contrast, only about one-quarter of customers who used the no-cost financing (27%) estimated that they would have moved forward in absence of that option. Moreover, the DI vendors and CDO trade allies all felt that the no-cost financing was an exceptional benefit to customers, and that removing this option would have a negative effect on customer participation.

Additional Opportunities

Some evidence of unmet needs. Nearly one-fifth of customers (17%) said they were interested in obtaining additional upgrades that they could not get through the program at the time of participation. The two most common measures were additional lighting (53%) and

refrigeration (26%). The survey options did not specify certain measures beyond these broad categories.

Competition Between Implementers

Competition between DI vendors and CDO trade allies, and among CDO trade allies, may lead to customer confusion. Implementation interviewees all noted that they have experienced program-related competition due to the nature of having both channels offering services in the same region.

Recommendations

Based on the findings from this evaluation, NMR makes the following recommendations.

Recommendation 1: Continue offering customers the option to participate via either a DI vendor or CDO trade ally.

Rationale: On the one hand, customers who participated with a DI vendor are more likely to promote the program and say they would use the same vendor and channel again than customers who participated with a CDO trade ally, suggesting that DI customers have a more positive experience overall than CDO customers. On the other hand, customers who participated with a CDO trade ally said that the CDO trade ally approached them about the program at rates nearly twice as high as DI customers said the DI vendor approached them, and CDO trade allies were much more likely than DI trade allies to provide services to customers who used no-cost financing. This suggests that CDO trade allies are more effective than DI vendors both at marketing the program's services and at reaching target audiences who are least likely to proceed with efficiency upgrades without program help. While both channels provide program services to a wide variety of businesses, each seems to also have a niche, with DI more likely to provide services to full-service restaurants and CDO more likely to provide services to retail stores. While nearly all vendors and trade allies noted that they had encountered competition for program customers, and it is clear from the interviews that they would prefer not to have the competition, there was little evidence that the competition has created confusion in the marketplace. (There was scant evidence of it from the customer survey, and just one DI vendor volunteered it as a challenge to the program.) If either channel were to be eliminated from the program, the program would need to work with program implementers in the remaining channel to ensure that they improve their performance in the areas in which the eliminated channel was stronger. In the absence of a compelling budgetary or management reason to whittle the program down to just one channel, it is prudent to maintain both in order to maximize the likelihood of the program achieving its savings and participation goals.

In addition, as a mature program, SBDI has established a foothold in the market and is benefitting from repeat participation by satisfied customers. Since the CDO channel is comparatively new and is less streamlined than the DI channel, slightly more variation in the quality of customers' experiences with the trade allies is to be expected at this stage. This is something for the CDO vendor and the SBDI program manager to watch for and address going forward. As more customers participate with trade allies, assuming that the CDO vendor is able to address any quality issues promptly

as they arise, we would expect substantial repeat business from CDO trade allies as well, especially given their effectiveness at reaching out to customers to generate more program activity.

Recommendation 2: Maintain both payment options for customers. The program should continue to offer both payment options to promote participation from both customers and implementers.

Rationale: Customers who chose each option highly valued the availability of the choice they made. The majority of customers who used no-cost financing payment indicated that they would not have made the upgrades without this payment option, which underscores the importance of maintaining this benefit to customers. Removing this option would likely have a negative effect on participation and program satisfaction for both customers and implementers. Indeed, some implementers said they might drop out of the program if the no-cost financing option were ever to be discontinued.

Recommendation 3: The CDO implementation vendor should increase the visibility of the training and support they offer to CDO trade allies, and ensure that they offer training with the CDO implementation data collection tool. CDO trade allies felt that the CDO implementation vendor could provide more frequent and structured support and training, especially regarding the pre-installation inspection procedures, new procedures and requirements that go into effect from time to time, and data entry protocols for the CDO implementation vendor's data collection tool. Although the CDO implementation vendor currently offers formal training to the CDO trade allies, the perceptions of the trade allies were that there was little training available to them, and few guidelines around paperwork and audit procedures. These perceptions indicate that these areas may need more attention. The communications between the CDO implementation vendor and the CDO trade allies could be improved by updating the program manual to clarify existing protocols and procedures, and by sharing this information via webinar or conference calls. This could reduce the number of inquiries that CDO trade allies make of the CDO implementation vendor, thereby helping reduce CDO implementation vendor response time.

Rationale: CDO trade allies identified a few challenges with the CDO implementation vendor's management of the CDO program, including slow response times, lack of clarity on program requirements and procedures, and perceived lack of training with the data collection tool.

Recommendation 4: Improve program communication around data collection and tracking requirements and expectations. Provide clear guidance to the CDO implementation vendor and DI vendors regarding appropriate data to enter into InDemand. This process could include seeking DI vendor and CDO trade ally input on specific issues they experience with InDemand. It is likely that the data in InDemand would become more reliable and be kept more up to date if the program were to provide additional guidance to DI vendors and the CDO implementation vendor about (1) what data are required to be entered into InDemand versus what are optional, (2) the right categorizations to choose to ensure that key data points are tracked consistently across vendors, and (3) when and how frequently to update information. It would be prudent for

program staff to talk with vendors and trade allies about the specifics of the challenges they experience with InDemand prior to developing the additional guidance.

Rationale: In addition to the persistent software and technical challenges that vendors and trade allies reported experiencing with InDemand, implementation stakeholders noted problems with the efficiency and accuracy of the data that are tracked through this system. Our interviews with vendors and review of program data made it clear that vendors do not all record data in InDemand the same way or update application statuses with the same frequency. Furthermore, our review of program data revealed substantial discrepancies in how data are reported in InDemand. For example, two vendors appeared to differ in their interpretation of customer source lead categorizations. There also appeared to be a considerable incidence of reporting "other" source leads, which hinders the program's ability to effectively perform targeted marketing and outreach to specific customer segments.

Recommendation 5: Consider allowing for more flexibility in data tracking and reporting. With input from program staff and vendors, the program should explore and assess alternatives to the current set of items that vendors are required to enter into InDemand. The program should also assess the frequency of required data entry updates.

Rationale: Vendors reported that other commercial direct-install programs allow for more independence regarding tracking program data and only require them to report on a set of key indicators at regular intervals. They are not required to use the programs' tracking systems to track day-to-day activities.

Recommendation 6: Consider how important it is to the program, the DI vendors, and the CDO trade allies to be able to determine if a prospective audit customer has received an audit recently from another vendor or trade ally. If it is determined that it is important, research the likely cost of modifying InDemand to identify such customers easily, and determine if the benefit warrants the cost.

Rationale: The CDO implementation vendor and DI vendors reported that it is challenging to distinguish customers who may have received multiple audits through the program because each audit is treated as a separate application. Although the implementers reported that this is not very common, it makes it difficult for them to determine whether another DI vendor or CDO trade ally has also approached a potential customer and to determine the status of their application. Although it may be possible for program staff to query InDemand to determine whether a customer has had multiple audits through the program, this did not appear to be a function available to vendors.

Recommendation 7: Investigate whether guidelines exist for pre-installation inspections by the CDO implementation vendor. If they do exist, assess the clarity of the guidelines and how well they are communicated to inspection staff and trade allies.

Rationale: Interviews with trade allies suggest that the CDO implementation vendor's pre-installation inspections may not be carried out consistently from site to site. This could possibly result in inaccurate savings estimates in some cases.

1 Section 1 Introduction

This report presents the results of the process evaluation of the Electric Small Business Services Program in New York (also known as Small Business Direct Install or "SBDI"). The SBDI program encourages small business customers to improve their location's electric energy efficiency by providing eligible customers with an on-site energy audit, incentives and financing, and installation services. National Grid provides the funding and overall oversight for the program, which is delivered by third-party vendors. The SBDI program offers customers two channels to participate: the Turnkey Direct Installation (DI) channel with program-approved vendors that conduct the audits and install the equipment, and a Customer Directed Option (CDO) channel with the participating customers using a trade ally to perform the installation. The CDO trade allies are managed by one CDO implementation vendor that National Grid's SBDI program manager oversees. (More detail on the program can be found in the Program Description.) National Grid New York contracted with NMR Group, Inc., to conduct a process evaluation of the SBDI program to assess the overall program, examine the relative effectiveness of the DI and CDO channels, and identify opportunities for ongoing improvement.

1.1 Evaluation Objectives

The main objectives of the process evaluation are to:

- Assess the relative effectiveness and efficiency of the DI and CDO delivery approaches from the perspectives of customers, vendors, and program staff; identify and understand any challenges with delivery and benefits specific to each approach
- Assess customer experiences and satisfaction overall and by delivery approach
- Identify opportunities to collect additional data that could be used to assess program progress on an ongoing basis (in real time)

Table 9 in Appendix A outlines the research objectives and questions and shows how they are related to the individual data collection methods.

1.2 Report Organization

This report synthesizes the overarching themes that emerged from the various sources of data. We begin by describing the research methodology, follow it with a detailed description of the program, and then present the evaluation results. Within each section, we report key findings by topic. The appendices provide detailed analysis of customers' decision-making processes, customer firmographics, and copies of the evaluation instruments.

2 Section 2 Methodology

NMR collected and analyzed data from several sources for the process evaluation as outlined in Table 1. We reviewed program data and documents and completed in-depth interviews with nine program stakeholders, including the SBDI program manager, the three DI vendors, the CDO implementation vendor, and a sample of four trade allies who perform audits and install equipment via the CDO channel. The data collection also included six in-depth interviews and 286 surveys with customers who have participated in the program.

Table 1: Evaluation Tasks

Research Method	Total
Program document and tracking data review	53,783 applications between 2010 and 2016
Program staff interview	1
Vendor interviews	4
Trade ally interviews	4
Customer interviews	6
Customer surveys	286

2.1 Program Data and Document Review

National Grid's SBDI evaluation study lead, Joe Dolengo, worked with NMR to compile and analyze program documentation, processes, and data. Together, Joe and NMR reviewed program data covering 2010 to 2016 to explore patterns of program participation as a whole and by key characteristics, including delivery channel, vendor, and business type. This, along with NMR's review of documents such as the program manual, marketing materials, and previous evaluation reports, helped to identify issues for further investigation and informed the development of the stakeholder interview guides and customer survey.

2.2 Stakeholder Interviews

NMR interviewed the SBDI program manager to clarify our understanding of the program and inform subsequent research tasks. The structured interview addressed program goals and objectives; overall program structure, including staffing, resources, and participation channels; marketing and outreach; and perceived program strengths, challenges, and opportunities for improvement.

The program vendors include three DI vendors and one CDO implementation vendor. The CDO implementation vendor provides oversight and technical assistance to the CDO trade allies that deliver program services. Although the CDO implementation vendor's function is

different from that of the DI vendors, the program (and this evaluation) refers to the CDO implementation vendor as a vendor.

CDO trade allies are typically electrical contractors and lighting distributors. NMR sought to interview a sample of trade allies that together had completed at least one-half of the 2015 and 2016 projects. The four trade allies interviewed for this evaluation were responsible for two-thirds of CDO projects completed in 2015 and 2016. Because trade allies who are not officially part of a program are often difficult to recruit for interviews, NMR offered a $100 incentive to encourage CDO trade allies to respond.

The in-depth interviews with vendors and trade allies covered a range of topics, such as roles and responsibilities, marketing and outreach, customer enrollment, audit and measure installation processes, QA/QC practices, program data tracking and reporting, overall satisfaction, perceptions of customer value and satisfaction, and strengths, challenges, and suggestions for improvement.

2.3 CUSTOMER INTERVIEWS AND SURVEY

The purpose of the customer interviews was to test the design and wording of telephone survey questions and answer categories to ensure the accuracy of the survey results. In an effort to obtain a range of customer experiences, NMR chose 24 individual applications based on the following criteria: vendor, level of participation (audit only and full participant), project costs, total energy savings, and measures installed (e.g., custom lighting, prescriptive lighting, and refrigeration). Of the initial 24 applications, NMR completed exploratory interviews with contacts from six customers that participated in the program in 2015 or 2016. We used these interviews to pilot the customer survey and refine the instrument.

The customer survey explored a range of topics, including customer satisfaction and experience with the audit and installation processes, perceived value of financing options, motivations and barriers to participation, overall satisfaction with the program, and recommendations for program improvements. In our analysis, we compare results between the CDO and DI channels as well as by vendor, when appropriate. We report statistically significant differences only when they occur. Details on the company firmographics (e.g., premise management, business type, and reported previous participation) are included in Appendix C: Customer Firmographics.

The survey was administered by RMS of Baldwinsville, NY, to a random sample of 286 customers who had completed installations between April 2015 and April 2016. To develop the sample for the customer survey, NMR isolated 2,169 individual applications from the program data. Since small business customers may have more than one application due to having multiple locations that participated in the program, with National Grid's help NMR identified 1,413 unique customers for the survey and asked customers with more than one application about their most recently completed project. NMR targeted a total of 268 customer surveys, 67 for each DI vendor and for the CDO implementation vendor. RMS notified the entire sample by mail and sent follow-up emails to 720 contacts with email addresses. After allowing customers to respond online for roughly two weeks after sending notification of the survey, RMS contacted customers to complete the survey by telephone.

As Table 2 shows, a total of 286 customers completed the survey via either mode for an overall response rate of 39%, using the American Association for Public Opinion Research (AAPOR) approach for Response Rate 3 (RR3).[3] The survey resulted in a margin of error of ± 5% at the 90% confidence level, and by delivery channel it was ± 5% among DI vendor customers and ± 9% among CDO implementation trade allies.

Table 2: Customer Survey Sample and Targets by Group

Channel	Vendor	Number of Applications	Number of Unique Applications	Targeted Completes	Actual Completes	AAPOR Response Rate	Margin of Error
CDO	CDO vendor	495	371	67	71	43%	8.8%
DI	DI Vendor # 1	644	441	67	72	35%	8.9%
	DI Vendor # 2	531	264	67	70	30%	8.5%
	DI Vendor # 3	499	337	67	73	54%	8.6%
DI Total		*1,674*	*1,042*	*201*	*215*	*37%*	*5.0%*
Total		**2,169**	**1,413**	**268**	**286**	**39%**	**4.5%**

[3] The AAPOR response rate adjusts for number of eligible sample units by taking into account important factors such as eligible respondents and total sample contacted.

3 Section 3 Program Description

The program description is based on information gleaned from the review of program documents and program tracking data. It is also based on in-depth interviews with the SBDI evaluation lead, the SBDI program manager, the DI vendors, and CDO trade allies.

3.1 Goals and Objectives

The SBDI program is designed to help small- and mid-sized business customers reduce their electric energy consumption and related costs. The program is charged with achieving energy savings goals while remaining within the program budget designated by the New York State Public Service Commission. The program goals are aligned with New York State's Reforming the Energy Vision (REV) goals by contributing to reducing energy consumption, and promoting customer engagement and striving to help customers make informed choices.

3.2 Approach to Achieving Goals and Objectives

Qualified customers: The SBDI program assists small business owners with an average monthly demand of 110 kW or less to improve their building's electric energy efficiency.[4]

Offerings and sources of savings: Through the program, eligible customers can receive free energy audits, savings analyses, incentives, direct installation services, and (if they qualify) no-cost financing. While refrigeration and HVAC equipment are among the measures addressed by the program, to date, the majority of savings from the program have been achieved from lighting and lighting controls.

Marketing and outreach: National Grid promotes the SBDI program in various ways, including through web, email, and direct mail marketing. The program has a dedicated 800 number which automatically forwards calls to the DI vendor in the area from which each call originates. Similarly, there is an online form for interested customers on the SBDI website, which, upon completion, is forwarded directly to the appropriate DI vendor. The program does not directly promote the CDO channel in the same way. The DI vendors and trade allies also market the program through cold calls, walk-in visits, and direct mail campaigns.

Administration and delivery: National Grid has provided funding and oversight for the program since 2009. Through 2013, only turnkey direct installation vendors delivered program services to customers. In 2014, National Grid added a second delivery channel, the CDO channel, which allowed trade allies to also deliver services to customers, facilitated by the CDO implementation vendor. The SBDI program manager is responsible for all aspects of day-to-day operations and is also involved in longer-term planning for the future direction of the program.

[4] Small business customers that qualify for the SBDI program typically are also eligible to receive services through National Grid New York's large C&I program. If a customer is interested in measures that are not offered through the SBDI program, they may pursue savings through the Large C&I program.

1. **Turnkey Direct Installation (DI):** Customers can work with a DI vendor that uses a *turnkey* model to deliver services. Three different DI vendors serve each of the three New York regions: western, eastern, and central. Each of the DI vendors is responsible for managing the entire audit and installation process. The DI vendors primarily install prescriptive lighting measures procured through a third-party materials vendor that provides equipment to the program. The DI option has been available to customers through SBDI since the program's inception.

2. **Customer Directed Option (CDO):** In the CDO option, customers are allowed to work with a contractor of their choice to identify and install energy-saving upgrades. These contractors, commonly referred to as *trade allies*, are approved by the program and conduct work across the entire upstate New York area (e.g., they are not limited to geographic regions like the DI vendors). The CDO implementation vendor is responsible for overall management of the CDO channel, which includes submitting all project-related documentation to National Grid, acting as a liaison between National Grid and the trade ally network, and overseeing quality inspections of trade allies' work.

The DI vendors and CDO trade allies are the public face of the SBDI program. They are responsible for scheduling and conducting the energy audit, identifying savings and recommending measures, and overseeing or conducting the installation of additional energy-saving upgrades. Because the DI vendors and CDO trade allies provide SBDI services in the same regions, competition for customers inherently occurs between these two groups. Trade allies also compete with each other for customers.

Prior to 2016, the SBDI program used an additional vendor that was responsible for installing refrigeration measures throughout upstate New York. In 2016, this refrigeration-focused vendor was removed and the responsibility for finding and installing refrigeration and other non-lighting measure opportunities was delegated to the DI vendors and CDO trade allies. According to interviews with the program manager and implementers, the DI vendors and CDO trade allies have rolled out this offering to customers very slowly. The program data supplied for this evaluation did not cover this transition period.

Equipment recycling and disposal: The DI vendors work with the program-assigned recycling contractor to remove all recyclable equipment that is replaced during the installation. Customers do not pay a separate fee to the recycling vendor for this service. CDO trade allies arrange recycling services with a contractor of their choice. The cost of these services is built into the customer's contract depending on the size of the replaced equipment and the number of units.

QA/QC Inspections: *Pre-installation inspections and QA/QC of the audit process.* For the CDO trade allies, the CDO implementation vendor performs QA/QC inspections on 100% of audits performed by newer trade allies and on 10% of audits performed by well-established trade allies. DI vendors do not receive pre-installation inspections. *Post-installation inspections.* For both DI and CDO, the SBDI program uses a third-party contractor to conduct post-installation inspections for 10% of paid applications or 100% of paid applications that

cost $15,000 or more. The CDO implementation vendor also carries out a post-installation inspection of 100% of work carried out by CDO trade allies.

Savings goals: The SBDI program manager assigns the three DI vendors savings goals. CDO trade allies do not have to meet individual or collective savings goals, but the CDO implementation vendor is assigned a savings goal.

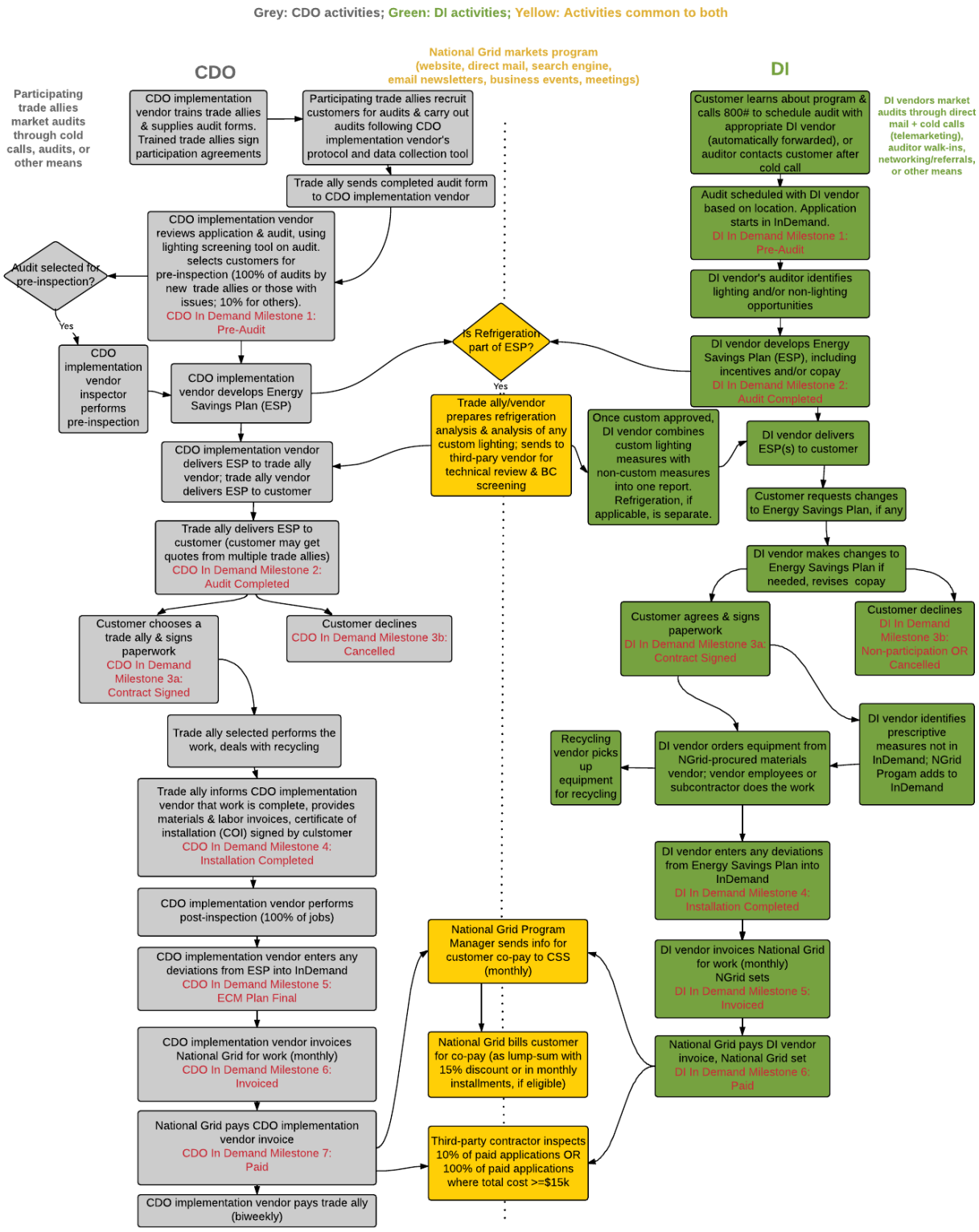
Incentives and financing: Customers who pursue energy-saving upgrades through the program receive incentives of up to 60% of the total project cost, as determined by program criteria (i.e., the minimum customer "copayment" is 40% for eligible equipment.) At the time of the evaluation, in addition to the incentive, customers had the choice of receiving either a 15% discount on their copayment if they pay the full cost in a lump sum one-time payment or (if they qualify based on their utility electric bill payment history) no-cost financing of the copayment for 12 or 24 months.

Program data tracking: National Grid maintains its own project tracking system, InDemand, which the SBDI program uses to document and report activities. The InDemand software is managed by National Grid and supported by its IT department. InDemand is used to track SBDI customer applications from initial contact until the project is paid. All three of the DI vendors and the CDO implementation vendor are responsible for entering data into this system as projects move through the pipeline from first contact to final payment. National Grid SBDI program management also uses the tracking system to update measure offerings and to perform detailed and general oversight of the program.

Coordination with other programs: As noted above, the SBDI program currently coordinates with the large Commercial & Industrial program, also known as the Energy Initiative program or EI. If a small business customer is interested in measures beyond lighting or refrigeration, the project typically is handled through the EI program. National Grid is considering plans to roll out additional offerings through an Electric Small Business Engagement & Efficiency Platform. Through this initiative, customers could conduct an online assessment to determine opportunities for energy savings upgrades. After the assessment, customers would receive a report with recommendations for rebated measures like LED lighting, smart Wi-Fi thermostats, faucet aerators, and power strips. They will be able to purchase these measures and immediately redeem the rebates online. It is likely that customers who currently initiate projects through SBDI could potentially access services through this platform, and subsequently pursue additional savings by installing more efficient measures covered in SBDI.

Figure 1 illustrates in more detail how customers move through the SBDI program, distinguishing pathways for the DI and CDO channels.

Figure 1: SBDI Process Map



4 Section 4 Evaluation Results

In this section, we present findings from the review of program data, interviews with program staff and vendors, and customer survey. Findings are organized by topic.

4.1 Program Participation and Trends

Between 2012 and 2015, the overall expenditures for SBDI fell by nearly 20%.[5] According to program data from InDemand, the number of projects completed decreased by more than 40% during this period. At the same time, the incentive offering decreased substantially. The first incentive reduction took place in 2013; the second, in 2015. Despite these reductions in budget and incentives, the SBDI program has been able to maintain strong customer satisfaction and customer loyalty.

4.2 Program Strengths and Challenges

4.2.1 Program Strengths

4.2.1.1 Customers' Perspective

According to customers, the greatest strengths of the program include energy savings (48%) and ease of participation (27%). The customer survey asked respondents to name the single best thing about the program (Table 3). Energy and cost savings were most frequently reported by customers, followed by ease of participation (48% and 27%, respectively). Other benefits of the program include the reduced customer project costs (8%), environmentally friendly upgrades (5%), and the quality of the equipment (4%).

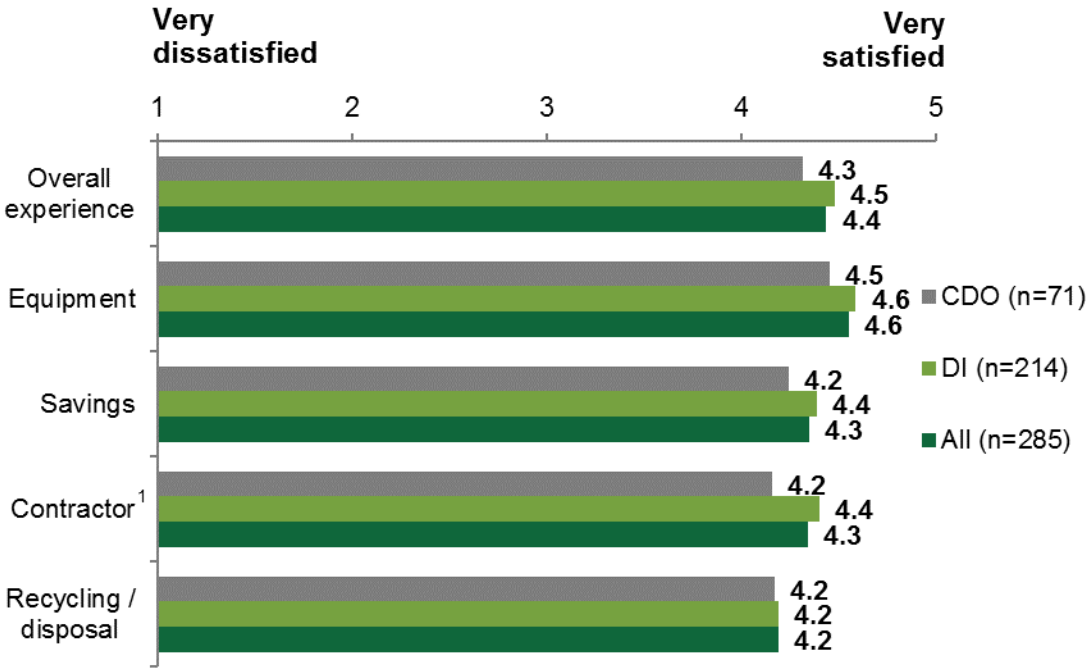
Table 3: Program Strengths According to Customers

What was the single best thing about National Grid's Small Business Services program?	% of Respondents
Sample size	*286*
Energy/cost savings	48%
Ease of participation	27%
Reduced customer project costs	8%
Environmentally-friendly upgrades	5%
Quality of equipment	4%
Financing option/process	1%
Other	1%
All of the above	2%
Don't know/Refused	4%

[5] Based on figures reported in the Electric and Gas Energy Efficiency Transition Implementation Plans (ETIPS).

Customers also reported strong satisfaction with the program. The average rating for all customers was 4.4 on a 5-point scale. While customer satisfaction scores were relatively high for all groups, DI vendors received substantially higher Net Promoter Scores (a measure of customer loyalty) than CDO vendors.[6] In general, customers reported strong satisfaction with the SBDI program. The customer survey asked respondents to rate their satisfaction with various aspects of the program. Using a scale of 1 to 5, where 1 is "very dissatisfied" and 5 is "very satisfied," respondents' overall average ratings ranged between 4.2 and 4.6 (Figure 2). Customers provided the highest average rating to equipment and the lowest to equipment recycling and disposal. On average, DI customers provided slightly higher ratings compared to CDO customers, but these differences were not statistically significant. More information on customers' experiences with these aspects of the program, including differences between the two channels, are detailed further in Section 4.5, Design and Implementation.

Figure 2: Customers Reported Strong Satisfaction with the SBDI Program



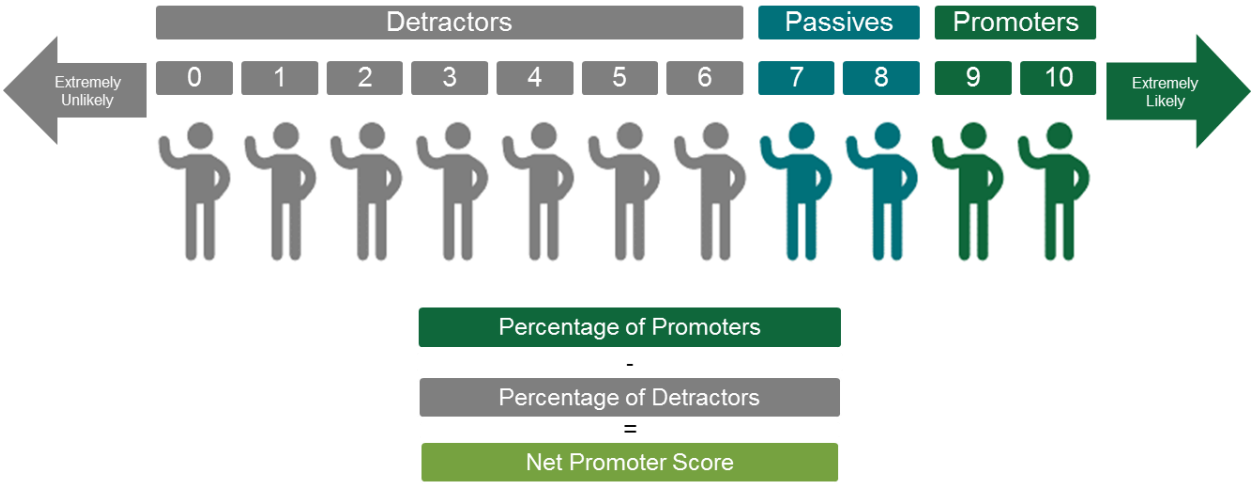
Sample sizes vary by topic; maximum sample sizes are shown.
[1] Qualitative responses revealed that respondents assessed program vendors *and* subcontractors

Customers were also asked to rate the likelihood of recommending the SBDI program to others. For this question, respondents used a scale of 0 to 10 where 0 is "extremely unlikely" and 10 is "extremely likely." This rating, or Net Promoter Score (NPS), is a well-established measure of customer loyalty. With the NPS, respondents are grouped as promoters (score 9-10), passives

[6] The Net-Promoter-Score was not tested for statistical significance; however, as explained later in this section, DI vendor customers were significantly more likely to be program promoters.

(7-8), and detractors (0-6). The NPS is calculated by subtracting the percentage of detractors from the percentage of promotors and presented as a whole number, as shown in Figure 3.

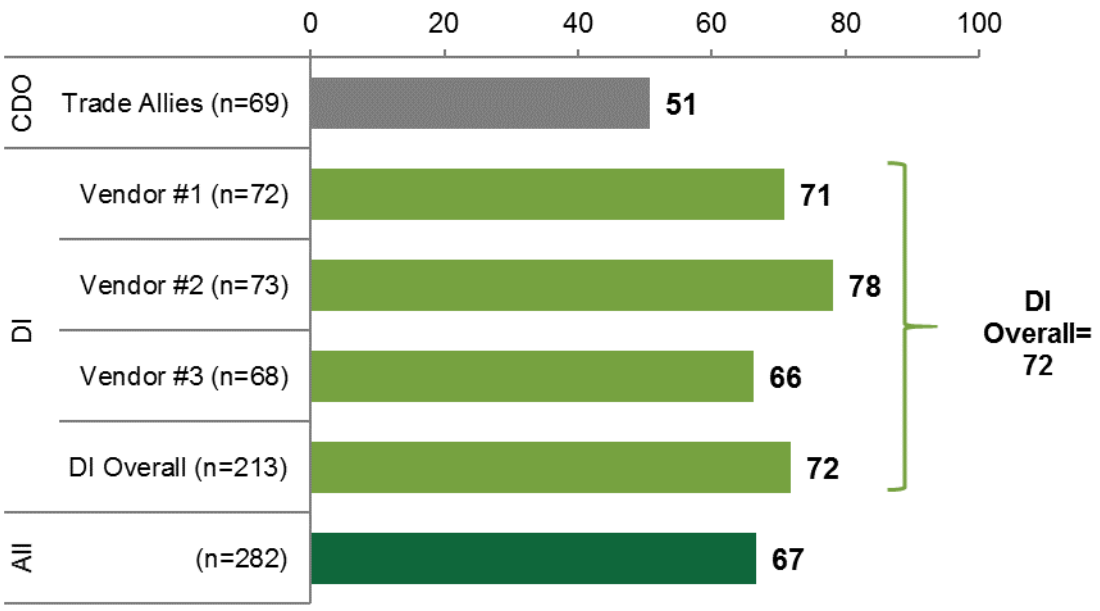
Figure 3: Net Promoter Score



According to the customer survey, SBDI customers' overall NPS was 67 (Figure 4). NMR has not measured net loyalty for other energy efficiency programs and is not aware of other energy efficiency programs having measured it, so we do not have an appropriate benchmark for it. However, 67 seems to be a very positive number, and leaves room to grow. The fact that one-fifth of customers reported having heard about the program through word-of-mouth suggests that the program is indeed getting considerable free advertising from previous satisfied customers. Overall, 74% of customers that participated in the program are "promoters" (Figure 5)—that is, there is a high likelihood that these customers will actively promote the program to other potential participants by word of mouth.

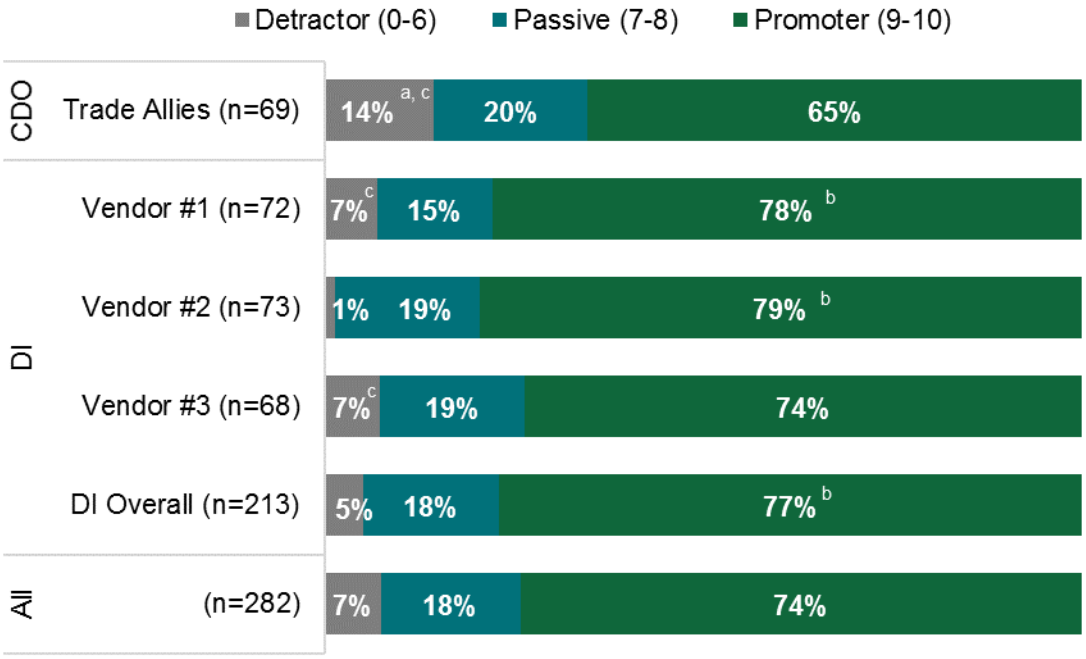
The NPS for the program varies across DI customers, ranging from 66 (for DI Vendor # 2) to 78 (for DI Vendor #3). CDO customers reported a substantially lower NPS for the program (51) (Figure 4). DI customers (77%)—in particular, customers of DI Vendor #1 (78%) and DI Vendor #3 (79%)—were significantly more likely than CDO customers (65%) to be program promoters (Figure 5). In contrast, CDO customers (14%) were significantly more likely than DI customers (5%) to be detractors.

Figure 4: Customers' NPS



Four respondents did not provide a rating.

Figure 5: Customer Promoters, Passives, and Detractors based on Likelihood Ratings



Categories are based on ratings of *likelihood to recommend the program to someone else.*
Four respondents did not provide a rating.
[a] Statistically significantly higher than DI respondents at the 90% confidence level.
[b] Statistically significantly higher than CDO respondents at the 90% confidence level.
[c] Statistically significantly higher than SmartWatt Energy respondents at the 90% confidence level.

4.2.1.2 Implementers' Perspective

From the perspective of program implementers, the no-cost financing option and the availability of program incentives are the program's greatest strengths. NMR asked DI and CDO vendors ("stakeholders") to identify the single greatest strength of the program. Interviewees most commonly volunteered the program's no-cost financing option (i.e., for customers to pay for their upgrades interest free on their electric bill for up to two years). Five of the eight vendors and trade allies stated that this was one of the greatest strengths of the program. Other responses from more than one interviewee include the incentives, improved lighting, penetrating a hard-to-reach market segment, and ease of participation. Table 4 shows the full range of responses from vendors and trade allies.

Table 4: Program Strengths According to Implementers

Primary Strength	CDO Stakeholders*	DI Stakeholders	Total
Sample size	*5*	*3*	*8*
No-cost financing option	3	2	5
Incentives	2	1	3
Improved lighting/Reduced inefficient lighting	1	1	2
Penetrate hard to reach segment	--	2	2
Ease of participation	2	--	2
CDO Model	1	NA	1
DI Model	NA	1	1
Helps National Grid meet savings goals	--	1	1
Contributes to vendors' business	--	1	1

*Responses from the CDO implementation vendor are included with the CDO stakeholders reported above.

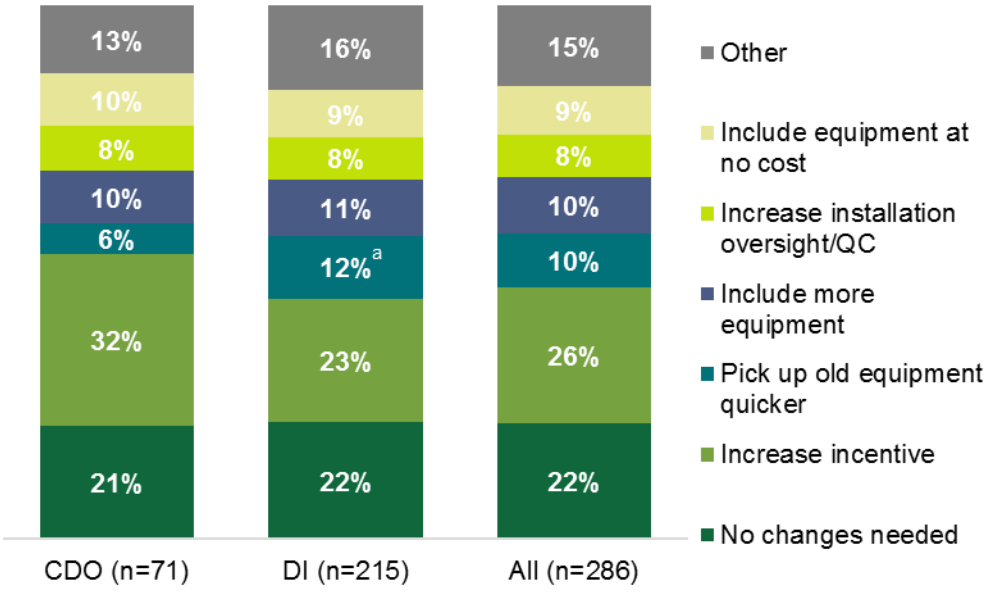
Note: Multiple responses possible.

4.2.2 Program Challenges

4.2.2.1 Customers' Perspective

When asked if they could change one thing about the program from a list of options on the customer survey, respondents most frequently suggested increasing the incentive (26%). Other recommendations were to pick up the replaced equipment quicker (10%), include more equipment (10%), and include more equipment at no cost (9%). In addition to asking about the positive aspects of the program, the customer survey assessed potential areas for improvement. When asked if they could change one thing about the program, more than one-fifth of all customers (22%) reported that no changes were needed (Figure 6). The most frequently mentioned suggestion from customers was to increase the incentive (26%). Other recommendations were to pick up the replaced equipment quicker (10%), include more equipment types (10%), and include more equipment at no cost (9%). CDO customers (6%) were significantly less likely than DI customers (12%) to suggest that the replaced equipment be picked up quicker.

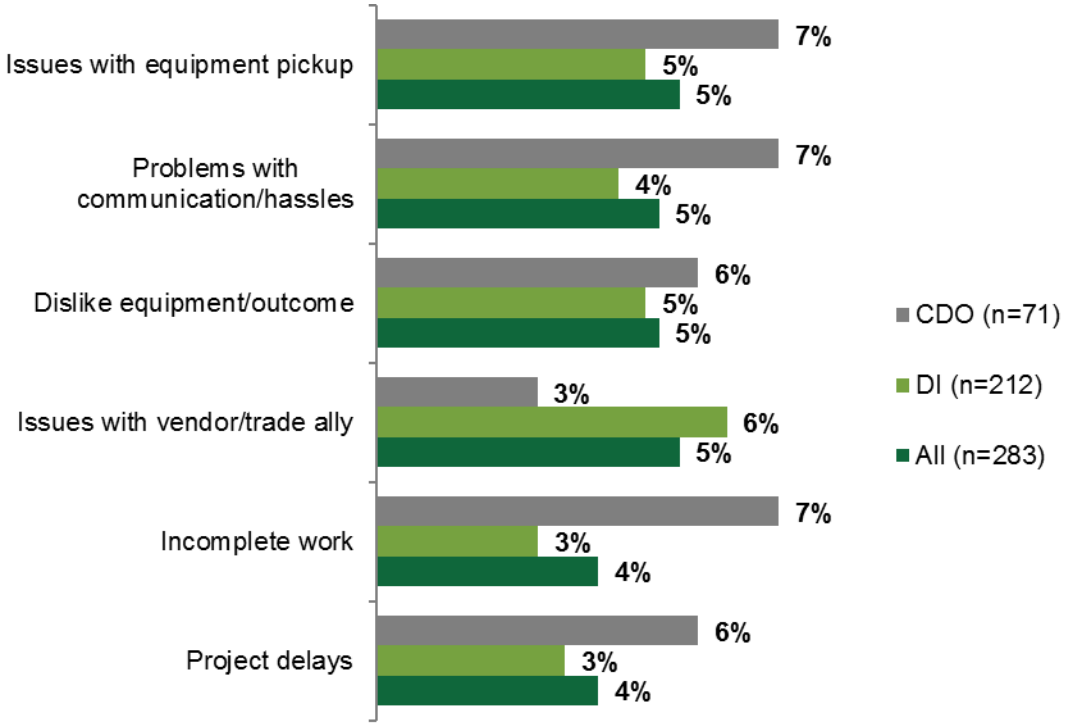
Figure 6: If Customers Could Change One Thing about the Program, What Would It Be?



Other includes responses accounting for =< 5% of respondents and Don't know/refused.
[a] Statistically significantly higher than CDO respondents at the 90% confidence level.

As noted above, customers reported strong satisfaction with the SBDI program. As a follow-up to their response to the rating of their overall satisfaction with the program, we asked respondents to comment further on their rating. Customers' responses were largely positive, and a minority of customers cited issues. Among the challenges were issues with equipment pickup (5%), communication problems (5%), and displeasure with the equipment or installation (5%; Figure 7).

Figure 7: A Small Percentage of Customers Cited Program Challenges



Multiple choice question: chart excludes responses mentioned by fewer than ten respondents.
Three respondents providing responses conflicting with their rating are excluded from analysis.

Below is a sample of customers' comments regarding their positive satisfaction with the program:

The work performed was great and done in a timely manner. I'm saving a lot of money.

I knew it was the right thing to do. I knew it would upgrade my light levels and save money.

The new LED lights work well. [They] don't burn out and need replacement, and are saving us on energy costs. The contractor took care of everything, the project did not cause us any hassle or inconvenience. The contractor was professional and did all the necessary work around our schedule (we are a retail store and cannot have workers during business hours).

I was very satisfied with the upgrade and continue to look for future upgrades through the Small Business [Direct Install] Program.

It's a great energy savings program with incentives and discounts to cut our bottom line.

The process was very smooth. The contractor kept in a lot of contact. I feel that this program will only work with a contractor that can walk you through it.

I don't think without the program we would have done it for a while. We saw immediate savings so it prompted us to do it.

4.2.2.2 Implementers' Perspective

The top two program challenges, according to implementation stakeholders, are using InDemand and the reduction in incentives over time. When asked about challenges or barriers that the program faces, DI and CDO stakeholders most frequently offered using InDemand (two of eight interviewees) and the reduction in incentives (two interviewees; Table 5). Other responses include lack of marketing support for the CDO channel, marketplace confusion, and diminished opportunities to capture savings.

Table 5: Program Challenges According to Implementers

Biggest Challenges	CDO Stakeholders*	DI Stakeholders	Total
Sample size	*5*	*3*	*8*
InDemand	1	1	2
Reduced Incentives	2	--	2
Lack of marketing for CDO	1	NA	1
Marketplace confusion	--	1	1
Diminished opportunity to capture savings	--	1	1
CDO audit process/paperwork	1	NA	1
Convincing the customer that they will the achieve estimated savings	1	--	1
Requiring that replacement tubes go through a ballast	1	--	1

*Responses from the CDO implementation vendor are included with the CDO stakeholders reported above.

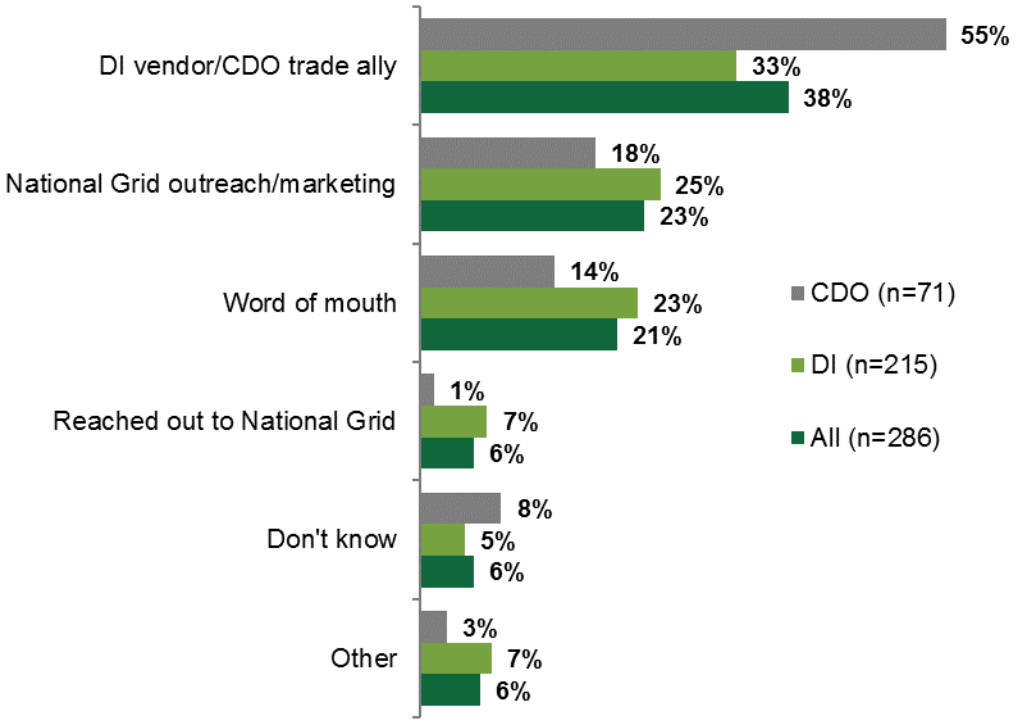
Note: Multiple responses possible.

4.3 Marketing and Outreach

4.3.1 Customer Recruitment

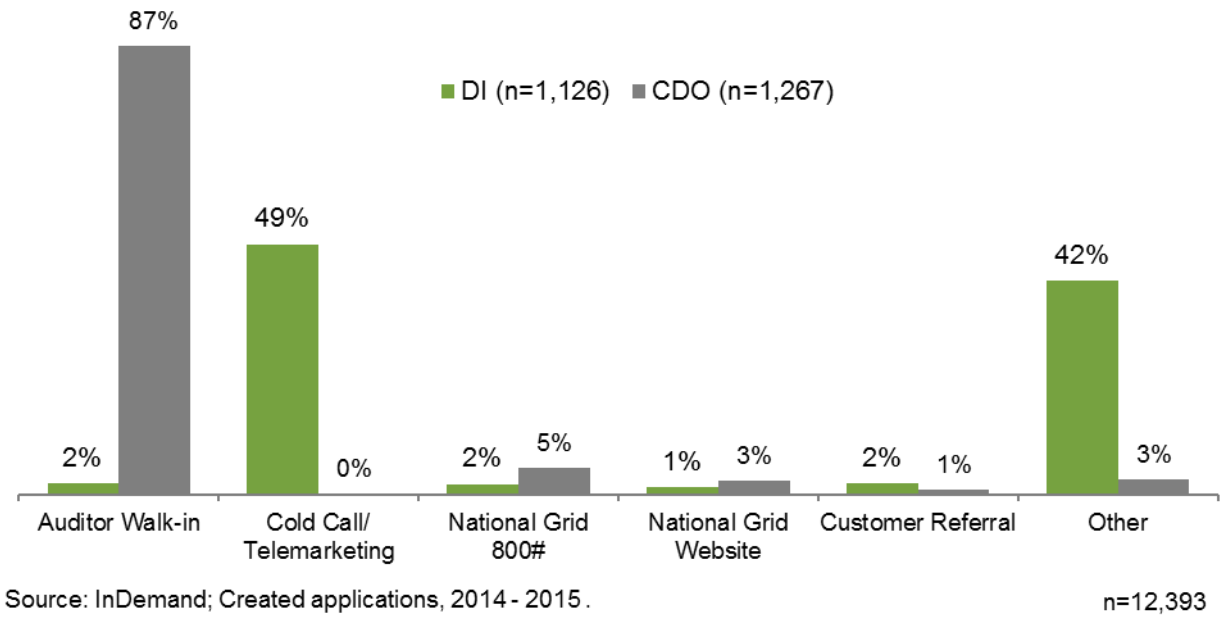
Customers are most likely to learn about the program from vendors. A fifth of customers heard about the program through word-of-mouth advertising—almost as many as heard about it from National Grid's marketing. The customer survey asked participants how they first heard about the SBDI program. Figure 8 shows that participants were most likely to learn about the program from a DI vendor or trade ally (38%), National Grid's marketing and outreach (23%), or from a colleague, business associate, or friend (21%).

Figure 8: How Did Customers Learn about SBDI?



Vendors appear to be inconsistent in how they record marketing activities in InDemand. The source leads recorded in the program data are generally consistent with the customer survey results. Figure 9 shows that DI projects most commonly result from cold calls (49%), while CDO projects most frequently stem from trade allies making walk-in visits (87%). The DI vendors also documented a substantial number of leads from "other" means, but the data do not appear to provide any insight regarding what those are. Figure 9 shows the most commonly reported source leads by channel from InDemand.

Figure 9: Customer Leads are Most Likely to Result from Auditor Walk-Ins and Cold Calls



Source: InDemand; Created applications, 2014 - 2015.

n=12,393

Disaggregating these program data further by vendor reveal a few disparities that are not easily detected when examining results by channel. The relatively large proportion of "other" source leads are mainly due to two of the DI vendors that entered a substantial number of leads in this category. As noted above, the program data do not appear to indicate what this grouping includes. These two vendors also documented relatively few walk-ins and cold calls, suggesting some inconsistency in how different vendors enter source lead data into InDemand, and that vendors may need some data entry guidance in this area.

Table 6: Customer Leads by Vendor

Source Lead	CDO Trade Allies	DI Vendor #1	DI Vendor #2	DI Vendor #3
Sample Size	*1,267*	*4,167*	*3,872*	*3,087*
Auditor walk-in	87%	6%	--	--
Cold call/Telemarketing	--	15%	51%	90%
National Grid 800#	5%	--	2%	4%
National Grid website	3%	1%	2%	--
Customer referral	1%	2%	1%	3%
Other	3%	75%	39%	--

4.3.2 DI and CDO Marketing

The DI vendors and CDO trade allies reported using a range of marketing efforts reflected in the customer survey results and program data. They stated that they use cold calls and walk-in visits, direct mail campaigns, and referrals, but emphasized that the most effective method for reaching customers is through personal contact (either in person or by phone). All three of the DI vendors noted that they use cold calls and walk-ins to generate interest in the program. Among the four trade ally interviewees, two indicated that their auditors generate customer interest through walk-in visits, and one stated that they have a dedicated staff member to conduct sales calls. Table 7 shows the specific marketing and outreach efforts that interviewees mentioned.

Table 7: DI and CDO Marketing Efforts

Marketing Activity	DI Vendors	CDO Trade Allies
Sample size	*3*	*4*
Auditor walk-ins	3	2
Cold calls/Telemarketing	3	1
Direct mail	3	1
Referrals	2	1
Previous customers	2	1
Networking	1	2

Source: DI Vendor and Trade ally IDIs.

Note: Multiple responses possible.

4.3.3 DI Vendors' Perspectives on National Grid Marketing

The DI vendors are familiar with National Grid's marketing activities for the SDBI program, and perceive these efforts as helpful in securing audits. All three DI vendors were generally aware of National Grid's marketing activities, and two of the three interviewees noted that they have on occasion leveraged National Grid's marketing events, such as email campaigns, for their own outreach. For example, after an email campaign is sent, a vendor might make follow-up phone calls or visits to customers. All three of the DI vendors indicated that National Grid's marketing campaigns were effective at generating leads. One DI vendor stated that their company experience "an uptick in inbound audit requests when there is an organized marketing effort." Another vendor confirmed that mailings from National Grid resulted in customer leads. This vendor stated that "these leads are often more likely to close [the deal] and are higher value jobs."

Although National Grid broadly advertises the program, all of the interviewees emphasized that customers are most likely to hear about the program from a DI vendor or trade ally. When asked how the program could improve its marketing, two of the three DI vendors provided concrete recommendations:

- Focus marketing on advertisements or billboards to increase commercial customers' general awareness that National Grid energy efficiency programs "even exist" (one trade ally).

- Another DI vendor expressed an interest in the New York program continuing to leverage marketing efforts with the SBDI programs in Massachusetts and Rhode Island since previous collaborations had proven to be successful.

4.3.4 CDO Trade Allies' Perspectives on National Grid Marketing

The CDO trade allies are not as aware as DI vendors of National Grid's marketing activities for the program and think that the utility should do more to represent and support the CDO channel, such as by supplying additional marketing materials and directing customer leads to both DI vendors and CDO trade allies. The CDO trade allies reported that they were not very familiar with National Grid's marketing efforts and felt that the CDO channel is not promoted by the program as much as DI. Three of the four trade ally interviewees mentioned receiving a brochure or flyer to assist them in promoting the program, but were unaware of any other way that the program supports the CDO channel. Two of the four CDO trade allies stated that National Grid marketing supports DI vendors in the program more than CDO trade allies. In general, trade allies felt that leads generated by their company were due to their own efforts. As one trade ally remarked, "Whatever efforts that they [National Grid] have [made] to market the program, from our experience, it does not drive sales for us. All of our sales come from us going to the customer and educating them on the program."

Overall, trade allies felt that National Grid's marketing should better represent and support the CDO channel. They offered several suggestions for National Grid to consider, including the following:

- Direct customer leads to both DI vendors and trade allies (two trade allies).
- Supply trade allies with additional marketing materials, such as case studies from CDO customers (three trade allies).
- Provide trade allies with a cover letter with program branding for them to use in their outreach efforts. This will help bolster trade ally credibility and highlight their affiliation with the program (one trade ally).

It is the evaluation team's understanding that the original intent of adding the CDO channel was to provide customers with more choice. It may not be appropriate for National Grid to provide the kinds of additional marketing support that the trade allies say they want without conducting more vetting of trade allies and developing more formal relationships with them. Currently, the CDO trade allies do not receive as extensive vetting as DI vendors and they do not receive direct support from the SBDI program. It may not be appropriate to redesign a specific aspect of the program to satisfy trade allies' desires for more marketing support.

4.4 Program Support and Training

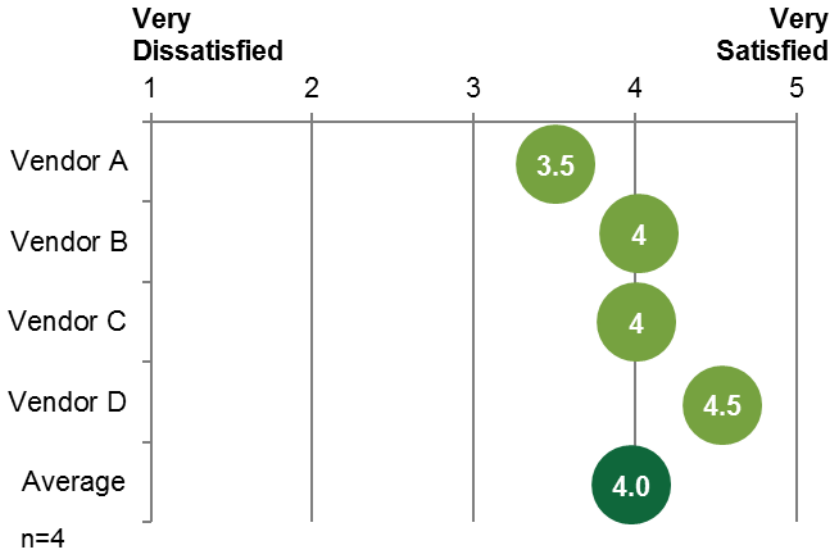
4.4.1 Support and Training Provided by SBDI to Vendors

Overall, DI vendors and the CDO implementation vendor report feeling well-supported by the SBDI program. The three DI vendors and CDO implementation vendor all spoke positively about working with the SBDI program manager and reported that the program manager was well-informed about program procedures and protocols. They reported that they feel well-supported

by the SBDI program and that the program requirements and expectations were clearly communicated by the program manager. When asked about formal training events, all four of the vendors shared positive remarks regarding the annual training provided by the procured third-party materials contractor. The vendors stated that the meeting provided an opportunity to review existing and new measures. Aside from the materials contractor's lighting technologies training, vendors noted that they are in regular communication with the National Grid program manager via email, phone, and standing monthly meetings. All four of the vendors indicated that the SBDI program manager has thoroughly communicated the program requirements and provides ongoing support as needed. They mentioned that the program manager is "a very active communicator," is "extremely responsive," and "does a fantastic job staying on top of the program and issues."

Their positive remarks and experiences were also reflected in their overall satisfaction ratings with the SBDI program as shown in Figure 10. On a scale of 1 to 5 where 1 equals "very dissatisfied" and 5 equals "very satisfied," vendors' ratings fell between 3.5 and 4.5, with an average of 4.0.

Figure 10: Vendors' Overall Satisfaction with the SBDI Program



4.4.2 Support and Training Provided by CDO Vendor to Trade Allies

Although the majority of the trade allies' remarks regarding working with the CDO implementation vendor were favorable, they all stated that they had, at times, experienced delays in communication and expressed a desire for formal training, ongoing support, and more clarity regarding program requirements and procedures. According to interviewees, the CDO implementation vendor offered training seminars when the CDO channel was first launched in 2014, but now focuses on providing one-on-one training as part of new trade allies' onboarding process. When asked about training, all four of the trade ally interviewees stated that they had not received any, which is contrary to the program's design for the CDO channel. (It is NMR's understanding that the CDO implementation vendor *does* provide training to the CDO trade allies, but the trade ally interviewees are not aware of it.) The trade allies all expressed a

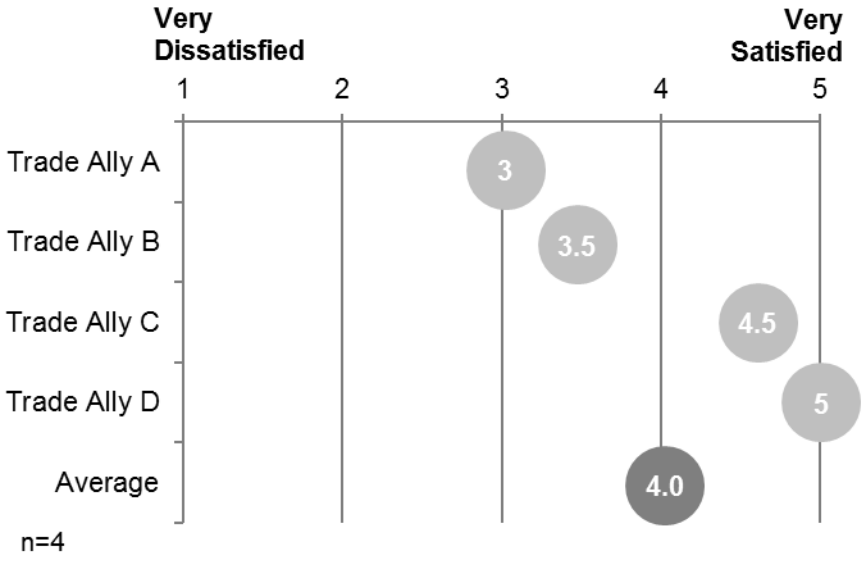
desire for greater access to formal training, more ongoing support, and greater clarity regarding program requirements, particularly when a change in rules or a new requirement takes effect. Two areas for which interviewees indicated a need for training were data collection and inspection criteria:

- All four trade allies said that they had not received training on the CDO implementation vendor's data collection tool (aside from written documentation, which only two referenced). Three of these trade allies felt that training would have been helpful for accurate data entry and to avoid repeating mistakes.
- In addition, two of the four trade allies felt that there were no clearly established guidelines for the pre-installation inspection, which is conducted by the CDO implementation vendor after the trade ally has performed the audit. This inspection is done to ensure that the auditor made a proper assessment of savings opportunities. The two trade allies who raised the concern regarding inspection criteria felt either that there were not standard procedures for the inspections or that such procedures had not been clearly been communicated to them.

The four trade ally interviewees expressed mixed opinions about working with the CDO implementation vendor, and at times all four voiced very pointed concerns. Three of the four interviewees mentioned that the CDO implementation vendor is typically supportive. However, they also mentioned that they had experienced times during busier periods when their contact was not very responsive and occasionally appeared "swamped" or "overburdened." One of these three interviewees indicated that the turnaround time for approvals is "aggravating" and that it has, at times, resulted in them losing business.

Although trade allies' overall satisfaction ratings average the same as that of vendors, the range of ratings is wider, with a low of 3 and a high of 5 (see Figure 11). In addition, two of the four trade allies specifically mentioned their negative experiences with the CDO implementation vendor to justify their relatively lower ratings.

Figure 11: Trade Allies Overall Satisfaction with the SBDI Program



4.5 DESIGN AND IMPLEMENTATION

A key aspect of this process evaluation is to document and describe how the program is currently implemented and how outcomes may vary by delivery channel.

4.5.1 Audit and Installation Process

Interviewees noted that the audit and installation process is essentially the same for the DI and CDO channels: An auditor from the DI vendor or CDO trade ally's company conducts the free audit and follows up in person with written recommendations for eligible equipment. If the customer agrees, the DI vendor or CDO trade ally will help the customer with accessing program incentives and financing if they qualify and will oversee or perform the installation of the energy-efficient equipment.

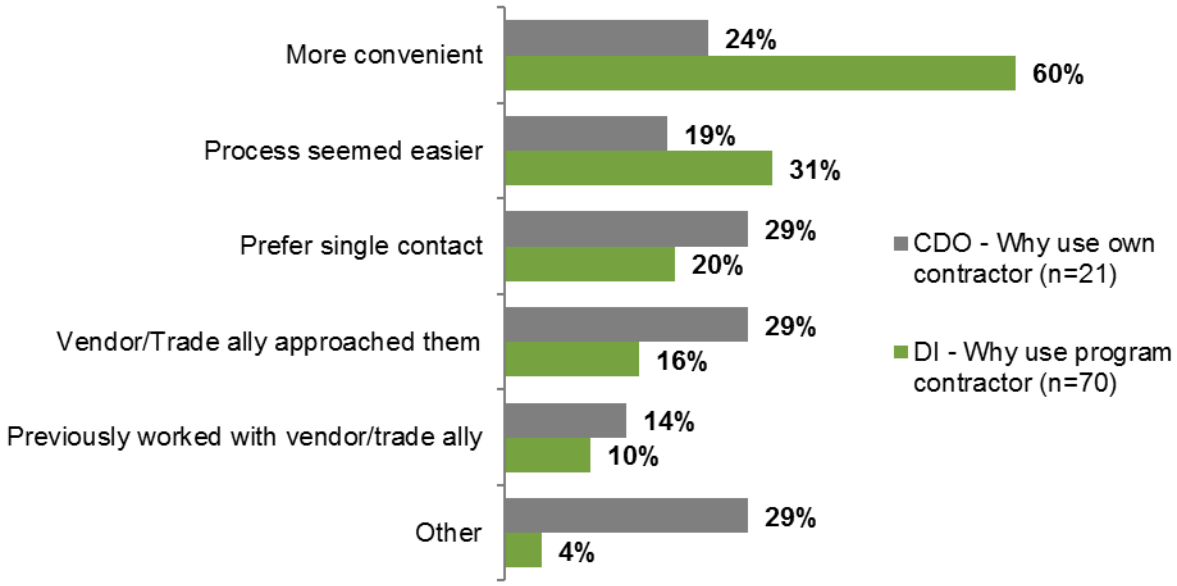
4.5.1.1 Customers' Reasons for Using DI or CDO Channels

One-third of surveyed customers were aware that there is more than one way to participate in the program. Those customers who were aware and chose to use the DI vendor were most likely to say it was for convenience or because the process seemed easier. Those customers who were aware and chose to use a CDO trade ally were most likely to say it was because they had been approached by the trade ally, prefer a single point of contact, or had previously worked with them.[7] One-third of respondents (33%) confirmed that they knew about the two participation options. The survey asked customers who were aware of the two channels to indicate why they chose to use the DI vendor or the CDO trade ally, rather than the other option. As Figure 12 shows, DI customers were more likely to say they chose to use a program-approved vendor because it was more convenient (60% DI versus 24% CDO) or the process seemed easier (31% DI versus 19% CDO). CDO customers were more likely to say that they chose to work with the CDO trade ally because the trade ally approached them (29% CDO versus 16% DI), they prefer a single contact (29% CDO versus 20% DI), or they had previously worked with the CDO trade ally (14% versus 10%).

[7] Only 21 CDO customers were aware of the two participation options, so we cannot test for statistical differences between CDO and DI customers' reasons for choosing the delivery channel that they followed.

Figure 12: Reasons for Choosing Program DI Vendor or CDO Trade Ally

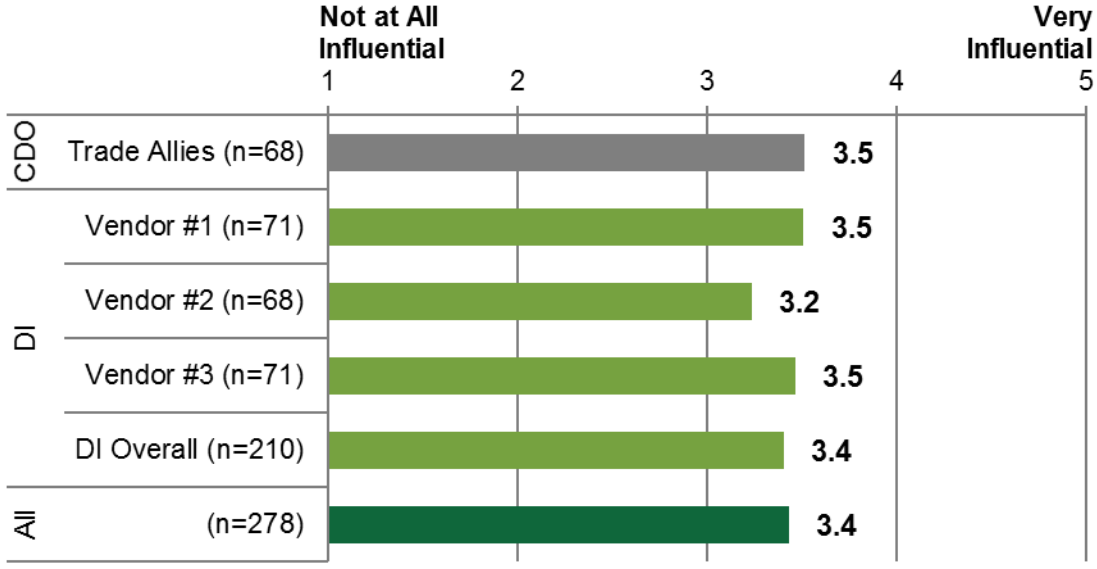
Base: Customers aware of the DI and CDO Channels



Multiple choice question; asked only of respondent who knew there are two participation channels.
The CDO *Other* category includes respondents (5) who thought their contractors *were* approved.

All customers were asked to what extent the DI vendor or CDO trade ally influenced their decision to participate in the SBDI program. On a scale of 1 to 5, where 1 is "not at all influential" and 5 is "very influential," participants gave an average rating of 3.4. Average ratings for customers in the DI and CDO channels were very similar, as were ratings across vendors (Figure 13).

Figure 13: DI Vendor/CDO Trade Ally Influence

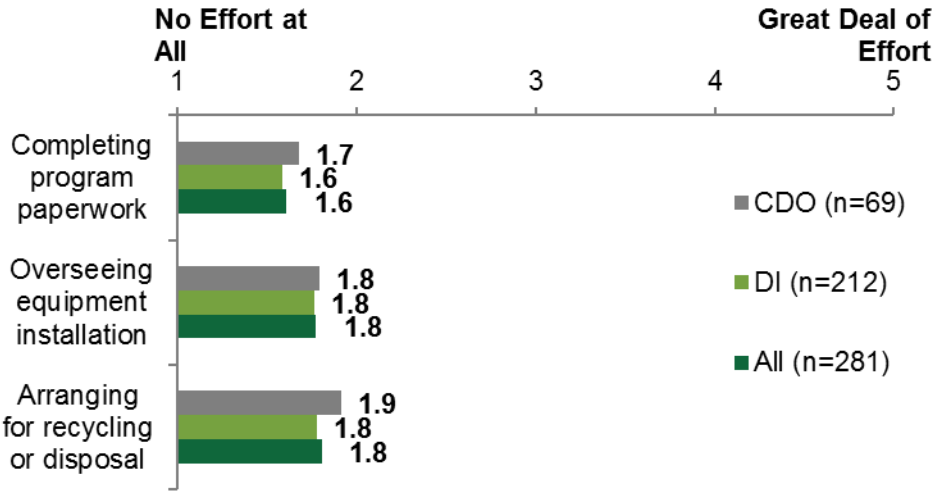


Eight customers responded "don't know" to this question.

4.5.1.2 Customers' Experience with SBDI Channels

The burden of participation appears to be equally low for customers who participate with either a DI vendor or CDO trade ally. The customer survey asked participants to indicate the extent to which they or the DI vendor or CDO trade ally was responsible for overseeing certain aspects of the program. Using a scale of 1 to 5, where 1 is "no effort at all" and 5 is a "great deal of effort," customers' average ratings were consistently on the low end of the scale, indicating that the DI vendor or CDO trade ally handled the majority of the program-related tasks (see Figure 14). The CDO customers reported slightly higher ratings than DI customers, but the differences were not statistically significant. Customers' average ratings across the DI vendors (not shown) were fairly uniform.

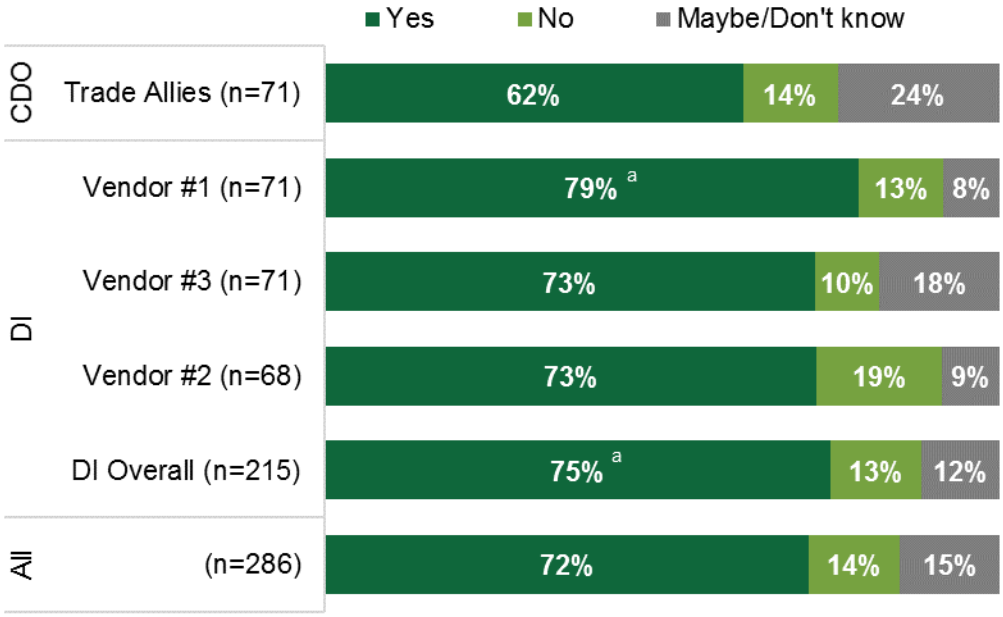
Figure 14: Customer Effort Involved



Sample sizes vary based on question; maximum sample sizes are shown.
Five customers responded "don't know" to this question.

Nearly three-fourths of all customers (72%) reported that they would work with the same DI vendor or trade ally again. DI customers (75%), in particular customers of DI Vendor #1 (79%), were significantly more likely than CDO customers (62%) to report that they would work with the same trade ally. When asked if they would use the same DI vendor or CDO trade ally again, the majority of customers stated that they would (72%). Customers' responses across DI vendors were relatively similar, as shown in Figure 15. Customers who participated in the CDO channel were less likely to say that they would work with the same trade ally and reported a higher percentage of "don't know" responses than their DI counterparts. Sixty-two percent said that they would work with the same trade ally again, and 24% said "maybe" or "don't know." Because numerous trade allies provide services in the CDO channel, there is likely to be more variation in customers' experiences. The customers served by four trade allies who represented over two-thirds of the 71 CDO projects in the survey sample (69%) represented only 38% of the customers that confirmed they would use the same trade ally again, but due to the small number of responses, it is difficult to draw a strong conclusion.

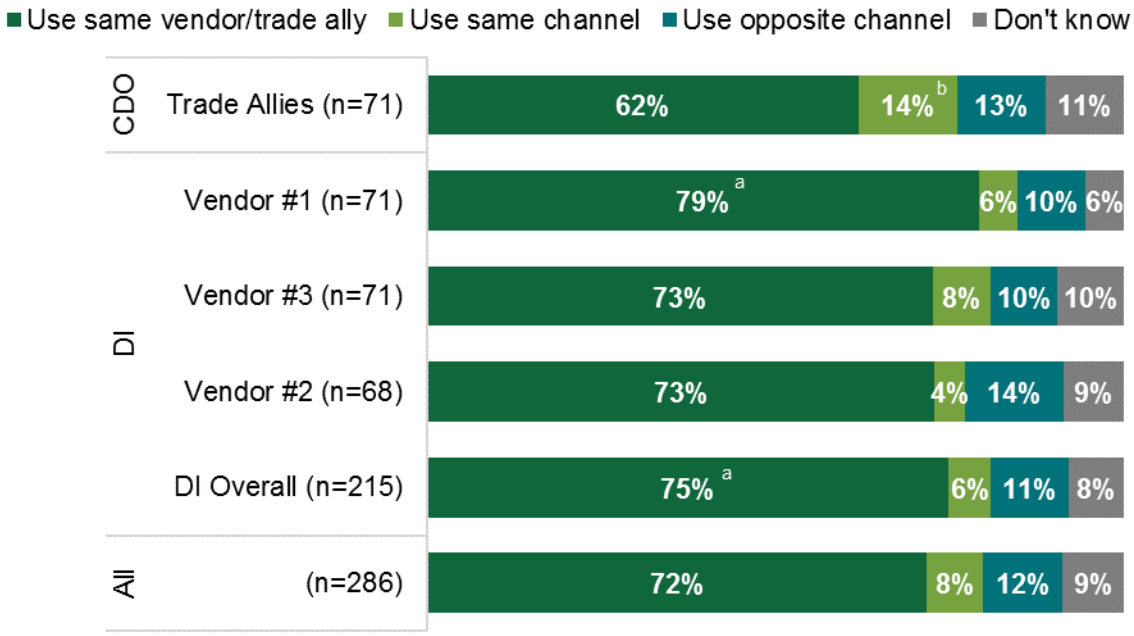
Figure 15: Would the Customer Use the Same DI Vendor/CDO Trade Ally Again?



[a] Statistically significantly higher than CDO respondents at the 90% confidence level.

The majority of customers reported that they would use the same channel again. As noted, 72% of customers would use the same DI vendor or CDO trade ally, and on top of that, an additional 8% would still use the same channel even if they were uncertain about using the same vendor or trade ally—meaning that, in total, 80% of customers would use the same channel that they had (Figure 16). Despite the fact that CDO participants were least likely to say that they would use the same trade ally again, they were not overwhelmingly opposed to using the CDO channel again (13%) when compared to DI customers (11%).

Figure 16: Would the Customer Use the Same Channel Again?



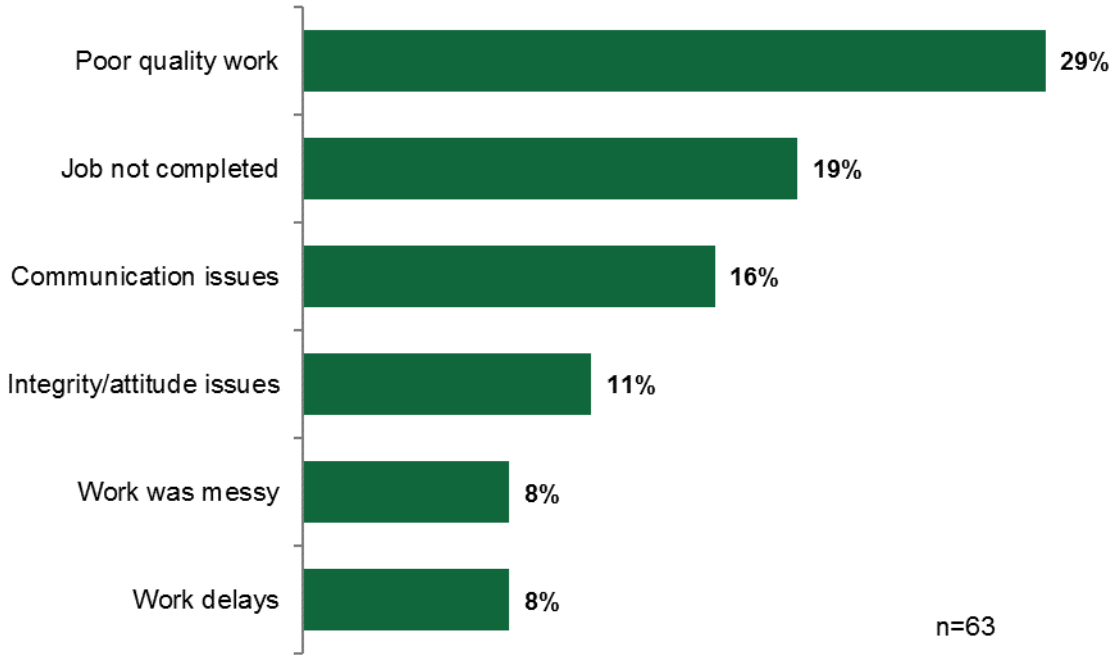
Use same channel refers to those who would not use same vendor/trade ally, but would use same path.
[a] Statistically significantly higher than CDO respondents at the 90% confidence level.
[b] Statistically significantly higher than DI respondents at the 90% confidence level.

Customers who said that they would not use the same DI vendor or CDO trade ally were asked to explain why. The most common responses overall referred to poor (29%) or incomplete work (19%), communication issues (16%), and integrity/attitude problems (11%; Figure 17). Below are a few remarks from customers on this topic.

> *I [have] participated three times. I have seen energy savings and was glad I [participated]. However, all three times the contractor used seems to be more concerned about rushing through than doing a really great job. All three times there were issues and none of them were dealt with in an acceptable manner. I just gave up.*
>
> *They were not responsive to follow-up calls with issues with the lighting, they missed a fixture, [and] tried to charge additional items after install. [Their] sales approach was poor. [I] would not recommend them.*

Figure 17: Customers' Reasons for not Wanting to Work with the Same DI Vendor/CDO Trade Ally Again

Base: Customers who would not use the same vendor/trade ally in the future

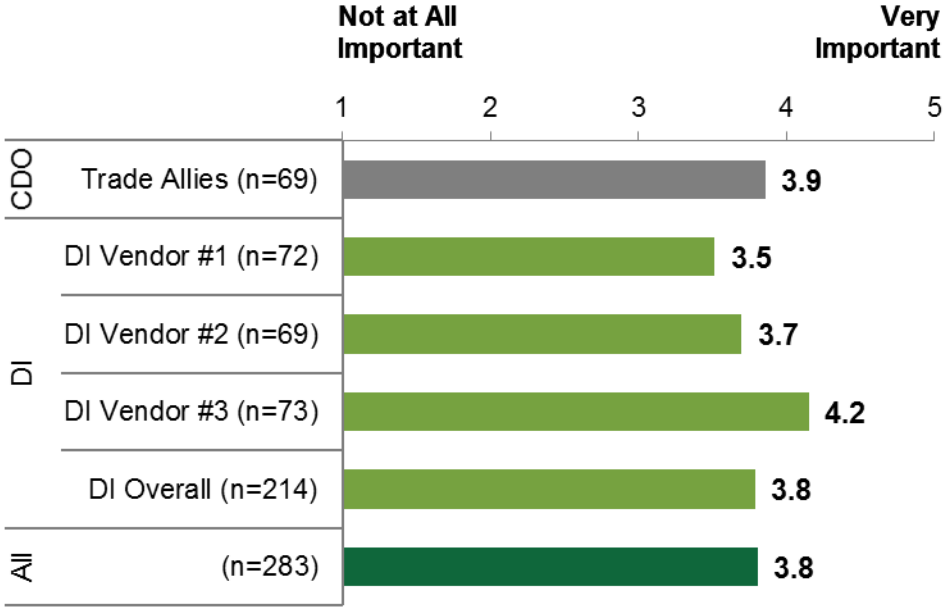


Multiple choice question asked of respondents who would not use the same contractor again.

4.5.2 Equipment Recycling and Disposal

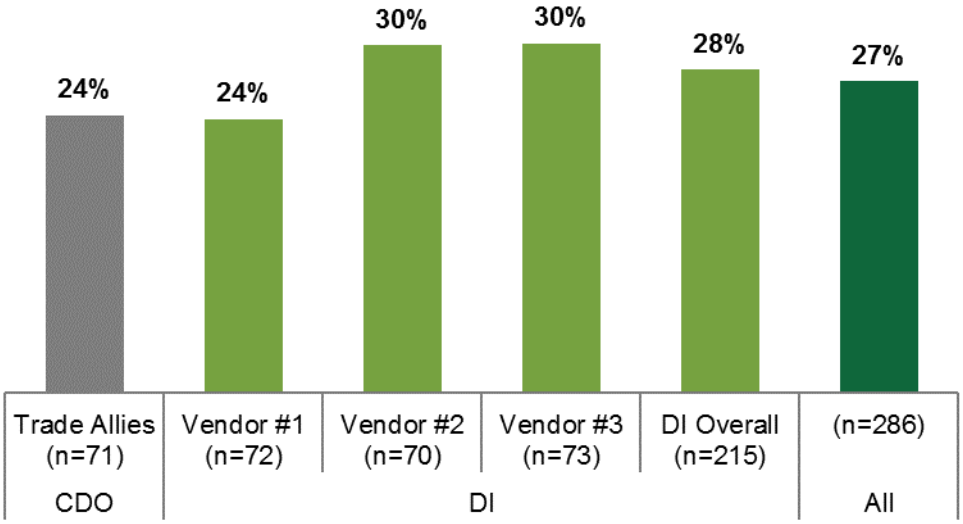
Program support for the recycling and disposal of replaced equipment appeared to be important to customers' participation (average rating of 3.8 on a 5-point scale). Customers indicated that, depending on the cost, they would be willing to pay an additional fee for this service. As described earlier, program vendors and trade allies arrange for the removal of all recyclable equipment that is replaced during the installation. The cost of this service is built into the customer's total cost for CDO projects and is paid for by the SBDI program for the DI projects. The cost of recycling depends on the size of the replaced equipment and the number of units, but for both CDO and DI projects the cost is not visible to the customer. Program equipment recycling and disposal appeared to play a fairly important role in the customers' decision to make upgrades through the program. On a scale of 1 to 5, where one equals "not at all important" and five equals "very important," customers rated the importance of the program recycling and disposal a 3.8 (Figure 18). CDO (3.9) and DI (3.8) customers did not provide notably different average ratings.

Figure 18: Importance of Program Recycling and Disposal on Customer Decision to Participate



Slightly more than one-quarter of customers (27%) speculated that they would have made upgrades through the program even if the program's equipment recycling and disposal service charged an additional fee (Figure 19).

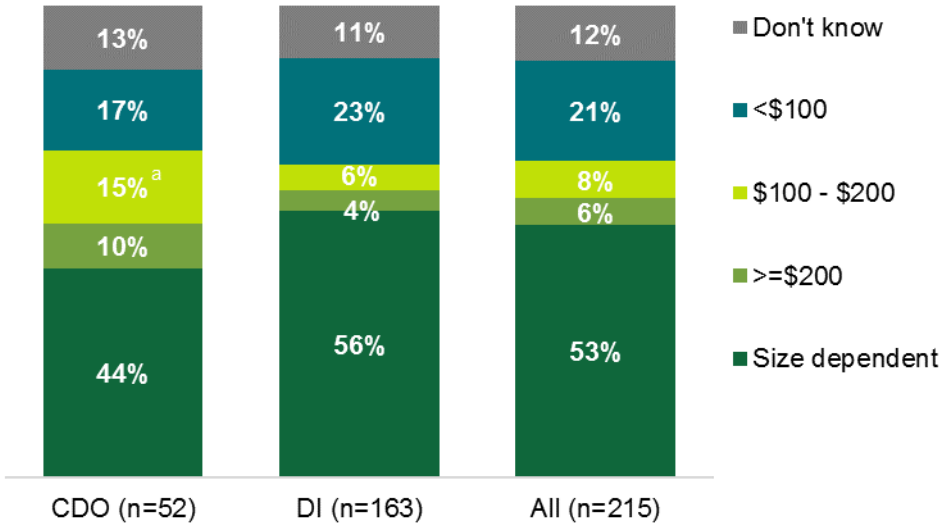
Figure 19: Would the Customer Make Program Upgrades if Program Recycling and Disposal Service Charged a Fee?



As Figure 20 shows, of the 27% of customers who said they would have been willing to pay an additional fee for the service, more than half (53%) reported that the amount of the fee

they would be willing to pay would depend on the size of the job. One-fifth (21%) said they would have paid less than $100. CDO customers were significantly more willing to pay higher fees than DI customers: 25% of CDO customers were willing to pay $100 or more, while only 10% of DI customers would pay a fee of that size.

Figure 20: How Much Would Customers Pay for Equipment Recycling and Disposal?



Asked of respondents who said, they still would have made the upgrades if the program had charged a fee to remove the replaced equipment.
[a] Statistically significantly higher than DI respondents at the 90% confidence level.

4.5.3 Payment Options

4.5.3.1 Implementers' Perspective

The program implementers all felt that the no-cost financing option was an exceptional benefit to customers, and felt that removing this payment option would have a negative effect on customer participation. All of the interviewees reported that the option for customers to pay for the upgrades, interest free, for up to two years on their electric bill was an extremely strong selling point for the program. All of the DI vendors and CDO trade allies stated that this option is important for promoting sales. A few of their comments are included below.

> *It's an important piece of the sales pitch, particularly for projects that show a return on investment within 24 months. It's important when you can show a customer that energy savings can cancel out project costs.*

> *It's a huge advantage. This is the only program that we run that has on-bill [no-cost] financing. Especially where the program is with incentives, it's huge to be able to offer that to customers.*

> *With the on-bill [no-cost] financing, you can advertise to the customer, there's no cash outlay, nothing out of your pocket. By the time you're getting billed for this, your electric bill is already lower. It's paying for itself.*

All of the DI vendors and CDO trade allies stated that removing this option would have a negative effect on the program. Respondents speculated that participation—and, by extension, sales—would drop as a result. Two of the four trade allies mentioned that their company would no longer participate in the program. One trade ally mentioned that the reduced incentives have negatively impacted sales, and eliminating no-cost financing would make it even hard to sell projects. Another trade ally noted that their company only uses the no-cost financing with their customers, and removing this option would require them to assume the liability for collecting the lump sum one-time payment, which is something that they are not willing to do.

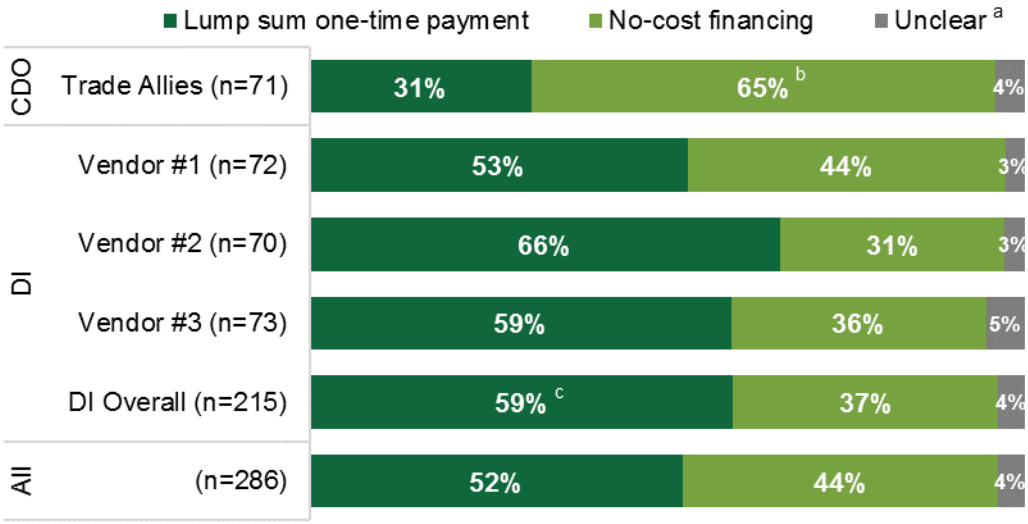
4.5.3.2 Customer Participation

About one-half of the customers surveyed (52%) paid for their upgrades by receiving a discount on the lump sum one-time payment, while a little less than one-half (44%) used no-cost financing. DI customer respondents were significantly more likely than CDO customer respondents to use the lump sum one-time payment (59% versus 31%). Slightly more than one-half of the respondents (52%) confirmed that they paid with a lump sum payment, while a little less than half (44%) confirmed that they used the program's no-cost financing (Figure 21).[8] This differs from the program tracking data, which show that 46% of customers paid with a lump sum one-time payment and 54% paid through no-cost financing. Although we drew a random sample of customers, which typically helps mitigate opportunities for producing a biased sample, we observed a slight difference between the population and the sample within these subgroups. Respondents to the survey, however, were fairly representative of the subgroups within sample frame, which reduces our concern regarding biased results among survey respondents.

According to survey data, DI customers (59%) were nearly twice as likely as CDO customers (37%) to use the lump sum one-time payment. This is in keeping with the sample frame, where 58% of DI customers and 34% of CDO customers paid with a lump sum payment. While surveys did not confirm this, the difference may be a product of CDO trade allies being more effective at directing customers to the no-cost financing option (65% among survey respondents) than the DI vendors (37%). Customer respondents from Vendor #2 (31%) were least likely to use no-cost financing compared to other survey respondents; however, this was not the case in the sample frame, where Vendor #2's customers' rate of no-cost financing enrollment (42%) was identical to that of the other DI vendors in the sample frame.

[8] A small percentage of customers' responses (4%) conflicted with the program database or they did not know the payment option that they used.

Figure 21: Customers' Reported Payment Methods for Program Upgrades



[a] A small percentage of respondents were unable to confirm the path they took despite prompting based on program tracking data.
[b] Statistically significantly higher than DI respondents at the 90% confidence level.
[c] Statistically significantly higher than CDO respondents at the 90% confidence level.

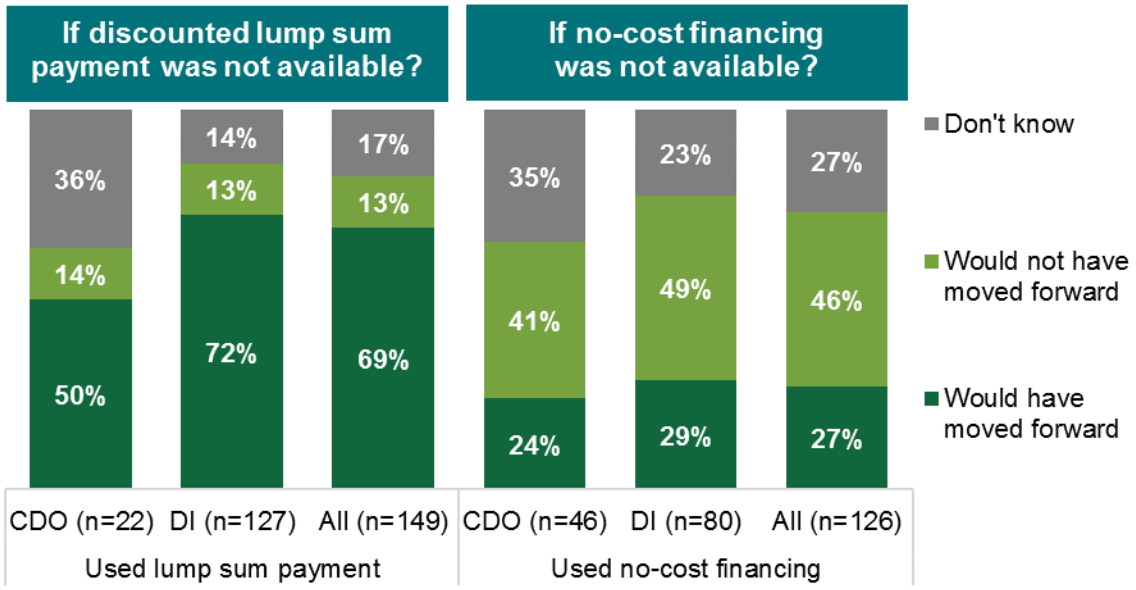
4.5.3.3 Value of Payment Options

For those customers who take advantage of it, no-cost financing really matters. Customers were asked if they would have moved forward with the program upgrades if the form of payment or discount that they used had not been available. As Figure 22 shows, more than two-thirds of customers who made a lump sum one-time payment (69%) said they would have moved forward with the installations even if they had not received the 15% discount associated with that option. Only about one-quarter of customers who used no-cost financing

(27%) estimated that they would have moved forward in absence of the no-cost financing option.

Figure 22: Rate Customers Would Have Moved Forward with Program in Absence of Form of Payment Used

Base: Customers who correctly confirmed their payment method

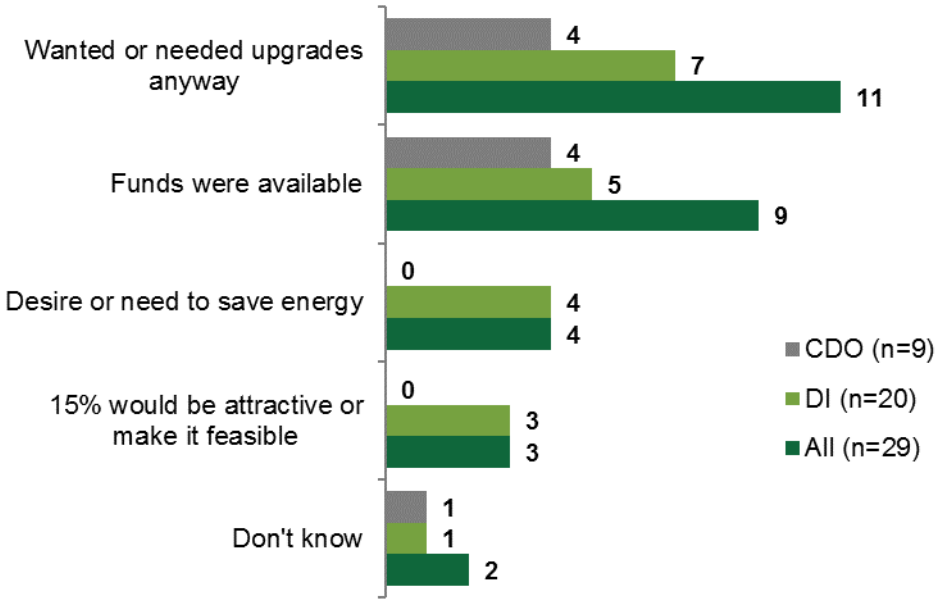


These questions were asked only of respondents able to confirm their payment method.

The small number of customers who used no-cost financing but speculated that they would have moved forward in absence of that option were most likely to explain they would have done so because they wanted or needed to install the upgrades regardless of the program (11 of 29) or they already had the funds available up front (9 of 29; Figure 23).

Figure 23: Reasons Customers Would Install Equipment in Absence of the No-Cost Financing Option

Base: Customers who confirmed using no-cost financing and indicated that they would move forward with the same upgrades in the absence of that option

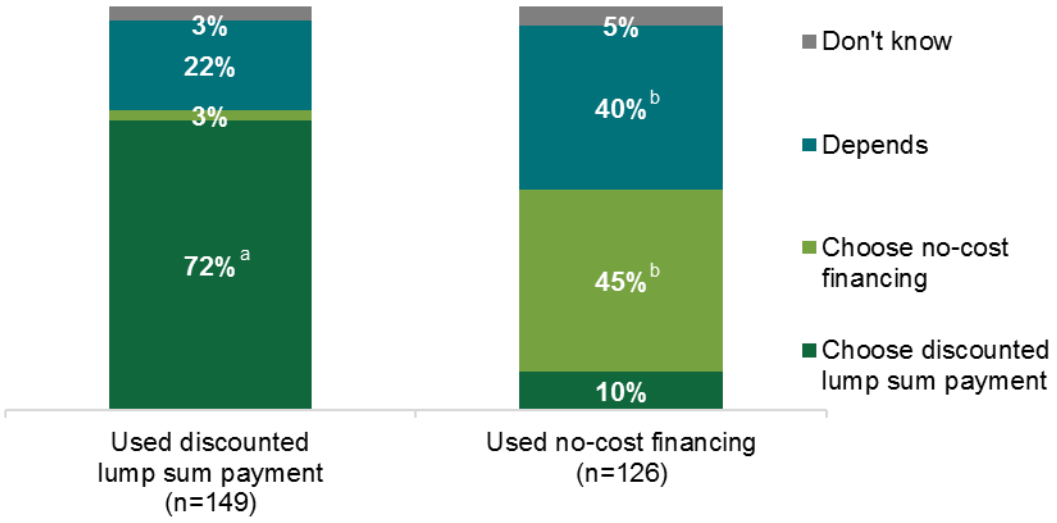


This question was asked of respondents confirming on-bill payment who would have moved forward with the same upgrades in absence of on-bill financing; note small sample sizes.
Five respondents provided responses not answering the question.

Nearly three-quarters of customers who used the discounted lump sum one-time payment (72%) believe they would pay the same way again if they were to particpiate in the future (Figure 24). Close to half (45%) of customers who paid through no-cost financing said that they would use this payment method again, while a simlar proportion (40%) said that their decision would depend on the project parameters.

Figure 24: Payment Option Customers Would Use in Future

Base: Customers who correctly confirmed their payment method

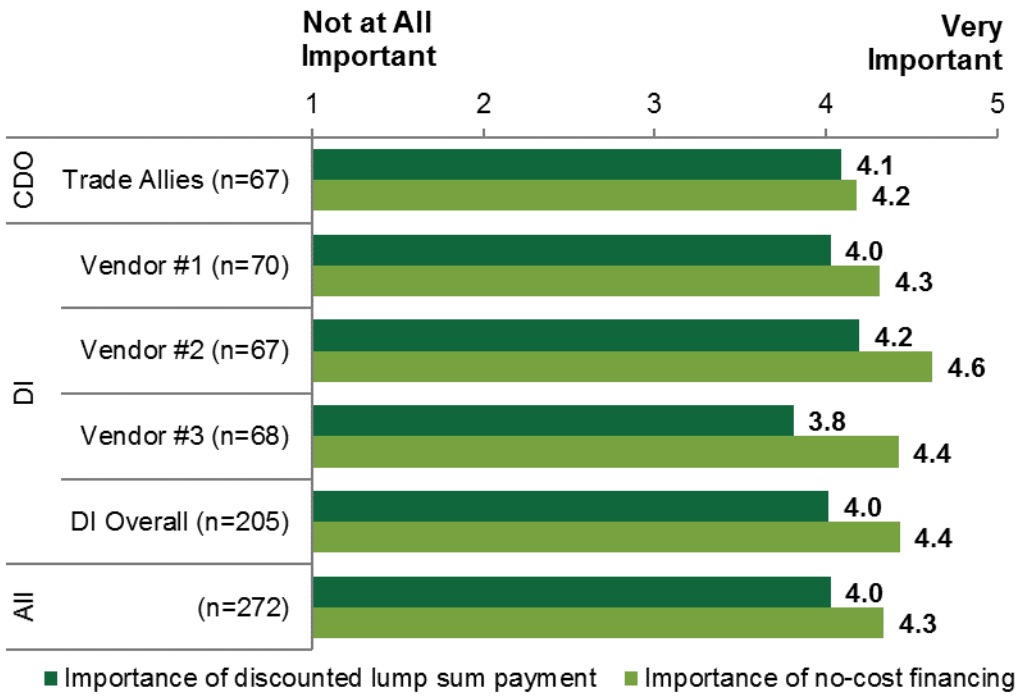


This chart excludes the 11 respondents unable to confirm their payment method.
[a] Statistically significantly higher than lump sum payment customers at the 90% confidence level.
[b] Statistically significantly higher than no-cost financing customers at the 90% confidence level.

Each set of customers said that the availability of the payment option they chose was important to their decision to install the upgrades. On a 5-point scale, the average importance ratings for lump sum on-time payment and no-cost financing options were 4.0 and 4.3, respectively (Figure 25).

Figure 25: Importance of the Availability of the Forms of Payment Used

Base: Customers who correctly confirmed their payment method

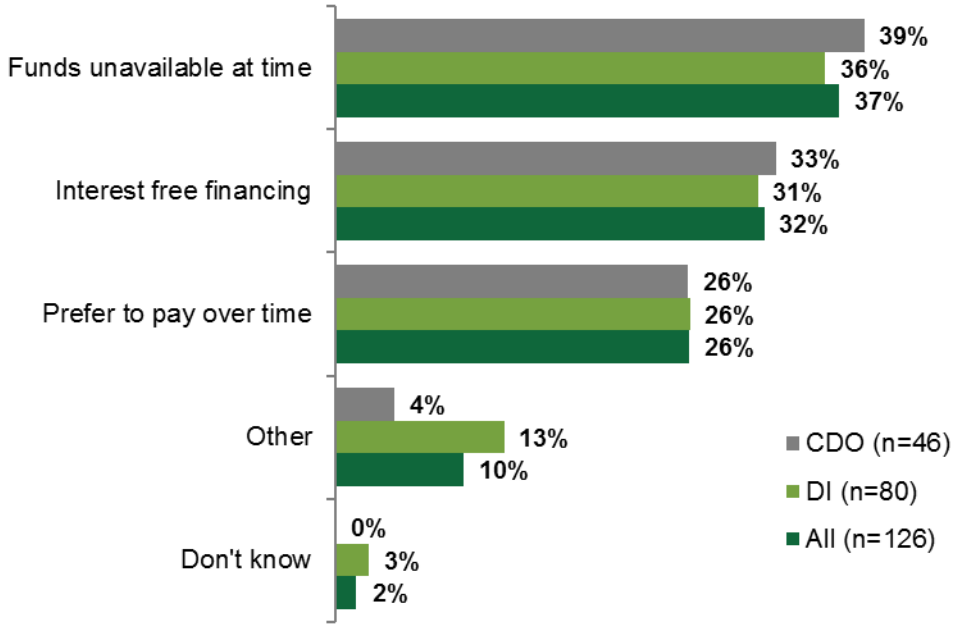


This question was asked only of respondents able to confirm their payment method.

4.5.3.4 Payment Drivers

Customers who confirmed how they paid for the program upgrades were asked why they chose to use the specific payment option. The answer categories varied by payment option and were read in random order. Customers could choose more than one reason. Figure 26 shows responses for customers who chose no-cost financing, and Figure 27 shows responses for customers who received a discount on their lump sum one-time payment. Customers who took advantage of the no-cost financing option most commonly reported doing so because they did not have the funds to pay for the upgrades at the time (34%), they were attracted to an interest-free financing opportunity (29%), or both (3%). More than a quarter (26%) prefer to pay for building upgrades over time when they can. For customers that paid with the lump sum one-time payment, the discount was by far the top driver of this decision (71%). There were no notable differences by program participation channel.

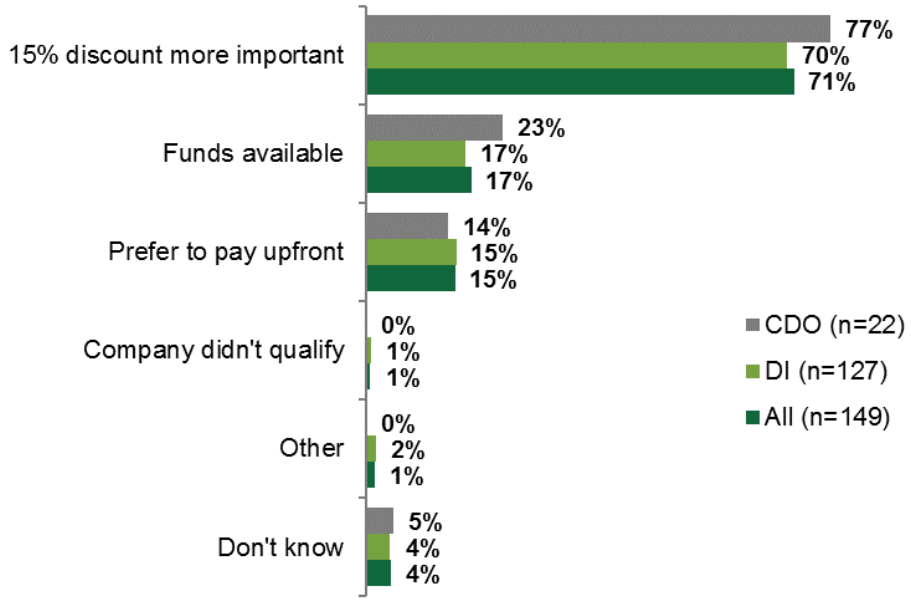
Figure 26: Reasons Customers Used No-Cost Financing



Multiple choice question: asked only of respondents able to confirm using no-cost financing.

Figure 27: Reasons Customers Paid for Program Upgrades with a Lump Sum One-Time Payment

Base: Customers who confirmed using the discounted lump sum one-time payment



Multiple choice question: asked only of respondents able to confirm using the lump sum one-time payment; note small CDO sample size.

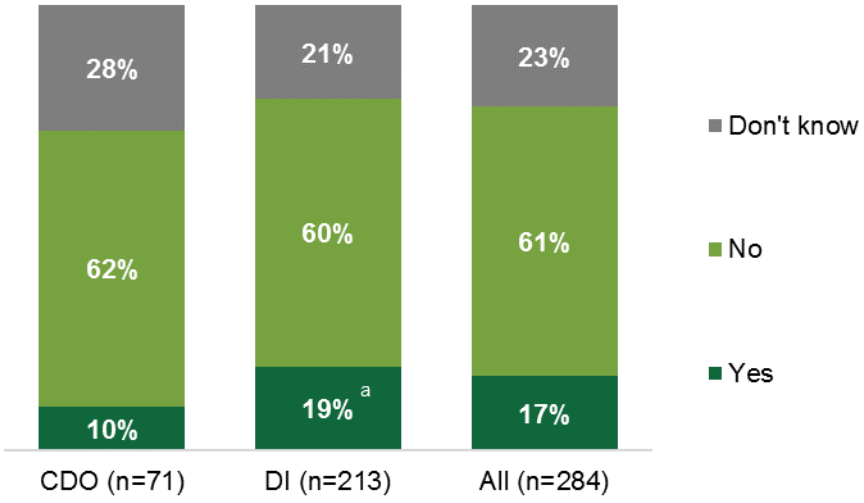
4.5.4 Additional Opportunities

4.5.4.1 Customers' Perspective

Nearly one-fifth of customers (17%) said they were interested in obtaining additional upgrades that they could not get through the program at the time of participation. The two most common measures were additional lighting (53%) and refrigeration (26%). Customers were asked if there were any energy efficiency upgrades they were hoping to get help with through the program that they could not get. While most customers responded *no* (61%), nearly a fifth (17%) responded *yes* (Figure 28). DI customers (19%) were significantly more likely than CDO customers (10%) to say yes. Of the 17% that said they were not able to obtain program help with all the upgrades they were hoping to obtain, more than one-half were interested in program support for additional lighting (53% of 47), followed by refrigeration (26%), space heating (21%), and space cooling equipment (19%,

Figure 29). The survey did not go into details regarding the specifics of the measures that were not covered. However, this is likely due to the fact that DI customers are limited to only those products that are offered through the third-party contractor that provides equipment to the program, while CDO customers can be obtain a wider range of products, as long as the products meet program requirements.

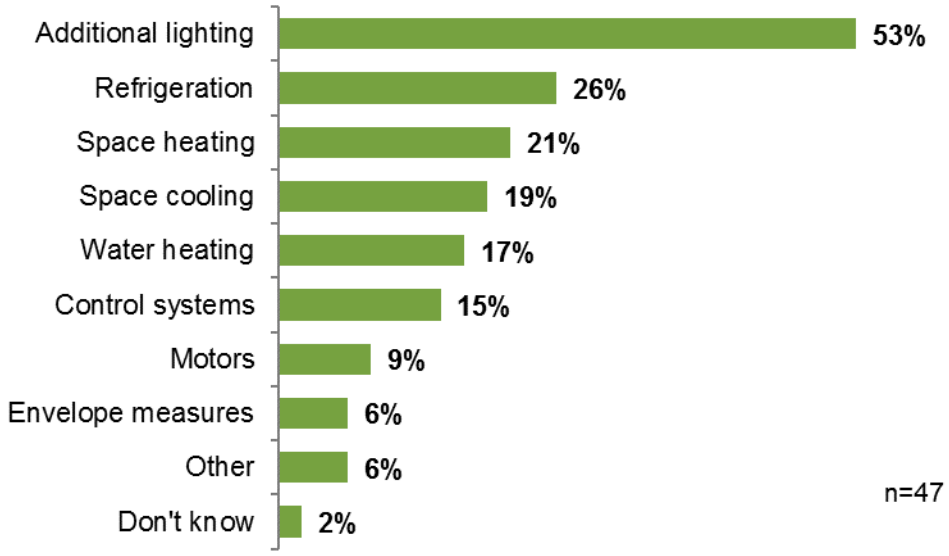
Figure 28: Were There Upgrades Customers Wanted to Get through the SBDI Program that They Could Not Get?



Two respondents were not asked this question.
[a] Statistically significantly higher than CDO respondents at the 90% confidence level.

Figure 29: For which Measures Do Customers Want Additional Program Support?

Base: Customers who reported an interest in additional upgrades



Multiple choice question: asked of respondents requesting additional equipment.

4.5.4.2 Implementers' Perspective

According to the program implementers (four of eight), the SBDI program should expand to cover HVAC systems and components. During the interviews, NMR asked vendors (including the CDO implementation vendor) and the CDO trade allies if there were any potential gaps in coverage in terms of measures or market segments. Interviewees most frequently mentioned HVAC systems or components such as variable frequency drives or economizers; four of the eight respondents mentioned this as a possible measure category to expand offerings. Other responses included programmable thermostats, water-saving devices, boiler room controls, and lighting automation controls.

Table 8: Which Measures Do Implementers Suggest for Program Inclusion?

Measures	Count
Sample size	*8*
HVAC	4
Programmable thermostats	1
Water saving devices	1
Boiler room controls	1
Lighting automation controls	1
Prescriptive non-lighting electric measures (unspecified)	1
Demand Response	1
None	1

Note: Multiple responses possible.

When asked about specific market segments that the program should consider, only two interviewees offered concrete insights. One respondent felt that local outlets of national franchises or chain stores may miss out on the benefits of the program, because while each location would qualify as a small business due to the level of energy use at the location, corporate offices in other states are likely to make decisions about what kind of equipment is installed at each location. Another interviewee noted that the SBDI program should increase the energy usage eligibility from 110 kW per month to at least 200 kW, as doing so would help reach mid-sized customers who currently are not eligible for SBDI and may not be targeted as aggressively by the large C&I program as customers that use more than 200 kW per month.

4.5.5 Competition Between Implementers

Implementers reported experiencing program-related rivalry, but there was little evidence that the competition has created confusion in the marketplace. The fact that the structure of the program allows DI vendors and CDO trade allies to offer SBDI services in the same region naturally creates marketplace competition between the two groups and among trade allies. All three of the DI vendors and three of the four trade allies stated that they have encountered program-related competition. All three of the DI vendors mentioned that the primary deciding factor for customers is the final project cost. One of the DI vendors also emphasized the benefit of being able to offer customers a turnkey approach by helping the customers from "start to finish." According to this vendor, "Just the word *turnkey* says we can offer everything. We handle everything from start to finish for the customer. [It's a] smoother process."

In addition to marketplace competition, there appears to be a perception from both DI vendors and trade allies that one channel has an "unfair" advantage over the other, which could lead to marketplace confusion between the two different channels. For example, one of the DI vendors remarked:

> *I understand the difficulty to police trade allies, and make sure they are delivering [the] program message in the proper way. The feedback that I'm getting from [my] sales people is that there's a lot of misinformation about who's allowed to propose measures through the program. A lot of [trade allies] claim to be a turnkey [DI] vendor or vendor chosen by National Grid.*

This same vendor thought that this dynamic could result in "marketplace confusion," and noted it as a potential challenge, as reported in 4.2.1.2 Implementers' Perspective.

One of the trade allies also voiced concern about the competition having an unfair advantage, but from the CDO perspective:

> *They [DI vendors] are allowed to go into places and say that they're National Grid and they're here to replace the lights. I feel like that creates an unfair competitive advantage for no reason*

Although there was little evidence that the competition has created confusion among customers, future evaluations may seek to explore these issues further, based on the DI vendors' and trade allies' contrasting perspectives.

4.6 PROGRAM DATA AND TRACKING

The evaluation set out to document practices for tracking program data and identifying areas for improvement.

4.6.1 Challenges with InDemand

Although InDemand is a valuable source of information, NMR's review of program data along with information gathered through interviews with program stakeholders revealed a few significant limitations. In general, the reported challenges fell into three main areas: software and technical issues, efficiency, and consistency.

4.6.1.1 Software and Technical Issues

All of the interviewees reported significant software and technical challenges that negatively affect their productivity. The three DI vendors and the CDO implementation vendor all reported serious challenges with using InDemand. They mentioned that the software often runs very slowly, frequently crashes, and is repeatedly down for extended periods of time. Two other vendors noted that the slow performance and regular outages negatively impact their productivity. One vendor stated, "We're all about volume and speed; that's the one thing slowing us down." Another remarked, "We have some people whose sole job is in InDemand, and when it goes down, it's money down the drain." One vendor also noted that all other field staff use mobile devices for data collection, which is not possible with InDemand.

4.6.1.2 Efficiency

Interviewees noted considerable inefficiencies due to duplicate data tracking systems. Three of the four vendors (including the CDO implementation vendor) maintain separate company-managed data tools as a standard practice, but also, in part, because InDemand does not function well for their day-to-day needs. Three of the four vendors reported that they use a separate software tool to record data that they ultimately re-enter into InDemand. Two of these vendors reported that they used a company-managed system based on their experience with other small commercial direct-install programs, which do not require vendors to use a utility-administered tool. These vendors reported that these other programs allow for more independence regarding tracking program data and require vendors to report on a set of key indicators at regular intervals. The third vendor who documented separate from InDemand explained, "I manage a lot of the progress internally on Excel files because InDemand is too slow."

4.6.1.3 Consistency

We observed inconsistent data entry practices across the three DI vendors and the CDO implementation vendor, which limits the potential for accurate, real-time reporting. In general, it appears that vendors do not record and update application statuses in a consistent manner or within the same timeframe. For example, when asked about the key applications status milestones, some vendors reported that they updated them on a different timeframe than others. Moreover, because three of the four vendors use separate tracking systems, there may be a delay in when data are subsequently entered into

InDemand. In addition, CDO application statuses differ slightly from those of the DI channel because the CDO implementation vendor is the intermediary for trade allies; they avoid using the "contract signed" status because this may prematurely lock in the cost and savings. Two DI vendors also raised the issues of not being able to update an application after the status has moved to contract signed; the two solutions to this problem are to submit a change order to National Grid—which, according to vendors, is a "complicated process"—or create an entirely new application, which makes it harder to track. The inability to change the application moving it to "contract signed" also appears to be a reason that vendors prefer to track data separate from InDemand and will update or enter the status after the job is complete. Because applications are updated within different timeframes, it is difficult to use data from InDemand for accurate, real-time reporting.

Another challenge that vendors reported is being able to distinguish customers who may have received multiple audits through the program because each audit is treated as a separate application. Although vendors reported that this is not very common, it makes it difficult for them to know whether another vendor or trade ally has also approached a potential customer and to determine the status of their application. Although it may be possible to query InDemand to determine whether a customer has multiple audits, this did not appear to be a function available to vendors.

There appear to be opportunities for discrepancies in savings estimates between different custom lighting technologies that are otherwise comparable, as custom lighting does not have predetermined specs in InDemand. In addition to the shortcomings with real-time reporting, there appears room for error in calculating savings for custom measures. Because the level of required information for custom measures is less detailed than that for prescriptive measures, it may be challenging to provide comparable savings estimates for custom lighting technologies that are not in the database. The information for prescriptive measures is preset in InDemand because it is tied to equipment procurement for DI vendors. It appears that the information for custom measures is not preset largely because the majority of custom measures come through the CDO program, where trade allies are responsible for procuring this equipment.

Appendix A Research Activities and Questions

Table 9 outlines the research activities and questions and shows how they are related to the individual data collection methods.

Table 9: Research Activities, Questions, and Methods

Research Activities and Questions	Research Methods							
	Document Review	Program Tracking Data	PM IDI (n=1)	DI Vendor IDIs (n=3)	CDO Vendor IDI (n=1)	Trade Allies IDIs (n=4)	Customer IDIs (n=6)	Customer Survey (n=286)
Describe how the SBDI program currently is implemented and how the program and outcomes may vary by customer type or delivery channel								
How is the SBDI program intended to operate? How has it changed over time, and why?	x	x	x					
What is the rationale behind the addition of a new delivery channel (CDO)? Is this change leading to the expected outcomes?		x	x					
What are the unique strengths and challenges of each delivery channel? Do the different delivery channels and options meet unique customer needs?		x	x	x	x	x	x	x
What led to the decision to allow lighting vendors to offer non-lighting measures? What impact has this change had on vendors' experience in the program? How, if at all, has the rate of kWh savings from non-lighting measures changed since this decision?		x	x	x				
How do the SBS projects vary by delivery channel in terms of costs per kWh saved, types of businesses served, or other factors?		x						
How else could the program overcome barriers to participation and increase savings?	x	x	x	x	x	x	x	x
Document practices for tracking program data and identify opportunities for improvement								
Are any of the data being collected through InDemand not needed by the program? Are any needed data not being collected? Could program data tracking be reduced or streamlined while still meeting program goals and reporting needs?	x	x	x	x	x			
How, if at all, could InDemand be made easier or more efficient for vendors to use without compromising program data needs?	x	x	x	x	x			
Document training offered by program, assess training needs, and identify opportunities to enhance program effectiveness through training								

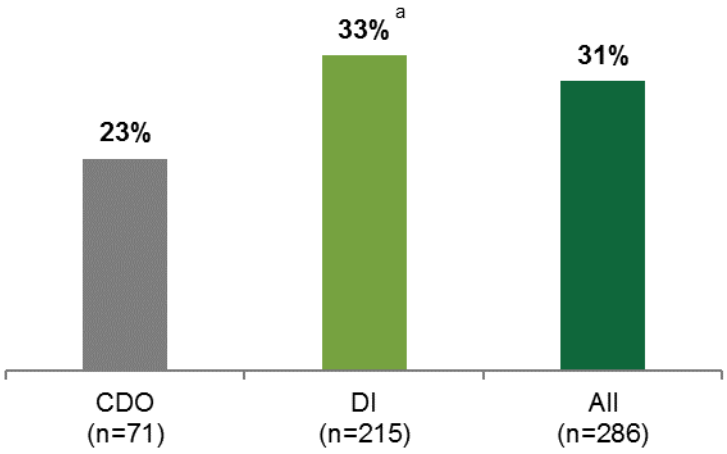
Research Activities and Questions	Research Methods							
	Document Review	Program Tracking Data	PM IDI (n=1)	DI Vendor IDIs (n=3)	CDO Vendor IDI (n=1)	Trade Allies IDIs (n=4)	Customer IDIs (n=6)	Customer Survey (n=286)
What training is offered to vendors and trade allies working in each delivery channel? What additional training could vendors and trade allies use in order to improve program effectiveness?			x	x	x	x		
Document QA/QC practices								
What QA/QC practices do vendors and the program undertake? What areas warrant additional QA/QC?			x	x	x	x		
Examine existing marketing practices and the extent to which RPAs and trade allies promote the SBS program								
How does National Grid NY market the SBDI program?	x	x	x	x	x	x		
How do vendors market the SBDI program?				x	x			
How do trade allies market the SBDI program?						x		
Assess customer experiences and satisfaction with different program delivery channels and options								
What is the customers' experience of the program?				x	x	x	x	x
How do customers perceive the program and National Grid given communications and interactions with multiple vendors and other National Grid programs?				x	x	x	x	x
How do customer experience and satisfaction vary by delivery channel?			x	x	x	x	x	x
What might be done to improve customer satisfaction with the program?			x	x	x	x	x	x
What else might be done to improve the close rate?	x	x	x	x	x	x	x	x
Are any customer groups underserved? If so, which ones?		x		x	x	x	x	x
What is the value to customers of the recycling offered by the program?			x	x	x	x	x	x
What is the value to customers of the no-cost financing offered by the program?			x	x	x	x	x	x

Appendix B Decision-Making Process

To lay the groundwork for future program net-to-gross analysis efforts, the customer survey asked respondents a series of questions assessing their decision-making process and the importance of the SBDI program within that process. Their responses do not initially imply overwhelming signs of potential free ridership; while some had specific energy efficiency project plans before learning about the program, many said their budgets could not have accommodated the cost of the projects without the program discount, and nearly the same share would not have made the upgrades in absence of the program. A small yet noticeable share still would have installed equipment of the same or higher efficiency in absence of the program discount; similarly, some still would have installed the equipment in the near future without the program discount. This appendix provides further details.

Nearly one-third of surveyed customers (31%) had specific plans to complete energy efficiency upgrades even before they learned about the program (Figure 31); this was significantly more common among DI customers (33%) than CDO customers (23%).

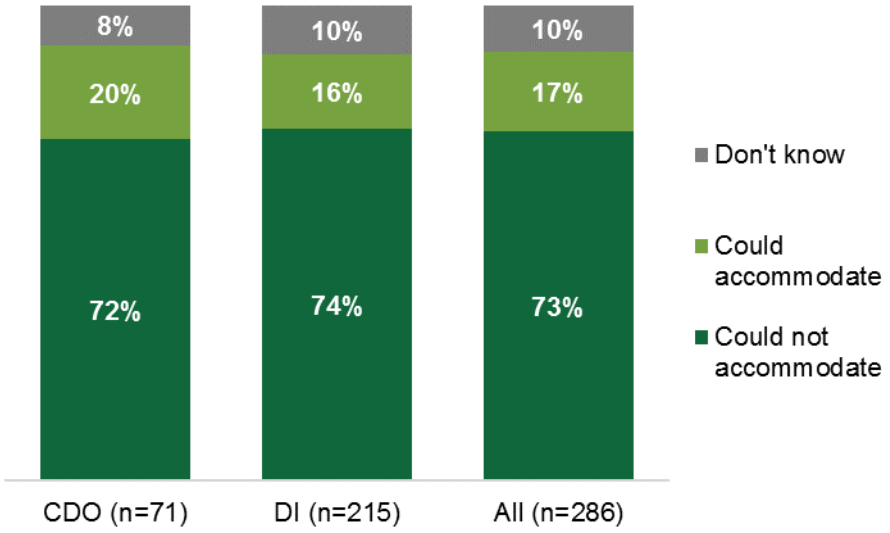
Figure 31: Customers with Specific Plans to Complete Upgrades before Learning about the Program



[a] Statistically significantly higher than CDO respondents at the 90% confidence level.

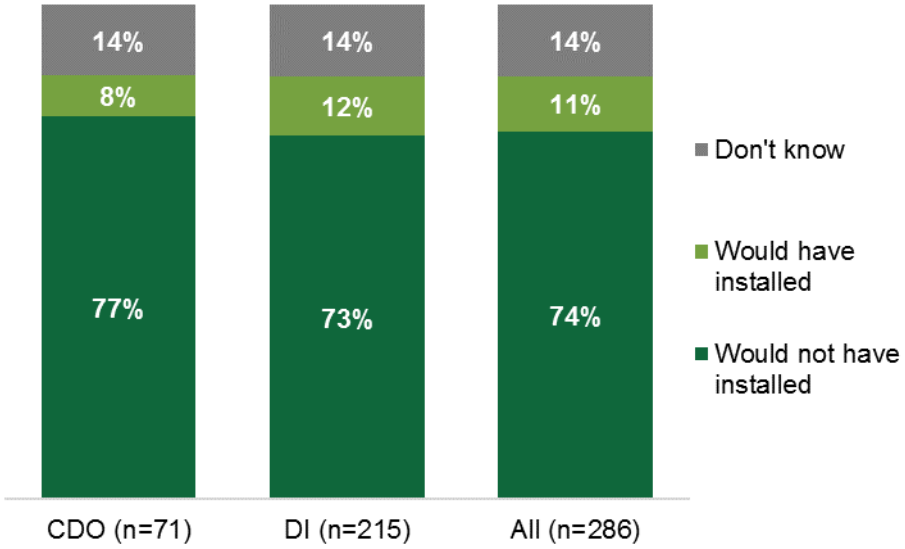
As shown in Figure 32, the majority of customers' budgets (73%) could not have accommodated the full cost of the upgrades without the program discount—a possible sign of low free ridership. This trend did not differ by delivery channel.

Figure 32: Customer Ability to Accommodate Full Upgrade Cost in Absence of Program Discount



In another sign pointing to low free ridership, most customers (74%) expected that if the program discount had not been available, they would *not* have purchased and installed the exact same make and model of equipment that they obtained through the program (Figure 33).

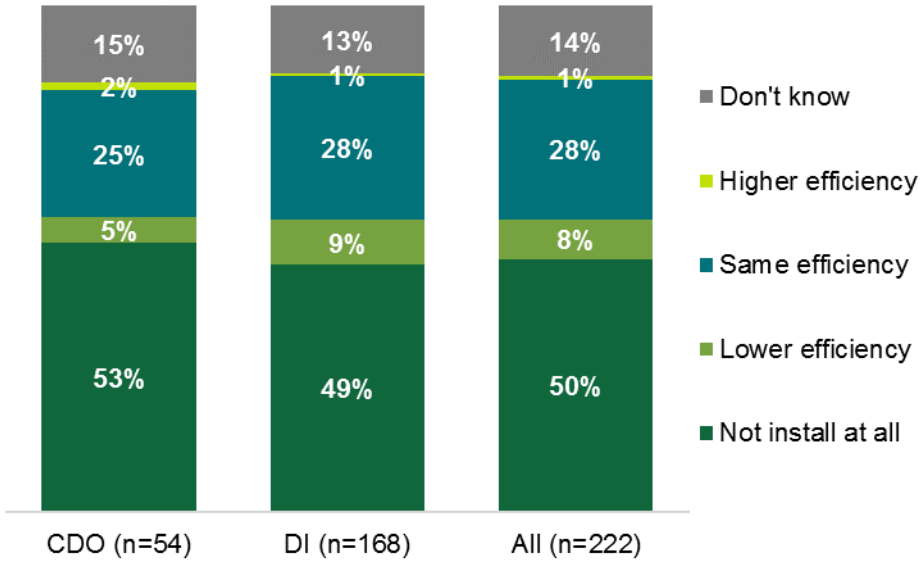
Figure 33: Customer Would Have Purchased and Installed the Same Make and Model in Absence of Program Discount



One-half of the customers (50%) who reported that they would not have installed the exact same make and model in absence of the program discount indicated that they would not have installed the upgrades at all. Eight percent thought that they would have installed the upgrades, but with lower efficiency models. At the same time, more than one-quarter of the customers would have installed equipment of the same (28%) or higher (1%) efficiency. As Figure 34 shows, there was little to no variation between CDO and DI customers' responses.

Figure 34: Customer Speculation – Efficiency Level Selection in Absence of Program Discount

Base: Customers who said that without the program discount they would not have purchased the exact same make and model of equipment



Asked only of respondents who reported they would not have purchased and installed the exact same make and model of equipment in absence of the program discount.

While about one-fifth of customers (21%) would not have made the upgrades at all without the program discount, nearly the same share thought that they would have made the upgrades either at the same time (14%) or within the year (5%). Roughly two-fifths of customers (43%) speculated that without the program, they would have made the upgrades in one year or later. A symbol of higher free ridership, DI customers were significantly more likely than CDO customers to estimate that they would have made the installations at the same time or within the year (21% compared to 13%, *cumulatively*; Figure 35).

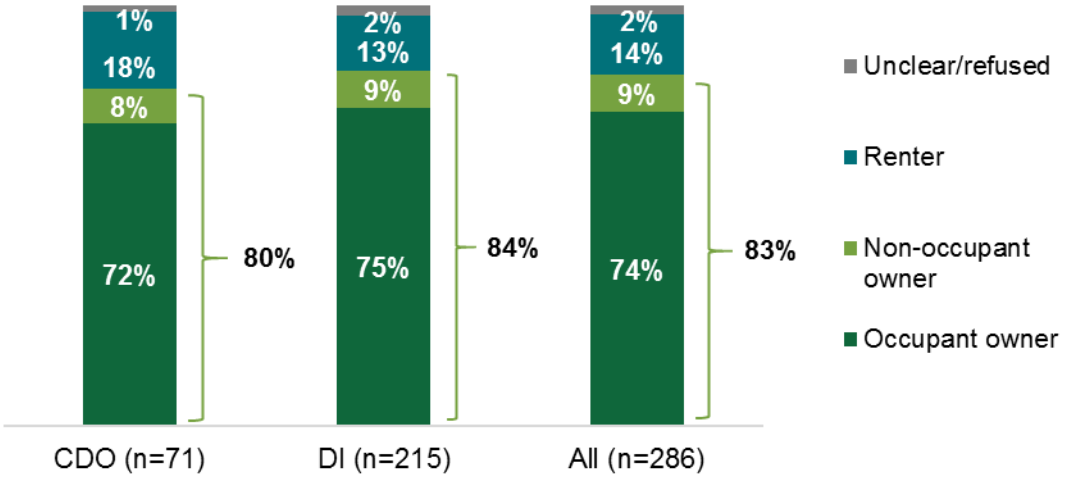
Figure 35: Customer Speculation – Timing of Installation in Absence of Program Discount

[a] Statistically significantly higher than CDO respondents at the 90% confidence level.

Appendix C Customer Firmographics

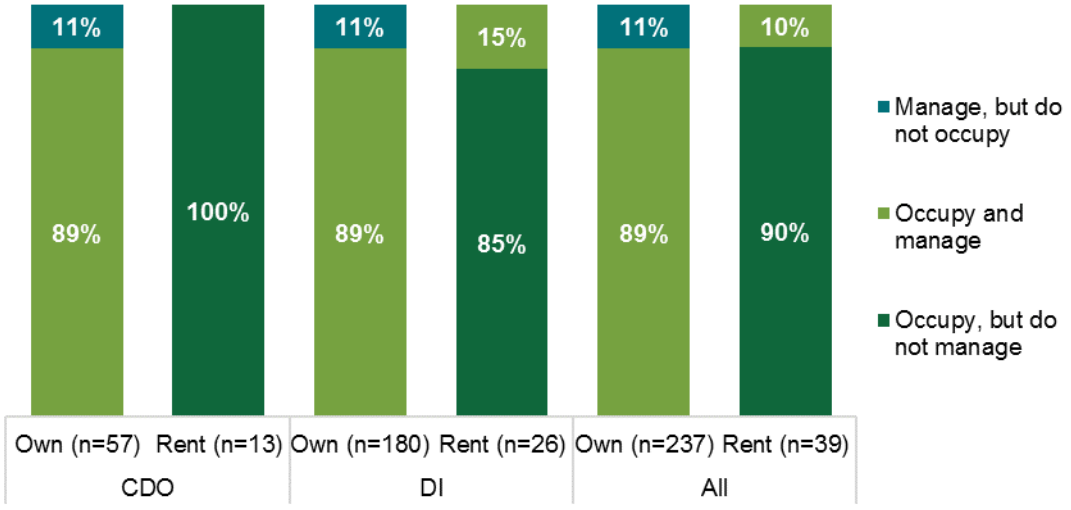
Most of the customers surveyed (74%) are owner-occupants. The majority of customer survey respondents (83%) owned the premises where program upgrades were made (Figure 36). All of the owner-occupants own, occupy, or manage their own spaces (Figure 37). Only 11% of the premise owners do not occupy the premises, and only 10% of renter respondents also manage the premises in addition to occupying them (Figure 38).

Figure 36: Customer Survey Respondent Premise Tenure



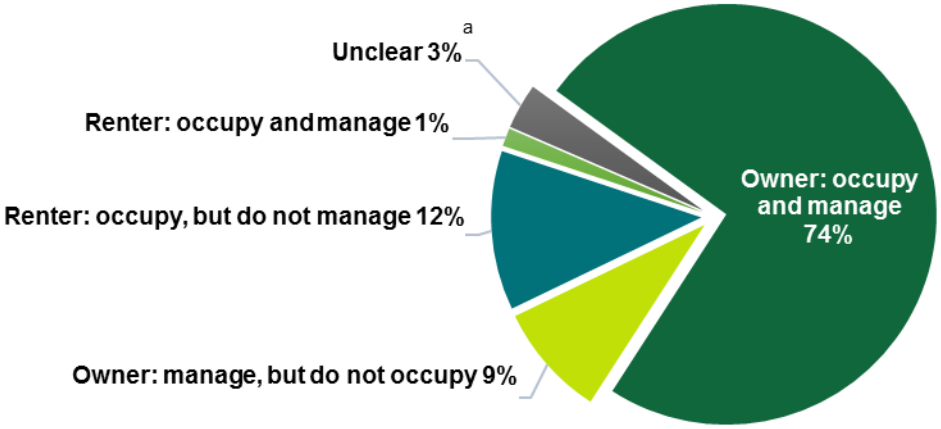
Percentages next to brackets show percentages of total sample that are owners.

Figure 37: Customer Survey Respondent Premise Management and Occupation



Ten respondents could not clarify the nature of their tenure.

Figure 38: Customer Survey Respondent Premise Tenure, Management, and Occupation

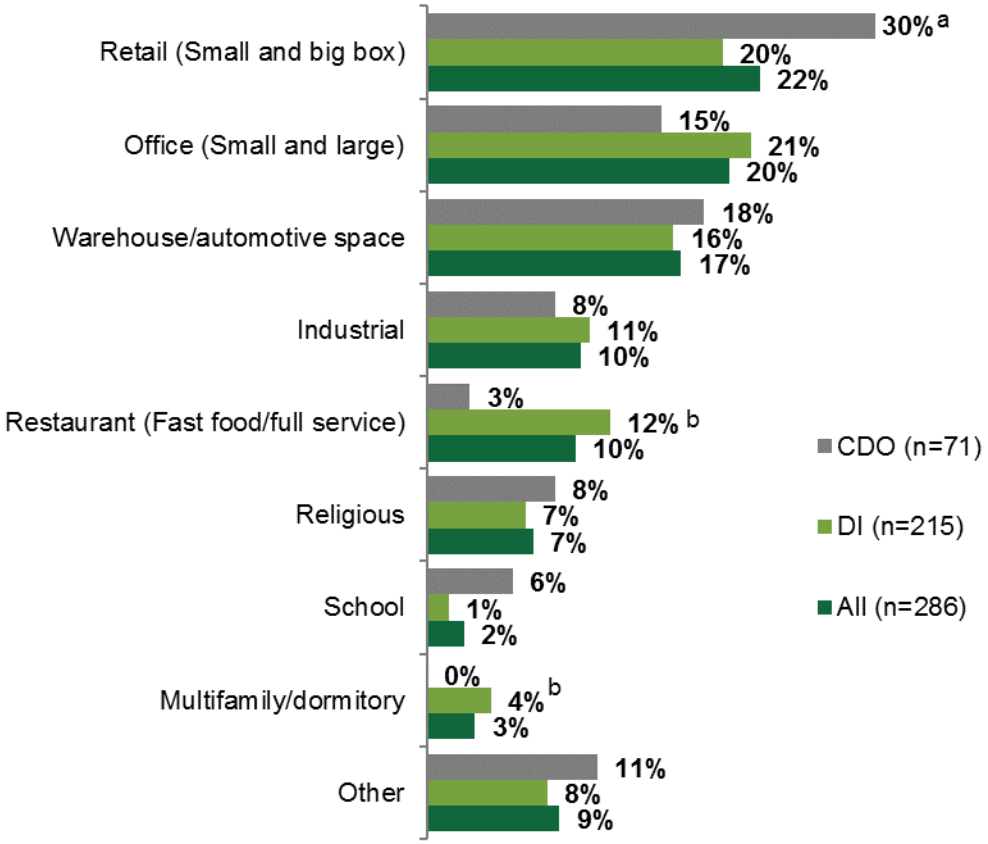


[a] Ten respondents could not clarify ownership, tenure, *and* management. n=286

C.1 BUSINESS TYPE

The survey asked customers to classify their participating sites' business types if that information was not in the program database. Adding their responses to the program database entries resulted in more than one-fifth of the sample (22%) being retail, with less than 1% being big box stores (Figure 39). The CDO channel (30%) was significantly more likely than the DI channel (20%) to have treated retail businesses. The next most common business type was offices, with one-fifth of the sample consisting of small (14%) and large (6%) offices combined. The DI channel (12%) was significantly more likely than the CDO channel (3%) to treat restaurant respondents—in particular, this difference was noticeable among full-service restaurants (10% versus 1%, respectively).

Figure 39: Customer Survey Respondents' Business Type

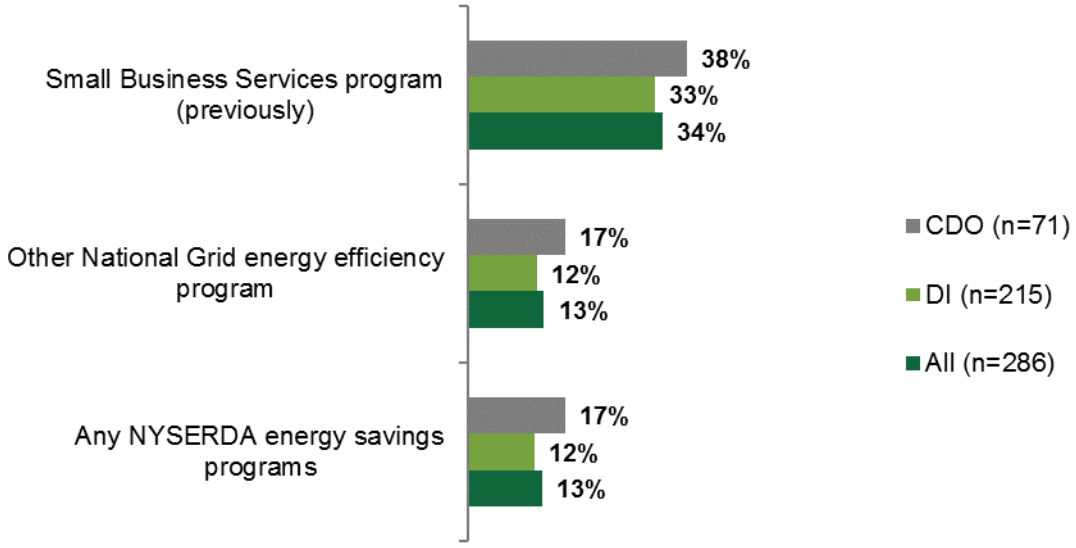


Other includes grocery, firehouses (each 2%) municipal buildings, farms, and hospitals (each 1%).
[a] Statistically significantly higher than DI respondents at the 90% confidence level.
[b] Statistically significantly higher than CDO respondents at the 90% confidence level.

C.2 Previous Participation in Energy Efficiency Programs

SBDI generates repeat business. Roughly one-third of respondents (34%) reported having previously participated in the SBDI program (Figure 40). Thirteen percent of customers stated that they had taken advantage of another National Grid program, and 13% also stated that they had participated in a program offered by NYSERDA.

Figure 40: Previous Participation in Energy Efficiency Programs (n=286)



Appendix D Customer Survey Results

This appendix provides summary-level results from the customer surveys and a comparison of results between CDO and DI customers.

Table 10: Customer Survey Results

(Base: Varies depending on survey items – maximum bases shown)

Indicator	All n=286	CDO n=71	DI n=215	Stat. Sig. Difference CDO vs DI[1]
Program Satisfaction (1=Very dissatisfied, 5=Very satisfied)				
Contractor	4.3	4.2	4.4	--
Equipment	4.6	4.5	4.6	--
Recycling/disposal	4.2	4.2	4.2	--
Savings	4.3	4.2	4.4	--
Overall experience (5-scale)	4.4	4.3	4.5	--
Net Promoter Score				
Promoters	74%	65%	77%	**DI**
Passives	18%	20%	18%	--
Detractors	7%	14%	5%	**CDO**
NPS (% Promoters - % Detractors)	67	51	72	DI
Repeat Business				
Would use the same vendor/trade ally again	72%	62%	75%	**DI**
Would use the same channel again	80%	76%	81%	--
Program Strengths: What was the Single Best Thing about SBDI?				
Energy/cost savings	48%	55%	46%	--
Ease of participating	27%	20%	30%	**DI**
Customers' project costs	8%	8%	7%	--
Enviro-friendly upgrades	5%	4%	5%	--
Program Challenges: If You Could Change One Thing about SBDI What Would it be?				
No changes needed	22%	21%	22%	--
Increase incentive	26%	32%	23%	--
Pick up old equipment quicker	10%	6%	12%	**DI**
Include more equipment	10%	10%	11%	--
Include equipment at no cost	9%	10%	9%	--
Increase installation oversight/QC	8%	8%	8%	--
How Customer First Heard about SBDI				
Reached out to National Grid	6%	1%	7%	**DI**
Word of mouth	21%	14%	23%	**DI**
National Grid outreach/marketing	23%	18%	25%	--

Indicator	All n=286	CDO n=71	DI n=215	Stat. Sig. Difference CDO vs DI[1]
DI vendor/CDO trade ally	38%	55%	33%	CDO*
Program Awareness				
Aware of the DI/CDO channels	33%	31%	33%	--
Reasons for Using DI or CDO Channels[2]				
Previously worked with vendor/trade ally	--	14%	10%	NA
Vendor/trade ally approached them	--	29%	16%	NA
Prefer single contact	--	29%	20%	NA
Process seemed easier	--	19%	31%	NA
More convenient	--	24%	60%	NA
Effort Completing Tasks (1=No effort at all, 5=A great deal of effort)				
Completing program paperwork	1.6	1.7	1.6	--
Overseeing equipment installation	1.8	1.8	1.8	--
Arranging for recycling or disposal	1.8	1.9	1.8	--
Equipment Recycling and Disposal				
Importance of recycling and disposal in decision to participate (5-point scale)	3.8	3.9	3.8	--
Customer would make upgrades if charged fee	27%	24%	28%	--
Amount willing to pay: depends on size of the job	53%	44%	56%	--
Amount willing to pay: >=$100	13%	25%	10%	CDO
Amount willing to pay: <$100	21%	17%	23%	DI
Used lump sum one-time payment	52%	31%	59%	DI
Used no-cost financing	44%	65%	37%	CDO
Reason for lump sum one-time payment: prefer to pay upfront	15%	14%	15%	--
Reason for lump sum one-time payment: funds available	17%	23%	17%	--
Reason for lump sum one-time payment: 15% discount more important	71%	77%	70%	--
Reason for no-cost financing: prefer to pay over time	26%	26%	26%	--
Reason for no-cost financing: interest free financing	32%	33%	31%	--
Reason for no-cost financing: funds unavailable at the time	37%	39%	36%	--
Relative importance of *no-cost financing* option (5-point scale)	4.3	4.4	4.2	--
Relative importance of lump sum one-time payment (5-point scale)	4.0	4.0	4.1	--
Decision Making Process				
Vendor/trade ally influence in decision to participate in SBDI (5-point scale)	3.4	3.5	3.4	--
Influence of the free energy audit on decision to participate in SBDI (5-point scale)	4.3	4.4	4.2	--

Indicator	All n=286	CDO n=71	DI n=215	Stat. Sig. Difference CDO vs DI[1]
Customer had specific plans to make upgrades before learning about SBDI	31%	23%	33%	DI
Customer could have afforded upgrades without discount	17%	20%	16%	--
Without discount would have made exact same upgrades	11%	8%	12%	--
Without discount would have made the upgrades **at the same time**	14%	11%	15%	--
Without discount would have made the upgrades **within the year**	5%	1%	6%	DI
Without discount would have made the upgrades **one year or more**	43%	44%	43%	--
Without discount would **never** have made the upgrades	21%	21%	20%	--
Participation				
Previously participated in SBDI	34%	38%	33%	--
Previously participated in another National Grid energy efficiency program	13%	17%	12%	--
Previously participated in a NYSERDA program	13%	17%	12%	--
Additional Opportunities				
There were additional upgrades that the customer could not get through SBDI	17%	10%	19%	DI

[1] Statistically significantly difference between CDO and DI customers at the 90% confidence level.
[2] Due to the relatively smaller subset of CDO customer respondents for these items (n=21), we cannot test for statistical differences between the two groups.