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GROUP
CADMUS

2021 Georgia Power Commercial DSM Program Evaluation Report

January 2022



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1 Commercial Program Portfolio Summary

The portfolio of Commercial Energy Efficiency programs includes five individual programs which provide unique market interventions for Georgia Power commercial customers. Energy efficiency program participation for all five programs from January 2020 to June 2021 improved over 33,000 projects resulting in 198 GWh in net energy savings as shown in Table 1-1.

Table 1-1. Commercial Energy Efficiency Portfolio Achievements¹

Program	Number of Projects	Reported kWh	Realization Rate	Verified Gross kWh	NTG	Verified Net kWh
Prescriptive	2,139	167,543,055	109%	182,759,287	71%	129,759,093
Custom	160	68,085,182	111%	75,444,166	88%	66,034,656
Midstream Products	828	5,029,139	98%	4,940,912	32%	1,557,706
SCDI	35	820,394	104%	852,048	90%	762,583
Behavioral	30,479	4,467,448	tbd	n/a	100%	n/a
TOTAL	33,641	245,945,218	107%	263,996,413	75%	198,114,038

BrightLine Group and Cadmus Group (the evaluation team) deployed a strategic and data-driven evaluation approach of the Commercial programs with the objective to produce a rigorous and accurate assessment of the program and enable confidence in results. The evaluation used industry standard strategies and approaches to allow for feedback in changing market environments. The evaluation team verified 220 implemented projects, and surveyed over 260 participants, more than 400 nonparticipating customers, and 85 contractors/distributors to evaluate these commercial program achievements. The verified gross energy savings represents the measurable energy savings at the electric meter and the net energy savings considers attribution (free-riders), to represent a value of energy savings directly related to the program influence.

The commercial energy efficiency programs are very popular with commercial customers and contractors alike, receiving high marks for satisfaction and engagement with Georgia Power staff. The COVID-19 pandemic was found to have had a clear effect on a large share of customer's decision to implement new energy efficient projects; consequently, programs missed their target goal for participation and energy savings in 2020 and 2021. Despite this disappointing outcome, the programs were operated in a cost-effective manner as shown in section 6 of this summary. Additionally, promising news comes from participants and nonparticipating customers, where they expect to participate in the programs in the next twelve months.

¹ Realization rates and Net-to-Gross values presented within this report are rounded to integer levels for clarity. Additionally for some tables in this report, total rows may not equal the sum of values due to rounding.





2 Custom and Prescriptive

The Commercial Energy Efficiency Program (CEEP) includes two programs which go-to-market in a cooperative manner for a large share of Georgia Power commercial customers: Commercial Custom (Custom) program and Commercial Prescriptive (Prescriptive) program. Participation in the Custom program from January 2020 to June 2021 included 160 unique projects². Participation in the Prescriptive program from January 2020 to June 2021 included 2,139 unique projects. As shown in Table 2-1, the program achieved 195,794 MWh in net verified energy savings.

Table 2-1. Commercial Energy Efficiency Program Achievements

Component	Number of Projects	Adjusted Reported kWh ²	Realization Rate	Verified Gross kWh	NTG	Verified Net kWh
Prescriptive	2,139	167,543,055	109%	182,759,287	71%	129,759,093
Custom	160	68,085,182	111%	75,444,166	88%	66,034,656
TOTAL	2,299	235,628,236		258,203,453		195,793,749

² Reported values for 2020 adjusted for consistency with Prescriptive program adjustments implemented in 2021, as discussed in Section 2.4.1.1.

The Georgia Power Commercial Custom and Prescriptive energy efficiency programs remain the most successful and most impactful customer programs in Georgia Power's demand side management (DSM) portfolio. These two programs combined have consistently provided more than 60% of energy savings of Georgia Power's DSM program portfolio since 2011 with accurate savings estimates and good customer influence. The programs are very popular with commercial customers and contractors alike, receiving high marks for satisfaction and engagement with Georgia Power staff and its implementation contractor, CLEAResult. The COVID-19 pandemic was found to have had a clear effect on a large share of customer decisions to implement new energy efficient projects; consequently, the program missed its target goal for participation and energy savings. Despite this disappointing outcome, the programs were operated in a cost-effective manner. Additionally, promising news comes from participants and nonparticipating customers, where they expect to participate in the programs in the next twelve months. Finally, this evaluation found under-reporting of energy savings for certain Prescriptive Lighting projects, which resulted in corrective actions from the implementation team.

² Project total based on count of unique project numbers in VisionDSM tracking data as of July 7, 2021.



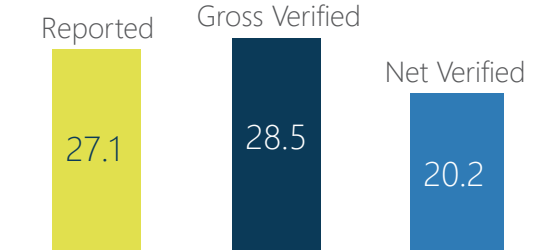
COMMERCIAL PRESCRIPTIVE PROGRAM

Program Performance

ENERGY SAVINGS (MWH)



DEMAND REDUCTION (MW)



Impact Evaluation Findings



95%
LIGHTING

Participation to date is dominated by lighting measures.

Non-lighting measures include smart thermostats and commercial appliances.

Mid-cycle program adjustments were adopted in 2021 that yielded forward-looking realization rates of

109% AND **105%**
for energy savings for demand savings.

Evaluation research determined a Net-to-Gross result of **71%** for the Prescriptive program.



Process Evaluation Findings

The COVID-19 pandemic had a significant impact on program participation. **30-51%** of surveyed populations reported delayed or deferred projects.



High initial cost is a barrier to participation. **60%** of respondents feel they have made all the energy improvements they can without a substantial investment.

95% of Prescriptive participants and **almost 50%** of nonparticipants stated they are 'somewhat' or 'very' likely to participate in a GPC program in the next 6 months.



Participant satisfaction with the application process continues to climb. **75%** of participants noted very high satisfaction with the application process, higher than in previous evaluations.

Key Recommendations

Expand the usage of retargeting and trigger emails to increase engagement through **email nurturing campaigns**. The campaigns can improve program awareness and identify customers with deeper improvement opportunities.



As the pandemic subsides, consider a marketing campaign focused on energy efficiency opportunities to help businesses return to normal.



Explore new and different ways to communicate the long-term benefits of energy efficiency above and beyond the typical 'low hanging fruit'.

COMMERCIAL CUSTOM PROGRAM

Program Performance

ENERGY SAVINGS (MWH)

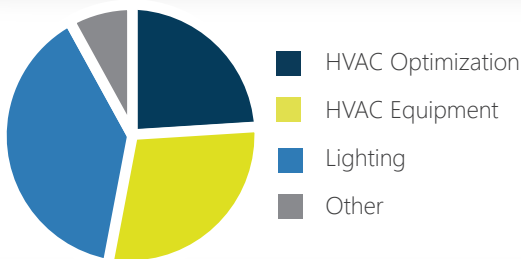


DEMAND REDUCTION (MW)



Impact Evaluation Findings

SAVINGS SHARES BY MEASURE TYPES



Verified savings were higher than reported for energy, but lower than reported for demand. Program realization rates were

111% AND **82%**
for energy savings for demand savings.

Evaluation research determined a Net-to-Gross result of **87%** for the Custom program.



Process Evaluation Findings

The COVID-19 pandemic had a significant impact on program participation. **30-51%** of surveyed populations reported delayed or deferred projects.



High initial cost is a barrier to participation. **60%** of respondents feel they have made all the energy improvements they can without a substantial investment.

100% of Custom participants and **almost 50%** of nonparticipants stated they are 'somewhat' or 'very' likely to participate in a GPC program in the next 6 months.



Participant satisfaction with the application process continues to climb. **75%** of participants noted very high satisfaction with the application process, higher than in previous evaluations.

Key Recommendations

Expand the usage of retargeting and trigger emails to increase engagement through **email nurturing campaigns**. The campaigns can improve program awareness and identify customers with deeper improvement opportunities.



As the pandemic subsides, consider ramping up contractor trainings to educate contractors on program offerings. Collaboration with trade groups and distributors could be beneficial.

Focused marketing to targeted high-usage nonparticipants with education on energy efficiency could capture additional customers who otherwise do not know about the program.





2.1 Program Overview

CEEP, implemented by CLEAResult, is made up of two efforts: the Commercial Custom Program (Custom) and the Commercial Prescriptive Program (Prescriptive). The Custom program provides a platform for comprehensive energy efficiency projects in larger existing and new facilities that go beyond single measures and common, measure-level efficiency practices. The Custom program provides incentives for efficiency improvements not included in other Georgia Power commercial program offerings. All program incentives are based on the verified energy savings achieved for each project³. The program does not define a specific list of eligible measures, but bases participation on the verifiable energy savings resulting from the measures or system improvements implemented. The 2020–2022 program offering builds on the existing Commercial Custom Program, which was originally certified by the Commission as part of Georgia Power’s 2010 Demand Side Management (DSM) Application filing.

The goals of Georgia Power’s Commercial Custom program include:

- ▶ Increasing customer acceptance and use of energy efficient technologies and practices.
- ▶ Encouraging and supporting comprehensive energy efficiency projects that go beyond single measures and common efficiency practices.
- ▶ Obtaining verifiable, cost-effective, and long-term electrical energy and demand savings.

The Commercial Prescriptive program promotes the purchase of eligible high-efficiency equipment installed at qualifying customer facilities. Rebates offered through this program serve to reduce the incremental cost to upgrade to high-efficiency equipment over standard efficiency options for Georgia Power’s commercial-class customers. The program includes equipment with easily calculated savings, provides straightforward and easy participation for customers, and allows for reduced evaluation, measurement & verification (EM&V) costs. The 2020–2022 program offering builds on the existing Commercial Prescriptive Program, which was also originally certified by the Commission as part of Georgia Power’s 2010 DSM Application filing.

The goals of the Commercial Prescriptive Program include:

- ▶ Increasing awareness and customer demand for high-efficiency, energy-saving equipment.
- ▶ Increasing the availability and market penetration of energy efficient equipment that will result in long-term energy savings and peak reductions.

For the purpose of the program-specific evaluation reports, the evaluation team has consolidated the reports for both the Prescriptive and Custom Programs. The Prescriptive and Custom Programs were evaluated as separate programs including distinct sample sizes, calculation of separate net-to-gross (NTG) ratios, highlighted accomplishments and recommendations, etc. However, because the two programs go-

³ The Custom Program pays incentives at \$0.10 per kWh (first year energy saved) at a maximum of \$75,000 and up to 50% of total project cost.





to-market as the “Georgia Power Commercial Energy Efficiency Program,” the evaluation team consolidated information when it is applicable to both.

2.1.1 Program Measures

Table 2-2 lists a selection of prominent measures and offered incentives available through the program. A full list of measures is included in Appendix B. For evaluation purposes, similar measures were grouped into strata according to size and end use.

Table 2-2. Commercial Energy Efficiency Program Qualifying Measures and Incentives

Evaluation Strata	Measure	Incentive
Large & Small Lighting	LED Screw-In	\$2/Lamp
	LED Décor/Candelabra	\$4/Lamp
	TLEDs	\$3/Lamp
	LED Troffer Fixture/Retrofit Kit	\$25/Fixture
	Linear Retrofit Kit	\$10/Fixture
	LED Can, Track, Pendant	\$10/Fixture
	LED Exit Signs	\$7/Fixture
	LED High Bay	\$30-100/Fixture
	Lighting Occupancy Sensor	\$7/Control
	Daylight Sensor	\$25/Control
	Parking Garage LED Light	\$30-50/Fixture
	LED Pole-Mounted Fixture	\$10-120/Fixture
	New Construction Lighting	\$0.04/kWh saved
Miscellaneous	Commercial Dishwasher	\$250/Unit
	Commercial Ice Machine	\$150/Unit
	Commercial Solid Door Freezers and Refrigerators	\$75/Unit
Refrigeration	Anti-Sweat Heat Control- Humidistat	\$15/Cooler Door
	Display Case Night Covers	\$3/Linear Foot
	Anti-Sweat Refrigerated Case Doors	\$50/Door
	Strip Curtains	\$3/Square Foot
	High-Efficiency Ventilation Hoods	\$200/HP
HVAC	Smart, WiFi-Enabled Thermostat	\$75/Unit
	Variable Frequency Drives (VFDs)	\$50/HP
	Hotel Key Card Room Energy Control System	\$100/Guest Room
Custom	Custom Savings	\$0.10/kWh saved





2.2 Participation and Achievements

Table 2-3 presents the numbers of measures, reported energy savings, and verified gross energy savings achieved for the Prescriptive and Custom Programs during the evaluation timeframe of January 2020 through June 2021. Demand savings achievements are presented in Table 2-4.

Table 2-3. Custom and Prescriptive Program Achievements – Energy⁴

Timeframe	Number of Projects	Reported kWh	Verified Gross kWh	Annual Energy Savings Target	% of Annual Goal
2020	1,478	112,563,648	133,608,507	246,041,956	54%
2021 Q1 & Q2	661	45,058,569	49,150,780	245,921,463	20%
PRESCRIPTIVE TOTAL	2,139	157,622,217	182,759,287		
2020	130	36,051,012	39,947,584	49,985,829	80%
2021 Q1 & Q2	30	32,034,170	35,496,582	49,984,538	71%
CUSTOM TOTAL	160	68,085,182	75,444,166		

Table 2-4. Custom and Prescriptive Program Achievements – Demand

Timeframe	Number of Projects	Reported kW	Verified Gross kW
2020	1,478	19,631	21,030
2021 Q1 & Q2	661	7,130	7,515
PRESCRIPTIVE TOTAL	2,139	26,761	28,545
2020	130	5,403	4,418
2021 Q1 & Q2	30	5,635	4,608
CUSTOM TOTAL	160	11,038	9,026

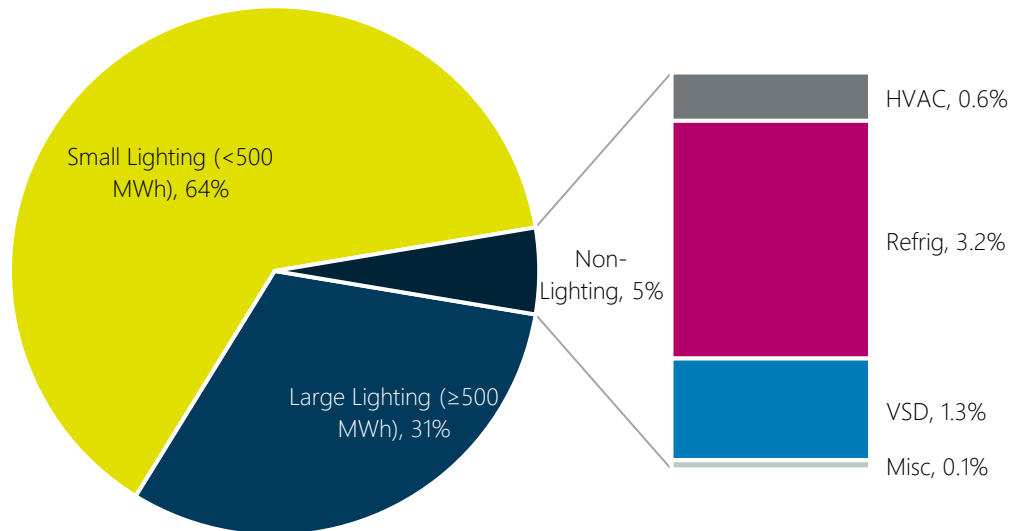
Participation in the Prescriptive Program was dominated by lighting measures, comprising approximately 95% of total verified savings, as shown in Figure 2-1.

⁴ The values for the Prescriptive Program reflect outcomes documented within the Quarter 2 2021 Update Report within Docket #42311, document no. #187125 <https://psc.ga.gov/search/facts-docket/?docketId=42311>





Figure 2-1. Prescriptive Program Verified Energy Savings Shares by Measure Type



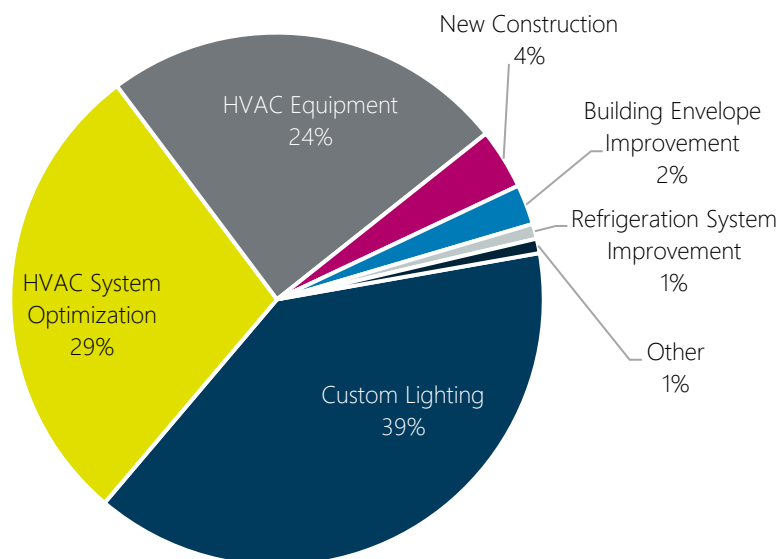
Small Lighting projects are defined as projects where the total reported energy savings sums to less than 500 MWh. Large Lighting projects are defined as projects where the total reported energy savings sums to 500 MWh or more.

Energy savings achieved through the Custom Program were achieved through a broader mix of project types. Figure 2-2 shows that HVAC Equipment, HVAC System Optimization, and Custom Lighting projects together accounted for approximately 92% of verified energy savings.





Figure 2-2. Custom Program Verified Energy Savings Shares by Measure Type



The 2020/21 COVID-19 pandemic and corresponding global economic slowdown disrupted Georgia Power customer and stakeholder decision making for energy efficiency products and services. The pandemic introduced economic uncertainties, premise lockdowns, labor market limitations, and supply chain disruptions that challenged customer adoption of energy efficient retrofit and new technologies. For the commercial sector, impacts ranged from reduced occupancy and abnormally high closures of restaurants, offices, and schools, while other businesses had short-term or little impact to historical occupancy patterns. Additionally, the pandemic resulted in remote and hybrid office employee work conditions, creating uncertain office occupancy patterns. At the time of this report, October 2021, the pandemic was not abated and new waves of COVID-19 cases continued to affect commercial businesses. This environment directly reduced participation in Georgia Power DSM programs.

The evaluators of Georgia Power's CEEP worked diligently to align with the original program evaluation plans that were developed in the early stages of the pandemic, April 2020. However, the resulting reduced participation, COVID safety protocols, limited access to premises, and new work environments impacted the evaluation team's ability to reach customers, conduct on-site measurement and verification, and reduced the population pool of participants and sample size sizes. This evaluation report will provide further details of impacts from the pandemic where applicable and known. To the extent possible, the evaluation team is confident the findings are as accurate as possible for this time horizon of 2020 through the summer of 2021. However, the environment in which this data was gathered may no longer be applicable in future years, if and when, the effects of the pandemic are changed.





2.3 Evaluation Methodology

BrightLine Group and Cadmus Group (the evaluation team) deployed a strategic and data-driven evaluation approach of the Custom and Prescriptive programs with the objective to produce a rigorous and accurate assessment of the program and enable confidence in results. This, in turn, will help Georgia Power manage the programs by providing feedback based on sound engineering, statistical analysis, and market research findings. The evaluation approach used industry standard evaluation strategies and evaluation approaches to allow for feedback in changing market environments and to provide Georgia Power with the most accurate evaluation results possible.

The evaluation activities commenced in December of 2019 with the development of the initial Evaluation Plan for the Custom and Prescriptive Programs. Shortly thereafter, the evaluation team conducted interviews with Georgia Power program staff and implementation staff (CLEAResult and internal to Georgia Power) to help inform the remaining impact and process activities for the evaluation, including the review of program documentation and tools and the development of survey instruments. Process and impact evaluation activities were conducted in cohorts that were spaced out over the evaluation period, allowing the evaluation team to conduct survey and verification activities closer to actual project implementation and to plan for verification activities that coincided with the heating and cooling seasons. Cohort 1 activities generally occurred from October to December of 2020, Cohort 2 occurred from February to May of 2021 and Cohort 3 occurred from June to July of 2021.

2.3.1 Research Questions

Table 2-5 presents each of the key researchable questions and the tools used to investigate each one. The evaluation approach combined a rigorous assessment of energy savings with in-depth exploration of participant motivations and challenges.



*Table 2-5. Prescriptive and Custom Program Evaluation Research Questions*

Key Research Questions	Staff and Implementation Team Dialogues	Participant and Nonparticipant Surveys	Contractor Surveys	Trade Group Interviews	Document Reviews Including Marketing Assessment	Project Engineering Review and On-site Verification
Are there planned program changes from the previous cycle?	✓					
How effective is the enrollment and participant process? Does the process allow for timely receipt of incentives?	✓	✓	✓			
How effective are the implementation contractors, including the contractors' customer outreach, contractor outreach and training, data tracking, quality control, and communication?	✓		✓	✓		
How satisfied are customers and contractors with the program process and Georgia Power overall?		✓	✓	✓		
How effective is program marketing? How aware are customers and contractors about the program?		✓	✓	✓	✓	
Are incentive levels sufficient to motivate energy efficiency implementation?		✓	✓			
What are the drivers and barriers for participation and customer demand for energy efficient equipment?		✓	✓	✓		
Does the program encourage adoption of additional energy efficiency measures? Are there additional measures that could be offered through the programs?		✓	✓			
What is the program team's plan for addressing the large savings goals?	✓				✓	
Does the program design and implementation meet the objective for a simple and straight-forward program and application process?	✓	✓	✓			



*Table 2-5. Prescriptive and Custom Program Evaluation Research Questions cont.*

Key Research Questions	Staff and Implementation Team Dialogues	Participant and Nonparticipant Surveys	Contractor Surveys	Trade Group Interviews	Document Reviews Including Marketing Assessment	Project Engineering Review and On-site Verification
Are measure-level project incentive caps easy to understand?		✓	✓			
Does the program help increase customer acceptance and use of energy efficient technologies and practices?		✓	✓			✓
Does the program encourage and support comprehensive energy efficiency projects that go beyond single measures and common efficiency practices?		✓	✓			✓
How effective is the program at obtaining verifiable, cost-effective, and long-term savings?	✓	✓			✓	✓
What is the program influence on the local market?		✓	✓	✓	✓	
What are the accurate and supportable gross energy and demand impacts of the program?					✓	✓
What are the accurate and supportable net energy and demand impacts of the program, or the net-to-gross impacts?		✓	✓			✓
Does the measure installation vintage align with the measure baseline definition?					✓	✓
How do these programs support the business environment in Georgia, including support for companies with sustainability goals?		✓				





2.3.2 Impact Evaluation Methodology

Impact evaluation is the process by which verified gross and net savings attributable to Georgia Power's programs in the evaluation period (January 2020 through June 2021) were determined. Gross impacts are the total energy and demand savings found at participating customers' premises. Net impacts are a reflection of the degree to which the gross savings are a result of the program efforts and influence. The impact evaluation process included the following activities:

- ▶ Review program tracking database.
- ▶ Select a sample of completed projects from each program.
- ▶ Independently determine verified energy and demand savings for each sampled project.
- ▶ Compare reported savings values to verified savings values to determine program realization rates.
- ▶ Estimate net-to-gross ratios using participant attribution surveys.
- ▶ Calculate verified gross and net savings for each program.

Overarching impact evaluation strategies for the Prescriptive and Custom programs followed standard industry protocols and definitions, where applicable and practical, including the Department of Energy Uniform Methods Projects (DOE-UMP)⁵ commercial lighting protocols.

Impact evaluation activities completed over the course of this evaluation are summarized in Table 2-6.

Table 2-6. Impact Evaluation Activity Summary

Impact Evaluation Activity	Custom	Prescriptive
Project-level document reviews	42	98 lighting, 23 non-lighting
Measure-level document reviews	43	437 lighting, 90 non-lighting
In-person site visits	7 projects, 7 measures	35 projects, 83 measures
Virtual site visits	24 projects, 25 measures	35 projects, 129 measures
Net-to-Gross participant surveys	20	110

⁵ U.S. Department of Energy's Uniform Methods Project is a framework and protocols for specific energy efficiency measures and programs. Online at: <https://energy.gov/eere/about-us/ump-protocols>





2.3.2.1 Sampling

Because of the Prescriptive and Custom programs' significant contribution relative to Georgia Power's portfolio, the evaluation team sampled to achieve 90% confidence with $\pm 10\%$ precision for each program separately. Sampling was conducted at the project level. Samples were selected on a rolling basis, in three separate cohorts, as described earlier. For the Prescriptive Program, the evaluation team stratified the impact evaluation sample by measure type—lighting and non-lighting—to appropriately capture the inherent differences between these two project types. For the Custom program, in response to the dominance of a few large projects towards the total program impact, the evaluation team stratified the impact evaluation sample by measure size. This stratification sought to ensure that the relative contributions of large and small measures were appropriately weighted.

2.3.2.2 Savings Verification

For projects in the evaluation sample, verified project savings were developed using project documentation reviews, on-site and virtual site visits, and engineering analysis.

Project documentation review focused on key project aspects including:

- ▶ Alignment with 2018 Georgia Power's and regional Technical Reference Manuals (TRM) for reasonableness comparison.
- ▶ Consistency within the tracking database.
- ▶ Measure description and project characterization.
- ▶ Savings calculation algorithms, including lighting hours-of-use and documentation of assumptions.
- ▶ Alignment between project documentation and parameter assumptions including invoiced quantities and equipment specifications.

In-person and virtual site visits were conducted to verify installed equipment quantities and real-world operating parameters in comparison to project documentation. Site visits included confirmation of equipment quantities and model numbers and interviews with site contacts to understand year-round operating conditions. Operating parameters were assessed through site contact interviews and on-site data collection.

The feasibility of conducting in-person site visits was affected by the COVID-19 pandemic. Where feasible to do so, the evaluation team used virtual site visit techniques to implement safety precautions during pandemic conditions.

2.3.2.3 Net-to-Gross Methodology

The evaluation team employed self-report end-user participant surveys and traditional Net-to-Gross (NTG) methodology to estimate net-to-gross ratios. Free-riders are defined as participants who would have purchased and installed measures without the support of the program; participant spillover indicates





additional unrebated measures that customers have installed because of program influence. The equation to calculate net-to-gross (NTG) savings is as follows:

$$\text{NTG} = 100\% - \text{Free-Ridership} + \text{Participant Spillover}$$

NTG ratios were used to develop the verified net savings estimates following guidelines in the State and Local Energy Efficiency Action Network's *Program Energy Efficiency Program Impact Evaluation Guide*⁶ and the U.S. Department of Energy's Uniform Methods Project information on net savings.⁷

The evaluation team designed the end-user participant survey using questions and methods similar to the process employed in the two previous Georgia Power program evaluations (2018 and 2015). The concept underlying the self-report surveys is that Georgia Power downstream program commercial customers decide whether or not to participate in DSM programs; therefore, they are in the best position to explain what influenced their decision. The survey was designed to collect information on free-ridership and participant spillover, as further detailed below.

Free-Ridership. To mitigate self-report bias, a battery of free-ridership questions was used to collect data on each participant's *intention*, as well as the program factors that might have had *influence* on the participant's actions. The *intention* and *influence* scores both held a maximum free-ridership value of 50%. The overall free-ridership score for each participant was calculated by summing the *intention* and *influence* scores:

$$\text{Overall Free-Ridership Score} = \text{Intention Free-Rider Score (Maximum 50\%)} + \text{Influence Free-Rider Score (Maximum 50\%)}$$

Participant Spillover. The survey also included questions necessary to calculate participant spillover—the program's influence on customers' decisions to invest in additional energy efficiency measures for which they did not receive any Georgia Power incentives and for which we can provide reasonable documentation of savings. For this evaluation, nonparticipant spillover was not considered, as the evaluation team understands that nonparticipant spillover cannot be included per the 2019 Demand Side Management Program settlement with the Georgia Public Service Commission (GPSC).

The NTG methodology is described in greater detail in the report appendix.

⁶ State and Local Energy Efficiency Action Network. *Energy Efficiency Program Impact Evaluation Guide*. December 2012. Online at: <https://www4.eere.energy.gov/seeaction/>

⁷ U.S. Department of Energy's Uniform Methods Project is preparing a framework and protocols for specific energy efficiency measures and programs. Online at: <https://energy.gov/eere/about-us/ump-protocols>





2.3.3 Process Evaluation Methodology

To gather insights into Georgia Power's Custom and Prescriptive program, the evaluation team developed and deployed interviews and surveys with program staff, program implementers, trade groups, participating and nonparticipating customers and participating and nonparticipating contractors. Table 2-7 presents the number of interviews and surveys conducted for each activity. The survey mode included email and phone for most activities, with most surveys being conducted via phone. Section 6 outlines the findings from the process evaluation activities.



Table 2-7. Process Evaluation Activity Summary

Process Evaluation Activity	Survey Mode	Custom	Prescriptive
Staff/implementer interviews	Phone	7	
Trade group interviews	Phone	9	
Participating customer surveys	Mixed Phone and Email	20	110
Nonparticipant surveys	Mixed Phone and Email	300	
Participating contractor surveys	Phone	4	24
Nonparticipating contractor surveys	Phone	42	

2.4 Impact Evaluation Findings

2.4.1 Realization Rates

The evaluation team selected a sample of completed Prescriptive projects comprising 19% of the program's total reported savings. Data collected through M&V activities, including desk reviews, virtual, and in-person site visits, was used to assess reported savings for these projects. Impact evaluation activities were conducted on a continual basis throughout the evaluation period, with on-going collaboration between the evaluation team and the implementation team.

2.4.1.1 Prescriptive Program Reported Savings Adjustment

During the evaluation cycle, concerns were raised that reported savings estimates were understated by the evaluation team and shared with the implementation contractor for their review and confirmation. Key findings on unclaimed savings presented to the implementation contractor included:





- ▶ Understated Hours of Use (HOU) for Big Box Retail. The energy savings calculator for prescriptive lighting projects uses defined operating hours based on building type, as shown in Figure 2-3. The evaluation team observed many 'Big Box' retail stores (i.e. Lowe's, Wal-mart) using selections that significantly understated their operating hours.

- Status: Corrected, effective Q3 2021. The implementation contractor has revised the Building Type categories to be more descriptive and put quality assurance controls in place to monitor Building Type selections.

Operating Hours and Coincidence Factor Table		
Building Type	Hours	Summer CF
Education K-12	2,483	0.47
College/University	3,283	0.61
Non-24 hr Retail	5,574	0.93
24 hr Retail	6,305	0.93
Retail (Other)	3,702	0.8
Service (Non-Food)	3,220	0.71
Non-Refrig. Warehouse	3,170	0.68
Refrig. Warehouse	3,269	0.7
Outdoor	4,045	0.04
Outdoor Less Than Dusk-to-Dawn	3,719	0.06

Figure 2-3: Lighting HOU Table Snippet

- ▶ Lighting Controls Factor Application Error. For projects with existing lighting controls, like occupancy sensors, an error in the implementation contractor's savings calculation algorithm was determined to be causing significantly underreported savings. The share of projects affected by this issue was relatively small, but the realization rates for affected projects exceeded 250% because of the calculation error.

- Status: Corrected, effective Q3 2021. The implementation contractor has corrected the programmed algorithm.

The implementation contractor took action to stop these above identified issues from persisting in the program and subsequently conducted an audit of their energy savings estimates. During the process of internally auditing their energy savings estimates, the implementer then determined that additional revisions were needed:

- ▶ Algorithm corrections were identified for two non-lighting measures – Electrically Commutated Motor (ECM) controllers and Refrigerated Case Door lighting.
 - Status: Corrected, effective Q3 2021. The implementation contractor has corrected the programmed algorithm.
- ▶ For a minor subset of lighting measures, a lamp wattage lookup function was failing, causing savings to be overestimated.
 - Status: Corrected, effective Q3 2021. The implementation contractor has corrected the lookup function.

After making changes considering these issues, reported savings values within the tracking system were adjusted for all affected 2021 projects in the summer months of 2021. The implementation contractor did not adjust 2020 project energy savings, as these values for these projects had already been reported to the Georgia Public Service Commission. In order to generate forward-looking realization rates that account for these mid-cycle corrections, the evaluation team generated similarly adjusted savings values for 2020 projects. Table 2-8 and Table 2-9 show the magnitudes of these adjustments and the resulting 'Adjusted' Reported Savings values for energy and demand, respectively.



*Table 2-8. Prescriptive Program Reported Savings Adjustment - Energy*

Component	Timeframe	Prelim Reported kWh	Filed Adjustment kWh	GPSC Reported kWh	Evaluation Adjustment kWh	Adjusted Reported kWh
Lighting	2020	107,744,825	0	107,744,825	9,920,838	117,665,663
	2021	37,003,707	4,882,486	41,886,194	0	41,886,194
	Sub-Total	144,748,532	4,882,486	149,631,019	9,920,838	159,551,857
Non-Lighting	2020	4,818,823	0	4,818,823	0	4,818,823
	2021	2,900,538	271,837	3,172,375	0	3,172,375
	Sub-Total	7,719,361	271,837	7,991,198	0	7,991,198
PRESCRIPTIVE TOTAL		152,467,893	5,154,323	157,622,217	9,920,838	167,543,055

Table 2-9. Prescriptive Program Reported Savings Adjustment - Demand

Component	Timeframe	Prelim Reported kW	Filed Adjustment kW	GPSC Reported kW	Evaluation Adjustment kW	Adjusted Reported kW
Lighting	2020	19,100	0	19,100	318	19,418
	2021	6,544	255	6,799	0	6,799
	Sub-Total	25,644	255	25,899	318	26,217
Non-Lighting	2020	531	0	531	0	531
	2021	300	31	331	0	331
	Sub-Total	831	31	862	0	862
PRESCRIPTIVE TOTAL		26,475	286	26,761	318	27,079

2.4.1.2 Prescriptive Program Realization Rates

The evaluation team reviewed the energy and demand savings estimates for the evaluation sample, which included a total of 527 measures. Inputs, assumptions, and algorithms used in the reported savings estimates were compared against findings from project documentation review and independent data collection activities. In cases where a discrepancy was found between the original savings estimate and evaluation-collected data, the evaluation team made corrections and recalculated energy and demand savings. Examples of corrections made for specific projects in the evaluation sample include adjustments to lighting fixture quantities based on observations made during in-person site visits and updates to equipment efficiency based on review of manufacturer specification sheets. These verified savings values were used to determine the stratum-level realization rates shown in Table 2-10 for energy and Table 2-11 for demand. Lighting projects were divided into strata based on project size, and projects where reported savings were adjusted were split into separate strata in order to accurately weight the results from each group.





Realization rates for both energy and demand exceeded 100%, indicating that the program reported savings remain conservative following the adjustments described in Section 5.1.1. Key contributing factors to the realization rates include:

- ▶ Appropriate use of industry-standard algorithms and assumptions. The implementation team is applying algorithms that are reasonably accurate and appropriate. Evaluation results show that assumptions for factors like lighting, HVAC, interactive factors, and peak coincidence factors are appropriate for the participant population. For lighting project baselines, savings calculations include appropriate baseline corrections for outdated equipment types. Existing T12 fluorescent lamps are corrected to T8-equivalent baseline wattages, and similarly incandescent bulbs are corrected to a halogen-equivalent baseline.
- ▶ Deemed Lighting Hours of Use. Within the sample of evaluated lighting projects, the evaluation team found hours of use assumptions to be conservative relative to evaluated, site-specific hours, particularly for larger lighting projects, as evidenced by the Large and Adjusted Large realization rates of 107% and 151% respectively. Examples of site-specific findings include:
 - Retail stores where lights are in use 24/5 for significant overnight stocking and cleaning.
 - Projects where the facility type was mis-categorized, such as a 24/7 warehouse characterized as a retail store.
- ▶ Conservative Deemed Savings for Refrigerated Case Doors. The evaluation team found that the deemed savings value in use for a specific refrigeration measure – adding case doors to open display cases – is conservative compared to industry research. The high realization rate for the Refrigeration strata results from the evaluation team applying a higher savings value for this measure.

For energy realization rates, the achieved statistical precision at 90% confidence was $\pm 6\%$, exceeding the targeted value of $\pm 10\%$. For summer demand realization rates, the larger relative precision of $\pm 19\%$ for the program results from a more narrowly defined peak window in the evaluation analysis. For the evaluation, the peak window was defined as a one-hour period, 4pm to 5pm, on July weekdays. Implementation lighting calculators apply generalized coincidence factors based on space type. The demand realization rate of 101% indicates that on average, the generalized coincidence factors in use are a good overall representation of average coincidence. The larger precision interval results for a higher degree of variability on a project-by-project level.





Table 2-10. Prescriptive Program Realization Rates - Energy

Component	Stratum	Sampled Measures	Reported Measures	Adjusted Reported kWh ¹	Energy Realization Rate	Relative Precision at 90% CI
Lighting	Large (≥ 500 MWh)	100	247	35,057,706	107%	3%
	Small (< 500 MWh)	232	5,258	77,056,137	104%	10%
	Adj. Large (≥ 500 MWh)	22	108	12,877,110	151%	15%
	Adj. Small (< 500 MWh)	83	1,528	34,560,904	103%	15%
	Sub-Total	437	7,141	159,551,857	109%	6%
Non-Lighting	HVAC	7	69	1,187,854	99%	10%
	Refrigeration	49	347	4,114,216	141%	8%
	VSD	6	60	2,507,090	98%	3%
	Miscellaneous	28	167	182,037	104%	8%
	Sub-Total	90	643	7,991,197	121%	5%
PRESCRIPTIVE TOTAL		527	7,784	167,543,055	109%	6%

¹ These values include adjustments made to account for mid-cycle savings algorithm corrections.

Table 2-11. Prescriptive Program Realization Rates – Demand

Component	Stratum	Sampled Measures	Reported Measures	Adjusted Reported kW	Demand Realization Rate	Relative Precision at 90% CI
Lighting	Large (≥ 500 MWh)	100	247	5,311	114%	33%
	Small (< 500 MWh)	232	5,258	12,777	85%	44%
	Adj. Large (≥ 500 MWh)	22	108	2,232	117%	6%
	Adj. Small (< 500 MWh)	83	1,528	5,897	137%	30%
	Sub-Total	437	7,141	26,217	105%	22%
Non-Lighting	HVAC	7	69	161	94%	33%
	Refrigeration	49	347	328	129%	34%
	VSD	6	60	357	97%	4%
	Miscellaneous	28	167	15	126%	20%
	Sub-Total	90	643	861	109%	10%
PRESCRIPTIVE TOTAL		527	7,784	27,078	105%	21%

¹ These values include adjustments made to account for mid-cycle saving algorithm adjustments





2.4.1.3 Custom Program Realization Rates

The evaluation team selected a sample of completed Custom projects comprising 73% of the program's total reported savings. As in the Prescriptive program, data collected through M&V activities, including desk reviews, virtual, and in person site visits, was used to assess reported savings for these projects. Impact evaluation activities were conducted on a continual basis throughout the evaluation period, with on-going collaboration between the evaluation team and the implementation team. In cases where a discrepancy was found in the reported savings, the evaluation team made corrections and recalculated energy and demand savings. These verified savings values were used to determine the stratum-level realization rates shown in Table 2-12 for energy and Table 2-13 for demand.

Table 2-12. Custom Program Realization Rates - Energy

Component	Stratum	Sampled Measures	Reported Measures	Reported kWh	Energy Realization Rate	Relative Precision at 90% CI
Custom	Jumbo (≥ 10 GWh)	1	1	26,186,508	100%	0%
	Large (1 to 10 GWh)	8	11	20,013,235	130%	9%
	Small (< 1 GWh)	34	153	21,885,439	106%	5%
CUSTOM TOTAL		43	165	68,085,182	111%	3%

Table 2-13. Custom Program Realization Rates - Demand

Component	Stratum	Sampled Measures	Reported Measures	Reported kW	Demand Realization Rate	Relative Precision at 90% CI
Custom	Jumbo (≥ 10 GWh)	1	1	4,022	100%	0%
	Large (1 to 10 GWh)	8	11	1,470	90%	9%
	Small (< 1 GWh)	34	153	5,546	66%	38%
CUSTOM TOTAL		43	165	11,038	82%	17%

Energy realization rates for all strata met or exceeded 100%. Demand realization rates were less than 100% for both the small and large strata. Key contributors to these results are:

- ▶ Appropriate Engineering Analysis. Generally across the evaluated sample, the implementation team was found to be employing appropriate level of rigor in savings estimates. Energy savings estimates for smaller projects are generally developed using engineering or quasi-prescriptive algorithms, where as larger project estimates employ more complex modelling.
- ▶ Conservative Treatment of Large Projects. The evaluation team found several projects in the large strata to be saving more energy than was originally estimated, with a strata realization rate at 130%. The





evaluation team found multiple projects in this strata to be outperforming expectations, in some cases due to conservative assumptions included in the original estimates.

- **Peak Demand Definition.** The evaluation team noted several projects in the Large and Small strata where reported demand savings values were not consistent with Georgia Power's definition of peak period. For example, in some cases, winter peak and summer peak demand savings were summed together in the reported demand savings. The evaluation team developed verified demand savings values for all projects in the evaluation sample using Georgia Power's specific peak definition.

2.4.2 Net-to-Gross Ratio

The evaluation team assessed free-ridership and participant spillover by interviewing 110 Prescriptive program participants and 20 Custom program participants using the self-report methodology discussed in Section 4.2.3 and described in greater detail in the appendix. One single Custom program participant represents 38% of the Custom's verified gross program population savings. The evaluation team is reporting this jumbo Custom project's NTG results and savings separately from the other 19 Custom respondents. The NTG results from the 19 Custom respondents are being applied to the 62% of Custom verified gross program population savings that are not associated with the jumbo project.

Table 2-14. Custom and Prescriptive Program NTG Results

Program	Responses	Estimated Free-ridership	Estimated Participant Spillover	NTG Ratio (kWh Weighted)	NTG Ratio (kW Weighted) ⁴
PRESCRIPTIVE TOTAL	110	30.0%¹	1.0%	71.0%	70.6%
Custom - Large and Small	19	9.2% ¹	0.2%	91.0%	81.0%
Custom - Jumbo	1	18.8%	0.0%	81.2%	68.3%
CUSTOM TOTAL	20	12.5%²	0.1%²	87.6%	78.2%
CEEP TOTAL	130	24.9%³	0.7%³	75.8%	72.8%

¹ The evaluation team weighted the estimate by respondents' verified gross program kWh savings to arrive at the estimates for the total program.

² The evaluation team weighted the Custom Program stratum estimates by their population verified gross program kWh savings to arrive at the estimates for the Custom Program total.

³ The evaluation team weighted the specific Prescriptive Program total and Custom Program total estimates by their population verified gross program kWh savings to arrive at the estimates for the Program total.

⁴ The evaluation team weighted the specific Prescriptive Program total and Custom Program total estimates by their population verified gross program kWh savings to arrive at the estimates for the Program total.

2.4.2.1 Free-Ridership

The team calculated the final free-ridership value for the programs as the sum of the verified gross savings weighted intention (with a maximum score 50%) and verified gross savings weighted influence (with a maximum score 50%) free-ridership components, which resulted in a value between 0% and 100%, as shown in the following equation:





$$\text{Final Free-Ridership Value} = \text{Intention Score} + \text{Influence Score}$$

The influence and intention scores contribute equally to the final free-ridership score. The higher the final free-ridership value, the greater the deduction of savings from the gross savings estimates.

Table 2-15 presents the free-ridership results for the programs. These findings are described in greater detail in the appendix.

Table 2-15. Custom and Prescriptive Program Free-Ridership Estimates

Program	Responses	Intention Score	Influence Score	Estimated Free-Ridership (Intention Score + Influence Score)
PRESCRIPTIVE TOTAL	110	24.8%¹	5.2%¹	30.0%
Custom - Large and Small	19	5.3% ¹	3.9% ¹	9.2%
Custom - Jumbo	1	6.3%	12.5%	18.8%
CUSTOM TOTAL	20	5.6%²	6.9%	12.5%
CEEP TOTAL	130	19.2%³	5.7%³	24.9%

¹ The evaluation team weighted the estimate by respondents verified gross program kWh savings to arrive at the estimates for the total program.

² The evaluation team weighted the Custom Program stratum estimates by their population verified gross program kWh savings to arrive at the estimates for the Custom Program total.

³ The evaluation team weighted the specific Prescriptive Program total and Custom Program total estimates by their population verified gross program kWh savings to arrive at the estimates for the CEEP total.

2.4.2.2 Spillover

Ten Prescriptive program participants and one Custom program participant⁸ reported that after participating in the program they installed additional high-efficiency measures for which they did not receive an incentive and Georgia Power was important in their decision to install these measures. The gross energy savings estimated for the spillover measures are aligned with this evaluation and the 2019 Georgia Power TRM. Table 2-16 shows the steps the evaluation team used participant spillover estimates of 1.0% and 0.2% to determine the Prescriptive and Custom Program, respectively.

⁸ The Custom participant installed an additional LED light and the Prescriptive Program participants reported measures were LED lighting, and high efficiency: central air conditioners, an air source heat pump, water heating equipment, lighting controls, motor equipment, refrigeration equipment, and chiller equipment.



*Table 2-16. Participant Spillover Estimates*

Variable	Variable Description	Prescriptive Value	Custom Value	Source
A	Survey Sample Size (n)	110	19	Survey Data
B	Total Survey Sample Spillover kWh Savings	96,978	10,193	Survey Data / Engineering Estimates
C	Average Spillover kWh Savings Per Survey Respondent	882	536	Variable B ÷ Variable A
D	Program Participant Population	2,139	160	Program Tracking Data
E	Spillover kWh Savings Extrapolated to the Participant Population	1,885,784	85,8367	Variable C × Variable D
F	Evaluated Program Population kWh Savings	182,749,555	46,419,298	Evaluated Gross Impact Analysis
G	Spillover Percent Estimate	1.0%	0.2%	Variable E ÷ Variable F

2.4.3 Verified Energy and Demand Savings

Realization rates are applied to the adjusted reported gross savings to determine verified gross savings. The NTG ratio is applied to the verified gross savings to determine the verified net savings. Table 2-17 and Table 2-18 summarize the application of the NTG ratio to the verified gross energy and demand savings, respectively, for the Prescriptive and Custom Programs.

Table 2-17. Verified Savings Results - Energy

Program	Component	Adjusted Reported kWh	Realization Rate	Verified Gross kWh	NTG	Verified Net kWh
Prescriptive	Lighting	159,551,857	109%	173,126,608	71%	122,919,891
	Non-Lighting	7,991,198	121%	9,632,679		6,839,202
PRESCRIPTIVE TOTAL		167,543,055	109%	182,759,287	71%	129,752,184
Custom	Jumbo (≥ 10 GWh)	26,186,508	100%	26,227,738	81%	21,296,923
	Large (1 to 10 GWh)	20,013,235	130%	25,989,758	91%	23,624,690
	Small (< 1 GWh)	21,885,439	106%	23,226,670		21,113,043
CUSTOM TOTAL		68,085,182	111%	75,444,166	88%	66,034,656



*Table 2-18: Verified Savings Results - Demand*

Program	Component	Adjusted Reported kW	Realization Rate	Verified Gross kW	NTG	Verified Net kW
Prescriptive	Lighting	26,217	105%	27,606	71%	19,600
	Non-Lighting	861	109%	939	71%	666
PRESCRIPTIVE TOTAL		27,078	105%	28,545	71%	20,266
Custom	Jumbo (≥ 10 GWh)	4,022	100%	4,022	81%	3,266
	Large (1 to 10 GWh)	1,470	90%	1,327	91%	1,206
	Small (< 1 GWh)	5,546	66%	3,677		3,342
CUSTOM TOTAL		11,038	82%	9,026	87%	7,814

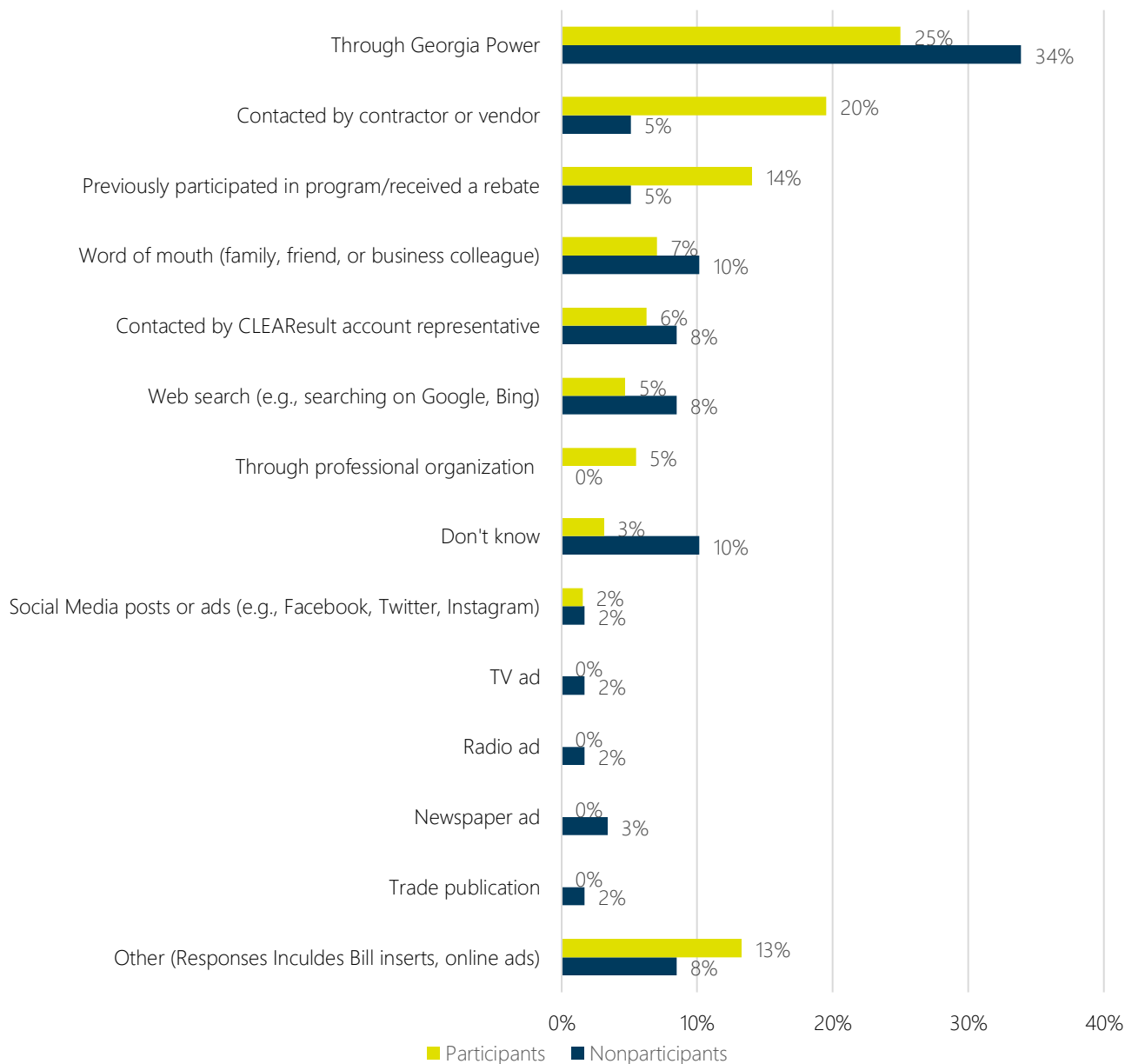
2.5 Process Evaluation Findings

The following section outlines the findings from the process evaluation activities. In most instances, the survey findings from the Custom participants and Prescriptive participants are combined due to similarities in the findings, unless where otherwise noted.

2.5.1 Program Awareness and Communication

Georgia Power conducted marketing campaigns throughout the year that sought to increase awareness of the program and to drive adoption. Participants and nonparticipants both noted that their primary awareness of the program was through Georgia Power (Figure 2-4). Respondents who noted that their primary awareness was through Georgia Power were asked for further details on their awareness source through Georgia Power, wherein 75% of participants and 38% of nonparticipants were contacted directly from a Georgia Power account representative. Only a small percentage (17%) of nonparticipants were aware of any energy efficiency program offering provided by Georgia prior to the survey. Georgia Power paused all marketing for energy efficiency programs in the second quarter of 2020 due to the COVID-19 pandemic and took a more targeted marketing approach once activity resumed, which may have impacted program awareness.



*Figure 2-4. Customer Program Awareness*

Source: Custom/Prescriptive Participant Survey and Nonparticipant Survey. Questions Q1/Q2. "How did you learn about Georgia Power's Commercial Energy Efficiency Program?" Participants n=128 Nonparticipants n=59

When respondents were asked their preferred source of program awareness, the majority of participants (36%) and nonparticipants (53%) noted an email from Georgia Power as the preferred method. Participants also mentioned direct contact from a program representative, CLEAResult (23%). The trend for preferred program communication via email is similar to the prior evaluation cycle, however very few nonparticipants are learning about the program this way (13%) and no participating customers noted this as the way they





learned about the program. Respondents who received messaging from Georgia Power around energy efficiency benefits said it was very easy to understand or somewhat easy to understand.

The majority of participating contractors learned about the program through the Georgia Power website (30%), followed by direct contact by a Georgia Power representative or account manager and word of mouth (13% each)⁹. One-third of these respondents stated that they learn about program changes mainly through email from Georgia Power or CLEAResult. Only about half of nonparticipant contractors surveyed were aware of Georgia Power's commercial energy efficiency programs and of those who were aware, the source of awareness included email from and direct contact from Georgia Power or account representative. The majority (60%) of nonparticipating contractors stated that they aren't registered with Georgia Power because they 'didn't know about it'. As Georgia Power continues to inform contractors about the program and any program changes, it will be important to keep in mind that, similar to customers, contractors preferred mode of communication is through email (noted by 70% of participants and 91% of nonparticipating contractors).

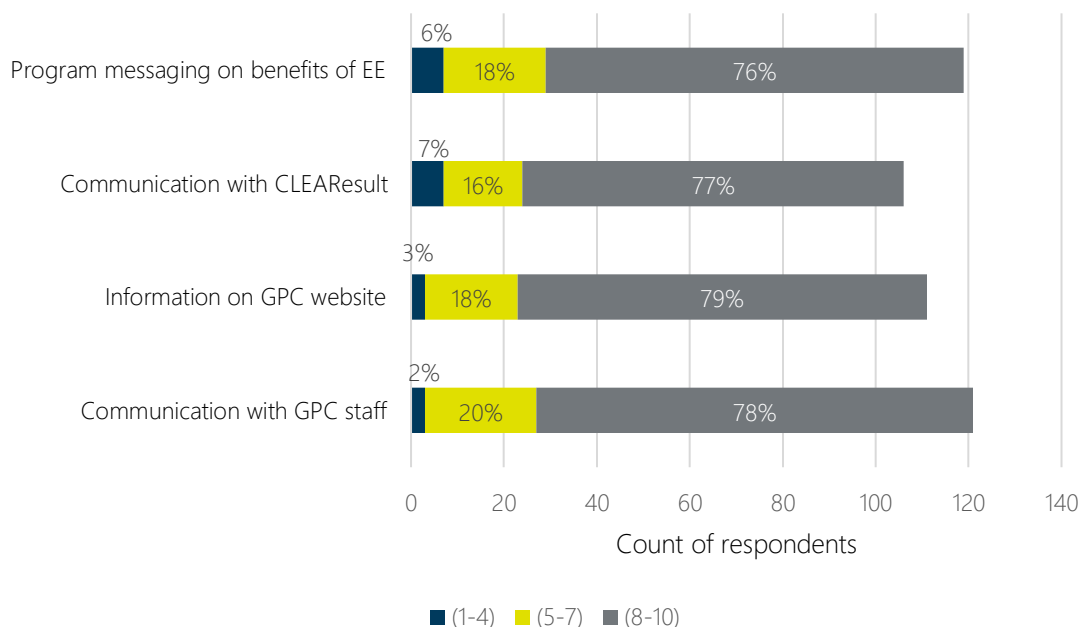
Participants expressed high levels of satisfaction with various aspects of the program communication, with 77% of respondents rating their communication with CLEAResult and Georgia Power an 8, 9 or 10 on a 10-point scale of satisfaction (Figure 2-5). Statements regarding lack of satisfaction with these areas focused on a slow response time to questions.

⁹ The Commercial Energy Efficiency team sends emails to managed customers on behalf of account managers. Thus, customers reporting awareness through a Georgia Power representative or account manager may be referring to these emails.





Figure 2-5. Participant Satisfaction with Program Communication



Source: Custom/Prescriptive Participant Survey. Questions Q20. "Please rate your level of satisfaction with different aspects of Georgia Power's Commercial Energy Efficiency Program using a 1 to 10 scale where 1 is "extremely dissatisfied" and 10 is "extremely satisfied" n=121, 111, 106 respectively from top

Contractors were also asked about the communication processes and informational material received from Georgia Power. Seventy percent (70%) of participating contractors had received some type of program materials and of these, 60% found the information 'very useful'. Very few contractors provided feedback on additional materials that they would like to receive from Georgia Power, but general comments around 'more information in general' was noted by a handful of contractors.

"Just having more information provided to us in general, you can always go to their website but not having it in front of you it's hard to remember."

-Nonparticipating Contractor

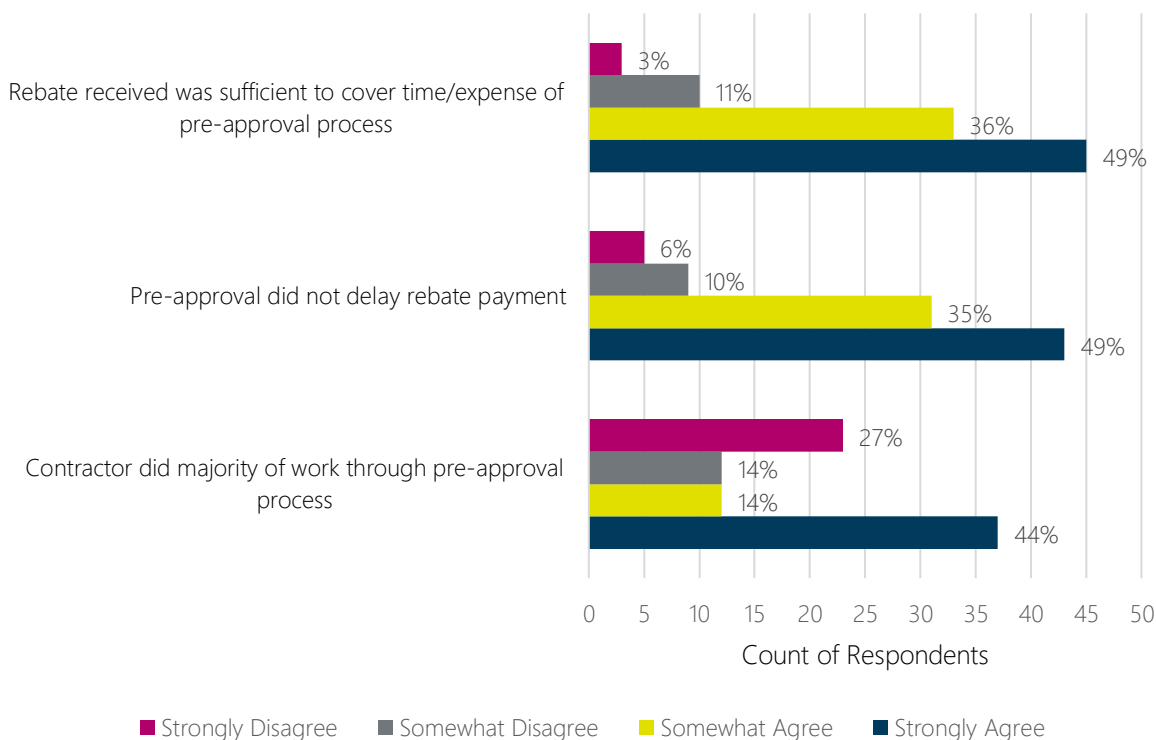
2.5.2 Program Design and Application Process

One of Georgia Power's objectives for the Commercial Energy Efficiency program is that the program and application process is simple and straight-forward. As such, participants were asked about their experiences with the pre-approval and application process. About 70% of Prescriptive participants and almost all of the Custom participants were aware of the pre-approval process. Of those aware, two-thirds of respondents stated the contractor did most of the work and the majority 'somewhat or strongly' agree that the pre-approval process did not delay payment (Figure 2-6).





*Figure 2-6. Participant Pre-Approval Process Agreement Questions**



*Totals may not sum to 100% due to rounding

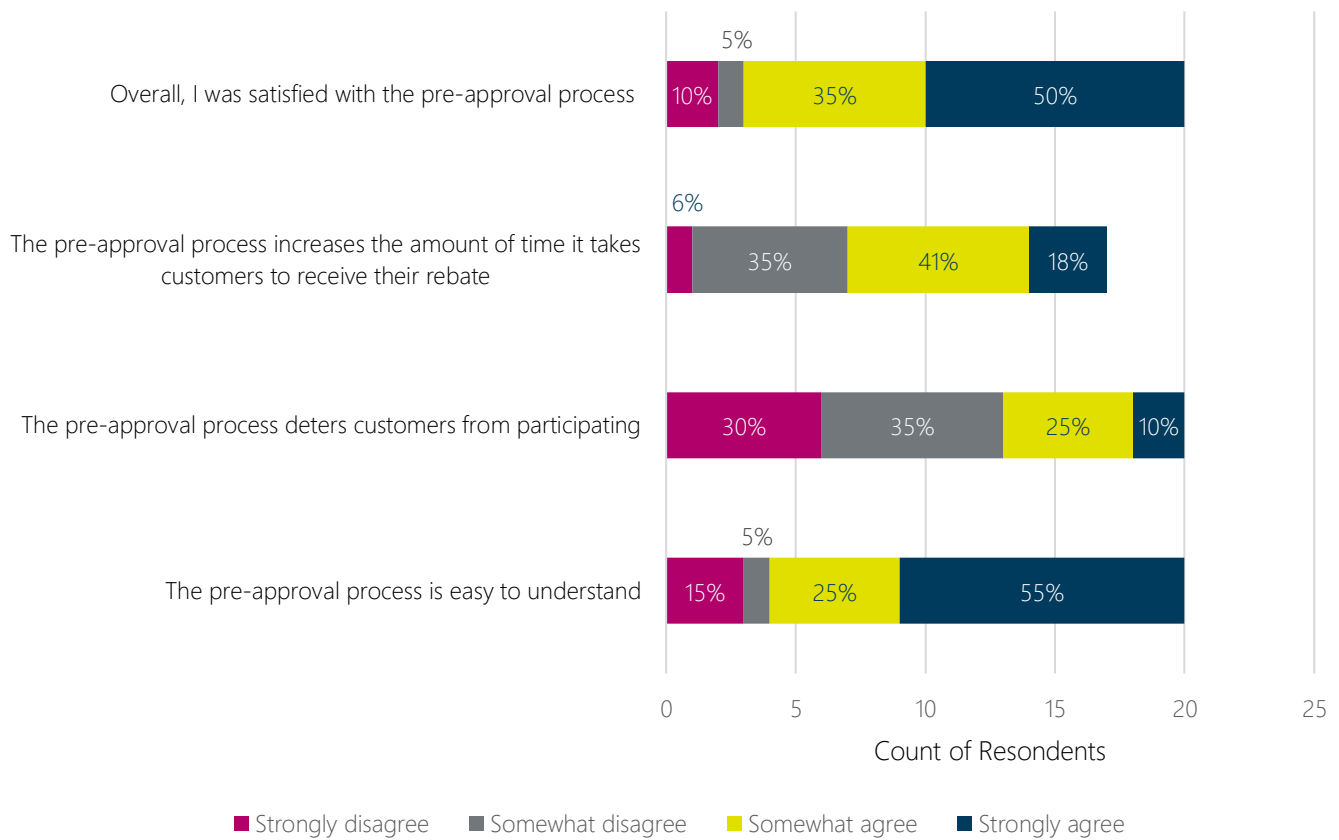
Source: Custom/Prescriptive Participant Survey. Questions Q12. "Thinking about the pre-approval process, for each of the next statements please indicate if you strongly agree, somewhat agree, somewhat disagree, or strong disagree?" n=92

Overall satisfaction among contractors with the pre-approval process was high with 85% of contractors satisfied with the process overall (Figure 2-7). Of note, 35% of contractors did 'somewhat or strongly' agree with the statement that the pre-approval process deters customers from participating.





Figure 2-7. Contractor Statements Regarding Pre-Approval Process



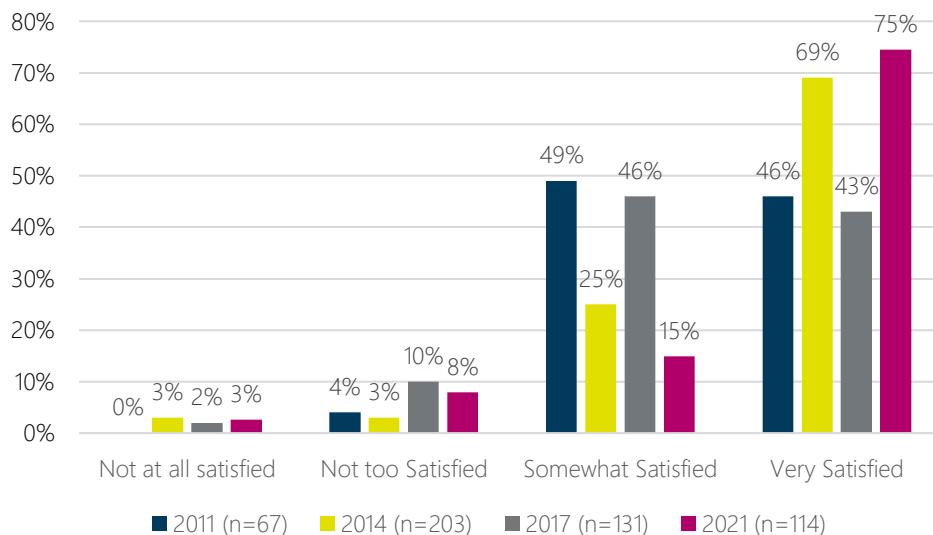
Source: Custom/Prescriptive Participating Contractor Survey. Questions Q15. "Thinking about the pre-approval process, for each of the next statements please indicate if you strongly agree, somewhat agree, somewhat disagree, or strong disagree?" n=20

All Custom participants understood the rebate cap for the program. Satisfaction with the application process amongst participants continues to climb in comparison to the last several evaluation cycles and 75% of participants in this cycle noted very high satisfaction with various aspects of the application process, including clarity of application requirements and ease of application process (Figure 2-8).





Figure 2-8. Participant Satisfaction with Application Process Trends*



*Totals may not sum to 100% due to rounding

Source: Custom/Prescriptive Participant Survey. Questions Q20. "Please rate your level of satisfaction with different aspects of Georgia Power's Commercial Energy Efficiency Program using a 1 to 10 scale where 1 is "extremely dissatisfied" and 10 is "extremely satisfied"

Overall satisfaction ratings from participating contractors regarding the program design and application process is also high. Satisfaction ratings are highest for working with CLEARResult representatives and working with Georgia Power staff. Lastly, most contractors (2/3rds) experienced no difficulties with the application form.

2.5.3 Market Motivators and Barriers

Participants asked what important factors were included in their decision to install energy efficiency equipment through the program. The top factors mentioned were (with % of respondents who mentioned):

- ▶ To save money on electric bills (31%)
- ▶ To reduce energy consumption or save energy (21%)
- ▶ To improve functionality (8%)
- ▶ To replace old (but still functioning) equipment (7%)

As in prior years, cost (both initial cost and overall budget limitations) was the largest barrier to participation (noted by 50% of participants and 56% of nonparticipants), while 17% of participants and 21% of nonparticipants noted no barriers to participation. Fewer participants have cited "lack of technical knowledge and understanding of eligible measures" as a barrier since 2014, which is a positive indication that the overall commercial market is becoming more informed and knowledgeable of the program and technical information around energy efficiency (see Figure in Appendix).





Not surprisingly, 60% of both participants and nonparticipants noted that rebates (higher incentives) are the best way for Georgia Power to help them overcome barriers. Providing more information on energy efficiency and program offerings was the next most common suggestion.

Noted barriers to customer participation were similar for contractors with high initial cost and budget limitations mentioned most often by participating contractors (64%) and nonparticipating contractors (78%). And again, not surprisingly, offering and/or increasing incentives was mentioned as the best way for Georgia Power to help their customers overcome these barriers. Both participating and nonparticipating contractors agreed with customer motivations for implementing energy efficient projects, stating 'energy savings' and 'lower operating and maintenance costs' as the top reasons.

When nonparticipating contractors were asked what the greatest influence was in their decision to not participate in the Commercial Energy Efficiency program, approximately 24% provided that a lack of understanding the project submittal process was most significant (Figure 2-9). A handful of the nonparticipating contractors also indicated a lack of information as a barrier to participation.





Figure 2-9. Nonparticipating Contractors Greatest Barrier to Participation in the Program



Source: Commercial Nonparticipating Contractor Survey Q13: "What kept you from submitting any projects through the Georgia Power Commercial Energy efficiency program in 2020 or 2021?" n=33

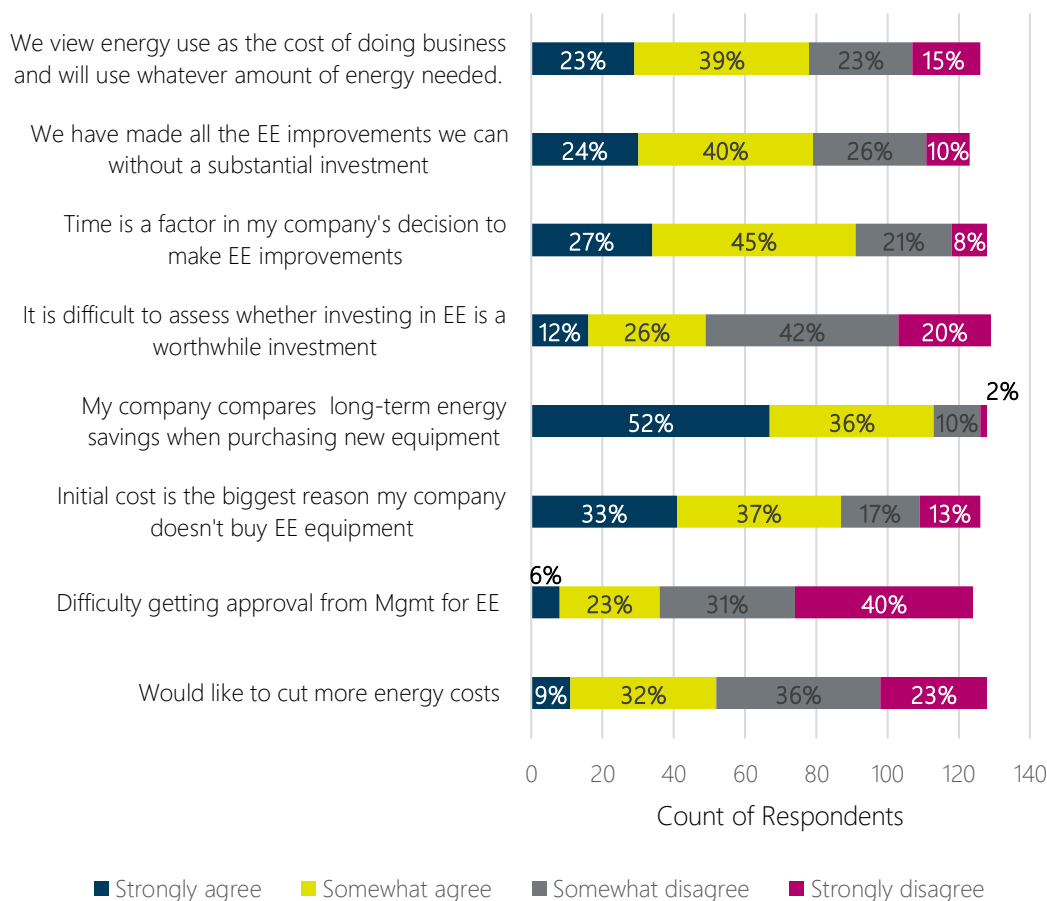
2.5.3.1 Energy Efficiency Behavior and Market Changes

The evaluation team assessed customer agreement with a variety of statements regarding decision making for energy efficiency improvements. Based on these responses, there are opportunities for repeat participation, and all Custom participants and 95% of Prescriptive participants noted they are 'somewhat' or 'very' likely to participate in a Georgia Power program again. However, 64% of these respondents stated that they strongly agree or somewhat agree to the statement "We have made all the EE improvements we can without a substantial investment." In addition, 62% strongly or somewhat agreed with the statement "We view energy use as the cost of doing business and will use whatever amount of energy needed." In addition, the majority of respondents strongly agreed with the statement that "My company compares long-term energy savings when purchasing new equipment" (Figure 2-10). These statements, along with budget limitations and high initial cost as the largest barriers to participation, indicate that targeted outreach and education will be important factors for Georgia Power to focus on moving forward. Information focused on long-term benefits will be important for repeat participation in the program, since the 'low hanging fruit' may have already been picked and opportunities for repeat participation exist in measures that may require a higher initial investment.





*Figure 2-10. Participant Opinions on Energy Efficiency Investments**



*Totals may not sum to 100% due to rounding

Source: Custom/Prescriptive Participant Survey. Questions Q30. "For each of the next statements, do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?" n=~127

Nonparticipants have similar sentiments to the participants when asked these same questions and while they state that it is important to their business to cut energy costs, the majority (62%) agree with the statement that they have already made all the EE improvements they can without a substantial investment and almost 80% agree that energy use is a cost of doing business. So, not surprisingly, reaching nonparticipants for future participation will have its challenges, but similar to participants, it will be important to educate these customers on the long-term benefits of energy efficiency so that they can see past the initial high cost (their largest barrier).

To further the market discussion, both participating and nonparticipating contractors are seeing an increase in the level of sales of high-efficiency equipment over the past few years (~2/3). Notably, 71% of participating contractors are noticing an increase in the sales of lighting measures while 71% of

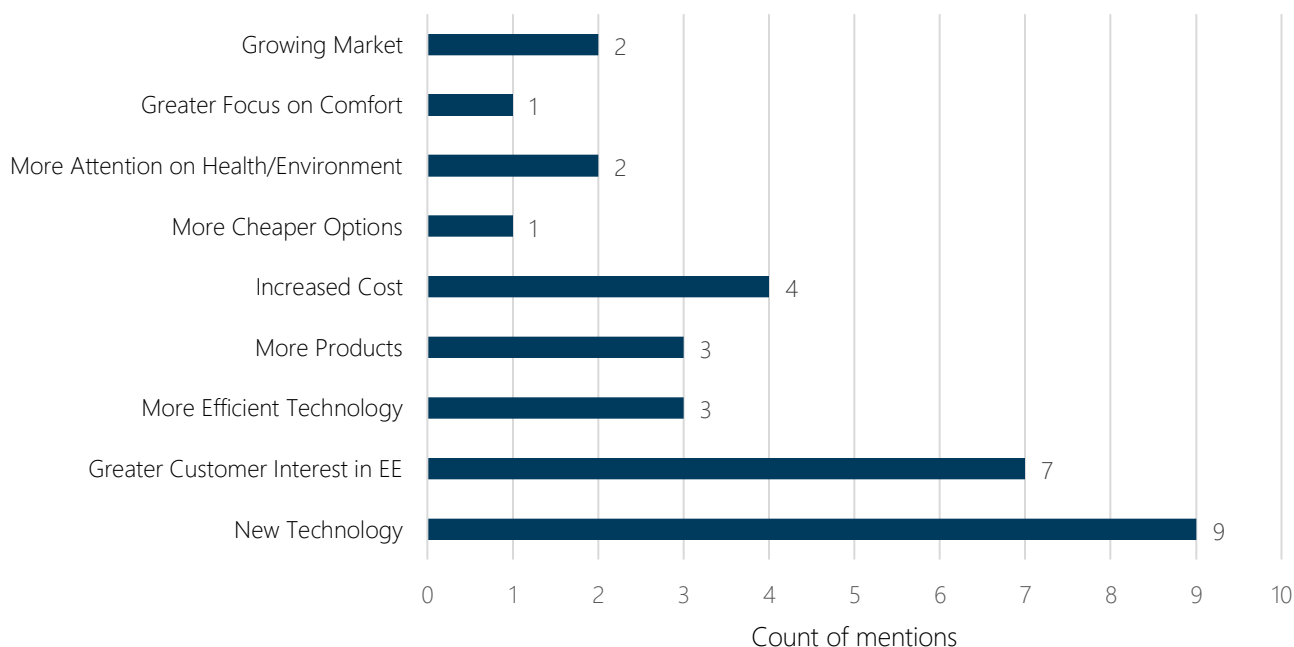




nonparticipating contractors noted the highest increase in sales among HVAC-based measures. Both groups are seeing increased demand for LEDs, though some are seeing a decline in demand for lighting.

Another positive sign toward overall market transformation is that nearly 60% of nonparticipating contractors indicate that they are actively promoting energy efficiency and the 75% of participating contractors 'always' refer customers to Georgia Power's program. In addition, nonparticipating contractors stated that customers ask about or request energy efficiency products about 50% of the time, indicating an opportunity for program participation if contractors are educated about program opportunities. When asked what changes respondents have noticed in the market, nonparticipating contractors predominantly noted the introduction of new technologies and greater customer interest in energy efficiency (Figure 2-11). New technologies mentioned include inverter technology, ductless systems, heat pumps and higher SEER options for HVAC.

Figure 2-11. Nonparticipating contractors observed market changes



Source: Custom/Prescriptive Nonparticipating Contractor Survey. Questions Q22. "What changes, if any, have you observed in the market for energy efficient products in the last few years?" n=32

2.5.4 Satisfaction and Overall Program Experience

Satisfaction with the program and with Georgia Power overall was very high (8.73 on a 10-point scale). Highest level of satisfaction among participants was with the performance of the equipment installed (9.26), the installation contractor (9.02), and the energy savings realized (8.88). Satisfaction is lowest with the rebate amount and the rebate processing time, wherein twelve (12) respondents each rated both items between a 1-4 on a ten-point scale (Figure 2-12). It is unsurprising



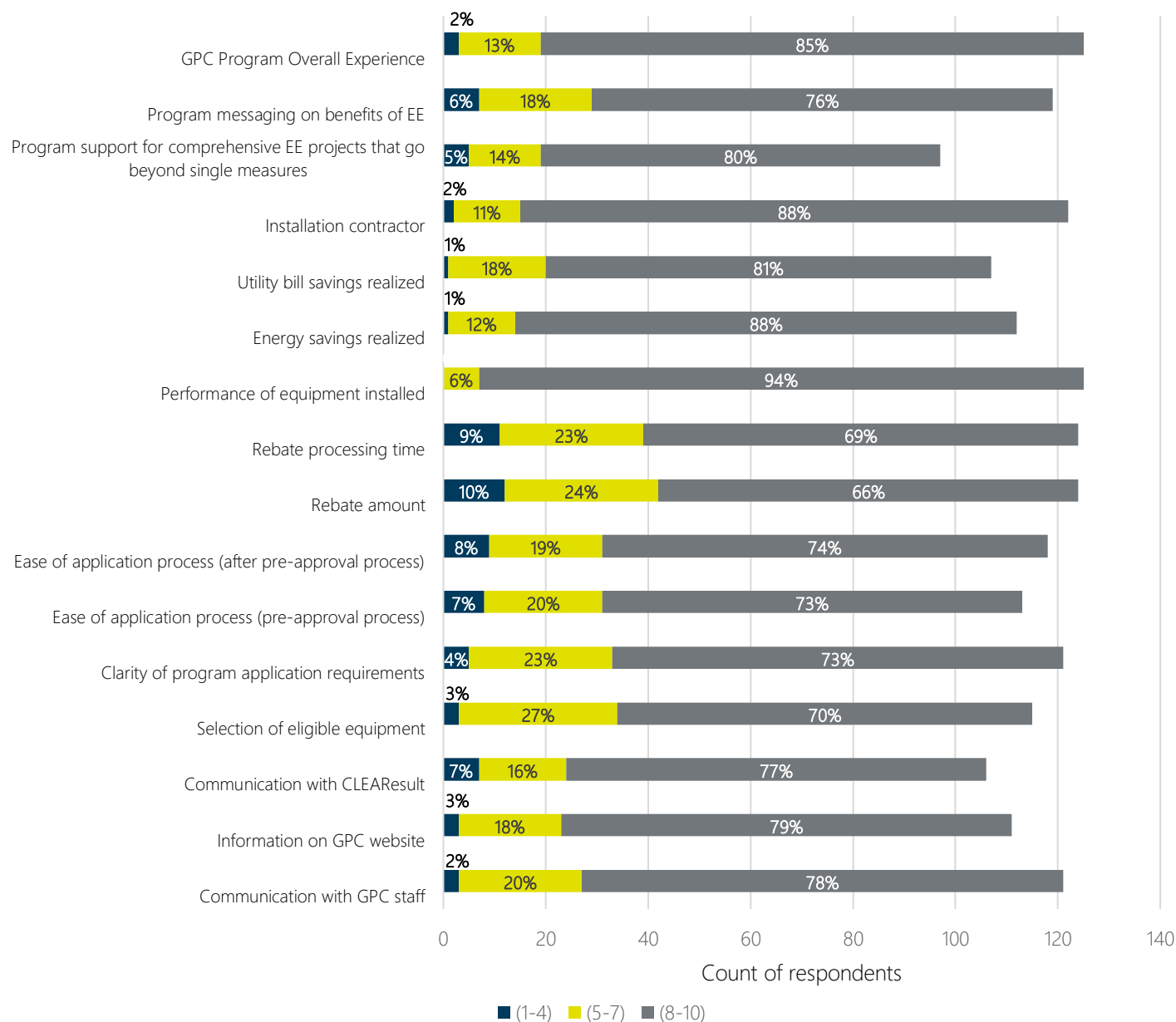


that satisfaction with the rebate amount is lower than other categories, as most end-use customers will indicate that higher incentives are preferred.





Figure 2-12. Participant Satisfaction with Various Aspects of the Program*



*Totals may not sum to 100% due to rounding

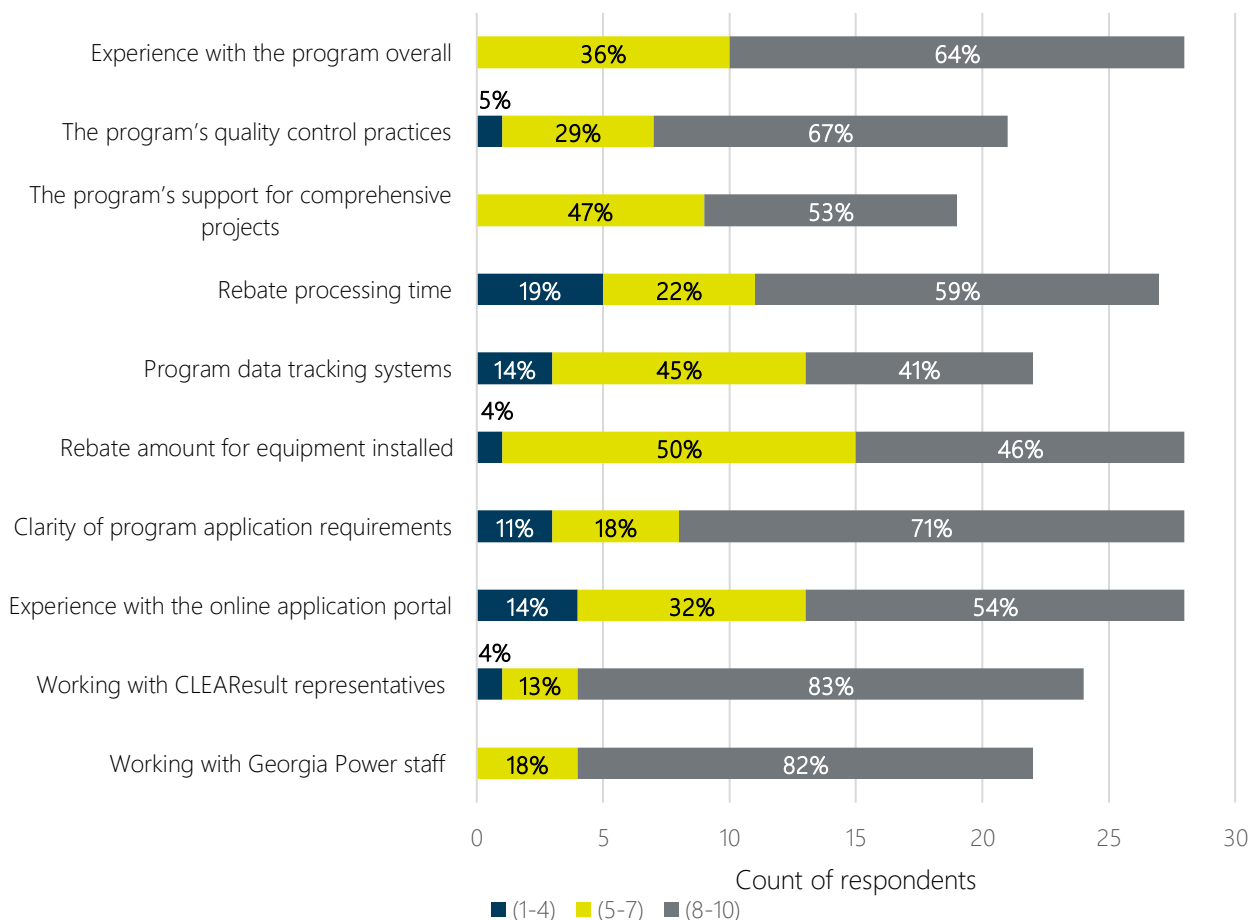
Source: Custom/Prescriptive Participant Survey. Questions Q20. "Please rate your level of satisfaction with different aspects of Georgia Power's Commercial Energy Efficiency Program using a 1 to 10 scale where 1 is "extremely dissatisfied" and 10 is "extremely satisfied" n=varies based on satisfaction component

Satisfaction among participating contractors is highest in working with CLEAResult and Georgia Power staff and lowest with the program data tracking systems, the rebate processing time and the online application portal (Figure 2-13).





*Figure 2-13. Participating Contractor Satisfaction with Program Aspects**



*Totals may not sum to 100% due to rounding

Source: Custom/Prescriptive Participating Contractor Survey. Questions Q20. "I would like to know your level of satisfaction with different aspects of Georgia Power's Commercial Energy Efficiency Program using a 1 to 10 scale where 1 is "extremely dissatisfied" and 10 is "extremely satisfied" n=varies based on satisfaction component

Nonparticipating contractors were asked about their overall satisfaction with Georgia Power. Generally, the results show that overall satisfaction is high, with more than 85% of respondents providing a rating of 8 or higher, and no respondents providing a rating under 5. This satisfaction has increased in comparison to the 2017 evaluation, with the average rating increasing from 8.0 to 8.54.

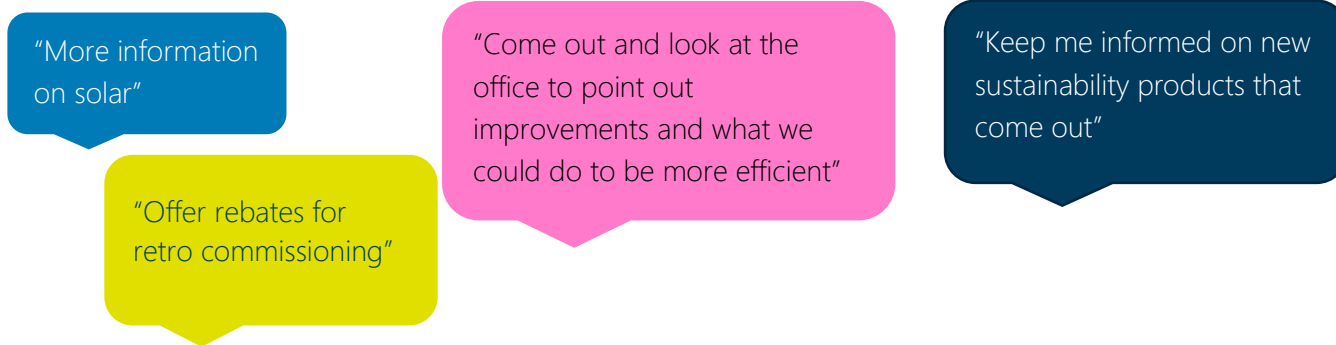
The evaluation team asked participants and nonparticipants about impacts on their business due to the COVID-19 pandemic. Thirty-one percent (31%) of nonparticipants noted that business decisions around EE were delayed due to COVID-19, and the majority of respondents who stated that EE decisions were delayed noted that they will reconsider making these investments, as soon as possible and in less than 1 year, pointing to an opportunity to engage these customers through Georgia Power's program. Similarly, about 30% of participants and participating contractors noted some delay or deferment in project implementation





due to impacts of COVID-19 while more than half (51%) of nonparticipating contractors noted a delay or deferment.

Comments provided by participants when asked if, overall, there is anything else Georgia Power could do to serve their company's needs with regards to savings energy included:



2.5.5 Marketing Assessment

The evaluation team reviewed Georgia Power's marketing strategy and performance for the Custom and Prescriptive Programs.

2.5.5.1 Marketing Strategy

Georgia Power marketed the Custom and Prescriptive Programs together in this program cycle. Georgia Power and CLEAResult jointly marketed these programs, with Georgia Power leading all customer-focused marketing while CLEAResult was responsible for trade ally outreach and engagement. Through these marketing efforts, Georgia Power sought to increase managed and non-managed account participation and awareness of the program and to drive adoption and participation to reach kWh goals. While the 2020 and 2021 marketing calendars were modified due to the COVID-19 pandemic, Georgia Power eventually resumed marketing activities across all channels. In 2020, Georgia Power used a targeted approach to only target customers that were not as negatively impacted by the COVID-19 pandemic as other customers. In 2021, Georgia Power moved to a measure-specific marketing approach that could reach all customers. The marketing calendar provided by Georgia Power showed an appropriate mix of channels across the given period to engage customers in multiple ways.



Georgia Power and CLEAResult took a robust approach to market these programs, with both customer-and trade ally-centric marketing spanning several digital and traditional channels. On the customer side, Georgia Power had multiple levels of marketing: some were targeted to appeal to a wide set of commercial customers while others were focused on a specific subset, such as specific industries or measures. Georgia Power also applied retargeting and trigger emails based on customer behavior, which adds a personalized aspect to the program's marketing. Among trade allies, CLEAResult primarily used email and direct outreach campaigns, but also supplemented with some social media marketing.





2.5.5.2 Marketing Materials and Performance Review

The evaluation team reviewed various marketing materials for their design and performance.

2.5.5.2.1 Material Design

Georgia Power provided the evaluation team with examples of various marketing materials from the “Do More Business with Less Energy” campaign. These example materials present a clear and consistent message, with a call to action that encourages customers to engage to find out more. The campaign was divided by different industry segments (general, food service, office, warehouse, and retail), and each example material utilized appropriate messaging and imagery for a given industry segment. The materials appear to have an appropriate level of detail, with display ads and social media posts utilizing short phrases with relevant images to catch the viewer’s attention, while longer-form pieces, such as emails and flyers, provide additional details. These longer-form marketing materials mention the benefits a customer can expect from participating towards the top of the piece, which increases the chance that customers read this message. Additionally, these materials use a mix of text formats, such as bulleted lists and short paragraphs, to call attention to specific elements.

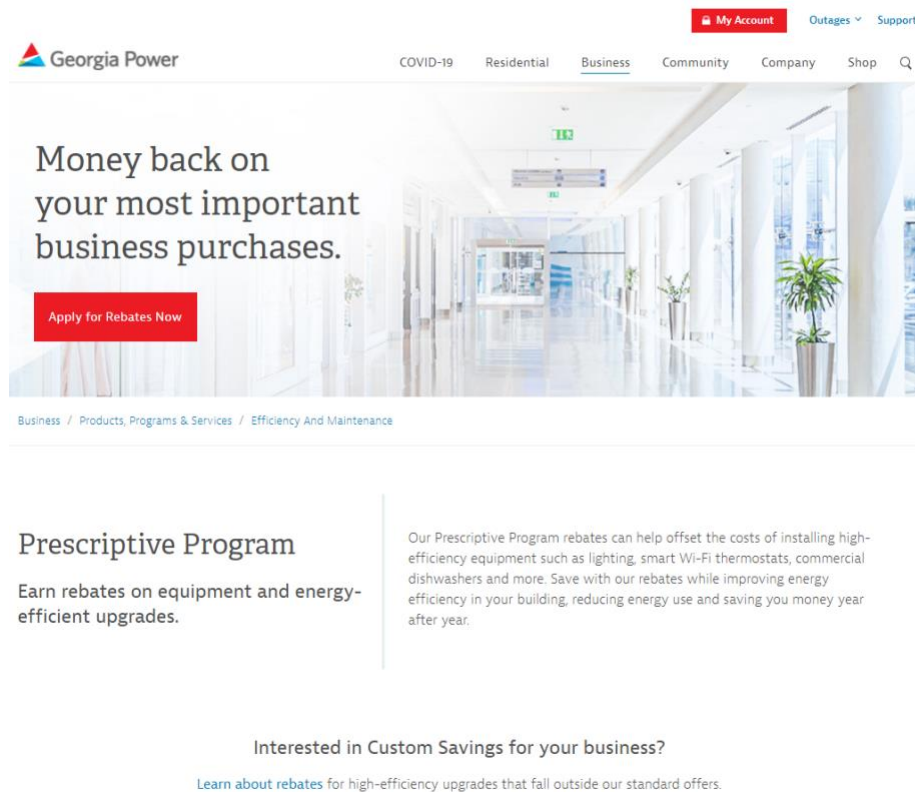
Across this campaign the branding is consistent, which creates a sense of continuity for customers. While the evaluation team did not review examples from every campaign, the examples that Georgia Power provided and the examples for other programs suggest that the branding is consistent across programs. However, the examples provided for general commercial energy efficiency (i.e., non-program) marketing are in a different branding scheme, with blue-dominant text rather than the green-dominant text in the Custom and Prescriptive marketing materials. The evaluation team did not review any trade ally-specific marketing materials.

The Georgia Power website includes several pages specifically for the Custom and Prescriptive Programs. One of the example marketing materials (print ad) directed customers to a landing page on the Georgia Power website for the Prescriptive Program, www.georgiapower.com/upgrades. This webpage is well-designed, utilizing several of the same branding elements and messaging as the example marketing materials. When customers are directed to the webpage, the area above the fold contains a call-to-action at the top, a description of the Prescriptive Program, and a message about custom savings for projects that do not fit into standard offers, as shown in Figure 2-14. The remainder of the webpage provides customers with the appropriate level of detail to capture their attention.





Figure 2-14. Prescriptive Program Landing Page



2.5.5.2.2 Marketing Performance

Georgia Power provided the Brightline team with standard marketing performance data for all Custom and Prescriptive marketing for the period of October 1, 2020 through January 31, 2021. Across all program marketing¹⁰, the click-through rate (CTR) from October through December 2020 (Q4) was 0.65%, which was below Georgia Power's KPI benchmark of 1.1%. This increased to 1.4% in January 2021, which Georgia Power noted is likely due to the election season in Georgia running through early January 2021, pulling attention away from Georgia Power marketing and increasing the cost for impressions. However, the Q4 period delivered a much higher number of impressions – over 38 million (average of ~12.5 million per month) – compared to just over one million in January 2021. During Q4 2020, the food service channel delivered the highest CTR (0.9%), while this channel had the lowest CTR in January 2021.

As noted earlier, one of the example marketing materials (print ads) directed customers to a landing page on the Georgia Power website for all commercial programs, georgiapower.com/upgrades. Across the period that Georgia Power provided performance data for, these materials had an average bounce rate of 83.8% in Q4 2020 and 92.0% in January 2021. These bounce rates are at the upper end of what is considered normal

¹⁰ Does not include email, homepage/OCC digital marketing.





for landing pages, which are typically 60-90%.¹¹ Using landing pages that are specific to a certain industry for industry-specific marketing can help to reduce the bounce rate and increase customer conversions.

Prescriptive and Custom program participants reported learning about the program primarily through Georgia Power (25%, n=124), their contractor (20%), and prior experience in a rebate program (14%). When asked their preferred method for learning about program opportunities, the majority of customers cited emails from Georgia Power (36%, n=107) as their preferred method, followed by direct contact from CLEAResult or Georgia Power (23%).

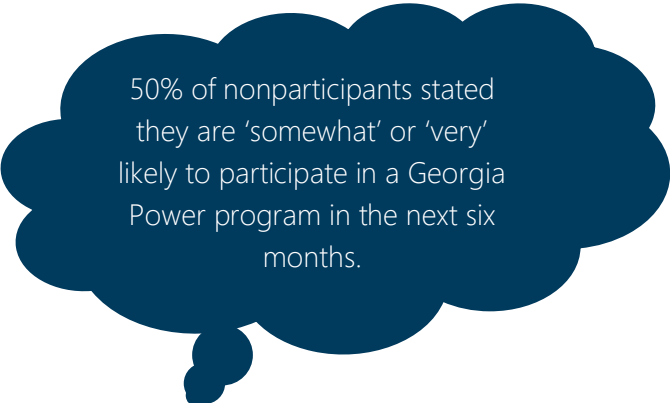
2.6 Cross-Cutting

2.6.1 Nonparticipant Survey

Nonparticipants are defined as Georgia Power customers who have not participated in one of Georgia Power's commercial energy efficiency programs in the last two years. The evaluation team surveyed 300 nonparticipants and results are stratified between large (>120 kW) and small (< 120kW) customers when deemed appropriate. About 70% of respondents use electricity as their primary source of heating fuel and about the same percentage own their facility.

Eighty-three percent (83%) of nonparticipants had not heard of Georgia Power's commercial programs prior to the survey. Those who were aware stated that they are 'not too' or 'somewhat familiar' with Georgia Power commercial programs and when asked if they could name any specific commercial programs, the Custom program was mentioned most often. As mentioned in Section 2.5.1 above, of those who were aware of the commercial programs, the majority heard about the programs through Georgia Power (predominately via direct contact with a Georgia Power representative).

The majority of nonparticipants have not participated because they 'didn't know enough about the program', but on average, half of nonparticipants stated they are 'somewhat' or 'very' likely to participate in a Georgia Power program in the next six months. As such, it is important to understand what will motivate these customers to participate in the program. The largest motivator to implement energy efficiency purchases or upgrades is lower costs of energy efficient products/equipment (40%) and 25% noted that higher rebates would have an impact on their decision to invest in EE equipment (Figure 2-15). So, while not knowing about the program appears to be the largest barrier to participation, ultimately decisions will be made on initial cost (the top mentioned barrier to implementing energy efficiency as noted in Section 2.5.3).



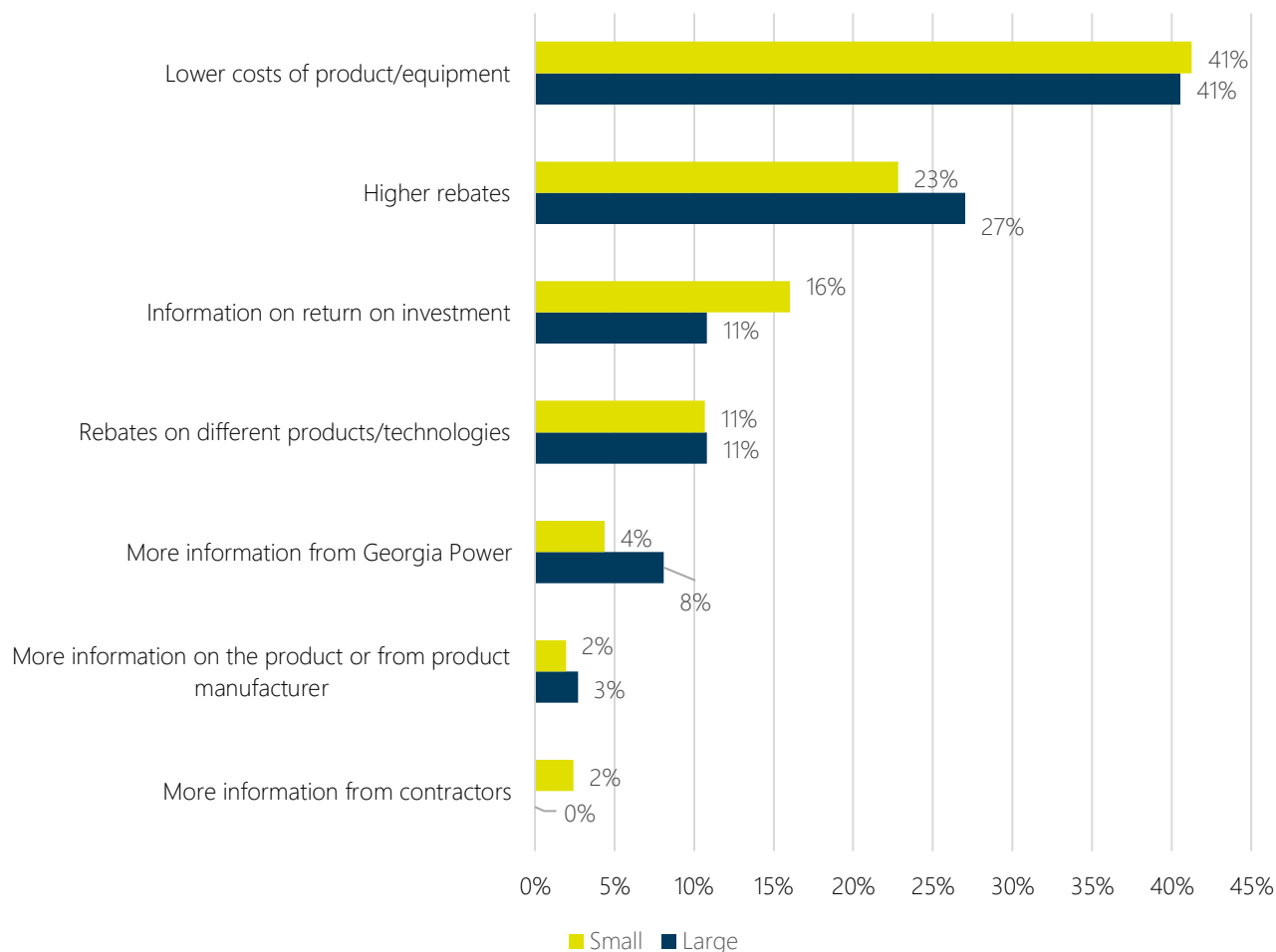
50% of nonparticipants stated they are 'somewhat' or 'very' likely to participate in a Georgia Power program in the next six months.

¹¹ Source: Customedialabs. *Bounce Rates: What's Good, What's Bad, and Why You Should Give a Damn*. Accessed June 25, 2021. <https://www.customedialabs.com/blog/bounce-rates/>





*Figure 2-15. Nonparticipant Motivators to Energy Efficient Upgrades/Purchases**



*Totals may not sum to 100% due to rounding

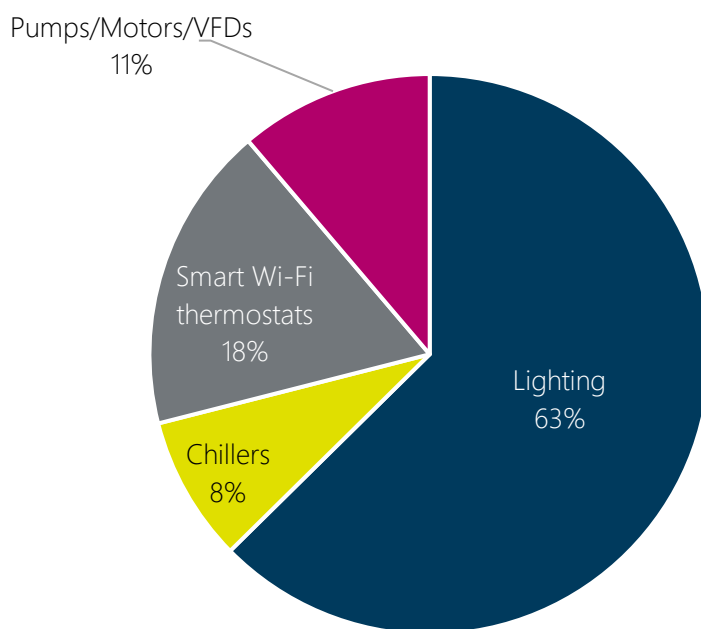
Source: Commercial Nonparticipant Survey. Questions Q17. "What would motivate your business to make more energy efficient purchases or upgrades on current equipment?" n=242

Nonparticipants noted that lighting is, by far, the most likely type of equipment that they will consider implementing (Figure 2-16).





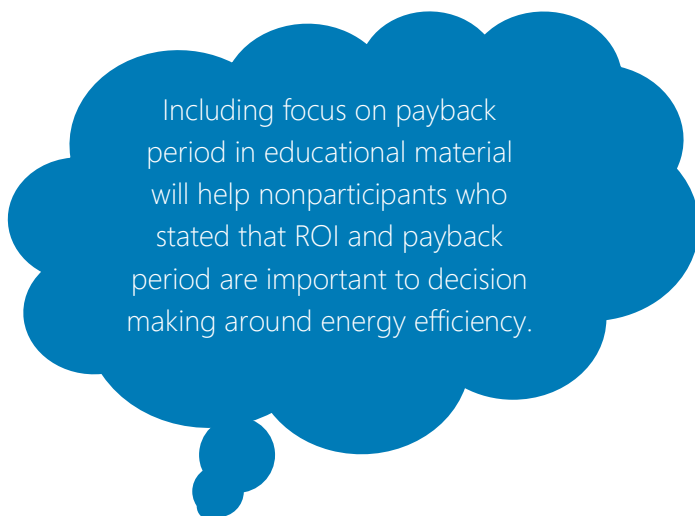
Figure 2-16. Nonparticipant Type of Equipment Consider for Upgrading



Source: Commercial Nonparticipant Survey. Questions Q8. Which type of equipment are you most likely to consider upgrading through a program to improve the energy efficiency of your facility? n=107

When nonparticipants were asked “When you consider all expenses, how important would you say is reducing energy costs to your business?”, 65% of respondents rated >8 on a 1-10 scale where 1 is ‘not at all important’ and 10 is ‘very important’.

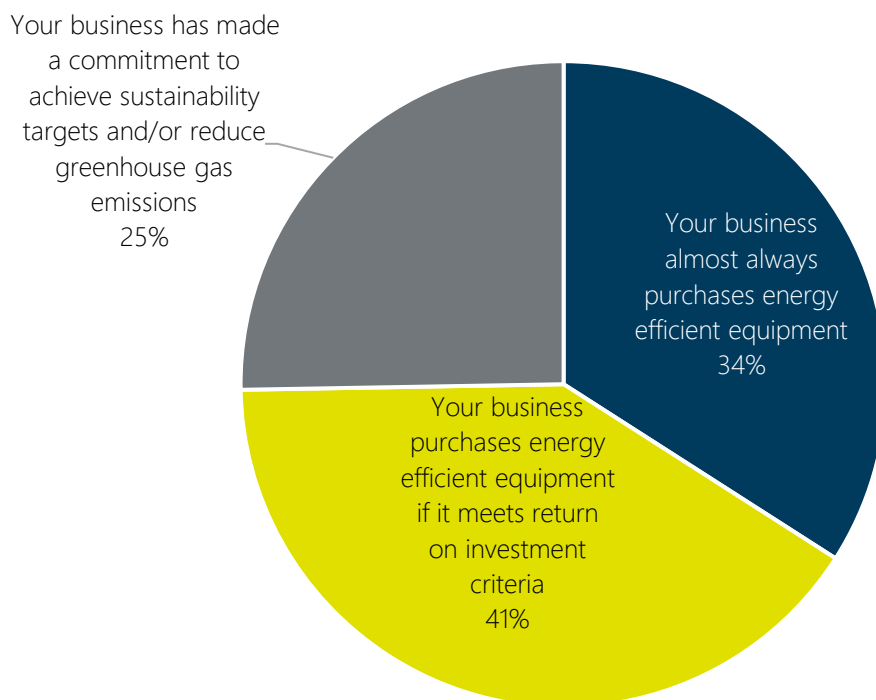
In addition, 79% of respondents noted that their business didn’t have a corporate policy in place for energy efficiency, sustainability, or carbon reduction, indicating that assistance from Georgia Power on the benefits of energy efficiency and the programs offered could help boost these nonparticipants who otherwise don’t have corporate policies to support this need. In addition, the majority (~60%) of nonparticipants noted that their company typically requires a payback period of less than three years, and 41% of respondents noted that meeting a return-on-investment (ROI) criteria for energy efficient purchases applied to their business (Figure 2-17).





Therefore, Georgia Power should include a focus on payback period in the educational material provided to customers.

Figure 2-17. Nonparticipant Business Practices



Source: Commercial Nonparticipant Survey. Questions Q14. "Which of the following applies to your organization?" n=91

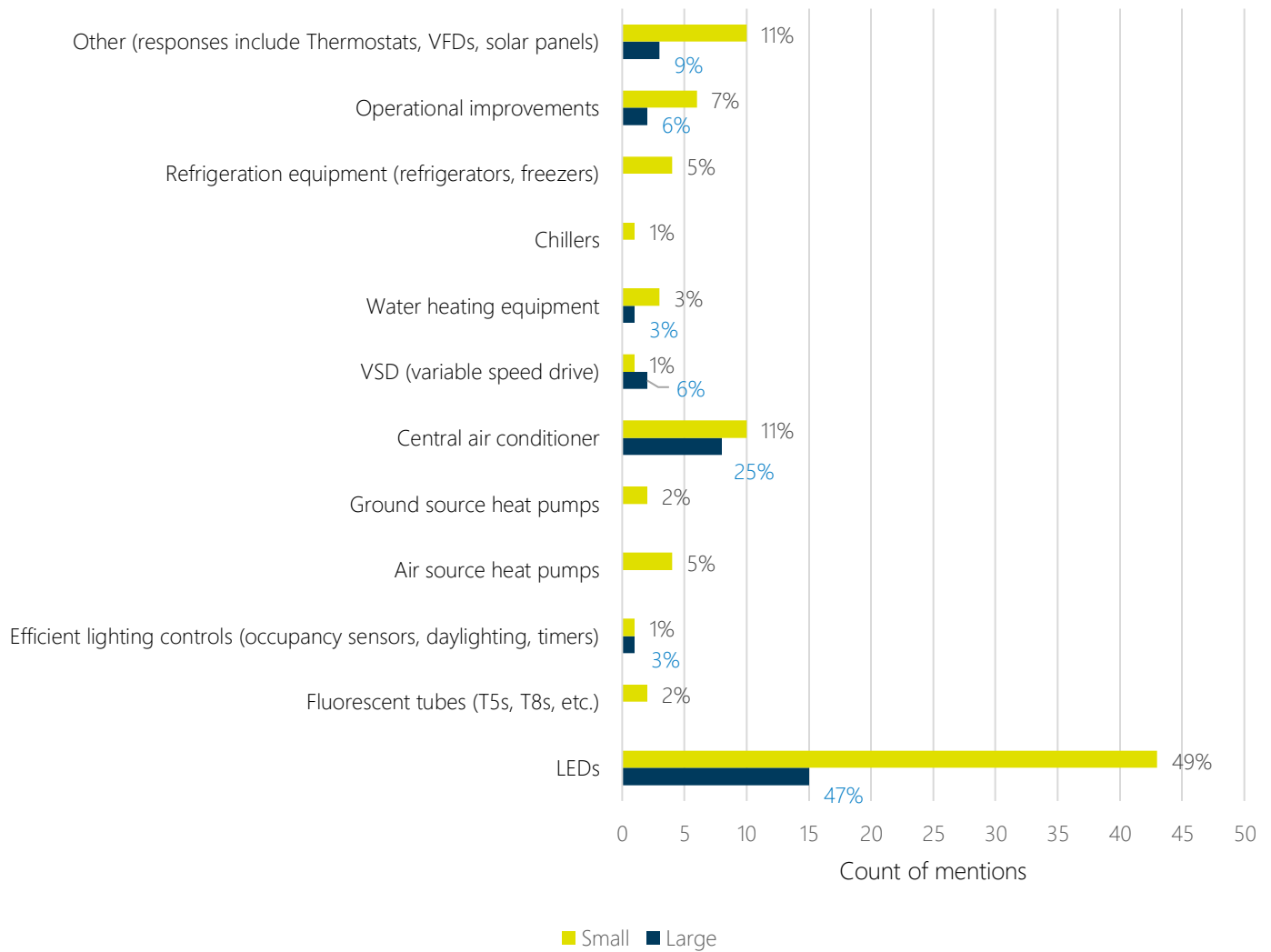
Interestingly, one-third of respondents (n=24 large and 68 small customers) noted that they have installed energy efficient products or equipment in the past year and of these, almost half noted lighting as the improvements made (followed by central AC) (Figure 2-18). When asked the reason for implementing these measures, reducing energy consumption, and replacing old or broken equipment were the most important reasons noted. This again points to the need to educate customers about the benefits of energy efficiency equipment on reducing consumption and cost, as this was a strong indicator of nonparticipant energy efficient behaviors. In addition, one-third of nonparticipants noted that information about energy savings from Georgia Power and information from a colleague who participated in the Georgia Power program was very important in their decision to participate. This indicates that customer energy efficiency motivations outside of the program are being driven by Georgia Power's efforts to promote the benefits of EE. (





Figure 2-19).

*Figure 2-18. Type of Energy Efficiency Improvements/Products/Equipment Installed by Nonparticipants**



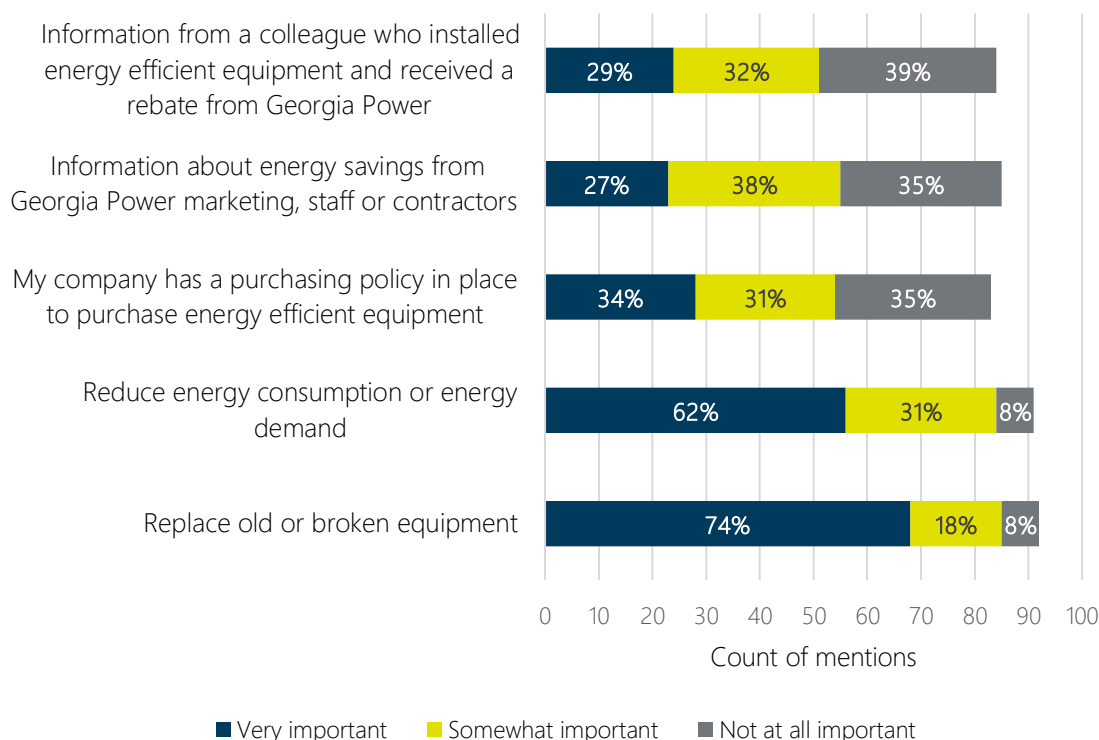
*Totals may not sum to 100% due to rounding

Source: Commercial Nonparticipant Survey. Questions Q23. "What type(s) of energy efficiency improvements, products, or equipment did you install? n =32 large, 87 small





Figure 2-19. Reasons for nonparticipant energy efficiency implementation*



*Totals may not sum to 100% due to rounding

Source: Commercial Nonparticipant Survey. Questions Q24. "How important were each of the following on your decision to install these energy efficient improvements?" n = ~90

Nonparticipant satisfaction with Georgia Power overall was high, with an average satisfaction rating of 8.2 on a 10-point scale. Satisfaction was slightly higher among small customers. When asked "Does knowing that Georgia Power offers energy efficiency programs impact your satisfaction rating of Georgia Power?", 40% of respondents stated that it did.

2.6.2 Trade Groups

The evaluation team interviewed five distributors and four trade groups as part of the evaluation activities. Interviews were conducted with HVAC and Lighting Distributors along with members of the Building Owners and Management Association (BOMA), the Conditioned Air Association of Georgia (CAAG), Georgia Association of Physical Plant Administrators (GAPPA), and Georgia Association of School Facility Administrators (GASFA). Overall awareness of Georgia Power's Commercial Energy Efficiency programs amongst this group is limited. Most respondents noted that they would like to receive information from Georgia Power about the programs offered, including information that they can share with contractors and direct customers.

Several HVAC trends were identified by this group including:





- ▶ An increased focus on indoor air quality due to the pandemic which, in their opinion, leads to an increased opportunity to focus on energy efficiency as a tie-in with indoor air quality discussions.
- ▶ Limited interest in the market to implement high efficiency HVAC due to high initial cost and long payback periods. There is a need for more education about the benefits of energy efficiency and any rebate offerings.
- ▶ Strong market interest in ductless systems due to versatility, improved comfort and efficiency.

Lighting trends identified included:

- ▶ Market is trending toward LEDs being the 'norm.'
- ▶ Significant opportunities remain with controls, but more training is needed to facilitate adoption amongst contractors.

Most of the distributors noted that they would appreciate assistance and information from Georgia Power to help pitch and educate their contractors and customers on the benefits of energy efficiency. Several distributors felt that the information should come directly from Georgia Power through direct training sessions or outreach, rather than the distributors conducting the training. It was also noted that increased trainings for facilities staff may increase willingness to adopt new technology and controls.

All trade groups interviewed stated that they actively promote energy efficiency to their members and three of the four trade groups stated that they would really like Georgia Power to provide more information on program opportunities and energy efficiency benefits. All three of those commented that in-person informational sessions would be most helpful and two of the four trade groups noted the need for regional trainings across the state.

"Georgia Power has the resources - need to be able to access them better. Would love to have opportunity for a training in their region (south) once/twice per year where Georgia Power could teach them about different options. Know Georgia Power has a center in Atlanta where do that type of training. That's great but not close to us."

-Trade Group

Lastly, one respondent stated that schools typically struggle with budget and state cost containment requirements that limit energy efficiency opportunities. However, with the recent federal COVID-19 pandemic relief funds, there was a noted opportunity for schools to focus on being more 'green', particularly through technology that focuses on improving indoor air quality.

2.6.3 Marketing Review

In addition to the program-specific marketing, Georgia Power used portfolio-level marketing to engage with commercial customers. Specifically, these marketing efforts sought to educate customers on energy efficiency tips, tools and resources/programs, drive customer awareness of program opportunities, and amplify the program-specific messaging by utilizing cross-program marketing. Georgia Power's portfolio-





level marketing focused on providing energy efficiency messages at key moments, such as during specific seasons with high electric bills for optimal impact. Georgia Power used an appropriate mix of channels for its portfolio-level marketing, including traditional (print ads, direct mail, and bill inserts) and digital (email, paid social media, display, streaming video/audio, and the Georgia Power website) channels.

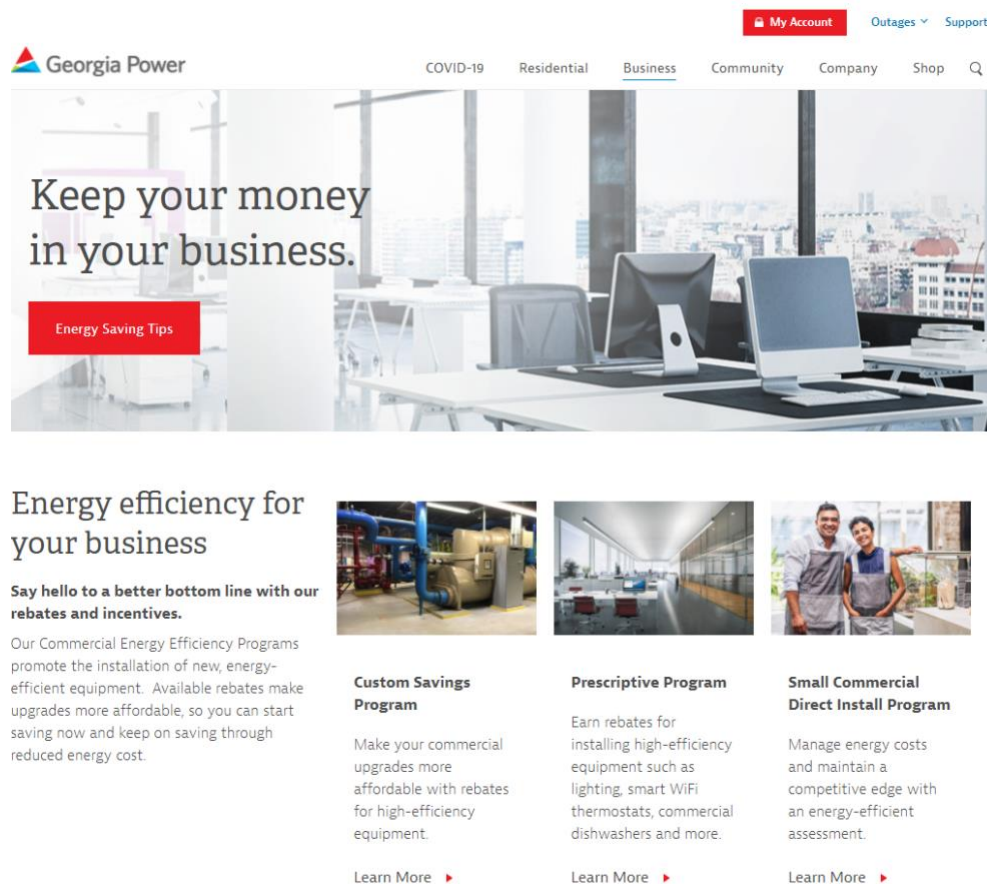
Georgia Power provided the Brightline team with examples of various marketing materials from the “Take Charge of Your Energy” campaign from Q1 2021. These example materials (print ad, social media ad, display ad, radio ad, video ad) all share consistent messaging and design, utilizing a similar headline and call-to-action, creating a sense of continuity for customers. These materials are all relatively brief and quickly get to the point, which is best-practice for marketing focused on awareness generation. Georgia Power set a KPI of 0.5% for the portfolio-level digital channel marketing click-through rate (CTR); the average CTR in 2020 was 0.44% and 0.31% in January 2021. According to Georgia Power’s marketing vendor noted that they planned several marketing optimizations in early 2021 to address the low CTR.

Most of the portfolio-level marketing materials direct customers to a landing page for commercial energy savings (<https://www.georgiapower.com/commercialsavings>), as shown in Figure 2-20. This webpage has a similar design to the program-level webpages, featuring key messages (saving money by making energy efficiency improvements) and links to commercial programs at the top of the page. The lower part of the page contains relevant information to draw the customer’s attention, including energy-saving tips, links to customer testimonials, and a link to the Business Energy Advisor tool. This webpage is well-structured and provides the correct depth of information for a landing page. The webpage bounce rate was 64.7% in January 2021, 23% lower than the bounce rate for all of 2020.





Figure 2-20. Commercial Energy Efficiency Landing Page



2.7 Conclusions and Recommendations

Conclusion: This evaluation found under-reporting of energy savings for certain Prescriptive Lighting projects.

Recommendation: Consider whether more descriptive building type names or definitions would improve accuracy of participant selections. The implementation team could also introduce additional quality control checks for large lighting projects and prior program participants to ensure that lighting projects are being assigned to the most appropriate building type. *This recommendation has already been adopted by the implementation team.*

Recommendation: Consider using project-specific or 'custom' hours of use inputs, especially for large lighting projects. This action could enable the program to more accurately track lighting savings for projects in facilities that have non-typical usage schedules. *This recommendation is in process of adoption by the implementation team.*





Recommendation: Make revisions to the programmed algorithms for specific measures as described in Section 5.1.1 including projects with existing controls in the baseline condition. *This recommendation has already been adopted by the implementation team.*

Conclusion: There are opportunities for repeat/new participation as all Custom participants and 95% of Prescriptive participants noted they are ‘somewhat’ or ‘very’ likely to participate in a Georgia Power program again and almost 50% of nonparticipants stated they are ‘somewhat’ or ‘very’ likely to participate in a Georgia Power program in the next 6 months.

Recommendation: As the COVID-19 pandemic subsides, consider a focused marketing campaign to inform and attract customers to the program who have delayed or deferred participation because of the pandemic. Activities might include an increase of in-person meetings and events with customers and trade allies, as the pandemic subsides.

Conclusion: Repeat and future participation may not come easy, because many companies view energy use as a cost of doing business and 60% of respondents (both participants and nonparticipants) ‘somewhat or strongly agree’ with the statement that “We have made all the EE improvements we can without a substantial investment”. In addition, high initial costs and overall budget are the largest barriers to participation.

Recommendation: Explore new and different ways to communicate the long-term benefits of energy efficiency above and beyond the typical ‘low-hanging fruit’. Educating customers on the long-term benefits of lowering operating and maintenance costs will help customers see past initial cost concerns and help with new and repeat program participation.

Conclusion: Statements from participants and nonparticipants regarding opinions on energy efficiency investments and business practices indicates that targeted outreach and education will be important factors for Georgia Power to focus on moving forward. The majority of customers state that they view energy use as a cost of doing business and will use whatever amount of energy they need and that their company compares long-term energy savings when purchasing new equipment.

Recommendation: Expand the usage of retargeting and trigger emails to increase engagement through an email nurturing campaign. Email nurturing campaigns use the same type of customer information as retargeting emails – such as prior engagement or their past program participation – and use it to create a series of targeted email sends. These emails can be used to identify customers who are looking to make upgrades beyond the typical ‘low-hanging fruit’, but may not know where to start.

Conclusion: Email is the preferred mode of communication for customers and contractors. However, very few nonparticipants are learning about the program this way (13%) and no participating customers noted this as the way they learned about the program. Awareness via email was higher for contractors (both participating and nonparticipating).





Recommendation: Increase use of and continue to include email as a primary mode of communication with customers and contractors. As noted in the recommendation above, using email nurturing campaigns or targeted emails via segment or business type can help improve awareness through this mode.

Conclusion: Customers are extremely satisfied with the program, which is the result of an effort to make the program straightforward and easy for participants. Satisfaction with the application process amongst participants continues to climb in comparison to the last several evaluation cycles and 75% of participants in this cycle noted very high satisfaction with various aspects of the application process, including clarity of application requirements and ease of application process. No Custom participants had trouble understanding the rebate cap for the program. In addition, satisfaction with the program design and application process was high among participating contractors, with 2/3rds of contractors experiencing no difficulties with the application form and 83% of contractors stating that they are satisfied with the program process overall.

Conclusion: Educating contractors about Georgia Power's programs and energy efficiency has a positive impact toward market transformation. Nearly 60% of nonparticipating contractors indicate that they are actively promoting energy efficiency and the 75% of participating contractors 'always' refer customers to Georgia Power's program. In addition, nonparticipant contractors stated that customers ask about or request energy efficiency products about 50% of the time, indicating additional opportunities for program participation if contractors are educated about program opportunities. In addition, fewer than half of participating contractors had received any program-sponsored training in 2020 or 2021 (however, this is not surprising due to the COVID-19 pandemic).

Recommendation: When the COVID-19 pandemic subsides, ramp up contractor training (in-person and virtual) offerings to educate contractors on the programs. Georgia Power should consider a mix of trainings offered directly by Georgia Power program staff and in collaboration with trade groups and distributors to help educate contractors.

Conclusion: The COVID-19 pandemic had a significant impact on customer behavior. Thirty-one percent (31%) of nonparticipants noted that business decisions around energy efficiency were delayed due to COVID-19, but the majority of respondents who stated that energy efficiency decisions were delayed noted that they will reconsider making these investments, as soon as possible and in less than 1 year.

Recommendation: When the COVID-19 pandemic subsides, Georgia Power could consider increased marketing campaigns focused on businesses opening back up and energy efficiency opportunities that could help reduce short and long energy costs as businesses return to a 'normal' schedule.

Recommendation: Conduct targeted marketing campaigns that focus on simple and straightforward opportunities that are easy for businesses to understand and implement. Focusing on high-usage nonparticipants and including a focus on payback periods in educational material may help educate





nonparticipants who stated that return on investment and payback period are important to decision making around energy efficiency.

Conclusion: Participants and contractors are highly satisfied with the program. The highest level of satisfaction among participants was with the performance of the equipment installed, the installation contractor, and the energy savings realized. Satisfaction among participating contractors is highest with working with CLEAResult and Georgia Power staff. The rebate amount received one of the lowest satisfaction ratings with both participants and contractors, however this is not unusual.

Conclusion: During the COVID-19 pandemic, both the implementation contractor and evaluation team were able to gather program and project information from participants utilizing remote and virtual inspection techniques.

Recommendation: Develop a more formal decision-tree on the best applications to utilize remote and virtual inspection methods to confirm measure installation and performance. These techniques can reduce program costs, increasing program cost effectiveness and reducing cost impacts.





3 Midstream Products

The Midstream Products program delivered incentives for qualifying sales through three HVAC and eight Food Service equipment distributors. Participation in the Midstream Products program from January 2020 to June 2021 totaled 1,975 measures from 828 unique projects.¹² As shown in Table 3-1, the program achieved 1,558 MWh in net verified energy savings. A few distributors mentioned in interviews that the COVID-19 pandemic delayed or reduced interest in high efficiency equipment, and one distributor noted an increased customer attention to energy efficiency in order to reduce operating costs. Because initial program cycle planning also set a fixed budget for the program, Georgia Power intentionally limited distributor recruitment. An expansion in the budget may allow the program to grow its reach to more, albeit smaller, distributors with a greater need for the midstream incentive.

Table 3-1. Commercial Midstream Products Program Savings

Component	Number of Measures	Reported kWh	Verified Gross kWh	Realization Rate	NTG	Verified Net kWh
Commercial HVAC Equipment	1,402	3,599,166	3,510,980	98%	35%	1,237,108
Commercial Food Service Equipment	573	1,429,973	1,429,932	100%	22%	320,598
TOTAL	1,975	5,029,139	4,940,912	98%	32%	1,557,706

Participating distributors reported high satisfaction with their program experience and expressed an appreciation for the education and support provided by Georgia Power that enabled them to sell more high-efficiency equipment and use the program as a marketing tool. However, most participating distributors reported already being in the practice of selling program-qualifying equipment, which limited the program's ability to make changes in stocking practices. This is a well-liked program; incorporating new distributors each year and making end-use customers aware of the benefits they've received can accelerate market transformation even further. The evaluation team has several recommendations to expand the impact of the offering and keep it relevant as demand for high-efficiency equipment matures.

¹² Project total based on count of unique invoices in VisionDSM tracking data as of June 29, 2021.



COMMERCIAL MIDSTREAM PRODUCTS PROGRAM

Program Performance

ENERGY SAVINGS (KWH)



DEMAND REDUCTION (KW)



Impact Evaluation Findings

The program's reported savings aligned well with verified savings, resulting in a realization rate of

98% AND **99%**
for energy savings for demand savings

Evaluated savings were adjusted to account for Split & Package AC units sorted into incorrect tonnage bins and VRF Mini Split ACs that were assigned VRF Mini Split HP savings.



Many distributors said they would have sold 40% - 100% of their units in the absence of the program. This resulted in a NTG of 35% for HVAC and 22% for food service, which is comparable to many other midstream delivery mechanisms around the country.



32%
program overall

Process Evaluation Findings

The COVID-19 pandemic had varying impacts on participant distributors' experience with the program.



The program's influence on distributor sales and stocking practices may have been limited by budget constraints that restrained distributor outreach.

Participant distributors are highly satisfied with the program and use the incentive to drive sales.



Peer utilities use their websites to connect customers with distributors participating in midstream programs and influence all three market actors: distributors, contractors and customers.

Key Recommendations

Modify **recruitment messaging** to help distributors understand the purpose of the program, which is to support them in offering new products and to increase their sales of eligible equipment.



Add a **customer-facing webpage** for the Midstream Products program that lists participating distributors and qualifying equipment.



Consider expanding distributor recruitment for the HVAC and food service segments if budget allows to incorporate distributors who are not already in the practice of selling high-efficiency equipment.



3.1 Program Overview

Georgia Power's Commercial Midstream Products program (Midstream Products Program), initiated in 2017, encourages equipment distributors to promote the installation of eligible, high-efficiency HVAC and Food Service equipment at qualifying Georgia Power commercial customer facilities. The program focuses on influencing distributors' promotion, sales, and stocking practices of high-efficiency equipment. Due to the long lead time required for high-efficiency HVAC sales, the HVAC portion of the program has a greater emphasis on the sales of equipment.

3.1.1 Program Design

In 2020, Georgia Power expanded its existing program offerings for HVAC equipment to include commercial Food Service equipment. Program staff shifted the delivery path for commercial kitchen equipment incentives from the Prescriptive program, where these measures had very limited uptake, to the Midstream Products program to increase participation levels.

In 2020, Georgia Power also transitioned program delivery from a third-party implementer to its own staff. Through the program, Georgia Power partners with participating HVAC and food service equipment distributors to offer incentives for each qualifying equipment sale, allowing distributors to price energy-efficient equipment at a competitive cost compared to standard-efficiency equipment. By providing the incentives directly to the distributors, the program intends to increase the availability and penetration of high-efficiency equipment in the market and eliminate the administrative burden on customers and contractors to submit applications for per-unit incentives.

There are three primary goals for the Commercial Midstream Products program:

- ▶ Increase distributor stocking of high-efficiency HVAC and Food Service equipment
- ▶ Increase sales of high-efficiency HVAC and Food Service equipment by leveraging existing distributor and contractor relationships and marketing channels
- ▶ Generate long-term energy savings and peak reductions from increased market penetration of high-efficiency equipment





3.1.2 Program Measures

Table 2-2 and Table 3-3 list all eligible HVAC and Food Service measure categories and the range of incentives available for each system or equipment type. The eligible measures for the HVAC component were consistent with the prior program cycle (2017-2019); however, the minimum incentive increased by \$5 to \$10 per ton for most measures. Food Service equipment must be ENERGY STAR rated to receive an incentive.

Table 3-2. Commercial HVAC Qualifying Measures and Incentives

HVAC System Type	Size	Range of Incentive (per ton)
Split & Package AC	<65,000 16 SEER or 13 EER	\$25-65
	65,000≤134,999 12.2 EER or 14 IEER	\$25-65
	135,000≤239,999 12.2 EER or 13.2 IEER	\$25-65
	≥240,000 10.8 EER or 12.3 IEER	\$25-65
	≥760,000 10.4 EER or 11.6 IEER	\$25-65
Split & Package ASHP	<65,000 16 SEER or 13 EER	\$50-100
	65,000≤134,999 11.8 EER, 13.6 IEER	\$50-100
	135,000≤239,999 10.9 EER or 11.6 IEER	\$50-100
	≥240,000 10.3 EER or 10.6 IEER	\$50-100
WSHP	≤134,999 14 EER @86F Entering	\$25
VRF Mini Splits, VRF AC and HP <65,000 18 SEER, 13 EER	<65,000 Btuh	\$100

AC = air conditioner, ASHP = air source heat pump, WSHP = water source heat pump, VRF = variable refrigerant flow, HP = heat pump, SEER = seasonal energy efficiency ratio, EER = energy efficiency ratio

Table 3-3. Commercial Food Service Qualifying Measures and Incentives

Food Service Equipment Type	Range of Incentive (\$ per unit)
Electric Fryer	\$225
Electric Combination Oven	\$400
Electric Griddle	\$125
Electric Steamer	\$250
Electric Holding Cabinet	\$175

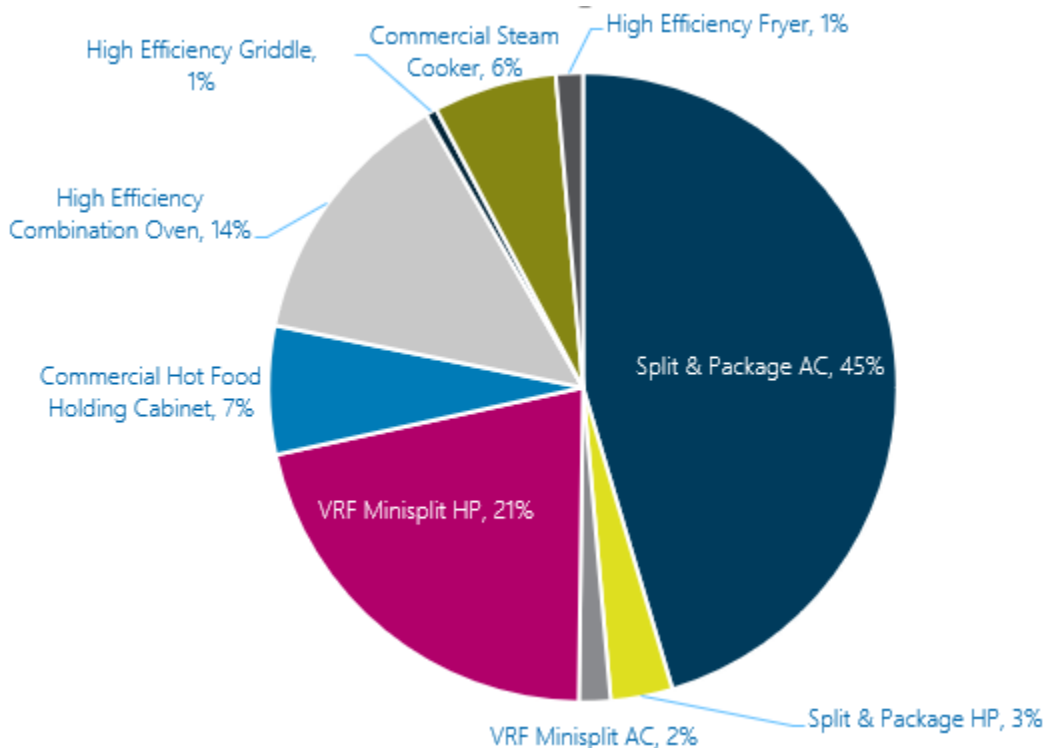




3.2 Participation and Achievements

Georgia Power's Commercial Midstream Products program rebated a range of energy efficiency measures in 2020 and 2021. Split & Package ACs represented the largest share of reported savings for the HVAC component, with 65% of reported savings. For the Food Service component, High-Efficiency Combination Ovens represented the largest share of reported savings, with 48% of total savings (Figure 3-1).

Figure 3-1. Midstream Products Program Reported Savings by Measure



The program reported 5,029,139 kWh savings in 2020 and Q1 and Q2 of 2021 and 1,398 kW demand reduction. Based on the 2020 verified savings of 2,706,223 kWh, the program achieved 62% of its 2020 energy savings goal. Energy and demand savings achievements are presented in Table 3-4 and Table 3-5.



*Table 3-4. Midstream Program Achievements – Energy*

Timeframe	Number of Measures	Reported kWh	Verified Gross kWh	Annual Energy Savings Target	% of Annual Goal
2020	1,151	2,706,448	2,706,223	4,340,660	62%
2021 Q1 & Q2	824	2,322,690	2,234,689	4,340,660	51%
TOTAL	1,975	5,029,139	4,940,912		

Table 3-5. Midstream Program Achievements – Demand

Timeframe	Number of Measures	Reported kW	Verified Gross kW
2020	1,151	838	837
2021 Q1 & Q2	824	560	541
TOTAL	1,975	1,398	1,378

The 2020/21 COVID-19 pandemic and corresponding global economic slowdown disrupted Georgia Power customer and stakeholder decision making for energy efficiency products and services. The pandemic introduced economic uncertainties, premise lockdowns, and supply chain disruptions that challenged customer adoption of energy-efficient retrofits and new technologies. For the commercial sector, impacts ranged from reduced occupancy and abnormally high closures of restaurants, offices, and schools, while other businesses had short-term or little impact to historical occupancy patterns. Additionally, the pandemic resulted in remote and hybrid office employee work conditions, creating uncertain office occupancy patterns. At the time of this report, October 2021, the pandemic has not abated and new waves of COVID-19 cases continue to affect commercial businesses. This environment directly and indirectly reduced participation in Georgia Power DSM programs; therefore, at this time, the impacts are not fully measurable and are outside of the range of estimation.

The evaluators of GPC commercial programs worked diligently to align with the original program evaluation plans that were developed in the early stages of the pandemic during April 2020. However, the resulting reduced participation, COVID-19 safety protocols, limited access to premises, and new work environments impacted the evaluation team's ability to reach customers, conduct on-site measurement and verification, and reduced the population pool of participants and sample sizes. This evaluation report will provide further details of impacts from the pandemic where applicable and known. To the extent possible, the evaluation team is confident the findings are as accurate as possible for this time horizon of 2020 through the summer of 2021. However, the environment in which this data was gathered may no longer be applicable in future years, if and when, the effects of the pandemic are changed.





3.3 Methodology

The evaluation approach for the Midstream Products program involved a data-driven strategy to produce a rigorous and accurate assessment of the program and enable confidence in the results. The evaluation team used industry standard evaluation strategies and approaches to capture feedback about the change in market environment.

3.3.1 Research Questions

Table 2-5 presents each of the key researchable questions and the tools used to investigate each one. The evaluation approach combined a rigorous assessment of energy savings with an in-depth exploration of participant motivations and challenges.

Table 3-6. Midstream Products Program Evaluation Research Questions

Research Questions	Indicators/Areas of Investigation	Research Tools
How effective is the enrollment and participant process? Does the process allow for timely receipt of incentives?	<ul style="list-style-type: none"> Distributor satisfaction with the application portal Clarity of program tracking data 	Stakeholder interviews, participant distributor interviews, document review
How effective is program implementation, including distributor outreach and training, data tracking, quality control, and communication?	<ul style="list-style-type: none"> Distributor awareness of Georgia Power support staff Distributor rating of program training usefulness Distributor awareness of updates or changes Completeness of tracking data 	Stakeholder interviews, participant distributor interviews, document review
How satisfied are distributors with the program process and Georgia Power overall?	<ul style="list-style-type: none"> Distributor satisfaction with the program and its components 	Participant distributor interviews
How effective is program marketing? How aware are distributors about the program?	<ul style="list-style-type: none"> Distributor use of program materials Nonparticipant distributor awareness of program and Georgia Power staff 	Participant distributor interviews, nonparticipant distributor interviews
Are incentive levels sufficient to motivate energy efficiency implementation?	<ul style="list-style-type: none"> Distributor satisfaction with incentive amount 	Stakeholder interviews, participant distributor interviews
What are drivers and barriers for participation and customer demand for energy efficiency equipment?	<ul style="list-style-type: none"> Distributor drivers and barriers Distributor perceptions of customer drivers and barriers 	Participant distributor interviews, nonparticipant distributor interviews, nonparticipant customer surveys
Does the program encourage adoption of additional energy efficiency measures?	<ul style="list-style-type: none"> Distributor-reported sales of energy-efficient equipment that did not receive a incentive 	Participant distributor interviews





Research Questions	Indicators/Areas of Investigation	Research Tools
Is the program increasing distributor stocking of high-efficiency HVAC and Food Service equipment?	<ul style="list-style-type: none"> Distributor-reported effect of program on sales or stocking practices 	Participant distributor interviews
What impact have any changes from the previous program cycle design had on 2020–2022 performance and delivery?	<ul style="list-style-type: none"> Distributor satisfaction with the program and its components Presence of marketing materials 	Stakeholder interviews, participant distributor interviews, document review
Is the program generating long-term energy savings due to increased market penetration?	<ul style="list-style-type: none"> Distributor-reported effect of program on sales and stocking practices Program engagement with nonparticipant distributors 	Stakeholder interviews, participant distributor interviews, document review
Is the program leveraging existing distributor and contractor relationships and marketing channels to increase sales of high-efficiency HVAC and Food Service equipment?	<ul style="list-style-type: none"> Distributor-reported effect of program on sales and stocking practices Nonparticipant distributor awareness of program and Georgia Power staff Presence of marketing materials 	Stakeholder interviews, participant distributor interviews, nonparticipant distributor interviews, document review
What are the accurate and supportable gross energy and demand impacts of the program?	<ul style="list-style-type: none"> Estimation and verification of equipment savings 	Document review, verification calls, measure review
What are the accurate and supportable net energy and demand impacts of the program (assess net-to-gross [NTG])?	<ul style="list-style-type: none"> Distributor ratings of program influence on qualifying equipment sales 	Participant distributor interviews

3.3.2 Evaluation Activity Summary

The BrightLine and Cadmus evaluation team (evaluation team), conducted several activities to assess the successes, weaknesses, and market barriers of the implemented program, as well as the veracity of the reported energy benefits. Table 3-7 summarizes these evaluation activities, which relied on an efficient and collaborative approach to support the concurrent process and impact evaluations of the program. Distributor interview sample sizes were originally based on expected program activity; however, participation was lower than expected, which resulted in fewer completed interviews. The program had a total of three participating HVAC distributors and eight food service distributors. The distributors reached by the evaluation team represent 99.5% of evaluated savings.



*Table 3-7. Evaluation Activity Summary*

Evaluation Activity	Planned	Completed
Program Materials Review	N/A	N/A
Marketing Assessment	N/A	N/A
Georgia Power Program Staff Interviews	4	4 (2 HVAC, 2 Food Service)
Participating Distributor Interviews	10 (5 HVAC, 5 Food Service)	9 of 11 participant distributors (3 HVAC, 6 Food Service)
Nonparticipating Distributor Interviews	10 (5 HVAC, 5 Food Service)	3 of 7 nonparticipant distributors (2 HVAC, 1 Food Service)
Nonparticipant surveys	300 across all commercial program evaluations	300
Equipment verification calls with participant businesses	30 projects (55 measures)	35 projects (73 measures)

3.3.3 Impact Evaluation Methodology

3.3.3.1 Verified Savings

The evaluation team calculated gross verified energy and demand savings based on a review of the Commercial Midstream Products program tracking database. The team reviewed all 2020 and 2021 projects with status designations of *application batched*, *application completed*, *payment QC (quality control)*, and *application processing completed* at the time of the VisionDSM data extract on June 29, 2021. Projects with a commit date in 2020 or 2021 were included in the analysis. We evaluated Georgia Power's reported savings values for commercial food service equipment against the January 2019 Georgia Power Technical Resource Manual (TRM). For HVAC measures, we used the verified per-unit savings from the 2017-2019 Commercial HVAC program.¹³ The use of the 2017 - 2019 evaluation findings in lieu of the TRM reflect the approach taken by Georgia Power in its reported assumptions, which is a more accurate approach than using the TRM values. The evaluation team conducted phone interviews instead of the planned on-site inspections due to the COVID-19 pandemic to verify nameplate data and measure persistence (i.e., the unit is currently installed and operable).

3.3.3.2 Net-to-Gross and Net Savings

3.3.3.2.1 Free-ridership

The free-ridership analysis compared 2020 and 2021 sales of program-qualifying equipment to participant distributors' estimated program-qualifying equipment sales in absence of the Georgia Power Midstream Products program. The evaluation team conducted interviews with participating distributors to obtain these estimates.

¹³ Nexant. Evaluation of Georgia Power Company's 2017 DSM Programs – Volume I. August 14, 2018





Natural occurring free-ridership was estimated from equipment type-specific answers to the following question:

What is your best estimate of the percent of [MEASURE] sales that would have occurred during [2020/2021] if the Georgia Power Midstream Products program did not exist?

We multiplied the percentage of sales that would have occurred without the program, as reported by a distributor, by the distributor's program sales for the equipment type to arrive at **natural occurring free-ridership units** associated with the distributor for a given equipment type.

The following equation illustrates the **natural occurring free-ridership units** calculation:

$$\text{Natural Occuring Free – ridership Units} = \text{Distributor Reported Percent Sold Without Program} * \text{Verified Program Units Sold}$$

The participant distributors were then asked the following question to assess the importance the Georgia Power Midstream Products program had on program-qualifying sales that distributors reported would not have occurred if the program didn't exist:

Using a five-point scale, with 1 meaning not at all important and 5 meaning very important, please rate how important participating in the Georgia Power's Midstream Products program has been on your [2020/2021] sales in Georgia Power's service territory for that same list of equipment we just discussed.

The evaluation team used the importance rating reported by distributors for each equipment type to estimate a lift free-ridership score, shown in Table 3-8. We then multiplied this score by the program-qualifying sales that distributors reported would not have occurred if the program didn't exist to estimate **lift free-ridership units** for each equipment type.

Table 3-8. Lift Free-ridership Scoring

Importance Rating	Lift Free-ridership Score
1 - Not at all important	100%
2	75%
3	50%
4	25%
5 - Very important	0%

The following equation illustrates the **lift free-ridership units** calculation:

$$\begin{aligned} &\text{Lift Free – Ridership Units} \\ &= \text{Lift Free – Ridership Score} \\ &* \text{Distributor reported program sales that would not have occurred if the program didn't exist} \end{aligned}$$





The sum of the **natural occurring free-ridership units** and **lift free-ridership units** divided by a distributor's program sales for the equipment type equals the equipment type-specific free-ridership ratio for a distributor:

$$\text{Free – ridership Ratio (Equipment Type specific)} = \frac{\text{Natural occurring Free – ridership units} + \text{Lift Free – ridership units}}{\text{Verified Program Units Sold}}$$

Overall program equipment type-specific free-ridership ratios are the summation of the distributors natural occurring and lift free-ridership units divided by summation of the distributor's total program sales:

$$\text{Overall Program Free – ridership Ratio (Equipment Type specific)} = \frac{\sum (\text{Natural occurring Free – ridership Units, Lift Free – Ridership units})}{\sum \text{Verified Program Units Sold}}$$

We estimated overall program pathway-specific free-ridership estimates (commercial HVAC and commercial Food Service) by weighting the program pathway equipment type-specific free-ridership estimates by *ex post* gross population savings.

3.3.3.2.2 Participant Spillover

To assess participant spillover, the evaluation team asked participating distributors if they sold any additional unrebated program-qualifying equipment because of Midstream Products program influence.

3.3.3.2.3 Net-to-Gross

To calculate net-to-gross, we combined the free-ridership and participant spillover estimates using the following formula:

$$NTG = 1 - \text{Free – ridership} + \text{Participant Spillover}$$

3.3.4 Process Evaluation Methodology

The evaluation team used the following methods to perform its process evaluation:

- ▶ A review of the program database and materials, which included the VisionDSM program tracking tool, any materials developed to promote the program to distributors or assist distributors with qualifying sales, and the implementation manual.
- ▶ A marketing assessment that focused on Georgia Power marketing to participating distributors.
- ▶ Interviews with Georgia Power staff involved in design, implementation, and outreach of the Midstream Products program. Interviews took place in March and July 2020 and sought to assess program operations, performance, and marketing strategies, as well as perceived market barriers and motivations.
- ▶ Telephone interviews with participating and nonparticipating distributors, which took place between December 2020 and June 2021. Participating distributors were defined as those who were affiliated with the program and sold products for which Georgia Power provided an incentive. Participant distributor interviews explored the effectiveness of the program and its delivery and fulfillment.





process, program satisfaction, and market baselines and program impacts. Nonparticipant distributor interviews focused on reasons for not participating and ways to overcome these barriers, along with capturing insights about market conditions in Georgia Power's territory to qualitatively inform the Midstream Products program NTG analysis. For HVAC, nonparticipant interviewees included those who had knowledge of the program because they had been a past participant or were invited to participate in 2020 or 2021. For Food Service, nonparticipant distributors included those who may not have had knowledge of the program.

- ▶ Surveys with the general population of nonparticipating customers. Surveys sought to gain a better understanding of customer attitudes and knowledge of energy efficiency and upgrades and plans for future energy improvements.

3.4 Impact Evaluation Findings

3.4.1 Verified Gross Savings

To determine verified gross program energy savings and demand reduction for the Midstream Products program, the evaluation team reviewed the program tracking database and checked savings estimates and calculations against reported savings assumptions. The evaluation team confirmed accurate application of the assumptions for all Commercial Midstream Products program measures with the exception of VRF Mini Split ACs, which were assigned incorrect reported savings. The savings assigned to this measure were consistent with VRF Mini Split HPs. The team assigned savings assumptions consistent with Split & Package ACs, which was a more accurate proxy for the mini split measures given that the VRF Mini Split ACs are cooling only and therefore should not be attributed heating season savings. Additionally, we corrected a small number of Split & Package ACs that were sorted into the incorrect tonnage bin. These adjustments resulted in lower verified energy savings and demand reduction for the VRF Mini Split ACs. Georgia Power has already corrected these Vision programming errors.

The evaluation team conducted phone calls with a sample of 35 participant businesses to verify installations and the accuracy of the tracking data. The verified installations included a 60/40 split of 21 HVAC and 14 Food Service projects, which is comparable to 72% HVAC and 28% Food Service records from the program tracking database. We found that all units rebated to surveyed program participants were tracked accurately and reported as installed and operable. The verification rate for all measures is 100%. All Food Service measures have realization rates of 100% for both energy and demand. The overall ratio is slightly less than 100% for HVAC measures due to the low realization rates of VRF Mini Split ACs (11%), which were assigned reported savings consistent with VRF Mini Split HPs. Split & Package ACs with a cooling capacity of at least 240,000 Btuh also accounted for a lower realization rate because those models with a cooling capacity of exactly 240,000 Btuh were incorrectly placed into a lower capacity bin, as well some slight differences due to rounding. As previously noted, this issue was corrected when shared with Georgia Power.

Table 3-9 compares the unit energy and demand savings values used for reported and verified savings where there are discrepancies. Reported calculations for 240,000 Btuh ACs used the value for Split & Package AC units below 240,000 Btuh instead of the value for 240,000 Btuh and above. Reported savings





for VRF Mini Split ACs used the value for VRF Mini Split HPs while verified savings use the value for Split & Package ACs below 65,000 Btuh.

Table 3-9. HVAC System Savings per Ton Discrepancies

Equipment Type	kWh/ton		kW/ton	
	Reported	Verified	Reported	Verified
240,000 Btuh Split & Package AC	300.31	110.47	0.1734	0.0221
VRF Mini Split AC	2,291.29	251.66	0.2910	0.0656

Table 3-10 and Table 3-11 show the individual measure-level realization rates.

Table 3-10. Program Reported vs. Gross Verified Energy Savings¹⁴

Equipment Type	Reported kWh	Verified Gross kWh	Realization Rate
Split & Package AC < 65,000 Btuh	345,969	345,951	100%
Split & Package AC 65,000<=134,999 Btuh	497,842	497,811	100%
Split & Package AC 135,000<=239,999 Btuh	1,238,530	1,238,520	100%
Split & Package AC >=240,000 Btuh	201,341	182,349	91%
Split & Package ASHP < 65,000 Btuh	79,717	79,722	100%
Split & Package ASHP 65,000<=134,999 Btuh	73,395	73,420	100%
Split & Package ASHP 135,000<=239,999 Btuh	6,807	6,808	100%
VRF Mini Split AC	81,753	8,976	11%
VRF Mini Split HP	1,073,813	1,077,423	100%
Commercial Hot Food Holding Cabinet	332,000	332,000	100%
High-Efficiency Combination Oven	680,400	680,400	100%
High-Efficiency Griddle	28,635	28,635	100%
Commercial Steam Cooker	319,308	319,267	100%
High-Efficiency Fryer	69,630	69,630	100%
TOTAL	5,029,139	4,940,912	98%

Note that the deemed demand savings values provided in the 2019 Georgia Power TRM for food service equipment are rounded to two decimal places. Reported and verified savings are calculated using more exact deemed values rounded to three decimal places. For consistency, the evaluation team calculated

¹⁴ Realization rates are rounded to nearest percent; reported and verified may not be exactly the same.





demand savings for HVAC measures using kilowatt per ton values rounded to three decimal places as well; however, reported savings were calculated using values rounded to just two. Although the overall realization rate for demand is 99%, the breakdown in Table 3-11 shows that individual unit verified ratios vary from as low as 23% to as high as 102%.

Table 3-11. Variance in HVAC Verified Demand Savings Ratio

Equipment Type	Reported kW	Verified Gross kW (summer peak)	Realization Rate
Split & Package AC < 65,000 Btuh	96.21	90.73	94%
Split & Package AC 65,000<=134,999 Btuh	135.04	129.24	96%
Split & Package AC 135,000<=239,999 Btuh	701.11	713.48	102%
Split & Package AC 759,999>=240,000 Btuh	48.01	36.31	76%
Split & Package ASHP < 65,000 Btuh	17.25	16.51	96%
Split & Package ASHP 65,000<=134,999 Btuh	16.30	14.94	92%
Split & Package ASHP 135,000<=239,999 Btuh	3.87	3.93	101%
VRF Mini Split AC	10.35	2.35	23%
VRF Mini Split HP	135.92	136.84	101%
Commercial Hot Food Holding Cabinet	60.92	60.92	100%
High-Efficiency Combination Oven	110.04	110.04	100%
High-Efficiency Griddle	4.61	4.61	100%
Commercial Steam Cooker	46.90	46.90	100%
High-Efficiency Fryer	11.18	11.18	100%
TOTAL	1,397.71	1,377.99	99%

Since the verification rate is 100% for all measures, reported and verified measure quantities are the same.

3.4.1.1 Precision Estimate

Because a desk review was performed for a census of reported measures, there is no statistical uncertainty in these realization rates. Moreover, there is no variance in the verification rate (in service rate) because all surveyed respondents reported a 100% verification across the board.

3.4.2 Net-to-Gross

To estimate free-ridership and participant spillover Georgia Power's Midstream Products program, the evaluation team performed interviews with all three participating commercial HVAC equipment distributors and six of the eight participating commercial food service equipment distributors between December 2020 and June 2021.





3.4.2.1 Free-Ridership

Table 3-12 presents the free-ridership findings for commercial HVAC equipment. The overall commercial HVAC equipment free-ridership estimates are weighted by program population verified gross savings. All three distributors interviewed indicated they were already in the market of selling program-qualifying measures for which they participated prior to their involvement with the program. The two distributors representing the majority of commercial HVAC gross population savings reported they would have sold between 40% and 80% (equipment type-specific estimates) of the units in absence of the program. Split & Package ACs have the lowest equipment type-specific free-ridership (56%) and represent the largest proportion of commercial Food Service equipment population gross savings (65% kWh, 85% kW).

Table 3-12. Commercial HVAC Free-Ridership Findings

Equipment Type	Number of Respondents	Verified Program Units Sold (a)	Natural FR Units (b)	Lift FR Units (c)	Average FR ((b+c)/a)	Percent of Verified Gross kWh Population Savings	Percent of Verified Gross kW Population Savings
Split & Package AC	3	957	503	36	56%	65%	85%
Split & Package ASHP	3	150	85	13	65%	5%	3%
VRF Mini Split AC & Heat Pump	3	332	231	44	83%	31%	12%
Overall					kWh ^a = 65% kW ^b = 60%		

FR = free-ridership

^a Weighted by verified gross kWh population savings.

^b Weighted by verified gross kW population savings.

Table 3-13 shows the free-ridership findings for commercial Food Service equipment. The overall commercial Food Service equipment free-ridership estimates are weighted by program population verified gross savings. Five of the six distributors interviewed indicated they were already in the market of selling program-qualifying measures for which they participated and would have sold the majority of program-rebated units in the absence of the program. The program had a strong influence in encouraging sales of High-Efficiency Combination Ovens for one distributor. High-Efficiency Combination Ovens have the lowest equipment type-specific free-ridership (71%) and represent the largest proportion of commercial Food Service equipment population verified gross savings (48% kWh, 47% kW).



*Table 3-13. Commercial Food Service Equipment Free-Ridership Findings*

Equipment Type	Number of Respondents	Verified Program Units Sold (a)	Natural FR Units (b)	Lift FR Units (c)	Average FR ((b+c)/a)	Percent of Verified Gross kWh Population Savings	Percent of Verified Gross kW Population Savings
Commercial Hot Food Holding Cabinet	1	164	108	14	75%	23%	26%
Commercial Steam Cooker	2	39	34	1	90%	22%	20%
High-Efficiency Combination Oven	5	140	73	27	71%	48%	47%
High-Efficiency Fryer	2	200	177	0	88%	5%	5%
High-Efficiency Griddle	1	15	15	0	100%	2%	2%
Overall					kWh^a = 78% kW^b = 77%		

^a Weighted by verified gross kWh population savings.

^b Weighted by verified gross kW population savings.

The overall Georgia Power Midstream Products program free-ridership estimates shown in Table 3-14 are weighted by program population verified gross savings.

Table 3-14. Commercial Food Service Equipment Free-Ridership Findings

Program Pathway	kWh Free-Ridership	Percent of Verified Gross kWh Population Savings	kW Free-Ridership	Percent of Verified Gross kW Population Savings
Commercial HVAC Equipment	65%	71%	60%	83%
Commercial Food Service Equipment	78%	29%	77%	17%
Overall	68%		63%	

3.4.2.2 Spillover

No participating distributors reported selling unrebated program-qualifying equipment in Georgia Power's service territory because of the Midstream Products program influence, and as a result, the participant spillover estimate for the program is 0%.

3.4.2.3 Net-to-Gross

Table 3-15 presents the NTG findings for commercial HVAC equipment. The overall commercial HVAC equipment NTG estimates are weighted by program population verified gross savings.



*Table 3-15. Commercial HVAC Equipment NTG Findings*

Equipment Type	Number of Respondents	FR	Participant Spillover	NTG
Split & Package AC	3	56%	0%	44%
Split & Package ASHP	3	65%	0%	35%
VRF Mini Split AC & Heat Pump	3	83%	0%	17%
Overall		kWh = 65% kW = 60%	0%	kWh = 35% kW = 40%

Table 3-16 presents the NTG findings for commercial Food Service equipment. The overall commercial Food Service equipment NTG estimates are weighted by program population verified gross savings.

Table 3-16. Commercial Food Service Equipment NTG Findings

Equipment Type	Number of Respondents	FR	Participant Spillover	NTG
Commercial Hot Food Holding Cabinet	1	75%	0%	26%
Commercial Steam Cooker	2	90%	0%	10%
High-Efficiency Combination Oven	5	71%	0%	29%
High-Efficiency Fryer	2	88%	0%	12%
High-Efficiency Griddle	1	100%	0%	0%
Overall		kWh = 78% kW = 77%	0%	kWh = 22% kW = 23%

The overall Georgia Power Midstream Products program NTG estimates of 32% for energy savings and 37% for demand savings shown in Table 3-17 are weighted by program population verified gross savings.

Table 3-17. Commercial Midstream Products Program Net Savings

Program Pathway	Verified Gross kWh	kWh NTG	Verified Net kWh	Verified Gross kW	kW NTG	Verified Net kW
Commercial HVAC Equipment	3,510,980	35% ^a	1,237,108	1,144.33	40% ^d	462.74
Commercial Food Service Equipment	1,429,932	22% ^b	320,598	233.65	23% ^e	53.17
Overall	4,940,912	32%^c	1,557,706	1,377.99	37%^f	515.92

^a True value is 35.41546%. ^b True value is 40.58399%. ^c True value is 31.44645%.

^d True value is 22.33651%. ^e True value is 22.66964%. ^f True value is 37.43784%.

3.4.2.4 Results Benchmarking

To provide context for and a check against the results of the interviews with distributors, the evaluation team researched evaluation reports and other commercial midstream NTG sources. As a result, the team found a





limited number of reported NTG valuations specific to midstream commercial HVAC and midstream commercial Food Service equipment programs. Table 3-18 summarizes the most comparable data found by the evaluation team for midstream commercial HVAC equipment, and Table 3-19 shows the results for midstream commercial Food Service equipment. These data are for illustrative purposes, as the programs can vary greatly in design as well as in the underlying market and regulatory conditions in which they operate.

Table 3-18. Commercial Midstream HVAC Program NTG Benchmarking Table

Utility	Evaluation Year	NTG	Notes
Georgia Power Company	2020-2021	35%	Based on distributor interviews. Counterfactual retrospective sales estimation and program influence on sales focused attribution analysis.
California Public Utilities Commission C&I HVAC Program Evaluation	2017	39%	Rooftop and split systems specific estimate. Based on distributor and end-user interviews. Stocking, upselling, and pricing casual pathway focused attribution analysis.
Massachusetts C&I Upstream HVAC/Heat Pump and Hot Water NTG and Market Effects Indicator Study	2016	37%-39%	Air-cooled unitary, split CAC and HP system (>5 tons) and ductless mini-split heat pump specific estimates. Based on distributor interviews. Counterfactual retrospective sales estimation focused attribution analysis.

C&I = commercial and industrial



*Table 3-19. Commercial Midstream Food Service Equipment Program NTG Benchmarking Table*

Utility	Evaluation Year	NTG	Notes
Georgia Power Company	2020-2021	22%	Based on distributor interviews. Counterfactual retrospective sales estimation and program influence on sales focused attribution analysis.
California Public Utilities Commission Upstream Food Service	2017	39%	Based on self-report surveys with 15 end-use participants.
<ul style="list-style-type: none"> • Pacific Gas and Electric • Southern California Edison 		57%	
Wisconsin Focus on Energy Commercial Food Service Pilot	2018	32%	Based on self-report surveys with 43 end-use participants.

3.5 Process Evaluation Findings

To gather insights into Georgia Power's Midstream Products program, the evaluation team performed distributor interviews, assessed the program's marketing effectiveness, and benchmarked its incentives and marketing against other utility programs.

3.5.1 Distributor Interviews

Between December 2020 and June 2021, the evaluation team conducted telephone interviews with participating and nonparticipating commercial HVAC and Food Service equipment distributors. Participating distributors were defined as those who were affiliated with the program and who have sold products for which Georgia Power provided an incentive. Participant distributor interviews explored the effectiveness of the program and its delivery and fulfillment process, program satisfaction, and market baselines and program impacts. Nonparticipant Food Service distributors were defined as those operating within Georgia Power's service territory who Georgia Power had not contacted to participate, while nonparticipant HVAC distributors had been contacted and decided for whatever reason to not enroll in the program. Participant distributor interviews explored the effectiveness of the program and its delivery and fulfillment process, program satisfaction, and market baselines and program impacts. Nonparticipant distributor interviews focused on market conditions and barriers in Georgia Power's territory. To qualitatively inform the Midstream Products program NTG analysis, we also intended to capture information from nonparticipants about their sales within the state. However, none of the respondents were willing to provide responses to the NTG questions despite multiple follow-up attempts.

Of the Food Service population, the evaluation team reached six participant and one nonparticipant distributors. For HVAC, the evaluation team reached three participant distributors and two nonparticipant distributors. Distributor participation volume was lower than we had anticipated for both HVAC and Food Service; though the Food Service component was added to the Midstream Products program in 2020, five distributors were enrolled in the HVAC component in the program during the first year of the program





(2017), compared to three in 2020. Georgia Power staff said limiting the number of enrolled distributors was largely a function of budget availability. Table 3-20 shows the population, sample, and response rates for each distributor respondent group.

Table 3-20. Distributor Interview Respondent Groups

	Population	Completed	Response Rate
HVAC Participant	3	3	100%
HVAC Nonparticipant	3	2	67%
Food Service Participant	8	6	75%
Food Service Nonparticipant	4	1	25%

3.5.1.1 Participant Distributor Program Awareness and Communication

Participant Food Service distributors first enrolled in the 2020 Midstream Products program from January to September, with two distributors first enrolling between January and March, one distributor between April and June, and the remaining between July and September. Two participant HVAC distributors first enrolled when Georgia Power introduced the HVAC Midstream Products program in 2017, and the third enrolled in 2018. All nine participant distributors first learned and continually received program updates or changes through contact with their Georgia Power representative. Eight out of nine participant distributors recalled receiving Georgia Power sponsored training in 2020, and all eight distributors said this one-on-one training was *very useful* in understanding how to participate in the program.

3.5.1.2 Marketing

The evaluation team asked participant distributors the ways in which they encourage the sale of program-eligible equipment. Five of six participant Food Service distributors and all three HVAC participant distributors said they mention the incentive in their product cost quotes; of these distributors, three Food Service and one HVAC participant uses additional customer-facing marketing materials, such as the product list and brochure. The remaining Food Service participant did not offer any ways its organization encourages program-eligible equipment. Food Service participant distributors were asked how likely they would be to use email and social media messages developed by Georgia Power in their marketing efforts; five distributors said they were *very likely* to use them, while the other distributor was neither *likely* nor *unlikely* to use them. Participant distributors shared a few suggestions for how Georgia Power could help promote program-qualifying products:

- ▶ Simplify the registration process when adding new equipment models to the application system (one HVAC distributor)
- ▶ Reopen the customer resource center (two Food Service distributors)
- ▶ Provide additional materials for end-use customers describing the benefits of high-efficiency equipment (one Food Service distributor)





The three nonparticipant distributors also reported promoting high-efficiency equipment to their commercial customers.

3.5.1.3 Application Process

All six Food Service participant distributors and all three HVAC participant distributors said they contact their Georgia Power representative in the event a question about the program or an application arises. Of the five participant Food Service and three HVAC distributor respondents who handle the applications, all but one said their experience using the online application portal has been smooth. The remaining distributor described using the online portal as somewhat cumbersome. Although all three HVAC participant distributors said this year's application processing time was quicker than previous years, one distributor described the actual 2020 application process as "difficult" compared to previous years. Although the respondent did not elaborate, the comment could be in reference to the development of the application portal. Some distributors were asked to hold their applications while the portal was completed.

How could Georgia Power improve the application portal?

"[Provide a] way to see if a customer's address qualifies." (food service participant distributor)

"Streamline the process, make it easier. [We] have to submit AHRI [reference numbers]." (HVAC participant distributor)

3.5.1.4 Market Motivators and Barriers

The evaluation team asked participant distributors about their primary motivations for participating in the Midstream Products program, and they most commonly said it was to receive program incentives (mentioned by five Food Service and one HVAC distributor) and to use the program as a sales tool for energy-efficient equipment (three Food Service and all three HVAC distributors). Participant distributors then listed the primary reasons they thought commercial customers were choosing to install energy-efficient equipment:

- ▶ Energy savings (mentioned by six of the nine distributors)
- ▶ Lower operating costs (five distributors)
- ▶ Environmental benefits (four distributors)

The evaluation team also asked nonparticipating distributors about perceived market barriers to increased sales and installation of high-efficiency commercial equipment. All three nonparticipant distributors mentioned high initial cost or budget limitations as the most significant barrier, and the nonparticipant Food Service distributor also mentioned a lack of technical knowledge of energy-efficient equipment. These perceived barriers are the same as those reported in the general population of nonparticipants, where high initial costs and overall budget are the largest barriers (see the Prescriptive and Custom program report for a full report of the general population survey findings). When asked what role Georgia Power could play in addressing these barriers, one HVAC distributor suggested increasing awareness of the savings potential available, and the other HVAC distributor said to offer more incentive programs to lower the total cost. The





Food Service nonparticipant did not offer a suggestion. HVAC nonparticipant distributors shared that they did not enroll in the 2020 Midstream Products program because they did not sell any eligible equipment during 2020, with one distributor noting the program was not motivating enough to stock and promote eligible equipment and the second elaborating that the organization changed many of its equipment lines to different manufacturers whose equipment has not yet been certified or deemed program eligible. When asked if there was anything about the program that, if changed, would motivate them to enroll in the future, both distributors said they are content with the program and hope their sales of eligible equipment increase. Both distributors had Georgia Power representative contact information should they decide to enroll in the Midstream Products program in the future.

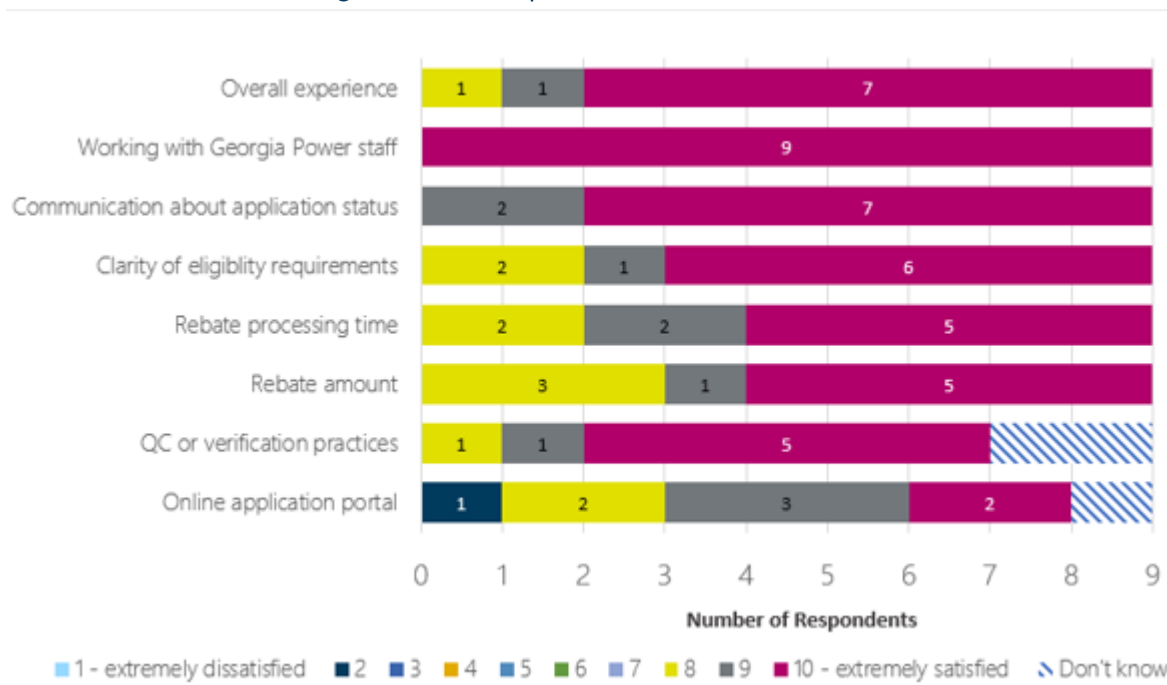
3.5.1.5 Satisfaction and Overall Program Experience

The evaluation team asked participating distributors to rate their satisfaction with several aspects of the Midstream Products program. In general, distributors were highly satisfied with the program and its processes, and notably, all nine participating distributors rated their experience with working with Georgia Power staff a 10 out of 10. One respondent expressed dissatisfaction with the online application portal, noting difficulty in looking up and registering new equipment types as the reason for the lower rating. Figure 3-2 shows all responses.





Figure 3-2. Participant Distributor Satisfaction



Source: Midstream Products Program Food Service and HVAC Participant Distributor Interviews. Questions Q31/Q33. "Please tell me how satisfied you are with each of the following aspects of the program on a 1 to 10 scale where 1 means extremely dissatisfied and 10 means extremely satisfied." Food Service n=6; HVAC n=3

Some factors that led to participating distributors' overall experience rating:

- ▶ "No complaints. Only way it could be better is if it [the application process] did itself."
- ▶ "Good support from the staff. I'd rate it a 10 if the application portal was easier to work with."
- ▶ "[Georgia Power staff are] as supportive as humanly possible."
- ▶ "Easy to participate."
- ▶ "Easy to participate in now that we have done it for a while."
- ▶ "Things are pretty simple."

Distributors shared a variety of impacts that the COVID-19 pandemic had on their experience with the Midstream Products program, including delayed installations or investments (one HVAC and three Food Service distributors), higher attention to energy efficiency among customers in order to reduce their operating expenditures (one Food Service distributor), restricted in-person meetings with Georgia Power





representatives (one HVAC distributor), and the closing of the test kitchen/customer resource center (one Food Service distributor).

3.5.1.6 Market Sales Assessment

The evaluation team asked participating distributors about the importance of incentives on their company's decision to stock and promote program-qualifying equipment. Six out of nine participating distributors rated the importance a 4 or 5, on a five-point scale where 1 is *not at all important* and 5 is *very important*, while the remaining three distributors, who support Food Service equipment delivery, rated incentive importance a 1 or 2.

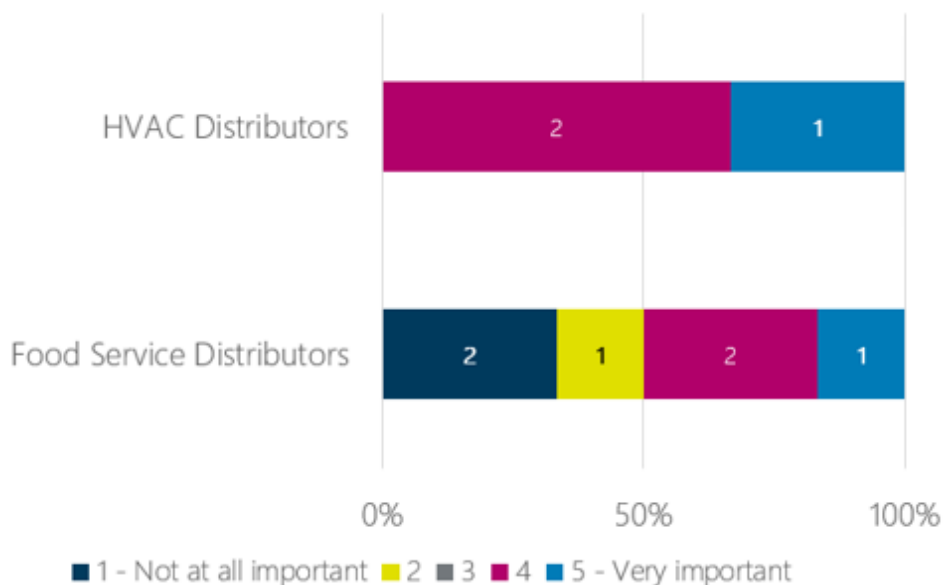
Participating distributors then reported the program's influence on commercial end-user adoption of additional energy-efficient measures: three out of nine distributors said the program was *very influential* in the customer adoption of additional measures, and the remaining six said the Midstream Products program was *somewhat influential*.

Other suggested commercial electric, energy-efficient equipment opportunities:

- Chillers (two HVAC participant distributors)
- Refrigerators and freezers (food service participant distributor)

Figure 3-3 breaks down HVAC and Food Service participant distributors' ratings of the program's effect on stocking and sales practices and customer adoption.

Figure 3-3. Effect of Program on Distributor Stocking and Customer Adoption

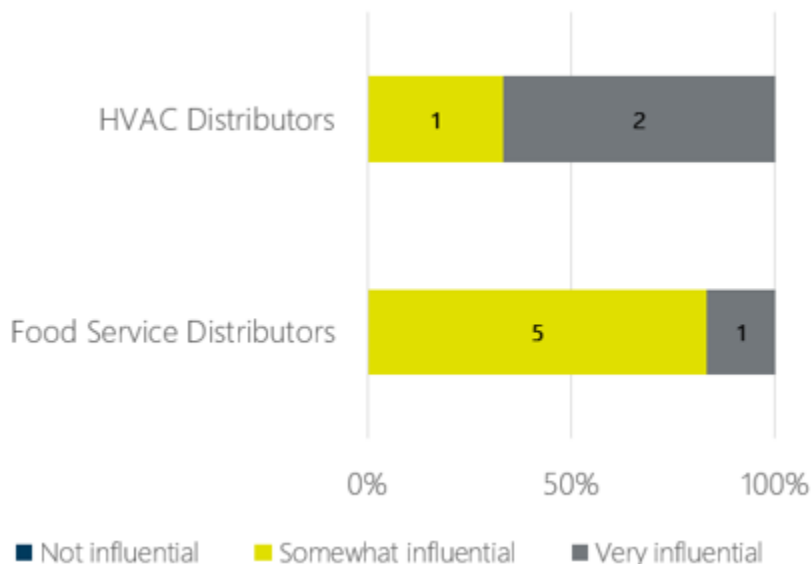


Source: Midstream Products Program Food Service and HVAC Participant Distributor Interviews. Questions Q23/Q25. "Using a five-point scale, with 1 meaning not at all important and 5 meaning very important, please rate how important the Georgia Power Midstream Products Program incentives are to your company's decision to stock and promote program qualifying high-efficiency equipment?" Food Service n=6; HVAC n=3 (left)





Figure 3-4. Effect of Program on Customer Adoption



Source: Midstream Products Program Food Service and HVAC Participant Distributor Interviews. Questions Q26/Q28. "How influential is the Georgia Power Midstream Products program in the adoption of additional energy efficiency measures among commercial customers?" Food Service n=6; HVAC n=3 (right)

Most distributors thought that the incentive was important on customers' decision to install program eligible equipment. Seven of nine indicated it was important, one said it was not important, and one was not sure. Two of the three HVAC distributors who noted the incentive was important specified that the importance was dependent on the contractor passing both the financial benefit and the information on to the end user.

Based on the Trade Group interviews conducted for the Custom and Prescriptive program activities, HVAC distributors who are not participating in the Midstream program are looking to Georgia Power to educate contractors and customers on the benefits of high-efficiency HVAC equipment and availability of incentives. High initial cost was noted as a barrier to EE implementation by all four of the HVAC distributors and three of the four stated that the primary reasons customer install energy efficient equipment is to 'lower operating and maintenance costs' and 'save energy'. Two of the four interviewed HVAC distributors noted that most customers or contractors are not asking for energy efficient units because of high initial cost and long payback periods and ways that Georgia Power could help overcome these challenges is to provide contractors and customers more education on the energy and cost benefits of energy efficiency, along with information on or availability of incentive programs. One way to engage this group is by including more HVAC distributors in the Midstream program to help bring down equipment costs across a larger market. In addition, providing distributors with information about the benefits of these products that they can use to educate or share with contractors and customers will help increase awareness of the high efficiency equipment.





Participating distributors provided several suggestions to increase energy-efficient equipment sales, highlighted in the box below.

How Could Georgia Power Increase the Adoption of Additional Energy Efficiency Measures Among Commercial Customers?

"A larger incentive amount or more of it passed through to the customer." (HVAC participant distributor)

"More incentives." (one HVAC and one food service participant distributor)

"Substantial rebates to the end user, along with ease of applying for them." (food service participant distributor)

"More marketing or exposure." (food service participant distributor)

3.5.2 Marketing Approach and Strategy

The Midstream Products program focuses on distributor relationships to increase sales of high-efficiency equipment. At this time, Georgia Power's marketing efforts are directed at distributors, who in turn have flexibility in how they use or market the incentive received. For 2020-2021, the key marketing campaign goal for the Midstream Products program was to increase the sales of high-efficiency HVAC and Food Service equipment through distributors. To accomplish this, program staff focused on building one-on-one relationships with eligible distributors. Georgia Power's primary strategy to market this program was to create and distribute the distributor marketing toolkit, which distributors could then use to promote program-eligible products. This toolkit contained email templates, animated video and social media graphics and messaging. As noted in the *Marketing* section, three of six Food Service and one of three HVAC distributors reported using these materials with customers. Aside from this, Georgia Power occasionally sent email updates to distributors.

Georgia Power gave latitude to participating distributors to decide to what extent they wanted to use their program incentive as a marketing tool. Georgia Power used a limited set of print and digital advertisements to promote the program among end users.

3.5.3 Incentives and Marketing Approach Benchmarking

The Brightline team benchmarked Georgia Power's marketing approach for the Midstream Products program against six other similar programs, three commercial Food Service and three commercial HVAC. Through this research activity, the Brightline team sought to understand what equipment other utilities incentive in their programs, the associated incentive levels, and how other utilities approach Midstream Products program marketing.

The Brightline team included the following programs in this benchmarking exercise, with summaries shown in Table 3-21 and Table 3-22:

- ▶ HVAC Programs





- Mass Save Commercial and Industrial Electric HVAC Program
- Energize CT Electric HVAC and Water Heating Rebate Program
- PNM Distributor Discount Program
- ▶ Food Service Programs
 - DTE Energy Company Point of Sales Food Service Rebate
 - NV Energy PowerShift Business Energy Services Instant Discount Program
 - Wisconsin Focus on Energy Commercial Kitchen Equipment Pilot

Nearly all benchmarked utilities, and Georgia Power, provided materials to distributors to assist them with implementing the program. These materials typically included educational pieces on what equipment qualifies, how much the incentive is per unit, and how to submit invoices for reimbursement. Additionally, some included point-of-sale material that distributors can use to promote the program to customers. All programs relied on one-on-one connections with a utility program representative; Wisconsin's Focus on Energy assigns an Energy Advisor to each distributor based on their location (with four commercial-sector Energy Advisors across the state) to help them understand and navigate the process. Because this effort is relatively new, the evaluation team does not have insight into the effectiveness of this approach.

Based on the available information, only one utility sets a minimum amount of the discount that must be passed on to customers: Focus on Energy. This program requires distributors to pass on at least 60% of the incentive to customers. All other programs do not specify an amount in publicly available information.

The most substantial difference in marketing approach between Georgia Power and the benchmarked programs was the lack of a customer-facing webpage. Five out of six of the benchmarked programs included lists of qualifying equipment and participating distributors on their website. Georgia Power's HVAC and Food Service Midstream Products programs did not have a customer-facing webpage. A customer-facing webpage allows customers to find participating distributors and see eligible equipment and incentives. Being listed on the website can benefit participating distributors by improving visibility to customers, and it can help recruit new distributors by highlighting the competitive advantage associated with being listed directly on the utility website. Focus on Energy, Mass Save, Energize CT, and NV Energy describe these benefits in their distributor messaging. Additionally, including a list of participating distributors can help increase sales of program-qualifying equipment by directing customers to participating distributors.



*Table 3-21. Benchmarked Commercial Midstream Kitchen Programs, Marketing Approach*

Program	Marketing Approach for Distributors	Marketing Approach for Customers
Georgia Power Commercial Kitchen Midstream Products Program	<ul style="list-style-type: none"> • <u>Approach</u>: Brochures provided to distributors on how the program works and qualifying equipment. • <u>Key messages</u>: Earn incentives by selling high-efficiency equipment. 	<ul style="list-style-type: none"> • <u>Approach</u>: Distributors market equipment to customer (no utility involvement). • <u>Key messages</u>: Save energy and money on your utility bill.
DTE Energy Point of Sales Food Service Rebate	<ul style="list-style-type: none"> • <u>Approach</u>: Flyers and a brochure available for distributors. • <u>Key messages</u>: Gain a competitive advantage over nonparticipating distributors. • <u>Other</u>: Participating distributors are listed on the website. 	<ul style="list-style-type: none"> • <u>Approach</u>: Educational flyer found on the website with all the information in one place on qualifying equipment and incentive amounts. • <u>Key messages</u>: New kitchen appliances can decrease energy consumption by 75%, save money on electric bills, no paperwork to apply.
Wisconsin Focus on Energy Commercial Kitchen Equipment Pilot	<ul style="list-style-type: none"> • <u>Approach</u>: Distributors are provided with a brochure outlining qualifying equipment and educational information to provide to customers, such as the amount in energy costs the customer could save. • <u>Key messages</u>: Gain a competitive advantage over nonparticipating distributors and earn incentives. • <u>Other</u>: Participating distributors are listed on the website. Distributors are assigned an Energy Advisor to help the navigate the program. 	<ul style="list-style-type: none"> • <u>Approach</u>: Education flyers are available on the website and emphasize instant savings for commercial kitchen solutions. They advertise the ability to save up to \$5,300 per year in energy costs. • <u>Key messages</u>: Ease of the incentive process, no paperwork, and instant savings. • <u>Other</u>: Materials provided in Spanish in addition to English.
NV Energy PowerShift Business Energy Services Instant Discount Program	<ul style="list-style-type: none"> • <u>Approach/Key messages</u>: Benefits for distributors are listed in the “frequently asked questions” section. No information given on what marketing materials are provided to distributors. • <u>Other</u>: Participating distributors are listed on the website. 	<ul style="list-style-type: none"> • <u>Approach</u>: Information on the website on qualifying equipment and participating distributors. Combined lighting, commercial kitchen, and refrigeration incentives on one page. • <u>Key messages</u>: Messaging is featured on the website: No applications. No waiting. Big savings.



*Table 3-22. Benchmarked Commercial Midstream HVAC Programs, Marketing Approach*

Program	Marketing Approach for Distributors	Marketing Approach for Customers
Georgia Power Commercial HVAC Midstream Products Program	<ul style="list-style-type: none"> • <u>Approach</u>: Brochures provided to distributors on how the program works and qualifying equipment. • <u>Key messages</u>: Earn incentives by selling high-efficiency equipment. 	<ul style="list-style-type: none"> • <u>Approach</u>: Distributors market equipment to customer (no utility involvement). • <u>Key messages</u>: Save energy and money on your utility bill.
Energize CT Electric HVAC and Water Heating Rebate Program	<ul style="list-style-type: none"> • <u>Approach</u>: Have trade ally portal on program website, encouraging distributors to join the program and allowing them to access relevant program tools. • <u>Key messages</u>: Utilize Energize CT's marketing to increase sales opportunities. • <u>Other</u>: Participating distributors are listed on the website. 	<ul style="list-style-type: none"> • <u>Approach</u>: Webpage with program details, incentive levels, and list of participating distributors. • <u>Key messages</u>: Get high-efficiency equipment without paying a premium price.
PNM Distributor Discount Program	<ul style="list-style-type: none"> • <u>Approach</u>: No distributor-focused marketing is included on the website. • <u>Other</u>: Participating distributors are listed on the website. 	<ul style="list-style-type: none"> • <u>Approach</u>: Webpage with program information, including eligible equipment, incentive levels, and a participating distributor list. Additionally, a video is included to help customers understand the program. • <u>Key messages</u>: Save money over the lifetime of the equipment. Easier to get a incentive than in a traditional program.
Mass Save C&I Electric HVAC Program	<ul style="list-style-type: none"> • <u>Approach</u>: Have a Partners Page that describes program details and a contact from the program implementer for those that are interested in participating. • <u>Other</u>: Participating distributors are listed on the website. 	<ul style="list-style-type: none"> • <u>Approach</u>: Webpage with program information, including eligible equipment, incentive levels, and a participating distributor search tool. • <u>Key messages</u>: Higher equipment efficiency leads to lifetime savings.

For Food Service equipment, Georgia Power offers incentives for electric deep fryers, combination ovens, griddles, holding cabinets, and steamers. As shown in Table 3-23, Georgia Power's incentive levels for various types of Food Service equipment vary compared to the benchmarked programs. Georgia Power's incentives were on the lower end compared to the benchmarked utilities for electric steamers and holding cabinets, while they were in the middle for combination ovens and griddles. Georgia Power's incentives for electric deep fryers were higher than the other three benchmarked utilities.



*Table 3-23. Benchmarked Midstream Foodservice Program Eligible Equipment and Incentives*

Equipment	Georgia Power Commercial Kitchen Midstream Products Program	DTE Energy Point of Sales Food Service Rebate	Wisconsin Focus on Energy Commercial Kitchen Equipment Pilot	NV Energy PowerShift Business Energy Services Instant Discount Program
Electric Deep Fryer	\$225	\$150	\$120-\$260	\$200
Electric Combi Oven	\$400	\$1,800	\$160	\$1,000
Electric Griddle	\$125	\$300	\$95	\$300
Electric Steamer	\$250	\$1,500-\$1,800	\$1,000	\$750
Electric Holding Cabinet	\$175	\$300-\$600	\$325	\$200-\$300
Convection Oven			\$160	\$350
Rack Oven			\$300-\$500	
Deck Ovens		\$1,000		
Conveyor Ovens		\$250		
Ice Machines			\$75	
Commercial Dishwashers		\$45-\$850		
Conveyor Broiler		\$2,000-\$3,000		
Dishwasher		\$150-\$1,750	\$1,500	
Freezer		\$75-\$200	\$60-\$160	
Ultra-low Temperature Freezer		\$600-\$1,200		
Infrared Salamander Broiler		\$425	\$300	
Infrared Charbroiler		\$1,450		
Infrared Rotisserie Oven		\$350		
Infrared Upright Broiler		\$1,200		
Kitchen Ventilation Controls- Temperature and Optical Sensing			\$80-\$600/Horsepower Controlled	
Refrigerator			\$40	
Spray Valve		\$7	\$25	





Table 3-24 shows Georgia Power's Commercial Midstream HVAC program incentives compared to three benchmarked utilities. Georgia Power's incentives are generally comparable to the Mass Save program's utilities, but slightly lower than Energize CT's or PNM's incentives.

Table 3-24. Benchmarked Midstream HVAC Program Eligible Equipment and Incentives

Equipment	Georgia Power Commercial HVAC Midstream Products Program	Energize CT Electric HVAC and Water Heating Rebate Program	PNM Distributor Discount Program	Mass Save Commercial and Industrial Electric HVAC Program
Split & Package AC	\$20-\$65 per ton	\$200-\$300 per ton	\$25-\$220 per ton	\$20-\$100 per ton
Split & Package ASHP	\$50-\$100 per ton	\$180-\$500 per ton	\$40-\$325 per ton	\$20-\$112.50 per ton
WSHP	\$25 per ton	\$750 per ton		\$37.50-\$100 per ton
VRF Mini Splits and AC	\$100 per ton	\$200 per ton	\$55-\$625 per ton	\$125-\$175 per ton
GSHP				\$75 per ton
Heat Pump Water Heater		\$750	\$500	
HECU for Refrigeration				\$200-\$400
Dual Enthalpy Economizer Controls				\$125
ECM Circulator Pumps				\$100-\$200

GSHP = ground source heat pump, HECU = high efficiency condensing units, ECM = electronically commutated motor





3.6 Conclusions and Recommendations

Conclusion 1: Participant distributors are highly satisfied with the program and use the incentive to drive sales.

Aside from the online portal, all distributors rated their experience with each program aspect as an 8 or higher. Also, participant distributors were highly satisfied with the support and training they received from Georgia Power staff. Every distributor rated their experience working the program staff as a 10, and the eight participant distributors who received program-sponsored training said the training was very useful. Several distributors mentioned this relationship was key to building confidence and helping them with the application process.

Most distributors are using the incentive as a sales tool, with eight out of nine participant distributors mentioning the incentive in their product cost quotes, and six of nine identifying it as their primary motivation for participating in the program. Further, five of six Food Service distributors said they would be very likely to use Georgia Power's email and social media messages in their marketing.

Recommendation: Maintain one-on-one trainings as a way to keep distributors confident in promoting the offerings to their contractors and/or customers and in using the online application portal.

Recommendation: Create additional marketing materials to help drive sales. Since most distributors mention the incentive in their product cost quotes, providing customer-facing materials may be useful to contractors in passing down these savings.

Conclusion 2: The program's influence on distributor sales and stocking practices was limited, and budget constraints may have restricted the program's ability to expand energy-efficient equipment adoption through a midstream delivery mechanism.

While all participant distributors were pleased with the program and rated the program as at least somewhat influential on customer adoption of additional energy efficient equipment, influence on stocking and customer decision-making practices were mixed. Six of nine said that the program incentive was important in their decision to stock and promote program-qualifying equipment, while three (all Food Service) said the program had little to no effect on their stocking practices. However, four of the six distributors who said the incentive was important also said that they would have sold 40% to 100% of the units without the program. As a result, distributor-reported free-ridership was high for both HVAC and Food Service equipment.

With respect to customer decision-making, seven of nine said the program was important, while one distributor of nine said the program incentive had little to no effect on their customers' decisions to install program-qualifying equipment, and another distributor was unsure of the effect.

Distributor participation volume was low for both HVAC and Food Service markets; though the Food Service component was added to the Midstream Products program in 2020, only three distributors were enrolled in the HVAC component of the program, compared to five during the first year of the program (2017). In the





evaluation team's conversations with nonparticipants, HVAC contractors reported demand for energy-efficient equipment and incentives to help offset the upfront customer cost, which indicates that demand for programs like this exist if the program can expand its reach. Georgia Power staff said the number of enrolled distributors was largely a function of budget limitations.

Of the nonparticipant distributors identified by Georgia Power staff, one reported having no qualifying equipment with their new manufacturer, and another said that the level of sales of qualifying equipment was not enough to encourage enrollment in the program. However, engaging these types of distributors would increase sales and stocking practices within new markets.

Recommendation: Modify recruitment messaging to help distributors understand the purpose of the program, which is to support them in offering new products and to increase their sales of eligible equipment. Tracking and reminding distributors of their sales prior to and following program participation would help the distributors see the program's influence and potentially reduce free-ridership.

Recommendation: Consider expanding distributor recruitment for the HVAC and Food Service segments. Expansion can incorporate distributors who are not already in the practice of selling high-efficiency equipment and grow the program's impact. Nonparticipant HVAC distributors, who had fewer employees and qualified equipment, could also benefit from Georgia Power staff support to engage manufacturers in obtaining the energy efficiency eligibility criteria required of the program.

Recommendation: Consider offering the Midstream program within the Prescriptive offering. The program is making an important impact on market transformation for HVAC and Food Service measures, and distributors appreciate the support and education, but the regulatory metrics to assess the program's success (NTG and program-level cost effectiveness thresholds) do not capture the long-term positive effects. If the program becomes a part of Prescriptive, reattribute portions of the program budget toward marketing support for distributors as they are a critical network for increased adoption of these measures.

Recommendation: Explore offering some of the food service measures used in peer utility midstream programs, such as freezers, refrigerators, dishwashers and other oven types, if the measures prove cost-effective and are consistent with types of equipment offered by participating distributors.

Conclusion 3: The COVID-19 pandemic had varying impacts on participant distributors' experience with the program. While four participant distributors noted a drop or delay in demand because of the pandemic, another distributor said that customers have a higher awareness of energy efficiency as a way to reduce operating expenditures. Two Food Service participant distributors were also disappointed that the customer resource center had been closed.

Recommendation: Consider reopening the customer resource center. Three out of six Food Service distributors mentioned this as a resource they used to show energy-efficient equipment to their customers outside of a sales environment.





Conclusion 4: Peer utilities use their websites to connect customers with distributors participating in midstream programs and influence all three market actors: distributors, contractors, and customers. Four out of five of the benchmarked programs included lists of qualifying equipment and participating distributors on their websites. Georgia Power's program, on the other hand, did not have a customer-facing webpage for the Midstream Products program. Inclusion on the webpage is beneficial to recruiting distributors by highlighting the competitive advantage associated with being listed directly on the utility website and the added visibility to customers, which Focus on Energy, Xcel Energy, and Puget Sound Energy use in their distributor messaging. Additionally, including a list of participating distributors can help increase sales of program-qualifying equipment by directing customers to participating distributors.

Recommendation: Add a customer-facing webpage for the Midstream Products program that lists participating distributors and qualifying equipment. This will help increase customer awareness and direct customers to participating distributors, a benefit that Georgia Power can promote when recruiting distributors to join the program.





4 Small Commercial Direct Install

The Small Commercial Direct Install (SCDI) program delivered incentives for qualifying sales through three participating installation contractors. While other Georgia Power programs operated in the early months of the COVID-19 pandemic, the SCDI program was put on hold until April 2021 due to the level of in-person recruitment and contact required for the program to successfully operate, and this evaluation reflects that initial implementation phase. The program had been in operation since 2017. In January 2020 it was paused to accommodate the transition to a new implementer, but the COVID pandemic further delayed program launch. The program resumed in April 2021, with savings incurred from May to June 2021, totaling 5,788 measures from 35 unique projects.¹⁵ During this time period, the program's reported savings aligned well with evaluated savings, which resulted in a realization rate of 104% for energy savings. The program achieved 762,583 kWh net verified energy savings (Table 4-1).

Table 4-1. Small Commercial Direct Install Program Energy Savings

Number of Measures	Reported kWh	Realization Rate	Verified Gross kWh	NTG	Verified Net kWh
5,788	820,394	104%	852,048	89.5%	762,583

The program process is straightforward with participants and installation contractors reporting satisfaction with the program; however, some program processes are working through improvements since the program launch in April 2021. The NTG ratio of 89.5% reflects the program's ability to meet customer need for the program, which was also evidenced by a robust wait list that developed while the program was paused. The following page highlights the program's accomplishments, key findings, along with recommendations from the evaluation period, which point to improved communication processes for both customers and installation contractors as an area of opportunity. Evaluated savings were adjusted to account for HVAC interaction and differences in wattage assumptions found in the database for a minority of measures.

¹⁵ Project total based on count of unique invoices in VisionDSM tracking data as of July 8, 2021.



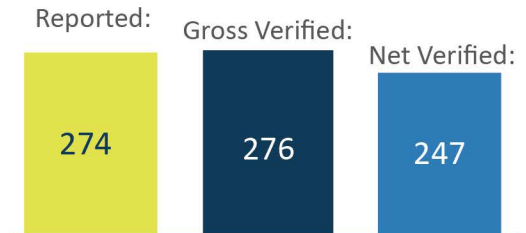
SMALL COMMERCIAL DIRECT INSTALL PROGRAM

Program Performance

ENERGY SAVINGS (KWH)



DEMAND REDUCTION (KW)



Impact Evaluation Findings

The program's reported savings aligned well with verified savings, resulting in a realization rate of

104%
for energy savings.

A subset of projects that installed LED Exit Signs, LED High/Low Bay 40 to 131 Watts Replacing 175W PSMH, A19 LED 9.5W, Wall Pack 15w, Wall Pack 20w, or LED Flood 70w measures had wattages that were different than in the database, which resulted in lower realization rates for those measures.



Customers described a high level of need for the program incentives, resulting in a net-to-gross of

89.5%

Process Evaluation Findings

The program process is straightforward and satisfactory for participants, but some encountered ill-prepared contractors.



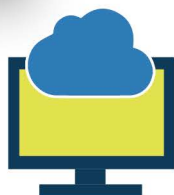
The VisionDSM database was not consistently updated as projects' statuses changed and was not always aligned with other project records (i.e. assessment files, invoices).

Participating contractors were comfortable with the work order process and the program overall, but their main challenge and dissatisfaction with the program stemmed from a lack of details and communication from the assessors regarding the installation site description.



Key Recommendations

Ensure the VisionDSM database is updated as each project's status changes and determine reported savings based on the final version of measure data imported into VisionDSM.



Review the assessment report and work order content and process with contractors to ensure both parties have a full understanding of the details needed to efficiently deliver program projects to customers.





4.1 Program Overview

4.1.1 Program Design

Georgia Power's SCDI program promotes the installation of eligible high-efficiency lighting equipment at qualifying commercial customer facilities with a peak demand of 120 kW or less over the past 12 months. Georgia Power introduced the program's direct install design in 2017 to reach an underserved segment of the nonresidential market by providing immediate energy savings to and identifying other electric-saving opportunities for small business customers. Georgia Power is responsible for customer outreach, recruitment, and registering qualified customers with its program implementer, FCI Management, Inc. (FCI), who administers the lighting assessment directly to customers and facilitates the direct installation and fulfillment process. FCI recruits distributors to stock and ship qualified equipment and installation contractors to perform the installations. Through a work order process, installation contractors submit invoices to FCI for reimbursement of the project cost share covered by the program.

4.1.2 Program Measures

The SCDI program offers qualified customers a variety of lighting measures at up to a 70% discount off of the equipment and installation cost. The incentive amount is consistent with the prior program cycle (2017-2019); however, Georgia Power limited the variety of measure types compared to previous years, removing programmable and smart thermostats, water heater blankets, faucet aerators, pipe insulation, and smart plug load power strips. Georgia Power made this change to simplify the program for customers and prevent the installation issues it experienced with these measures in previous years, but that it may bring on additional, non-lighting measures over time. Table 4-2 lists all eligible measures offered through the SCDI program.

Table 4-2. SCDI Program Qualifying Measures

Type	Measure
LED Lamp	R/BR Lamp: 10 Watt and 11 Watt
	Globe: 8 Watt, 9 Watt, and 10 Watt
	Candelabra: 4 Watt and 5 Watt
	PAR30: 10 to <11 Watt and 11 to <12 Watt
	PAR38: 13 to <14 Watt, 14 to <15 Watt, and 15 to <16 Watt
	A19 12W
	48in T8 LED replacing 48in T8 Linear Fluorescent
LED Fixture	96in T8 Lamp LED replacing 96in T8/T12 Linear Fluorescent
	12 Watt, 13 Watt, 14 Watt, and 13 Watt Down Light
	Wall Pack 12 Watt and 26 Watt





Type	Measure
	LED Retrofit Kits 1x2 feet, 2x2 feet and 2x4 feet
	LED Canopy 33 Watt
	LED Flood
	LED High/Low Bay 40 to 131 Watt Replacing 175W PSMH
	LED High/Low Bay >262 to 280 Watt Replacing 400W PSMH
	Conversion Kit 8 foot
	LED Exit Sign
	60in Low Temp Reach-in Display Cases LED replacing 60in T12 Linear Fluorescent
	60in Medium Temp Reach-in Display Cases LED replacing 60in T12 Linear Fluorescent
	60in Medium Temp Reach-in Display Cases LED replacing 60in T8 Linear Fluorescent
LED Refrigerator/Freezer Door Retrofit	72in Low Temp Reach-in Display Cases LED replacing 72in T12 Linear Fluorescent
	72in Medium Temp Reach-in Display Cases LED replacing 72in T12 Linear Fluorescent

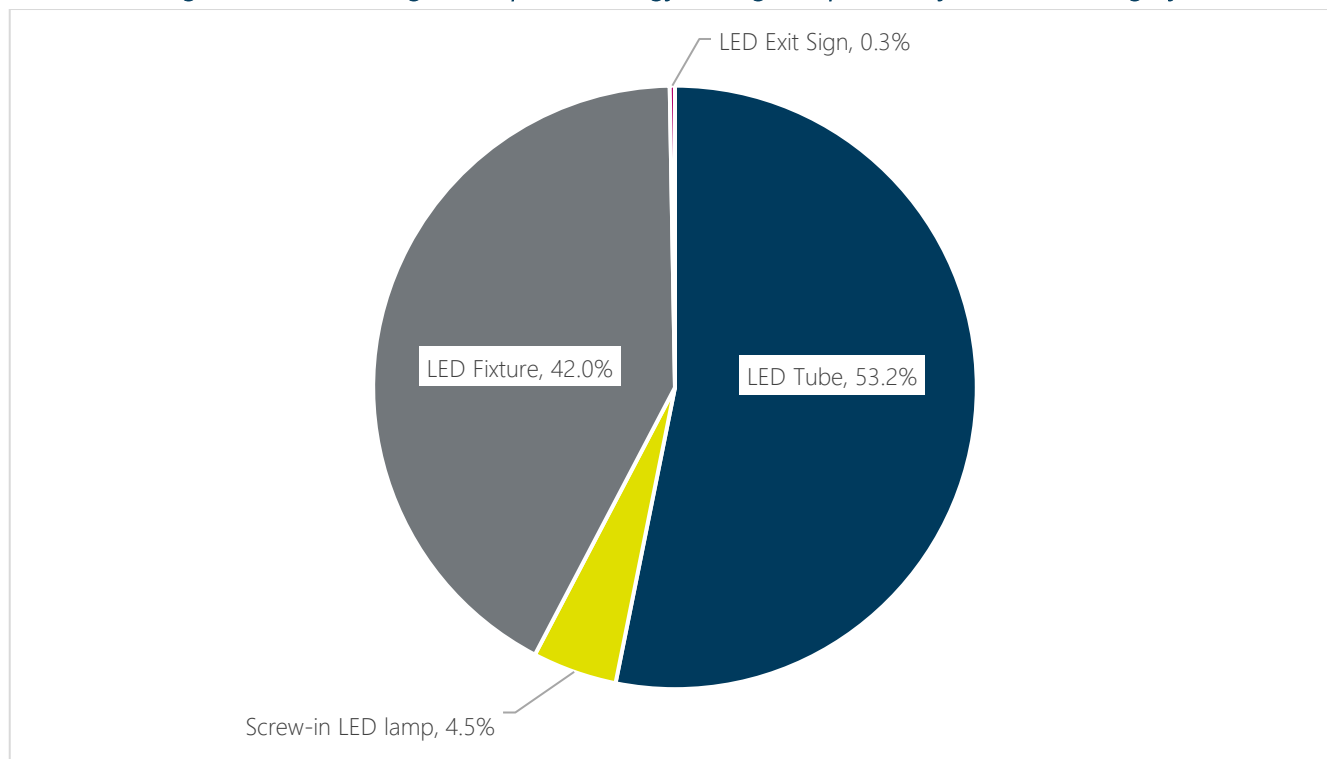
4.2 Program Participation and Achievements

Georgia Power's SCDI program rebated 5,788 energy efficiency measures in 2021. Due to the launch date of the program in April 2021, this evaluation covers just two months of program operations. LED tube measures represented the largest share of reported savings, with 53.2% of reported savings. Figure 4-1 shows the proportion of SCDI program reported energy savings by measure category.





Figure 4-1. SCDI Program Reported Energy Savings Proportion by Measure Category



The program reported 820,394 kWh savings between April and the end of June 2021 and 274 kW demand reduction. Based on the verified savings of 852,048 kWh, the program achieved 4% of its 2020-2021 energy savings goal. Energy and demand savings achievements are presented in Table 2-3 and Table 4-4.

Table 4-3. SCDI Program Achievements – Energy

Timeframe	Number of Measures	Reported kWh	Verified Gross kWh	2021 Energy Savings Target	% of Goal
2021 Q1 & Q2	5,788	820,394	852,048	22,176,580	4%

Table 4-4. SCDI Program Achievements – Demand

Timeframe	Number of Measures	Reported kW	Verified Gross kW
2021 Q1 & Q2	5,788	274	276

The 2020/2021 COVID-19 pandemic and corresponding global economic slowdown disrupted Georgia Power customer and stakeholder decision making for energy efficiency products and services. The pandemic introduced economic uncertainties, premise lockdowns, and supply chain disruptions that





challenged customer adoption of energy-efficient retrofits and new technologies. For the commercial sector, impacts ranged from reduced occupancy and abnormally high closures of restaurants, offices, and schools, while other businesses had short-term or little impact to historical occupancy patterns. Additionally, the pandemic resulted in remote and hybrid office employee work conditions, creating uncertain office occupancy patterns. At the time of this report, October 2021, the pandemic was not abated and new waves of COVID-19 cases continue to affect commercial businesses. This environment directly and indirectly reduced participation in Georgia Power DSM programs; therefore, at this time, the impacts are not fully measurable and are outside of the range of estimation.

The evaluators of GPC commercial programs worked diligently to align with the original program evaluation plans that were developed in the early stages of the pandemic, April 2020. However, the resulting challenges delayed the launch of this program for more than a year, reduced participation, created COVID-19 safety protocols, limited access to premises, and new work environments, which impacted the evaluation team's ability to reach customers and conduct on-site measurement and verification, and reduced the population pool of participants and sample sizes. This evaluation report will provide further details of impacts from the pandemic where applicable and known. To the extent possible, the evaluation team is confident the findings are as accurate as possible for the two-month period evaluated in 2021 for the SCDI program. However, the environment in which this data was gathered may no longer be applicable in future years, if and when, the effects of the pandemic are changed.

4.3 Methodology

The BrightLine and Cadmus evaluation team (the evaluation team) used industry-standard evaluation strategies and approaches to capture feedback about the program's impact on Georgia Power's small commercial customer segment.

4.3.1 Research Questions

Table 2-5 presents each of the key researchable questions and the indicators and tools used to assess each aspect of the program.



*Table 4-5. SCDI Program Evaluation Research Questions*

Research Questions	Indicators/Areas of Investigation	Research Tools
How effective is the enrollment and participant process? Does the process allow for timely receipt of incentives?	<ul style="list-style-type: none"> Customer satisfaction with the program processes Installation contractor experience with the work order, equipment, and reimbursement processes Clarity of program tracking data 	Stakeholder interviews, installation contractor interviews, document review
How effective is the implementation contractor (customer outreach, installation contractor outreach and training, data tracking, quality control)?	<ul style="list-style-type: none"> Installation contractor rating of program training usefulness Installation contractor satisfaction with FCI staff Completeness of tracking data 	Stakeholder interviews, installation contractor interviews, document review
How satisfied are participants with the program process and Georgia Power overall?	<ul style="list-style-type: none"> Customer satisfaction with the program and its components Installation contractor satisfaction with the program and its components 	Installation contractor interviews, participant surveys
How effective is program marketing? How aware are customers about the program?	<ul style="list-style-type: none"> Customer program awareness source Installation contractor program awareness source 	Installation contractor interviews, participant surveys
Are incentive levels sufficient to motivate energy efficiency implementation?	<ul style="list-style-type: none"> Customer satisfaction with rebate amount 	Stakeholder interviews, participant surveys, program tracking data
What are drivers and barriers for participation and customer demand for energy-efficient equipment?	<ul style="list-style-type: none"> Installation contractor drivers and barriers Customer drivers and barriers 	Installation contractor interviews, participant surveys
Does the program encourage adoption of additional energy efficiency measures?	<ul style="list-style-type: none"> Installation contractor-reported demand for other energy-efficient equipment that is not available through the program Participant awareness of Georgia Power's other rebate programs 	Installation contractor interviews, participant surveys
Is the program increasing the availability and market penetration of energy-efficient equipment that results in long-term savings?	<ul style="list-style-type: none"> Installation contractor-reported effect of program on sales or stocking practices 	Installation contractor interviews
Which marketing messages and tools are most effective in encouraging participation?	<ul style="list-style-type: none"> Customer mention of program aspects of value Customer motivations for participating 	Participant surveys
What are the accurate and supportable gross energy and demand impacts of the program?	<ul style="list-style-type: none"> Estimation and verification of equipment savings 	Verification calls, measure review, program tracking data
What are the accurate and supportable net energy and demand impacts of the program (assess net-to-gross)?	<ul style="list-style-type: none"> Customer ratings of program influence on equipment installed 	Installation contractor interviews
Does measure installation vintage align with measure baseline definition?	<ul style="list-style-type: none"> Measure-level savings assumptions 	Document review, measure review, program tracking data

4.3.2 Evaluation Activity Summary





The evaluation team addressed the research objectives using the methods shown in Table 4-6. The COVID-19 pandemic delayed program implementation, which officially commenced in April 2021. As a result, participation was lower than expected at the time of the evaluation, which led to fewer-than-planned completed customer surveys and installation contractor interviews. The evaluation team reached 14 of the 35 participants, a 40% response rate. To achieve this rate, the team offered a \$50 gift card and expanded fielding from an exclusively phone-based survey to include a web-based survey. Due to the truncated evaluation timeline, the evaluation team collected equipment verifications via responses in the participant survey. The team also interviewed all three participating installation contractors.

Table 4-6. Evaluation Activity Summary

Evaluation Activity	Completed
Program Materials Review	N/A
Marketing Assessment	N/A
Georgia Power Program Staff Interviews	4
Participating Customer Survey ¹⁶	14
Participating Installation Contractor Interviews	3
Nonparticipant surveys	300
Equipment verification calls or visits with participant businesses	14 telephone surveys

4.3.2.1 Impact Evaluation Methodology

4.3.2.1.1 Verified Savings

The evaluation team calculated gross verified energy and demand savings based on a review of the SCDI program tracking database. The team reviewed all projects with status designations of “added to invoice” in the VisionDSM data extract, which contained all projects completed, if not yet invoiced, on or before June 30, 2021.¹⁷ We evaluated Georgia Power’s reported savings values for lighting measures using the National Renewable Energy Laboratory’s (NREL’s) Uniform Methods Project (UMP) Commercial and Industrial Lighting Evaluation Protocol.¹⁸ To determine peak demand savings, the evaluation team applied a coincidence factor

¹⁶ The evaluation plan developed prior to the pandemic included higher customer surveys and on-site verification targets. However, based on the delayed program start in April 2021, the program had considerably lower participation than originally anticipated. The evaluation team considered the largest participation population and sample size for robust and reliable evaluation results.

¹⁷ The first project had an audit date of April 12, 2021. The first work order completion is recorded as May 13, 2021.

¹⁸ More information on the UMP protocol is available at <https://www.nrel.gov/docs/fy17osti/68558.pdf>. National Renewable Energy Laboratory. October 2017. *The Uniform Methods Project*. “Chapter 2: Commercial and Industrial Lighting Evaluation Protocol.”





to evaluated gross savings for each installed measure. The evaluation team conducted phone interviews to verify nameplate data and measure persistence (i.e., the unit is currently installed and operable). More detailed discussion on savings methodology can be found in the appendix of this report.

4.3.2.1.2 Net-to-Gross and Net Savings

The evaluation team employed self-report end-user participant surveys and traditional Net-to-Gross (NTG) methodology to estimate net-to-gross ratios. Free-riders are defined as participants who would have purchased and installed measures without the support of the program; participant spillover indicates additional unrebated measures that customers have installed because of program influence. The equation to calculate net-to-gross (NTG) savings is as follows:

$$\text{NTG} = 100\% - \text{Free-Ridership} + \text{Participant Spillover}$$

NTG ratios were used to develop the verified net savings estimates following guidelines in the State and Local Energy Efficiency Action Network's *Program Energy Efficiency Program Impact Evaluation Guide*¹⁹ and the U.S. Department of Energy's Uniform Methods Project information on net savings.²⁰

The concept underlying the self-report surveys is that Georgia Power downstream program commercial customers decide whether or not to participate in DSM programs; therefore, they are in the best position to explain what influenced their decision. The survey was designed to collect information on free-ridership and participant spillover, as further detailed below.

Free-Ridership. To mitigate self-report bias, a battery of free-ridership questions was used to collect data on each participant's *intention*, as well as the program factors that might have had *influence* on the participant's actions. The *intention* and *influence* scores both held a maximum free-ridership value of 50%. The overall free-ridership score for each participant was calculated by summing the *intention* and *influence* scores:

$$\text{Overall Free-Ridership Score} = \text{Intention Free-Rider Score (Maximum 50\%)} + \text{Influence Free-Rider Score (Maximum 50\%)}$$

Participant Spillover. The survey also included questions necessary to calculate participant spillover—the program's influence on customers' decisions to invest in additional energy efficiency measures for which they did not receive any Georgia Power incentives and for which we can provide reasonable documentation of savings. For this evaluation, nonparticipant spillover was not considered, as the evaluation team

¹⁹ State and Local Energy Efficiency Action Network. *Energy Efficiency Program Impact Evaluation Guide*. December 2012. Online at: <https://www4.eere.energy.gov/seeaction/>

²⁰ U.S. Department of Energy's Uniform Methods Project is preparing a framework and protocols for specific energy efficiency measures and programs. Online at: <https://energy.gov/eere/about-us/ump-protocols>





understands that nonparticipant spillover cannot be included per the 2019 Demand Side Management Program settlement with the Georgia Public Service Commission (GPSC).

4.3.2.2 Process Evaluation Methodology

The evaluation team used a range of methods to perform its process evaluation. The team conducted interviews with Georgia Power staff involved in design, implementation, and outreach of the SCDI program to understand program processes and learn about program status. Interviews took place in March and July 2020, and July 2021, and sought to assess program operations, performance, and marketing strategies, as well as perceived market barriers and motivations.

To assess program data completeness, conduct the impact evaluation, and assess marketing materials, the team conducted a review of the program database and materials, which included the VisionDSM program tracking tool, any materials developed to promote the program to distributors or assist distributors with qualified sales, and the implementation manual.

The evaluation team conducted several surveys and interviews with program stakeholders:

- ▶ Surveys with participating small commercial customers to capture their input on the program experiences and identify challenges or barriers to implementing energy-efficient products and equipment.
 - The surveys achieved a 40% response rate, driven by offering a multimode survey with a \$50 gift card incentive. In July, VuPoint, the survey vendor, fielded phone surveys and obtained responses from nine participants. To improve the response rate, VuPoint then offered an online survey in August, which resulted in one participant contacting VuPoint directly for a phone survey and four participants taking the online survey.
- ▶ Interviews with participating installation contractors in July 2021 to understand their perspectives on the program, assess program processes, and identify areas for improvement. The evaluation team completed an interview with all three participating installation contractors.
- ▶ Surveys with the general population of nonparticipating customers to better understand attitudes and knowledge of energy efficiency, energy efficiency upgrades, and plans for future energy improvements.

4.4 Impact Evaluation Findings

4.4.1 Verified Gross Savings

To determine verified gross program energy savings and demand reduction for the SCDI program, the evaluation team reviewed the program tracking database and checked savings estimates and install data against project invoices and assessment files. The evaluation team confirmed the accuracy of the VisionDSM program data for the vast majority of installs and used them as the basis for gross verified savings calculations.





For a small minority of measures, measure annual hours of use, quantities, and wattages in the database did not align with the reported savings. This was the case for a subset of projects that installed LED Exit Signs, LED High/Low Bay 40W to 131W Replacing 175W Pulse Start Metal Halide (PSMH), A19 LED 9.5W, Wall Pack 15W, Wall Pack 20W, or LED Flood 70W measures. Georgia Power and the implementation contractor stated these discrepancies resulted from changes made to the project between the assessment, work order, and final invoice. The evaluation team updated these fields before calculating gross verified savings, and the implementation team has since corrected these errors moving forward.

The other main driver of discrepancies between reported and gross verified savings is the inclusion of a waste heat factor for installs in conditioned spaces. The inclusion of this factor added 7.4% of savings if that measure was installed in a conditioned space.

The evaluation team attempted phone calls with all 35 participating businesses to verify installations and the accuracy of the tracking data and received 14 responses. The team found that all units rebated to surveyed program participants were tracked accurately and reported as installed and operable. The verification rate for all sampled measures is 100%.

The overall energy and demand realization rates for the SCDI program are outlined in Table 3-10 and Table 3-11 along with the individual measure-level realization rates.

Table 4-7. Program Reported vs. Gross Verified Energy Savings

Measure Category	Reported kWh	Verified Gross kWh	Realization Rate
LED Tube	436,105	500,030	115%
Screw-in LED Lamp	37,137	39,336	106%
LED Fixture	344,859	309,779	90%
LED Exit Sign	2,291	2,902	127%
TOTAL	820,394	852,048	104%

Totals may not sum due to rounding.

Table 4-8. Program Reported vs. Gross Verified Demand Savings

Measure Category	Reported kW	Verified Gross kW	Realization Rate
LED Tube	156	167	107%
Screw-in LED Lamp	15	15	101%
LED Fixture	102	94	92%
LED Exit Sign	<1	<1	124%
TOTAL	274	276	101%

Totals may not sum due to rounding.





4.4.1.1 Precision Estimate

Because a desk review was performed for a census of reported measures, there is no statistical uncertainty in these realization rates. Moreover, there is no variance in the ISR because all surveyed respondents reported a 100% ISR across the board.

4.4.2 Net-to-Gross

To estimate free-ridership and participant spillover for the SCDI program, the evaluation team performed surveys with 14 participants and used the self-report methodology discussed in *Section 4.3.2.1.2* and described in greater detail in the appendix of this report.

Table 4-9. SCDI Program NTG

Responses	Estimated Free-ridership	Estimated Participant Spillover	NTG Ratio
14	10.5%	0.0%	89.5%

4.4.2.1 Free-ridership

The team calculated the final free-ridership value for the programs as the sum of the verified gross savings weighted intention (with a maximum score 50%) and verified gross savings weighted influence (with a maximum score 50%) free-ridership components, which resulted in a value between 0% and 100%, as shown in the following equation:

$$\text{Final Free-Ridership Value} = \text{Intention Score} + \text{Influence Score}$$

The influence and intention scores contribute equally to the final free-ridership score. The higher the free-ridership score, the greater the deduction from gross savings estimates.

Table 4-10 summarizes the intention, influence, and free-ridership scores for the SCDI program. These findings are described in greater detail in the appendix of this report.

Table 4-10. SCDI Program Final Free-ridership Score

n	Intention Score	Influence Score	Free-ridership Score (Intention Score + Influence Score)
14	8.4%	2.1%	10.5%

4.4.2.2 Participant Spillover

None of the surveyed participants reported that, after participating in the program, they had installed additional Georgia Power program eligible equipment for which they could confirm they did not receive an incentive and that participation in the SCDI program was important in their decision. Therefore, no spillover is attributed to the program. There was short amount of time between the respondents finished





participating in the program and when they surveyed due to constraints of the evaluation schedule. This short window of time may have contributed to there being no attributable spillover activity reported.

4.4.2.3 Net Savings

The NTG ratio is applied to the verified gross savings to determine the verified net savings. Table 2-17 summarizes the application of the NTG ratio to the gross verified energy and demand savings.

Table 4-11. SCDI Net Verified Impact Results

	Verified Gross Savings	NTG Ratio	Verified Net Savings
kWh	852,048	89.5%	762,583
kW	276.37		247.35

4.4.2.4 Results Benchmarking

To provide context for and a check against the results of the surveyed participants, the evaluation team researched small commercial direct install program evaluation reports where a NTG analysis was conducted. Table 3-18 summarizes the most comparable data found by the evaluation team for the SCDI program.

Table 4-12. SCDI Program NTG Benchmarking Table

Utility	Evaluation Year	Free-ridership	Participant Spillover	NTG	Notes
Georgia Power Company	2021	10.5%	0.0%	89.5%	Self-report with end-user participants
Ameren Missouri	2019	12.8%	0.6%	87.8%	Self-report with end-user participants
AES Indiana	2020	13.0%	10.0%	97.0%	Self-report with end-user participants
AES Indiana	2019	13.0%	1.0%	88.0%	Self-report with end-user participants

4.5 Process Evaluation Findings

To gain insight into Georgia Power's SCDI program, the evaluation team conducted participant surveys via phone and online. The survey results provided a detailed look into many different factors, including customer awareness, customer satisfaction, and general program experience.

4.5.1 Participant Surveys

Fourteen of the 35 program participants completed a survey and shared feedback on how they became aware of the program, as well as their assessment and installation experience during the program's ramp up period. Several made recommendations for the program.

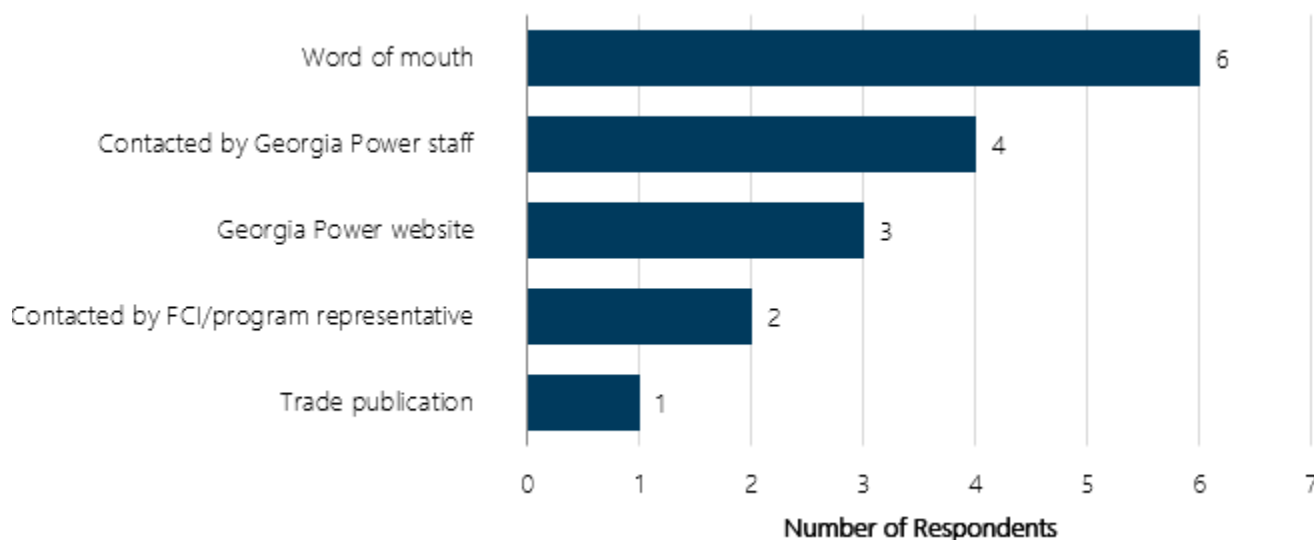




4.5.1.1 Participant Awareness

Although Georgia Power staff conducted outreach to recruit participants to the program, respondents most commonly said they learned about the program through word of mouth, followed by Georgia Power staff contact and the Georgia Power website. Figure 4-2 shows all sources of program awareness.

Figure 4-2. SCDI Program Participant Awareness



Source: Participant Survey. Question Q1. "How did your organization first learn about Georgia Power's Small Commercial Direct Install Program?" n = 14. Multiple responses allowed.

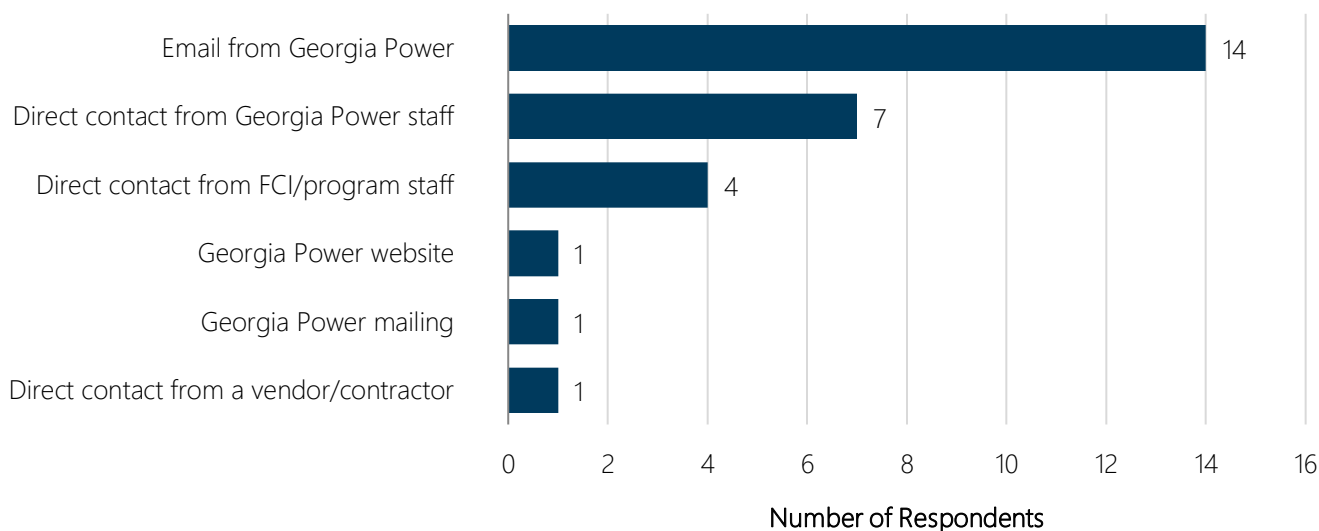
After having learned about the program, 12 of 14 participants reported most commonly using installation contractor/vendor information, Georgia Power staff, and the Georgia Power website to inform their decision.

To understand preferred methods of reaching small commercial business decision makers, the evaluation team asked respondents how Georgia Power could best inform businesses about rebates for energy-efficient improvements. Like the Custom and Prescriptive programs, SCDI participants identified email as the preferred method, followed by direct contact from Georgia Power staff. All methods mentioned are shown in Figure 4-3.





Figure 4-3. SCDI Program Participant Preferred Method of Communication for Rebate Information

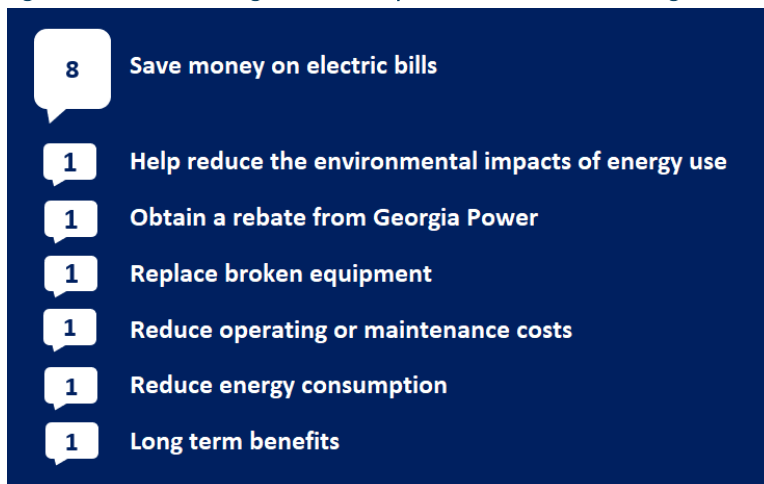


Source: Participant Survey. Question Q5. "What's the best way for Georgia Power to inform businesses like yours about their rebates for energy-efficient improvements?" n= 14. Multiple responses allowed.

4.5.1.2 Motivations and Attitudes

Survey respondents identified the most important factors in their decision to participate in Georgia Power's Small Commercial Direct Install program, shown in Figure 4-4.

Figure 4-4. SCDI Program Participation Decision-Making Factors



Source: Participant Survey. Question Q31. "What was the most important factor in your decision to participate in Georgia Power's Small Commercial Direct Install Program?" n= 14. Multiple responses allowed.





When asked about the economic impacts of Georgia Power's program (beyond rebates), seven participants responded that the program *lowered their organization's operating or maintenance costs*. Two different respondents shared that the program *increased their awareness of energy saving opportunities*.

Twelve of the 14 SCDI participants installed new equipment to replace equipment that was still working, signifying a large portion of early replacements within this program.

Five of the 14 participants identified having social and environmental sustainability goals, and that their program participation supported these goals in several ways:

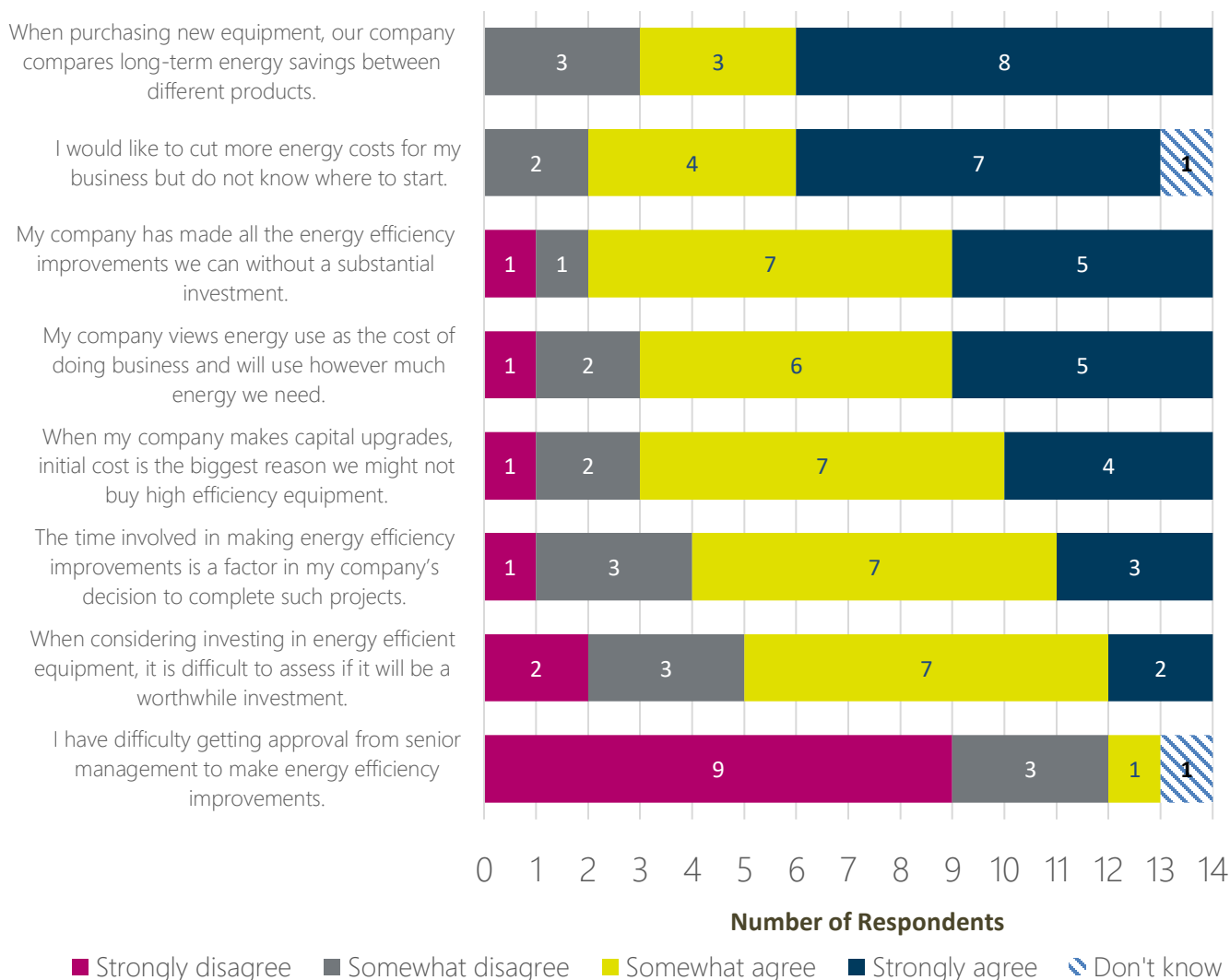
- ▶ Reducing carbon and greenhouse gas emissions (two respondents)
- ▶ Increasing awareness of energy efficiency opportunities (two respondents)
- ▶ Supporting a small minority business (one respondent)

Respondents provided their agreement level with several statements about energy efficiency in their businesses. As shown in Figure 4-5, customers were looking for assistance identifying where they can save energy, with 12 respondents stating that their *company has made all the energy efficiency improvements we can without a substantial investment* and 11 respondents stating that they *would like to cut more energy costs for [their] business, but do not know where to start*. Additionally, customers identified a need for help with calculating the potential benefit of energy efficient equipment, as evidenced by nine respondents agreeing with the statement *when considering investing in energy efficient equipment, it is difficult to assess whether it will be a worthwhile investment*. Respondents did not indicate that senior management was a barrier to installing energy-efficient equipment; only one respondent said they *somewhat agree* with the statement.





Figure 4-5. Attitudes Toward Energy Efficiency Projects



Source: Participant Survey. Question Q30. "For each of the next statements, please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree." n=14.

4.5.1.3 Program Experience

To identify opportunities for installing program-qualified measures, the program implementer, FCI, conducted an onsite lighting assessment and provided each business with an assessment report. Thirteen of the 14 respondents recalled receiving a lighting assessment from a program representative before implementing the energy efficiency project. Of those 13 respondents, 12 recalled receiving the assessment report, and 11 reported that a program representative contacted them to answer questions about the assessment and the next steps of participating in the program.



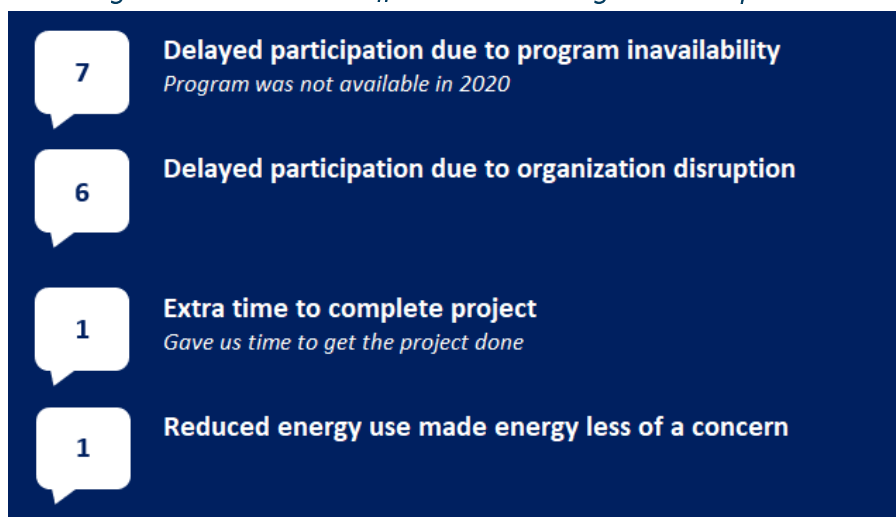


Nine of the 13 respondents who recalled receiving the lighting assessment indicated that the assessment process was *very important* in helping them decide to install energy efficient equipment through Georgia Power's SCDI program. The remaining four participants indicated that the assessment process was *somewhat important* in their decision.

Eleven of the 13 participants installed all of the recommended improvements. One respondent who did not install all of the recommended improvements said that financial constraints prevented them from doing so, and the other was not able to provide a reason. The evaluation team also asked whether respondents were interested in but did not install additional energy efficient equipment because the rebate was insufficient or unavailable through Georgia Power's commercial programs, beyond the SCDI program. Three said they had additional project ideas they had not pursued: one identified HVAC equipment; a second mentioned additional lighting equipment; and a third mentioned kitchen equipment.

The COVID-19 pandemic delayed participation in Georgia Power's SCDI program for all but three respondents. Figure 4-6. details the effects of the COVID-19 pandemic.

Figure 4-6. COVID-19 Effects on SCDI Program Participation



Source: Participant Survey. Question Q21. "What impacts, if any, did the COVID-19 pandemic have on your organization's participation in Georgia Power's Small Commercial Direct Install Program?" n= 13. Multiple responses allowed.

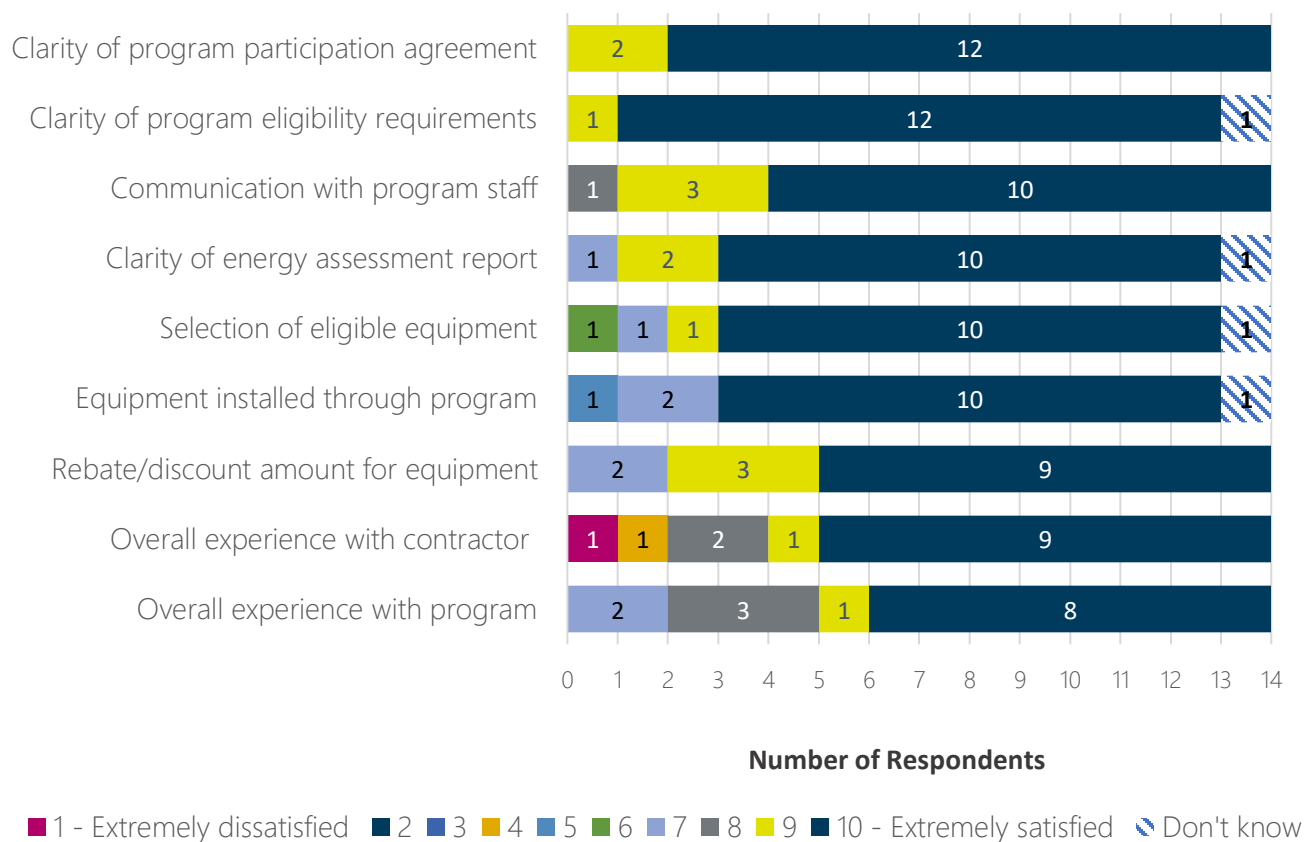
4.5.1.4 Participant Satisfaction

Program participants were asked to rank their satisfaction with several aspects on a scale of 1 to 10, with 1 being *extremely dissatisfied* and 10 being *extremely satisfied* (Figure 4-7). Clarity of the program participation agreement and clarity of program eligibility requirements were the two factors with highest satisfaction ratings, while, interestingly, fewer participants gave high satisfaction ratings (9 or 10 rating) for overall program experience.





Figure 4-7. SCDI Program Participant Satisfaction



Source: Participant Survey. Question Q22. I would like to know your level of satisfaction with different aspects of the Georgia Power's Small Commercial Direct Install Program. Please rate your level of satisfaction with the following using a 1 to 10 scale where 1 is "extremely dissatisfied" and 10 is "extremely satisfied". n=14.

Regarding overall experience with the contractors that installed the equipment, there were two respondents that said their overall satisfaction was below a 5 out of 10. For these two respondents, the evaluation team asked for the reason for their dissatisfaction. The two participants shared that their installation contractors did not arrive with ladders to complete the project, and one of these participants noted issues with the equipment installed. FCI reported that it is continuously working with installation contractors to improve on these logistical items that these participants experienced during the program's ramp up period.





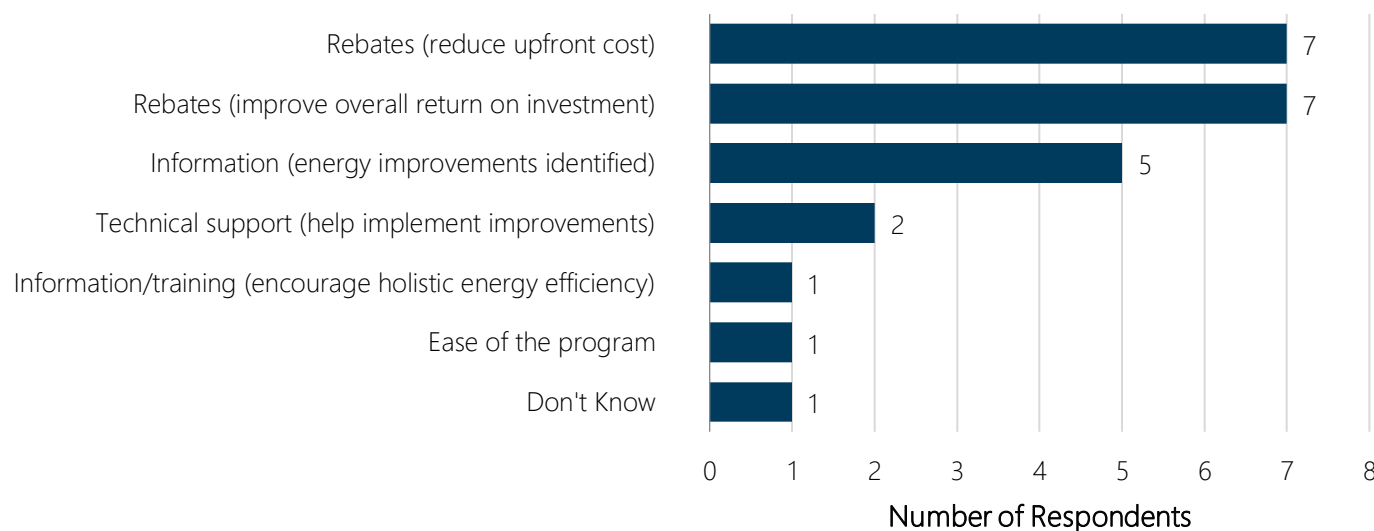
4.5.1.5 Energy Efficiency Opinions and Practices

Respondents shared feedback about the barriers to installing energy efficient equipment at the participating companies. Budget limitations, high initial cost or long payback period of the equipment were the primary concerns for all survey respondents, (18 responses total, multiple responses allowed). The following were also mentioned by one respondent each:

- ▶ Lack of understanding of measures eligible for rebates
- ▶ Lack of corporate support for energy efficiency investments
- ▶ Business disruptions related to the COVID-19 pandemic
- ▶ Does not own building/short-term lease
- ▶ Finding time for projects

In contrast to the barriers of installing energy efficient equipment, respondents identified the specific components of the program that were most important in combatting these challenges (Figure 4-8). Rebates for reducing upfront cost and improving the return on investment were the two most commonly mentioned responses.

Figure 4-8. Valuable Aspects of SCDI Program



Source: Participant Survey. Question Q56. "What aspects of Georgia Power's program were most valuable to your organization in addressing these challenges and implementing energy efficiency improvements?" n=14. Multiple responses allowed.

4.5.2 Installation Contractor Interviews

The evaluation team conducted interviews with all three participating installation contractors. They provided their perspectives on the program processes, satisfaction, and areas for improvement and opportunities based on their experiences during the program's ramp up period.







4.5.2.1 Installation Contractor Awareness

The direct install component of SCDI has been in place since 2017, and although the program transitioned to a new implementer in 2020, for two of the three respondents, 2021 marked their fourth year of participation. Only one respondent was new, having joined at the end of 2020.

Figure 4-9 shows respondents’ history with the program and how they were introduced to the program.

Figure 4-9. Installation Contractors’ History with and Introduction to the SCDI Program

	Respondent 1	Respondent 2	Respondent 3
 History with program	Participating since 2018	Participating since 2018	Participating since late 2020
 Introduction to program	First heard about program from previous implementer	First heard about program through their boss	Joined company in 2020 and not sure how they first heard about program

Source: Installation Contractor Interviews. Questions Q1 and Q2. “When did you first enroll in the Georgia Power Small Commercial Direct Install Program” and “How did your organization first learn about Georgia Power’s Small Commercial Direct Install Program?” n=3.



The SCDI program fell in line with the work that the installation contractors were already doing. All three respondents identified this good fit as their primary motivation for participating in the program. Despite the good fit, all three respondents mentioned that the application process had not gone as smoothly as they had expected. See next section for more details on issues with the application process.

Figure 4-10 summarizes respondents’ primary motivation for participating in the program and how well it met their expectations.





Figure 4-10. Installation Contractors' Participation Motivations for and Expectations with the SCDI Program

	Respondent 1	Respondent 2	Respondent 3
 Primary motivation to participate	Program aligned with what their business was already doing	Program aligned with what their business was already doing	Program aligned with what their business was already doing
 Meeting expectations	Aligning the business with program has been good, but has been bumpy at times	Aligning the business with program has been good, but has been bumpy at times	Aligning the business with program has been good, but has been bumpy at times

Source: Installation Contractor Interviews. Questions Q3 and Q4. "What would you say was your company's primary motivation for participating in the SCDI program?" and "Has the program met your expectations, in regards to...[response from Q3]?" n=3.

4.5.2.2 Application Process





Installation contractors found the work order and reimbursement processes easy, but the assessments were often missing details, which impacted their profitability and ability to complete the jobs. As shown in Figure 4-11, all three respondents described the work order process as easy. These three respondents also mentioned the same issue within the work order process – that the assessors did not document or provide enough details about the installation site description.

Specifically, respondents said that the assessors did not measure the ceiling or communicate that ladders/lifts were needed for the job. As a result of this, respondents said they did not come prepared with ladders/lifts to be able to complete the job. Respondents said this issue cut into their profitability as the work needed to be rescheduled. To resolve this issue, respondents suggested that the assessments provide more detailed descriptions of the installation site and better communication from the assessors.





Figure 4-11. Installation Contractors' Experience with the Application Process

	Respondent 1	Respondent 2	Respondent 3
 Work order process	Easy	Easy	Easy
 Issues with work orders	Assessors did not include detailed info so arrived at some jobs unprepared	Assessors did not include detailed info so arrived at some jobs unprepared	Assessors did not include detailed info so arrived at some jobs unprepared
 Reimbursement process	(Does not manage reimbursement process)	Easy	Very easy
 Issues with reimbursements	(Not applicable)	Miscommunication on the assessments is underlying issue	Have not received any money yet. If it did come through, was not communicated.

Source: Installation Contractor Interviews. Questions Q9-10 and Q13-14. "How would you describe the work order/reimbursement process?" and "Have you ever encountered an issue with a work order/reimbursement?" n=3.

4.5.2.3 Market Opportunities



Installation contractors identified the removal of ballasts from the program and adding various other lighting products as opportunities for the SCDI program. As shown in Figure 4-12, two of the three respondents suggested removing ballasts from the program; these respondents said that ballasts last up to five years and lighting that has a ballast would require replacement along with the fixture, whereas lighting without a ballast would only require a bulb replacement. All three respondents suggested that the program consider new lighting products such as flood lights, hybrid bulbs, and combo units to increase energy savings. Two respondents also suggested that the program consider occupancy sensors.

All three respondents said that the current COVID health and safety protocols for the program were good as is and did not have any suggestions in this area.





Figure 4-12. Installation Contractors' Program Recommendations

	Respondent 1	Respondent 2	Respondent 3
 Other products and ideas for program to consider	<ul style="list-style-type: none"> • Flood lights with photocell option • Occupancy sensors 	<ul style="list-style-type: none"> • Removing ballasts • Hybrid bulbs • Occupancy sensors 	<ul style="list-style-type: none"> • Removing ballasts • Combo units like exit lights
 Other changes for GPC to implement during COVID	None. Current protocols are good.	None. Current protocols are good.	None. Current protocols are good.

Source: Installation Contractor Interviews. Questions Q16 and Q18. "Is there additional commercial electric, energy-efficient equipment that you would be willing to install through this process that you think Georgia Power should consider adding?" and "Considering the impacts from the COVID-19 pandemic...are there any changes you would like to see Georgia Power implement that would improve the program experience for you or participants during this unique time?" n= 3.

4.5.2.4 Satisfaction and Overall Program Experience

The SCDI program received mixed satisfaction results from installation contractors (Figure 4-13). For overall experience with the program, all three respondents were satisfied, providing a 7 or higher rating on a 1 to 10 scale with 1 being *extremely dissatisfied* and 10 being *extremely satisfied*.

The program aspect of *working with FCI staff* received the highest satisfaction ratings. Two respondents gave the lowest satisfaction ratings for *the clarity of the customer's site installation information*, while the third respondent gave the lowest satisfaction rating for *the program's quality control or project verification process*.

The low satisfaction ratings for *the clarity of the customer's site installation information* and *the program's quality control or project verification process* had to do with the assessments and work orders. As mentioned earlier, all three respondents were dissatisfied with the lack of details and communication from the assessors about the installation site description. All three respondents said that they are currently working with FCI to resolve this issue. FCI also reported meeting regularly with each installation contractor to collect feedback, which included requests that work orders detail when ceiling heights are over 12 feet and any other special installation or site instructions.





Figure 4-13. Installation Contractors' Satisfaction with the SCDI Program

Response	Respondent 1	Respondent 2	Respondent 3
Working with FCI staff within the SCDI program	10	10	9
Work order process	8	7	8
Reimbursement process	8	7	Don't know
Process of obtaining equipment for each project	7	6	6
Customer awareness of the process when you arrive on installation day	6	6	7
Program's quality control or project verification process	7	8	4
Clarity of the customer's site installation information	5	5	9
Your overall experience with the SCDI program	10	8	7

Source: Installation Contractor Interviews. Question Q19. "Please tell me how satisfied you are with each of the following aspects of the program." n=3.

4.5.3 Marketing Approach

The evaluation team reviewed Georgia Power's marketing strategy and design for the SCDI program. Because program implementation and marketing were paused due to the COVID-19 pandemic, the Georgia Power team did not have data on marketing performance at the time of this evaluation.

4.5.3.1 Marketing Strategy

Georgia Power led program marketing for the SCDI program with the intent to increase awareness of the program and drive adoption and participation to reach kilowatt-hour goals. The marketing materials are generally consistent with these stated goals.

Georgia Power paused the SCDI program and its marketing efforts through the end of March 2021 due to the COVID-19 pandemic. During this time, Georgia Power's only touchpoint with customers interested in the SCDI program was a "Thank You for Your Continued Interest" email sent in January 2021. Upon resuming the program in April 2021, Georgia Power's marketing calendar included display ads, print ads, paid social media, and several Georgia Power-owned channels, such as email, the Georgia Power website, and organic social media. The evaluation team found that this mix of channels was sufficient to engage customers in multiple ways. During the stakeholder interviews, Georgia Power noted that in the prior program cycle, it used direct mail for SCDI program outreach, which could be included in this program cycle's SCDI marketing. All of this marketing is customer-centric, which is appropriate for a program with this design.





As noted in section 4.5.1.2, customers want help identifying how to save energy for their businesses and make the financial case for energy-efficient equipment. Based on the evaluation team's review of the SCDI Creative Assets document and example marketing, the current set of marketing materials helps to meet this need.

4.5.3.2 Material Design

Georgia Power provided the evaluation team with general SCDI program marketing materials, as well as copies of marketing materials from the "In a New Light" and "We are In Your Neighborhood" campaigns. Across marketing materials, the evaluation team found that the messaging was strong, with a clear focus on customer benefits and the potential for energy and cost savings. These materials use a mix of text formats, such as bulleted lists and short paragraphs, to call attention to specific elements. The campaign was divided by different priority industry segments (general, auto shops, warehouses, and retail/services), and each piece used appropriate messaging and imagery for a given industry segment. However, the evaluation team noticed restaurant imagery in some of the example materials, which is not listed as an independent channel. Given the size of this segment, Georgia Power should consider splitting restaurants into its own segment given the distinct needs of restaurant owners.

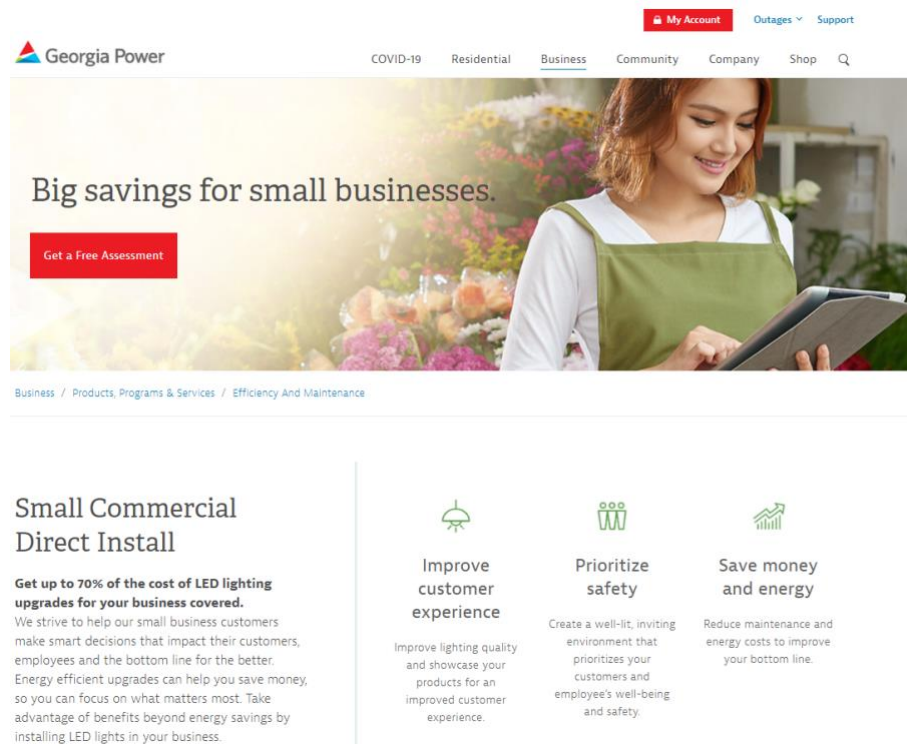
Branding is generally consistent, as shown by the examples Georgia Power provided and the examples for other programs. This creates a sense of continuity for customers. When reviewing the design of the marketing materials, the evaluation team found some small design improvements that Georgia Power could implement to improve readability. Some of the buttons in digital pieces, such as the email and digital ad call-to-action buttons, are low contrast or the same color as other aspects of the marketing piece. Using a different color with more contrast would help make the call-to-action button stand out better to the customer. This also applies to print ads, where Georgia Power could use text effects to help make key elements stand out. Finally, the emails and flyers promoting LED replacement use an image of a CFL bulb, which should be updated for consistency.

The Georgia Power website dedicates a page for the SCDI program. One example marketing piece is a flyer that directs customers to a landing page for the SCDI program (georgiapower.com/small_business). This webpage is well-designed, using several of the same branding elements and messaging as the example marketing materials, as shown in Figure 4-14. Where customers are directed to the webpage, the area above the fold contains a call to action at the top, a description of the SCDI program, and key benefits that the customer can expect from participating. The remainder of the webpage contains the appropriate level of detail to capture the customer's attention, including a video to walk the customer through the steps to participate.





Figure 4-14. SCDI Program Landing Page



4.6 Conclusions and Recommendations

Conclusion 1: The program process is straightforward and satisfactory for participants, but some encountered ill-prepared installation contractors during its ramp up period. Similarly, participating installation contractors were comfortable with the work order process and the program overall, but their main challenge and dissatisfaction with the program stemmed from a lack of details and communication from the assessors regarding the installation site description.

Most participating businesses were able to recall and reported a favorable site assessment experience, and they gave high marks for the program requirements and staff. However, two participants provided specific examples of issues with installation contractors that suggest contractors were not prepared with the necessary information, equipment, and/or tools to complete the project during the program's ramp up phase.

Installation contractors enlisted to support the program considered the program to be a good fit for their business, and they were generally pleased with the program overall. All three found the work order and reimbursement processes easy, but they were less satisfied with the content in the program's assessment reports and work orders. Installation contractors mentioned that the assessment report and work order lacked necessary details, which impacted their profitability and ability to complete jobs. The evaluation team collected this feedback from participating installation contractors in July 2021, while the program was still





ramping up, and installation contractors noted they are currently working with FCI to resolve this issue. FCI also said it meets regularly with each installation contractor to collect feedback and that it resolved some of the issues with missing site information.

Recommendation: As noted, the implementer has and should continue to review content and process for the assessment reports and work orders with installation contractors to ensure both parties fully understand the details needed to efficiently deliver projects to customers. The implementer should add required fields for any missing data that assessors must fill out in the site description of the assessment and work order. Include photos and descriptions of the site for installation contractors to consider ahead of the job. As ambassadors of the program, ensure installation contractors are confident with and prepared for the project before heading off to the jobsite.

Conclusion 2: The SCDI program’s marketing materials are consistent with Georgia Power’s goal to increase awareness of the program and drive adoption and participation.

Upon launching the program in April 2021 after the COVID delay, Georgia Power’s marketing calendar included display ads, print ads, paid social media, website updates, email campaigns, and organic social media. As a result, participants mentioned learning about the program through direct and indirect contact with Georgia Power staff, the website, and a trade publication, in addition to word of mouth and through the implementer. Further, participant survey respondents responded strongly to statements of identifying how to save energy for their business and make the financial case for energy-efficient equipment; the current set of marketing materials helps to meet this need.

Conclusion 3: The implementer did not consistently update the VisionDSM database as projects’ statuses changed, and as a result, VisionDSM project data was not always aligned with other project records (i.e. assessment files, invoices).

When verifying the VisionDSM database for accuracy, some measures had different wattage and/or measure name information in the database compared to the final invoices for that project. Reported savings in the VisionDSM database were sometimes misaligned with the reported wattages, quantities, and annual hours of use in the implementer’s database and invoices. These differences were the main reasons measure realization rates were not 100%. Georgia Power and the implementer said these discrepancies resulted from changes made to the project between the assessment, work order, and final invoice. Georgia Power reports that FCI has since corrected its practice, as FCI staff responsible for moving projects from one stage to the next have become better trained and proficient in updating project details during this process.

Recommendation: Ensure FCI maintains the practice of updating the VisionDSM database as each project’s status changes, and determining reported savings based on the final version of measure data imported into VisionDSM.





5 Behavioral

As a new program in Georgia Power's commercial energy efficiency portfolio, the Commercial Behavioral program launched its first report in August 2020. This program lays the groundwork to engage commercial customers in energy saving behaviors spurred by Business Electric Assessment (BEA) reports, online engagement with Georgia Power's program landing page and eventual participation in the company's other energy efficiency offerings to commercial customers.

In conjunction with the program's launch in 2020, the evaluation team conducted focus groups with small groups of commercial customers eligible to receive a BEA (but who had not received one specific to their business) to understand their interpretation of the BEA, identify what aspects of the BEA they valued and what areas could use more refinement. The results of this activity have already been reviewed by Georgia Power and the Public Service Commission Staff and are presented in the appendix of this report.

In the late summer 2021, the evaluation team conducted a survey with customers who received BEAs over the past year (the treatment group) and compared their responses to customers who did not receive BEAs (the control group) to gauge satisfaction with the BEA, learn about energy efficiency actions taken as a result of the BEA, and assess awareness of Georgia Power's programs.

The treatment and control survey indicated that the BEAs provided valuable information to the treatment group recipients and had a significant positive impact on customer satisfaction with Georgia Power. Treatment customers used the BEAs and were empowered to take energy efficiency actions, while control group respondents indicated a need for this information. Significantly more control group customers expressed a need for more information about how to implement energy efficiency at their facility, while treatment customers expressed knowledge about Georgia Power incentives and resources to help them take action. Among nearly one-third of treatment respondents who made upgrades, BEAs were very important in their decision. This is an early indicator that the BEA is working as intended.

In December 2021, the evaluation team conducted an impact analysis of the program's first year of operation, the results of which will be added to this report upon finalization. Preliminary results are referenced in section 5.2.



COMMERCIAL BEHAVIORAL

Pre-Implementation Focus Groups



7 Georgia Power customers provided feedback on example BEAs in September 2020

Key Recommendations

The purpose of the BEA aligns with customers' strong desires and motivations to save energy.



Customers need education on energy-saving opportunities relevant to their circumstances.



Confusion about the information shown about bill cycle, price and temperature elements is a barrier to action.

Customers want and value case studies to understand the types of energy-saving opportunities available to them. Case studies must be relatable to their industry and relevant to their size and type of business.



The BEA could benefit from refinements to make both the BEA and landing page content more relevant and useful.

Treatment and Control Group Survey



82

Treatment Customers



103

Control Customers

Key Recommendations



Treatment customers overwhelmingly found BEAs useful, accurate, and contained relevant business comparisons and tips that spurred energy-efficiency actions.

There is evidence that treatment respondents are leveraging the information from BEAs and following tips.



The BEAs have a significant impact on customer satisfaction and knowledge empowerment for customers who regularly read their reports.

Treatment respondents indicated higher levels of knowledge about saving energy and what incentives are available for efficient upgrades, and expressed fewer customer service complaints.



Treatment respondents who read BEAs regularly had significantly higher overall satisfaction with Georgia Power (8.3) than treatment respondents who do not read BEAs (7.4) and control respondents (7.7).

46%

of treatment respondents said their knowledge of their facility's energy use had increased slightly.

19%

said they were much more knowledgeable.



5.1 Program Overview

Georgia Power launched the Commercial Behavioral program in August 2020 to further engage their commercial customers, expanding upon the 2019 pilot program. Georgia Power designed the Commercial Behavioral program to encourage customers to actively manage their facility's energy use by equipping them with knowledge and tools to reduce energy consumption. Through the Commercial Behavioral program's BEAs, Georgia Power provides customer-specific reports six times per year via postal mail. These reports contain historical customer energy-use data and comparisons to average anonymous peer businesses. The BEAs also include seasonal and facility-appropriate energy savings tips and energy efficiency program information. In addition, Georgia Power created a landing page on its website to provide customers with information regarding the BEAs, answer frequently asked questions, and collect customer firmographics that inform the customization of the reports.

Agentis implements the program and designed the report content in collaboration with Georgia Power. In August 2020, 32,642 commercial customers with metered accounts and energy usage up to 500 kW received their first BEAs. Georgia Power elected to remove some customer types for practical reasons, and over the course of the first year some customers opted out or were determined to have closed accounts.²¹ For example, K-12 public schools were not included in the eligible customer groups because the program launched amidst the COVID-19 pandemic that closed or significantly altered school operations.

Behavioral programs typically take one to two years to reach a steady state of savings, offering the opportunity to refine report content and delivery. The customer feedback presented in this report will inform additional tailoring of the report content and associated landing page to increase customer awareness of energy efficiency behaviors that can generate cost-effective energy savings. A full impact evaluation is scheduled to be completed within several months of this report and will inform the savings achieved by the program. As noted above, given the length of time it takes behavioral programs to reach maturity, first year savings may not be indicative of future trends.

5.2 Participation and Achievements

The results of the impact analysis, which was conducted in December 2021, will be incorporated into this report once finalized. Table 5-1 reflects only reported savings at the time of this report.

²¹ Georgia Power removed some customers based on non-eligible rate codes or because they were likely not an operating business location (like billboards and telecommunications devices that need electricity). Other exclusions included Georgia Power and all Southern Company subsidiary locations, apartments, cell towers, communications companies, federal and state accounts, K-12 schools, larger national and key accounts (Walmart, Target, Google, Amazon, etc.), railways, condos, airports, large metro area city accounts (Savannah, Atlanta), and non-electric utility meters (EMCs, gas, water/sewer, phone, etc.).



*Table 5-1. Behavioral Program Achievements - Energy*

Timeframe	Reported kWh	Verified Gross kWh	Annual Energy Savings Target	% of Annual Goal
2020	2,105,058	TBD	13,560,787	16%
2021 Q1 & Q2	2,362,390	TBD	13,558,850	17%
TOTAL		TBD		

The 2020/21 COVID-19 pandemic and corresponding global economic slowdown introduced economic uncertainties, premise lockdowns, labor market limitations, and supply chain disruptions that challenged customer adoption of energy efficient retrofit and new technologies. For the commercial sector, impacts ranged from reduced occupancy and abnormally high closures of restaurants, offices, and schools, while other businesses had short-term or little impact to historical occupancy patterns. Additionally, the pandemic resulted in remote and hybrid office employee work conditions, creating uncertain office occupancy patterns. This environment directly reduced engagement in Georgia Power DSM programs, including the Commercial Behavioral program.

In the impact evaluation, which will be incorporated into this report by February 2022, the evaluation team compared usage patterns between treatment customer (report recipients) and control customers (no report) and found that usage patterns in both groups were similar and demonstrated an increase in energy consumption from 2020 to 2021. That is most likely the result of the dramatic change in workplace operations. The pandemic potentially limited customers' exposure with the Business Electric Assessments and opportunities to implement measurable energy reducing technologies or processes.

The evaluation team conducted an impact evaluation of the Commercial Behavioral program's first year of operation (August 2020 through August 2021) and found average savings per customer to be lower than the planned estimates. Behavioral programs typically take multiple years to reach a steady state of savings, and the results from this first impact analysis do not represent long-term indicators for the program due to the early phase in which the program operated. The evaluation team recommends a follow up impact evaluation in another 6-12 months.

The evaluation team identified high savings among accounts older than 10 years of age, which indicates an opportunity for the program to focus on a smaller segment of customers that are more responsive to the Business Electric Assessments. Furthermore, treatment customers who read the reports reported high engagement with the reports, actions they took to save energy, and statistically higher satisfaction with Georgia Power. It may be the case that report reader have not sufficient opportunities to implement changes to equipment operation given the timing of the impact evaluation. Finally, targeting specific commercial customers and/or a reduction in the program size to potential high energy savers may offer more statistically significant findings and improved cost-effectiveness.





The evaluation team is confident the findings are as accurate as possible for this time horizon of 2020 through the summer of 2021. However, the environment in which this data was gathered is likely not be applicable in future years, if and when, the effects of the pandemic are changed.

5.3 Methodology

To evaluate the Commercial Behavioral program, BrightLine Group and Cadmus Group (the evaluation team) conducted interviews with program staff, held focus groups with customers eligible to receive BEAs, and surveyed treatment and control group customers. The impact analysis will be conducted in November 2021.

5.3.1 Research Questions

Through this evaluation, the evaluation team addressed the research objectives below. Given that the program is new, the evaluation activities emphasized prospective enhancements, and focused on providing actionable feedback on report content. This report addresses the research objectives shown in Table 5-2.

Table 5-2. Commercial Behavioral Program Evaluation Research Questions

Research Questions	Indicators/Areas of Investigation	Research Tools
How effective are the implementation contractors, including data tracking, quality control, and communication?	<ul style="list-style-type: none"> Completeness and clarity of tracking data 	Stakeholder interviews, database review
How effective is program marketing?	<ul style="list-style-type: none"> Focus group feedback on possible BEA content Treatment customer awareness of Georgia Power incentive programs, ways to save energy Treatment customer follow-through on email tips Treatment customer use of BEAs 	Pre-Implementation focus groups Treatment and control survey
How satisfied are treatment customers with the BEAs?	<ul style="list-style-type: none"> Treatment customer satisfaction with the BEA 	Treatment and control survey
What kind of influence has the assessment had on customer adoption of EE measures?	<ul style="list-style-type: none"> Customer-reported energy efficiency actions taken 	Treatment and control survey
How effective was the program launch?	<ul style="list-style-type: none"> Program manager feedback on launch process 	Stakeholder interviews
How aware are customers of their facility energy use and how has the BEA impacted their knowledge and awareness?	<ul style="list-style-type: none"> Treatment customer use of BEAs Difference between treatment and control group knowledge and awareness 	Treatment and control survey
Which assessment messages and online tools are most effective in encouraging treatment group engagement?	<ul style="list-style-type: none"> Focus group feedback on possible BEA content Treatment customer satisfaction with BEA Treatment customer recommendations for BEA improvement 	Pre-Implementation focus groups Treatment and control survey





Research Questions	Indicators/Areas of Investigation	Research Tools
What are the accurate and supportable gross energy and demand impacts of the program?	<ul style="list-style-type: none"> Estimation of program savings 	Billing analysis
What are the accurate and supportable net energy and demand impacts of the program?	<ul style="list-style-type: none"> Estimation of program savings 	Billing analysis

5.3.2 Stakeholder Interviews

The evaluation team conducted separate interviews with the Commercial Behavioral program manager and the Commercial Energy Efficiency program implementation manager in January 2020 and conducted regular meetings with the program team and representatives from the implementation contractor (Agentis). These meetings provided the evaluation team with foundational information about program eligibility and planned BEA content. They also included a discussion of the activities leading up to the first BEA distribution in August 2020.

5.3.3 Pre-Implementation Focus Groups

In September 2020, the evaluation team conducted online focus groups with eligible commercial customers within the treatment and control groups. At the time of the focus groups, only one BEA had been issued and participants in the focus groups included a mix of customers who could have received a BEA (treatment group) and those who did not (control group). Six participants received a report in August 2020. Customers responded to example reports, not ones specific to their businesses.

Given the wide range of businesses eligible for the Commercial Behavioral program, the evaluation team selected a subset of business types to ensure that respondents in the same group had some level of similarity in their energy use needs and patterns. The focus groups consisted of two groups of different business types:

- ▶ Group one: office, healthcare, and education sectors
- ▶ Group two: food service and retail sectors

The evaluation team randomly selected a subset of 1,000 account records from the program's treatment and control groups²² for the sample frame, excluding managed accounts at the request of Georgia Power, records without contact information, and records with a request not to be contacted for research purposes. The evaluation team recruited respondents via telephone using a screener to confirm customers' eligibility and ability to participate in the focus groups. As shown in Table 5-3, the evaluation team recruited a total of

²² The Commercial Behavioral program's treatment and control groups each contain 33,000 eligible commercial customers with metered accounts that met program eligibility requirements. The treatment group received the BEA while the control group did not. Program savings will be measured as the difference between the energy consumption behavior of the treatment and control groups.





16 customers with the expectation that 10 to 12 recruits would ultimately attend (typically, one for every four recruits does not show; however, increased frequency of drop-outs in the commercial sector does sometimes occur). The evaluation team followed best practices for recruitment by sending multiple email reminders to customers and calling each customer the day before the focus groups to confirm their intention of participation. To encourage participation, the team also provided customers who completed the focus group a \$150 gift card to compensate them for their time.

Turnout was lower than anticipated with only six respondents across both focus groups. Despite low turnout, the evaluation team gathered valuable qualitative insights across the target business types. Despite the small number of focus group participants, the presence of consistent themes in both groups is an indicator that additional respondents may not have changed the core findings.

Table 5-3. Recruitment and Group Attendance

Group 1 (5PM EST)			Group 2 (7PM EST)		
Respondent	Sector	Status	Respondent	Sector	Status
1	Office	Participated	9	Retail	Participated
2	Healthcare	Participated	10	Food service	Participated
3	Education	Participated	11	Food service	Participated
4	Education	Attempted to join; connection was bad	12	Retail	No response; did not attempt to join
5	Healthcare	Work conflict (dentist with patient)	13	Food service	No response; did not attempt to join
6	Healthcare	No response; did not attempt to join	14	Food service	No response; did not attempt to join
7	Office	Dropped out the day of the groups	15	Retail	Dropped out the day of the groups
8	Healthcare	Dropped out the day of the groups	16	Retail	Dropped out the day of the groups

The evaluation team conducted the online focus groups using the FocusVision specialized software. FocusVision allowed the moderator to share stimuli, interact with respondents, and converse privately with the Georgia Power team members viewing the focus groups. Before each group began, respondents answered a set of poll questions intended to prep them for the group and provide some additional insight into their awareness and prioritization of energy efficiency.

The evaluation team designed a focus group facilitation guide to address the research objectives listed in Section 123. In the discussion guide, the moderator displayed two stimuli: the peer comparison BEA and the case study BEA. The moderator walked through different sections of each stimuli to elicit respondent





reactions and understand their feedback. Additionally, the moderator displayed the Commercial Behavioral program landing page on the Georgia Power website in real time. Each focus group lasted 90 minutes.

5.3.4 Treatment and Control Group Survey

The evaluation team conducted surveys with treatment group customers who started receiving BEAs in August 2020 and with control group counterparts. Treatment customers are those who received BEAs, while control customers are those who are in the comparison group of customers who do not receive BEAs. The control group is used to compare the difference in savings and other metrics to assess the effectiveness of the treatment (in this case, the BEAs). The evaluation team administered the surveys online after determining that there was sufficient email coverage to meet confidence and precision targets.

The evaluation team developed a single-survey instrument for the treatment and control group customers. The survey included identical questions for both groups, and only treatment group customers received questions about engagement and satisfaction with the BEAs. Respondents were entered into a drawing to receive one of ten \$100 gift cards (per survey). The evaluation team received responses from 82 treatment customers and 103 control customers. Table 5-4 shows the final response rate.

Table 5-4. Treatment and Control Survey Sample and Results

Respondent Group	Population	Population with Valid Email	Sample Frame	Responses	Response Rate
Treatment	30,126	19,089	7,288	82	1.1%
Control	30,157	19,196	4,223	103	2.4%

5.4 Treatment and Control Group Survey Findings

This section includes findings from the treatment and control group survey, organized by research objective:

- ▶ Feedback on the BEA (treatment group only)
- ▶ Satisfaction with Georgia Power
- ▶ Familiarity with Georgia Power's energy efficiency programs
- ▶ Adoption of specific energy-saving products
- ▶ Adoption of energy-saving behaviors

5.4.1 Feedback on the BEA (Treatment group only)

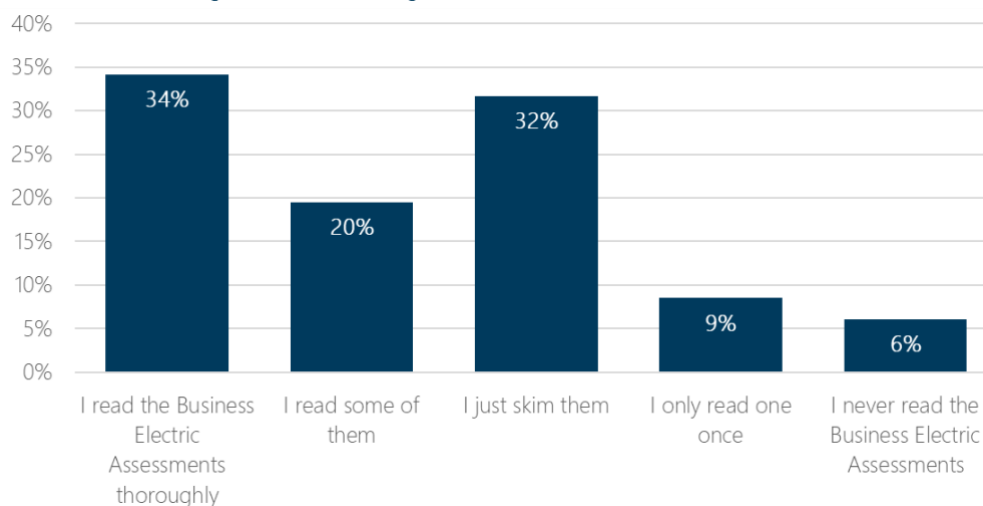
About a third of treatment respondents read the BEAs *thoroughly* (34%), and 85% said they at least *skim* the reports (Figure 5-1). Fifteen percent of treatment respondents (all of whom answered a screening question that they recalled receiving BEAs) said that they read the BEAs *once* or *never*. Respondents who read BEAs *once* or *never* were asked why they do not read them: three of seven said they did not have time or it was not a high enough priority, one said because they are a tenant rather than owner of their building, and





another had a one-person company that does not use much power. The last two respondents said they did not read BEAs because they were not sure what information they contained and that they gave the BEAs to their company owner to read.

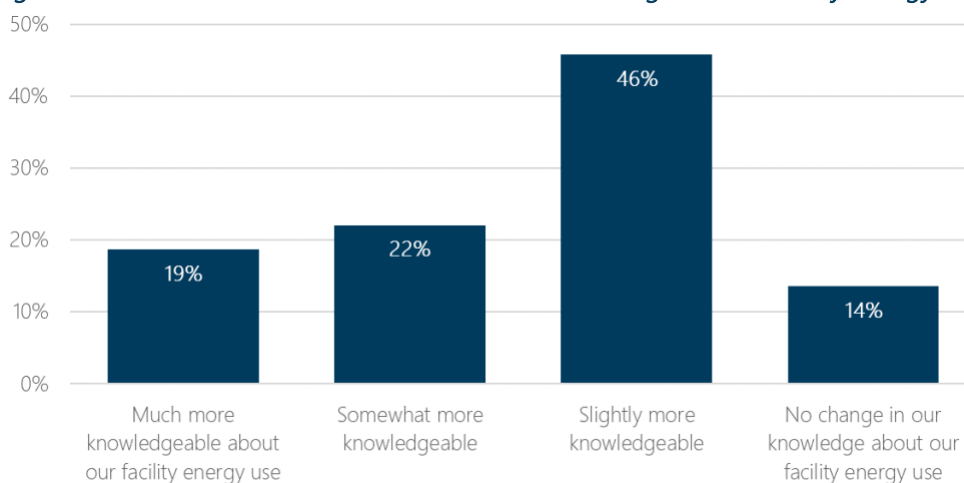
Figure 5-1. Reading Business Electric Assessments



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q29. "Which of the following statements best describes what you usually do with the Business Electric Assessments you have received?" n=82. Percentages may not total to 100% due to rounding.

The evaluation team asked treatment respondents who at least regularly skim the BEAs if doing so had changed their knowledge about their facility's energy use (Figure 5-2). Only 14% said that their knowledge did not increase, while nearly half said their knowledge had increased *slightly* (46%) and 19% said they were *much more knowledgeable*.

Figure 5-2. Business Electric Assessments and Knowledge About Facility Energy Use



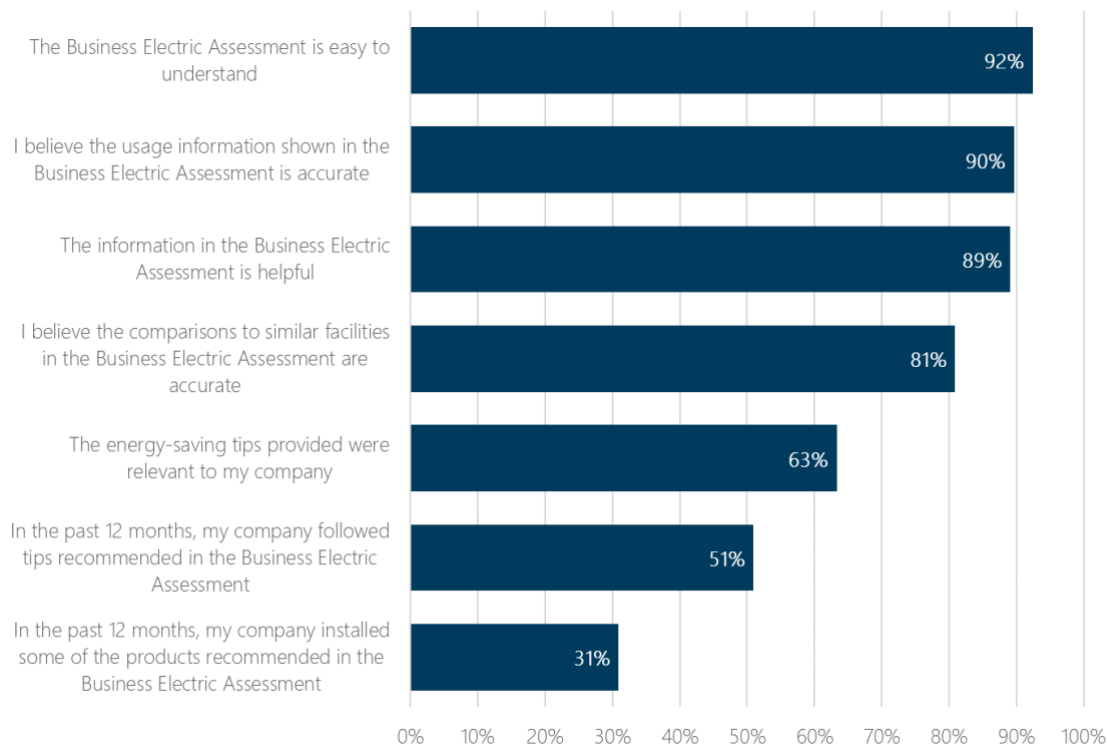
Source: Commercial Behavioral Program Treatment and Control Survey. Question Q31. "Have the Business Electric Assessments changed your knowledge about energy use at your facility?" n=59 (respondents who read BEAs). Percentages may not total to 100% due to rounding.





The evaluation team asked treatment respondents who read BEAs to rate their agreement with a series of statements about the reports (Figure 5-3). Most respondents *strongly* or *somewhat agree* that the BEAs are easy to understand (92%), contain accurate usage information (90%), are helpful (89%), and have accurate comparisons to similar facilities (81%). Respondents were less prone to agree that the energy-saving tips are relevant for their company (63%), that their company has followed tips from the BEAs (51%), and only a minority agreed that they have installed recommended products (31%).

Figure 5-3. Business Electric Assessments and Knowledge About Facility Energy Use



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q32. "To what extent do you agree or disagree with the following statements about the Business Electric Assessment you received from Georgia Power? [LIST OF ITEMS]" n=47 to 66 (respondents who read BEAs).

Of the 51% of respondents who said they followed tips from the BEA, 10 provided information about actions they took (some took multiple actions). Eight of 10 respondents installed efficient lighting, four set back thermostats during off hours, and one turned off lights and computers when building areas were not in use (respondents could mention more than one tip).

The evaluation team asked five respondents who did not believe the comparison to similar facilities was accurate why this was so. Three of these five respondents said that their business was not comparable to others ("no one does what we do," "my business keeps longer hours") and two highlighted the general nature of the comparisons ("it's not industry specific," "we are not compared to other churches, just businesses.")

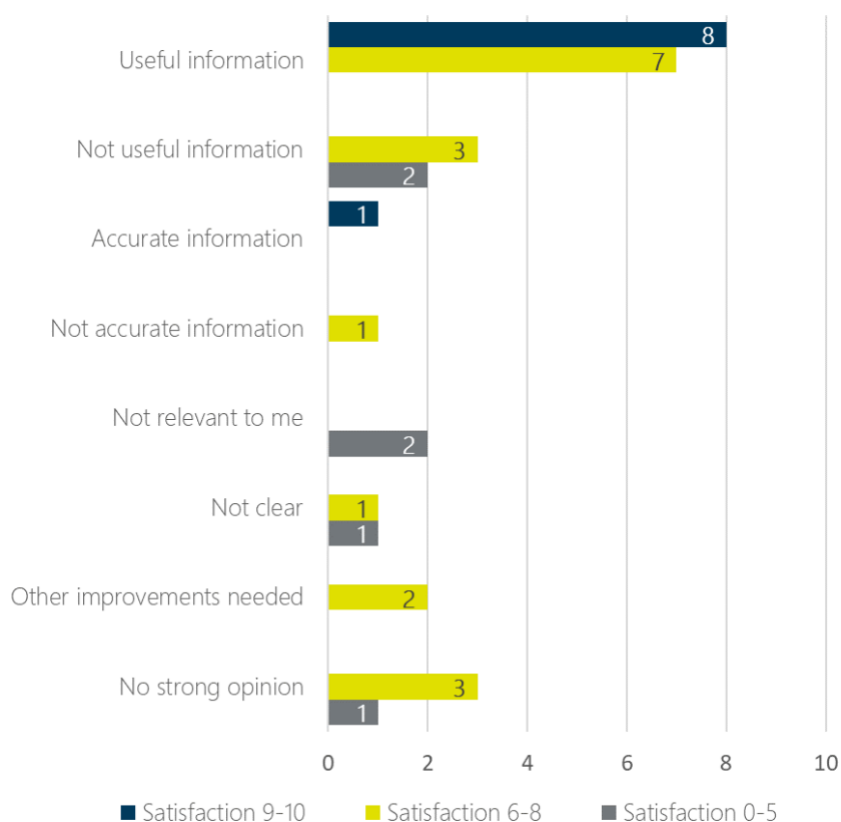




The evaluation team asked treatment respondents to rate their overall satisfaction with the BEAs on a 10-point scale, and they gave average ratings of 7.3. Thirty-five percent of respondents gave ratings of 9 or 10, and another 35% gave ratings of 6 or lower.

The evaluation team asked treatment respondents why they gave the rating they did for the BEAs and analyzed their responses by satisfaction rating (Figure 5-4). Respondents who gave 9 and 10 ratings for their satisfaction mostly cited the usefulness of the information in the BEA (8 of 9 responses). Respondents who gave satisfaction ratings from 6 to 8 also mostly cited useful information (7 of 9 responses). Respondents who gave satisfaction ratings from 6 to 8 also mostly cited useful information (7 of 17 responses). For the respondents with the lowest satisfaction with BEAs, the information not being useful and not relevant to them (two responses each) were the top reasons for low ratings.

Figure 5-4. Reasons for Satisfaction Ratings for BEAs

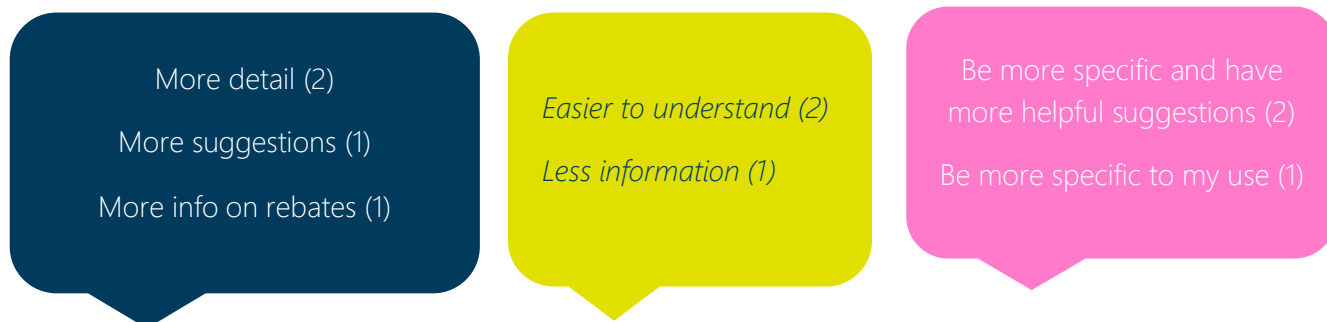


Source: Commercial Behavioral Program Treatment and Control Survey. Question Q38. "Please tell us why you gave that satisfaction rating for the Business Electric Assessments." Satisfaction 9-10 n=9; Satisfaction 6-8 n=17; Satisfaction 0-5 n=6.





The evaluation team asked treatment respondents who gave the BEA satisfaction ratings of 8 or lower what could be done to improve the BEAs. Eleven respondents offered these suggestions:



5.4.1.1 BEA Engagement

The evaluation team analyzed differences between treatment respondents who read the BEAs regularly (*thoroughly or some of them*) and treatment respondents who recalled receiving BEAs but skim or do not read them (*just skim them, read one once, or never read*).

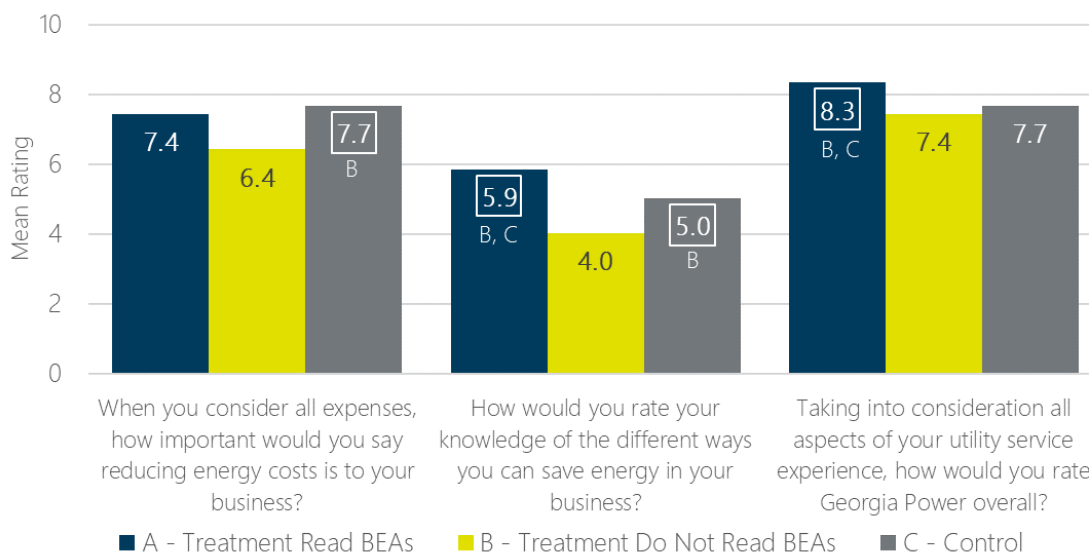
Figure 5-5 shows that treatment respondents who read BEAs regularly had significantly higher overall satisfaction with Georgia Power (8.3, n=44) than treatment respondents who do not read BEAs (7.4, n=38) and control respondents (7.7, n=103). Regular BEA readers also rated their knowledge of how to save energy significantly higher (5.9, n=43) than the other groups (treatment who do not read BEAs 4.0, n=35 and control 5.0, n=102).

Treatment respondents overall gave significantly lower ratings for the importance of reducing energy costs compared to control respondents. However, treatment respondents who read BEAs regularly gave average ratings (7.4, n=42) that were statistically equivalent to control respondents (7.7, n=101). Only treatment respondents who do not read BEAs gave ratings (6.4, n=35) that were significantly lower than the control group.





Figure 5-5. Ratings Differences by BEA Engagement



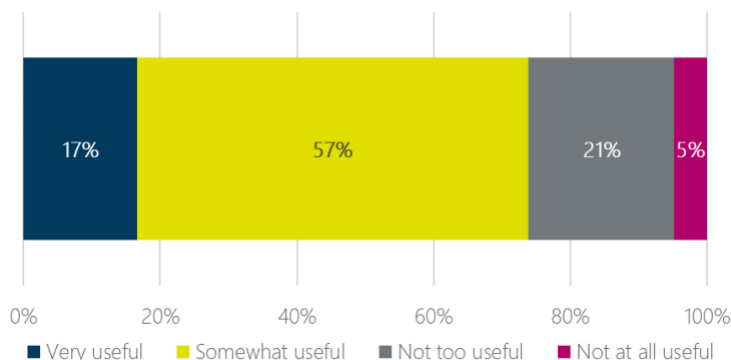
Source: Commercial Behavioral Program Treatment and Control Survey. Question Q11. "When you consider all expenses, how important would you say reducing energy costs is to your business?" Question Q12. "How would you rate your knowledge of the different ways you can save energy in your business?" Question Q24. "Taking into consideration all aspects of your utility service experience, how would you rate Georgia Power overall?" Question Treatment Read BEAs n=42 to 44; Treatment Do Not Read BEAs n=35 to 38; Control n=101 to 103.

Boxes around numbers indicate the rating is statistically higher than another group at a significance level of $p < 0.10$ using ANOVA. Letters below significance boxes show which group(s) that rating is significantly higher than.

5.4.1.2 Energy Efficiency "Tips" Emails

Most treatment respondents (56%, n=75) recalled receiving emails from Georgia Power that included tips on reducing energy use in their businesses. About three-quarters of treatment respondents (74%) said that they found these emails *very* or *somewhat useful* (Figure 5-6).

Figure 5-6. Usefulness of Georgia Power Emails



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q41. "How useful have you found these emails to be in helping you learn what you can do to reduce your business' energy usage?" n=42 (respondents who recalled receiving emails).



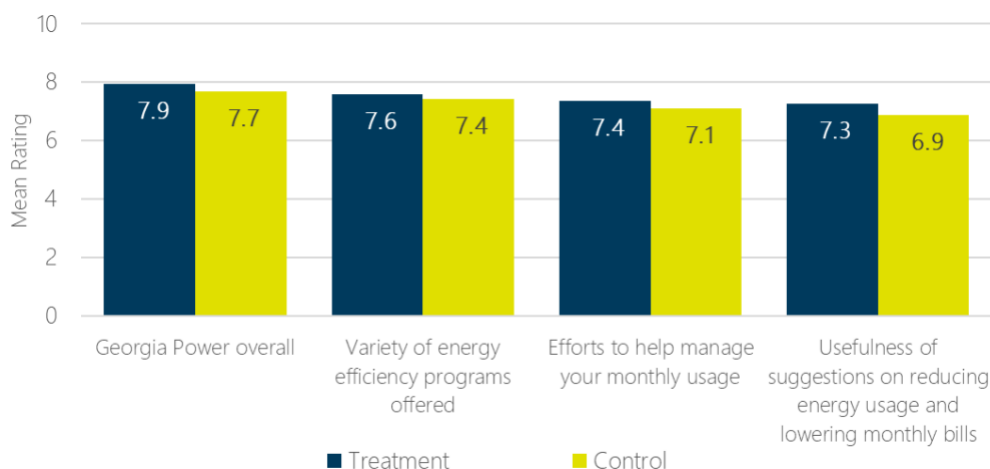


The evaluation team asked respondents who recalled receiving emails but did not find them *very useful* what could be done to improve them. Eleven respondents offered suggestions: four said that the tips and information could be more specific to their businesses, and two requested that Georgia Power send these emails less frequently. No other themes were mentioned by more than one respondent: one wanted more information, while another wanted less information.

5.4.2 Satisfaction with Georgia Power

Survey respondents rated their satisfaction with Georgia Power and their energy efficiency programs on a 0-to-10-point scale (Figure 5-7). Although treatment respondents gave average ratings that were 0.2 to 0.4 ratings points higher than control respondents for every measure of satisfaction, none of these differences were statistically significant. Respondents who gave Georgia Power overall satisfaction ratings of 5 or lower were asked why they gave that rating. Four out of the five treatment respondents who gave low ratings cited high energy costs and one mentioned an issue with billing. From the control group, eight of 15 respondents who gave low ratings cited high energy costs and the other seven described customer service or communication issues.

Figure 5-7. Average Satisfaction Ratings for Georgia Power



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q24. "Taking into consideration all aspects of your utility service experience, how would you rate Georgia Power overall?" Question Q26. "How satisfied are you with the variety of energy efficiency programs offered by Georgia Power?" Question Q27. "How satisfied are you with Georgia Power's efforts to help you manage your monthly usage?" Question Q28. "How would you rate the usefulness of Georgia Power's suggestions on ways you can reduce your energy usage and lower your monthly bills?" Treatment n=82 Control n=103

5.4.3 Familiarity with Georgia Power's Energy Efficiency Programs

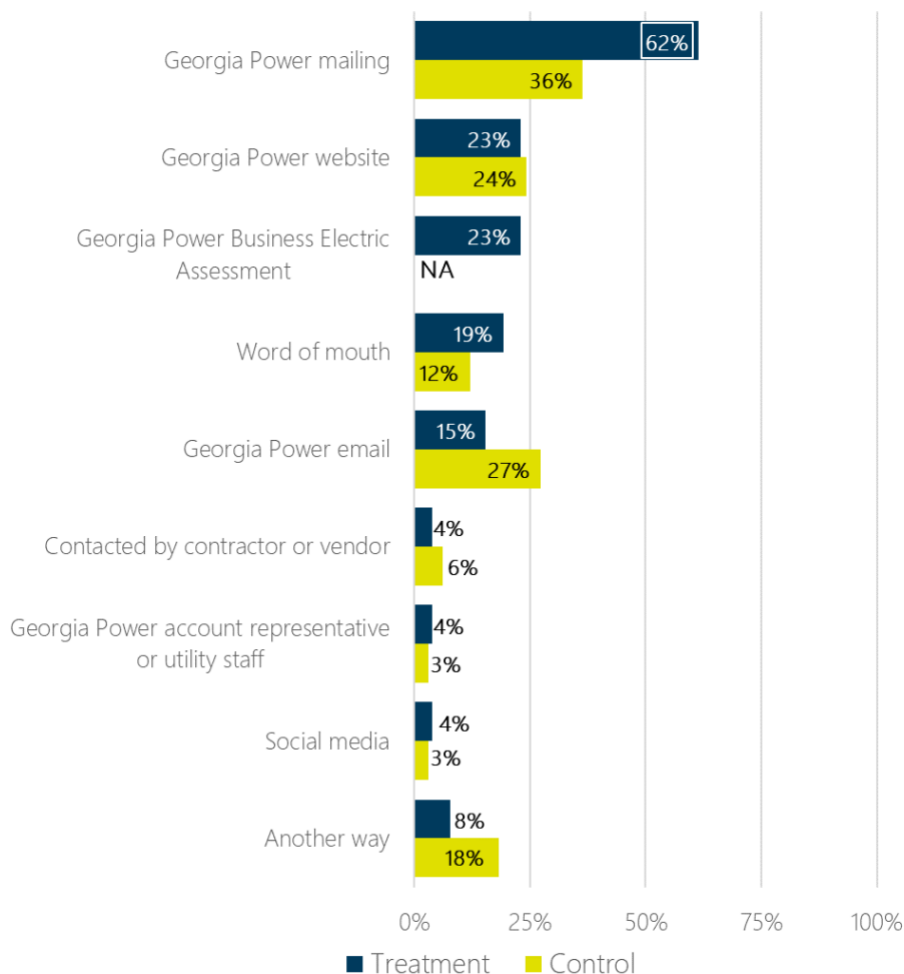
Survey respondents were asked: *Before today, had you heard anything about Georgia Power's energy efficiency rebate programs for commercial customers that help businesses reduce their energy consumption and save money on their energy bills?* Overall awareness of Georgia Power programs was nearly identical for treatment (33%, n=82) and control (32%, n=103) groups. However, there were some differences in the sources of their awareness (Figure 5-8). Respondents from the treatment group were significantly more likely





to report learning about programs from Georgia Power mailings (62%), which could include the BEA, compared to those in the control group (36%). Respondents in the control group were more likely to hear about programs from Georgia Power emails (27%) compared to those in the treatment group (15%). About a quarter of treatment respondents (23%) reported that they learned about programs from their BEAs. In total, 73% of treatment respondents learned about Georgia Power programs from mailings and/or the BEA they received in the mail.

Figure 5-8. Sources of Awareness of Georgia Power Programs



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q3. "How did you learn about these programs? Please select all that apply." Treatment n=26; Control n=33 (respondents who were aware of Georgia Power programs). Percentages may total to more than 100% because multiple responses were accepted.

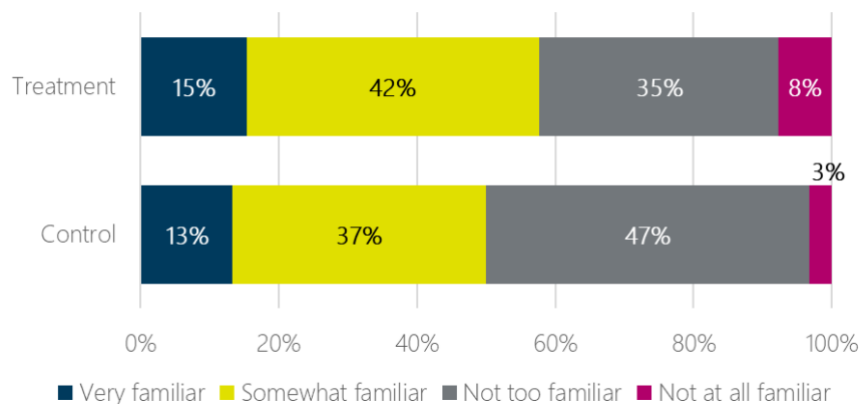
Boxes around numbers indicate a statistically significant difference of $p < 0.10$ using a binomial t-test.

Respondents who were aware of Georgia Power programs gave similar ratings for their familiarity with the programs, with about half in each group saying they were *very familiar* or *somewhat familiar* (Figure 5-9). Note that respondents described product categories as opposed to program names, such as Custom or Prescriptive.





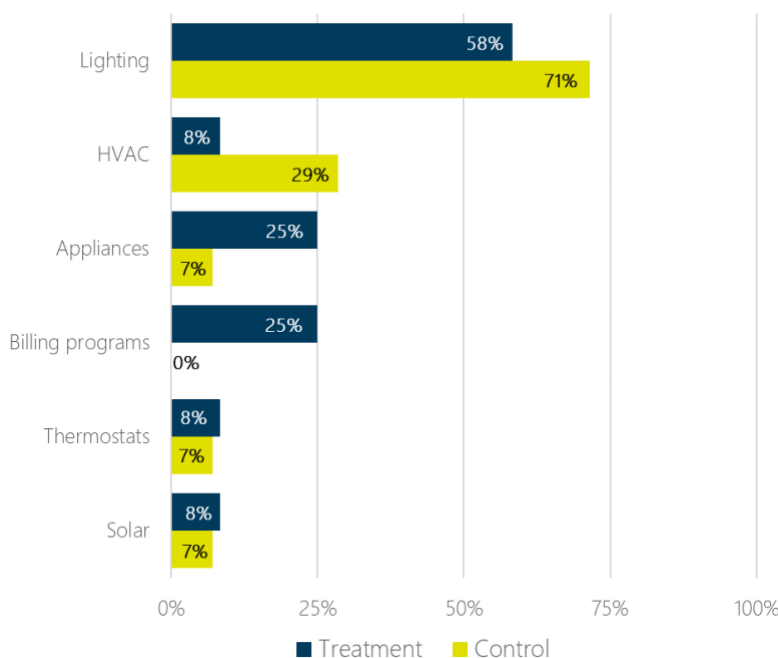
Figure 5-9. Familiarity with Georgia Power Programs



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q4. "How familiar would you say you are with Georgia Power's energy efficiency programs for commercial customers?" Treatment n=26; Control n=30 (respondents who were aware of Georgia Power programs).

Most respondents who had some familiarity with Georgia Power programs mentioned lighting upgrades when asked which programs come to mind (Figure 5-10). There were no significant differences between the groups.

Figure 5-10. Knowledge of Specific Georgia Power Rebates



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q5. "When thinking about commercial energy efficiency programs offered by Georgia Power, what if any specific programs come to mind?" Treatment n=12; Control





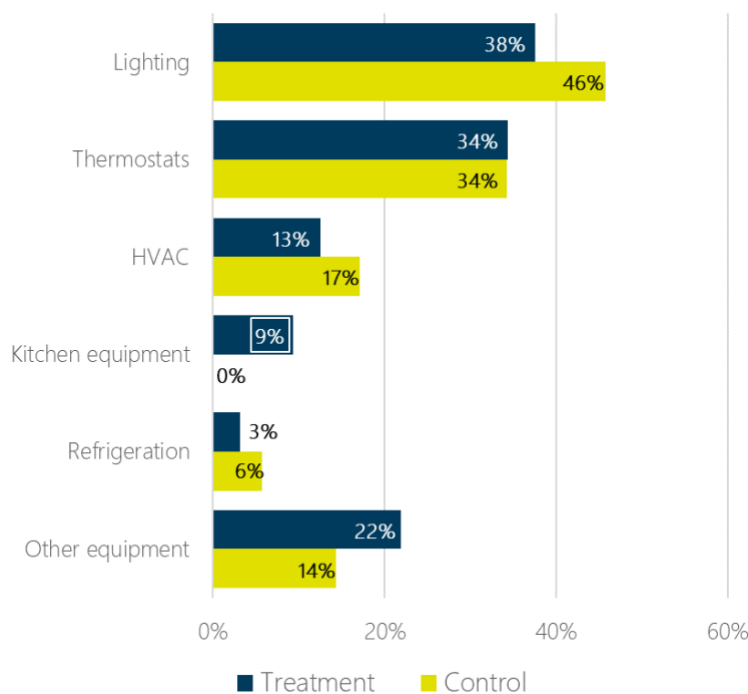
n=14 (respondents who have some familiarity with Georgia Power programs). Percentages may total to more than 100% because multiple responses were accepted.

Only two respondents from each group reported participating in a Georgia Power program in the past year, representing 2% of each group. One treatment respondent upgraded lighting to LEDs in one building, and one control respondent reported upgrading lighting and roofing through the Custom program. The other respondents did not specify which programs they participated in.

Most respondents reported that they were *very likely* or *somewhat likely* to participate in a Georgia Power program in the next six months (66% treatment and 73% control); there were no statistically significant differences between the treatment and control groups.

Respondents who said they were *very likely* or *somewhat likely* to participate in a Georgia Power program in the next six months most frequently mentioned lighting upgrades and smart thermostats as the equipment they were looking to upgrade (Figure 5-11). The only statistically significant difference between the two groups was that respondents in the treatment group were more likely to mention kitchen equipment (9% treatment compared to 0% control). The *other equipment* mentioned by respondents included chillers, water heaters, solar panels, variable frequency drives, compressors, and efficient windows.

Figure 5-11. Equipment Considered for Upgrades through Georgia Power Programs



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q8. "Which type of equipment are you most likely to consider upgrading through a program to improve the energy efficiency of your facility?" Treatment n=32; Control n=35 (respondents who were likely to participate in a program). Percentages may total to more than 100% because multiple responses were accepted.

Boxes around numbers indicate a statistically significant difference of $p < 0.10$ using a binomial t-test.





5.4.4 Adoption of Specific Energy-Saving Products

Respondents in both groups reported that they made energy-efficient upgrades and improvements in the past year at similar rates: 47% treatment (n=73) and 47% control (n=93). The types of equipment they installed or upgraded were also similar, with more than a third of respondents in each group making lighting upgrades. There were no statistically significant differences between the treatment and control groups which is not surprising at this stage in the program's maturity (approximately nine months of treatment at time of survey). Ten percent of treatment customers and 5% of control customers installed HVAC measures; all other measures represented 5% or less of the measures installed.

Though only a few respondents reported receiving rebates or incentives from Georgia Power for their energy efficiency upgrades in the past year, treatment respondents were significantly more likely to have received Georgia Power incentives (17%, n=30) compared to control respondents (2%, n=41).²³ While only two treatment respondents said they participated in a program (Section 5.4.3), five treatment respondents said they received incentives from Georgia Power. This may represent a disconnect between program participation and incentives. Three of these treatment respondents reported that they completed lighting projects, one installed smart thermostats, and one did not specify what their project was. The only control respondent who reported receiving an incentive said it was for "school improvements."

Respondents from both groups who made energy efficiency upgrades in the past year gave similar reasons for making the upgrades. Most respondents from both groups gave *very important* ratings for replacing old or broken equipment: treatment (91%) and control (80%). Many respondents from each group also said reducing energy consumption or demand was also *very important*: 58% treatment and 45% control. Though respondents from the treatment group gave higher ratings for these two items, the difference from the control group was not statistically significant. For 27% of treatment respondents who made upgrades, BEAs were *very important*. A few respondents in each group said their company policies about purchasing efficient equipment were *very important*: 12% treatment and 9% control.

5.4.5 Adoption of Energy-Saving Behaviors

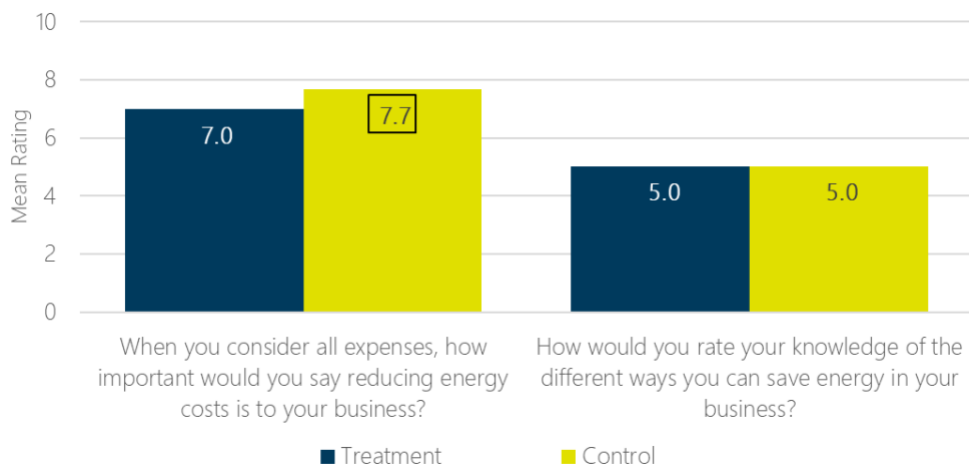
Many respondents from each group rated saving money on their energy bills as *very important* (35% of treatment and 43% of control respondents gave ratings of 9 or 10 out of 10). However, only a few respondents in each group rated themselves as *very knowledgeable* about how to save energy (6% of treatment and 9% of control respondents gave ratings of 9 or 10 out of 10). Overall, treatment respondents had an average rating of 7.0 for the importance of saving money on energy bills, while control respondents had a significantly higher average rating of 7.7. Across both groups, respondents had an average rating of 5.0 for their knowledge of saving energy (Figure 5-12).

²³ Statistically significant difference at $p < 0.10$ using a binomial t-test.





Figure 5-12. Importance of Reducing Energy Costs and Knowledge about Saving Energy



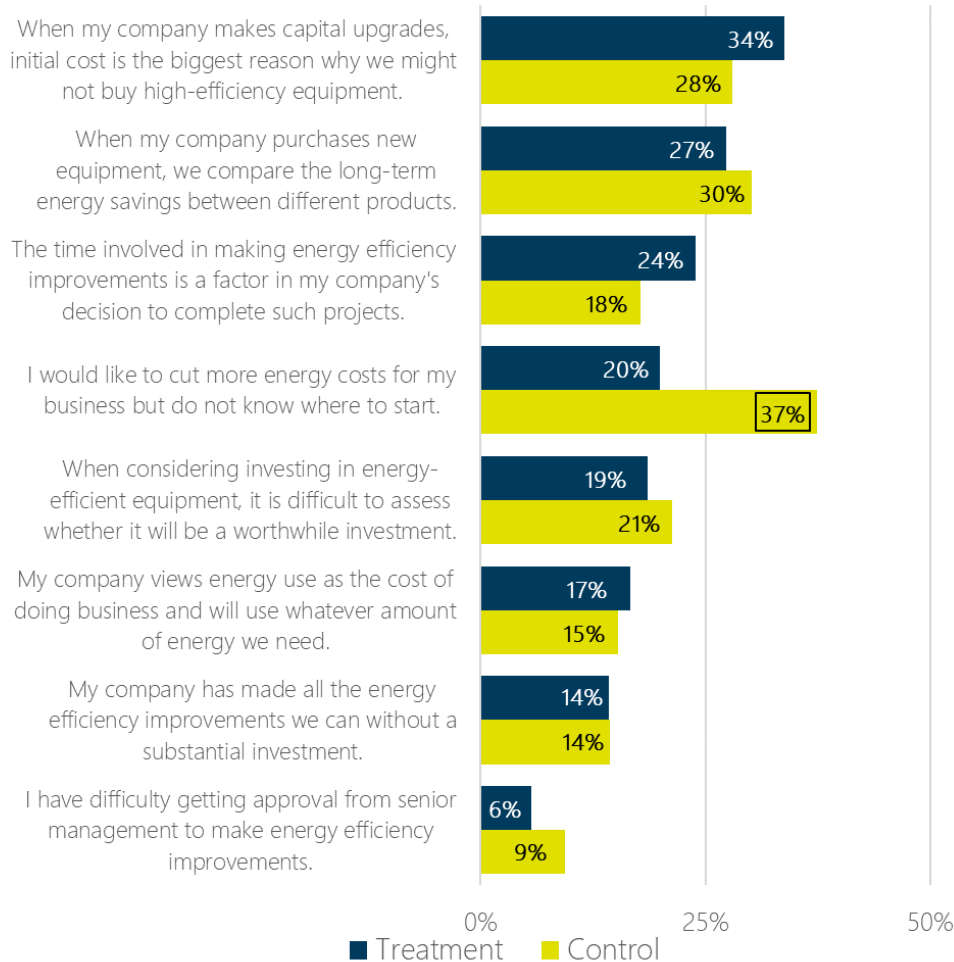
Source: Commercial Behavioral Program Treatment and Control Survey. Question Q11. "When you consider all expenses, how important would you say reducing energy costs is to your business?" Treatment n=78; Control n=102. Question Q12. "How would you rate your knowledge of the different ways you can save energy in your business?" Treatment n=77; Control n=101. Boxes around numbers indicate a statistically significant difference of $p < 0.10$ using ANOVA.

Respondents rated their agreement with eight statements about factors that may influence decisions to install or upgrade equipment (Figure 5-13). Treatment respondents agreed most strongly with the importance of initial costs (34% strongly agree), followed by long-term savings (27%) and the time involved to complete projects (24%). However, control respondents found not knowing where to start (37% strongly agree) to be the most important factor, which was significantly higher than those in the treatment group and the only significant difference between groups. Relatively few respondents in either group strongly agreed with statements about it being difficult to get approval from management (6% treatment, 9% control) or that their company had already made all upgrades not requiring a substantial investment (14% for both groups).





Figure 5-13. Strong Agreement with Factors that Influence Energy Efficiency Upgrades



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q13. "Please rate your level of agreement with the following statements. [LIST OF ITEMS]" Treatment n=66 to 75; Control n=85 to 99. Boxes around numbers indicate a statistically significant difference of $p < 0.05$ using a binomial t-test.

Respondents shared what challenges they face when making energy efficiency improvements for their business. There were no statistically significant differences between the treatment and control respondents, and a majority in each group identified budget limitations (55% treatment, 64% control) and high initial costs (55% treatment and 56% control) as challenges. A substantial number of respondents in both groups also mentioned lack of staff time (38% treatment, 29% control) and lack of understanding about incentive eligibility (34% treatment and 40% control), while very few said they did not face any challenges (5% treatment, 3% control).





Respondents who identified challenges to making energy efficiency improvements were asked how Georgia Power could help them overcome those challenges. Eighteen treatment respondents and 33 control respondents offered suggestions, which the evaluation team coded into a total of 58 suggestions across nine categories.

Treatment respondents most commonly suggested that Georgia Power provide more information (29%) and education, training, and advice (24%), while control respondents most commonly suggested that Georgia Power provide education, training, and advice (30%) and identify and quantify expected savings from installing or upgrading equipment, such as through an audit (16%).

Education, Training and Advice

"Advise me and I can take it to the owners." (Control)

"Provide real life examples and sample stories." (Treatment)

"Provide online learning related to available energy efficient technologies with cost savings that are easy to understand." (Control)

More information

"Emails or mailings describing in detail the steps and products available." (Treatment)

"Provide information pertaining to rebates." (Treatment)

"Have more information on their login page for specials and offers." (Control)

Identify and quantify savings

"Clearly show where energy savings would take place." (Control)

"Explain factors in energy consumption and the calculation process." (Control)

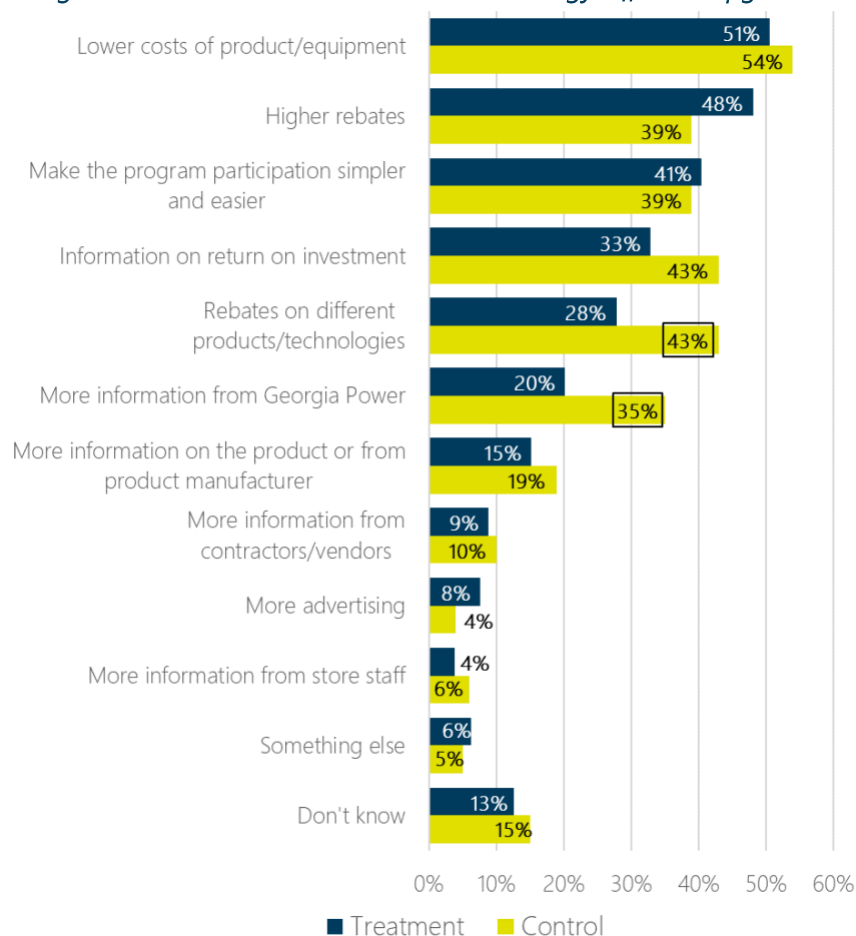
"Do an analysis of our building and show us areas in particular where we could still save." (Treatment)

Most treatment (51%) and control (54%) respondents reported that lower equipment costs would motivate them to purchase more energy-efficient equipment, as well as higher rebates (48% treatment, 39% control). Simplifying program participation and providing more information about return on investment were also among the most-mentioned motivations for both groups. Control respondents were significantly more likely than those in the treatment group to report that rebates for different products and technologies (43%) and more information from Georgia Power (35%) would motivate them. In both groups, respondents said that information from Georgia Power was more motivating than information from manufacturers, contractors, vendors, store staff, and advertising.





Figure 5-14. Motivations to Make More Energy-Efficient Upgrades



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q16. "What would motivate your business to make more energy-efficient purchases or upgrades on current equipment? Please check all that apply. [LIST OF ITEMS]"
Treatment n=79; Control n=100.

Boxes around numbers indicate a statistically significant difference of $p < 0.05$ using a binomial t-test.

The evaluation team asked respondents who said more information from Georgia Power would motivate them to make energy-efficient upgrades to specify the kind of information they were seeking. Additional information about what programs and rebates are available was the most common response from both groups (three treatment and five control respondents). More control respondents mentioned education about potential upgrade options and return on investment analyses (four mentions apiece) than treatment respondents (one mentioned education, none mentioned return on investment).

The evaluation team asked respondents who said rebates for different equipment would motivate them to make energy-efficient upgrades to specify equipment for which they would like to receive rebates. Three treatment respondents mentioned solar power, window replacement, and "energy-efficient smart equipment" (one mention apiece). More control than treatment respondents answered this question because they were significantly more likely to say expanding rebates would motivate them, most commonly citing

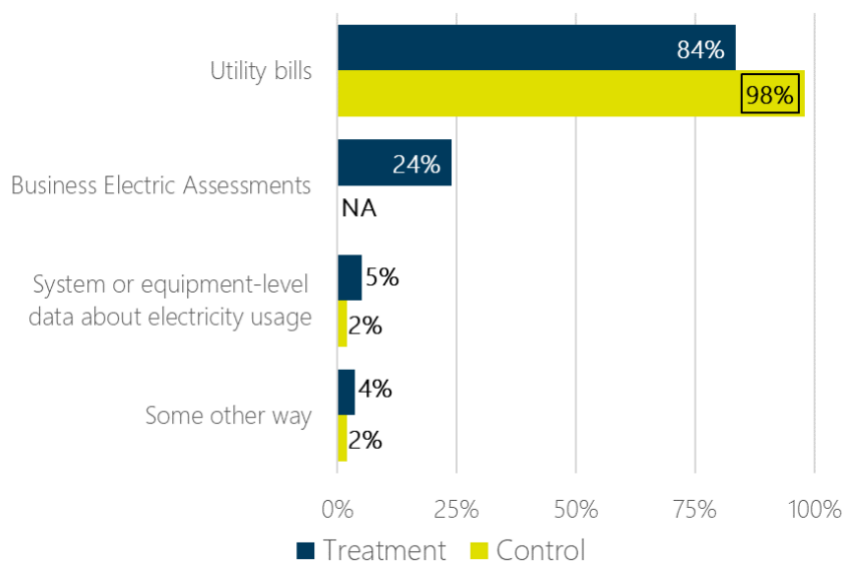




solar power (five mentions), efficient lighting (four mentions), HVAC systems (three mentions), system controls (two mentions), and backup power (two mentions).

Most respondents from both groups reported that they track facility electricity usage using their utility bills (Figure 5-15). However, treatment respondents were significantly less likely to rely on utility bills (84%), and a quarter of treatment respondents used BEAs to track electricity use at their facilities (24%). Few respondents from either group track their electricity use at the level of individual pieces of equipment or systems (5% treatment, 2% control).

Figure 5-15. Tracking Facility Electricity Use



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q1. "Please select the statements that describe how you track information about electricity use at your facility." Treatment n=79; Control n=98. Percentages may total to more than 100% because multiple responses were accepted.

Boxes around numbers indicate a statistically significant difference of $p < 0.05$ using a binomial t-test.

5.5 Conclusions and Recommendations

This section presents the evaluation team's conclusions and recommendations for the Commercial Behavioral program based on the treatment and control group survey. Given that savings from behavioral programs tend to slowly increase over time and take one to two years to establish a steady state, the evaluation team cautions against making frequent, small changes to BEAs, as it becomes difficult to detect the savings impact of such changes. It is recommended that Georgia Power establish one defined date for BEA updates annually.





Conclusion 1: Treatment customers overwhelmingly found BEAs useful, accurate, and contained relevant business comparisons and tips that spurred energy efficiency actions. This feedback reinforces Georgia Power's efforts to act on the recommendation from focus group participants to customize reports by business type, and to feature a variety of relevant tips and programs on the back of the BEA to increase customer interest.

Most treatment respondents *strongly* or *somewhat agreed* that the BEAs are easy to understand (92%), contain accurate usage information (90%), are helpful (89%), and have accurate comparisons to similar facilities (81%). Furthermore, for 27% of treatment respondents who made upgrades, BEAs were *very important* in their decision to make updates.

In the pre-implementation focus groups, respondents identified that having accurate and similar business comparisons were important features of the BEA and receiving such positive feedback on the BEA elements reinforces the value of these similar business comparisons.

Recommendation: Consider the addition of case studies, as recommended by the focus groups as well. Customers value case studies to understand the types of energy-saving opportunities available to them and placed greater value on stories most relatable to their industry.

Conclusion 2: Although treatment and control respondents participated in programs and upgraded equipment at similar rates, this is not a surprising result given the short length of program treatment. Furthermore, there is evidence that treatment respondents are leveraging the information from BEAs and following tips.

Most treatment respondents read the BEAs regularly (54%), and 84% who read more than one BEA said that their knowledge of their facility's energy use had increased, with 19% saying they have become *much more knowledgeable*. About half of respondents who read any BEAs (51%) said their company was influenced by tips from the BEA and a third (31%) reported influence on installing recommended equipment (mainly efficient lighting and smart thermostats). A substantial number of treatment respondents reported using BEAs to track electricity use at their facilities (24%), as opposed to their utility bills for this purpose (compared to only 2% of the control group).

Among treatment respondents who were aware of Georgia Power programs, 73% said that they heard about them from BEAs or mailings from Georgia Power which was twice the rate for control respondents (36% aware through mailings). Although treatment respondents did not make energy-efficient upgrades in the past year at a higher rate than control (47% both groups), treatment respondents were more likely to apply for Georgia Power rebates and incentives (17% compared to 2% for control). This indicates greater awareness of the incentives offered by Georgia Power and reflects how BEAs have empowered recipients with the knowledge to take action.





Recommendation: Continue the email tips to complement paper BEAs and monitor progress. Consider using email tips as a way to test case studies and stories tailored to specific business types. Behavior-based programs have more effect as customers receive more stimulus over time.

Conclusion 3: The BEAs have a significant impact on customer satisfaction and knowledge empowerment for customers who regularly read their reports. Treatment respondents indicated higher levels of knowledge about saving energy and what incentives are available for efficiency upgrades, and expressed fewer customer service complaints.

Treatment respondents who read their BEAs regularly gave significantly higher average ratings on a scale of 1 to 10 for their knowledge of how to save energy (5.9) than control respondents (5.0) and treatment respondents who do not read BEAs (4.0). Treatment respondents were also significantly less likely to report that not knowing where to start is a barrier to cutting energy costs (20%) compared to control (37%). In terms of what would motivate them to make upgrades, treatment respondents were also significantly less likely to mention rebates for different technologies (28%) and more information from Georgia Power (20%) compared to control (43% and 35%, respectively), which indicates that more treatment respondents know what incentives are available and feel they have the information they need from Georgia Power.

Treatment respondents who read BEAs regularly had significantly higher overall satisfaction with Georgia Power (8.3) than treatment respondents who do not read BEAs (7.4) and control respondents (7.7). None of the treatment customers who provided a satisfaction with Georgia Power rating below 6 indicated they had a customer service complaint, while seven control customers did.

Recommendation: Use the BEAs to create specific linkages to program incentives and ensure the landing page on the Georgia Power website is complementary.





6 Cost Effectiveness

This section considers program cost-effectiveness in terms of the Total Resource Cost test (TRC), the Ratepayer Impact Test (RIM), the Program Administrator Cost test (PAC), and the levelized program delivery costs.

6.1 Methodology

The evaluation team completed a benefit-cost analysis to compare the value of the gross verified savings impacts resulting from the DSM programs to the costs incurred by the programs. The evaluation team utilized net verified energy and demand savings for the calculation of avoided cost benefits, consistent with the values from the most recent DSM program filing²⁴. The calculation of cost effectiveness components including: additional resource savings, incremental equipment and installation costs, program administrative costs, incentive payments, and bill savings, were generated by Georgia Power with review by the evaluation team.

Table 6-1 summarizes the allocation of cost effectiveness components as a cost or benefit to each cost effectiveness test consistent with the California Standard Practice Manual (SPM).

Table 6-1. Cost Effectiveness Component Inputs

Component	Program Administrator Cost Test (PACT)	Ratepayer Impact Measure (RIM)	Total Resource Cost (TRC)
Energy & Capacity Related Avoided Costs	Benefit	Benefit	Benefit
Additional Resource Savings			Benefit
Incremental Equipment and Installation Costs			Cost
Program Admin Costs	Cost	Cost	Cost
Incentive Payments	Cost	Cost	
Bill Savings/Lost Revenues		Cost	

Benefits and costs are stated in present value terms, using the appropriate discount and inflation rates.

6.1.1 Total Resource Cost

The TRC test measures the net costs of a program as a resource option based on the total costs of the program, including both the participants' and the utility's costs. In general, it is the ratio of the discounted total benefits of the program to the discounted total costs over a specified time period. A benefit-cost ratio

²⁴ <https://psc.ga.gov/search/facts-docket/?docketId=42311>





greater than one indicates that the program is beneficial to the utility and its ratepayers on a total resource cost basis.

The benefits calculated in the TRC test are the avoided supply costs, the reduction in transmission, distribution, generation, and energy costs valued at marginal cost for the periods when there is a load reduction. The costs associated with this test are the net programs costs paid by both the utility and the participants; this includes administration costs, and equipment costs.

In algebraic form:

$$Benefits = \sum_{t=1}^n \frac{UAC_t}{(1+d)^{t-1}}$$

$$Costs = \sum_{t=1}^n \frac{PRC_t + PCN_t}{(1+d)^{t-1}}$$

$$TRC\ Ratio = \frac{Benefits}{Costs}$$

Where:

UAC_t = Utility (electric and gas) net avoided supply costs in year t

PRC_t = Program administrator program costs in year t

PCN_t = Net participant costs (equipment costs) in year t

d = Nominal discount rate

6.1.2 Program Administrator Cost

The PAC test measures the net costs of a program as a resource option based on the costs incurred by the program administrator and excluding any net costs incurred by the participant. A benefit to cost ratio above one indicates that the program would benefit the administrator's cost environment.

Similar to the TRC test, the benefits calculated in the PAC test are the avoided supply costs of energy and demand. However, the net avoided supply costs for the PAC test include only the avoided costs of supplying electricity, not the avoided societal costs of natural gas, propane, or water. The costs associated with this test are the program costs incurred by the administrator and the incentives paid to the customers.

In algebraic form:





$$Benefits = \sum_{t=1}^n \frac{UAC_t}{(1+d)^{t-1}}$$

$$Costs = \sum_{t=1}^n \frac{PRC_t + INC_t}{(1+d)^{t-1}}$$

$$PAC\ Ratio = \frac{Benefits}{Costs}$$

Where:

UAC_t = Utility net avoided supply costs in year t

PRC_t = Program administrator program costs in year t

INC_t = Incentives paid to participants in year t

d = Nominal discount rate

6.1.3 Ratepayer Impact Measure Test (RIM)

The RIM test measures what happens to customer bills or rates due to changes in utility revenues and operating costs caused by the program. This test adopts the perspective of all ratepayers, including program participants and nonparticipants. In general, the test is the ratio of the discounted total benefits of the program to the discounted total costs over a specified time period. A benefit-cost ratio above one indicates that the program is beneficial to the customers.

The benefits calculated in the RIM test are the avoided supply costs, the reduction in transmission, distribution, generation, and energy costs valued at marginal cost for the periods when there is a load reduction. The costs associated with this test are the gross incentive costs of the program, the net bill reductions experienced by participants (which can be thought of as the lost revenue to the utility from implementing the conservation program), and the program administration costs.

In algebraic form:

$$Benefits = \sum_{t=1}^n \frac{UAC_t}{(1+d)^{t-1}}$$

$$Costs = \sum_{t=1}^n \frac{RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$





$$RIM\ Ratio = \frac{Benefits}{Costs}$$

Where:

UAC_t = Utility avoided supply costs in year t

RL_t = Revenue loss from reduced sales in year t

PRC_t = Program administrator program costs in year t

INC_t = Incentives paid to participants in year t

d = Nominal discount rate

6.1.4 Levelized Delivery Cost

Leveling the delivery costs of each initiative is a useful way to express the program delivery costs per unit of energy or capacity savings. Levelized delivery costs are useful when comparing programs within a demand-side management portfolio.

Initiative delivery costs are the sum of program administrator costs and incentives paid to the participants. To level these costs for energy and demand savings, the following formula is used:

$$Levelized\ Delivery\ Costs = \frac{Delivery\ Costs}{\sum_{t=1}^n \frac{Q_t}{(1+d)^{t-1}}}$$

Where:

Q_t = Energy or capacity savings in year t

d = Nominal discount rate

6.2 Portfolio Summary

Table 6-3 summarizes the results of the cost effectiveness assessment for the Commercial Portfolio.



*Table 6-2. 2021 Commercial DSM Portfolio Cost-Effectiveness*

Metric	Value
Program Administrator Cost (PAC)	
PAC Costs	(\$26,442,783)
PAC Benefits	\$118,946,336
PAC Net Benefits (\$)	\$92,503,553
PAC Net Benefit (Ratio)	4.5
Ratepayer Impact Measure (RIM)	
RIM Costs	(\$236,430,957)
RIM Benefits	\$118,946,336
RIM Net Benefits (\$)	(\$117,484,621)
RIM Net Benefit (Ratio)	0.5
Total Resource Cost (TRC)	
TRC Costs	(\$38,509,087)
TRC Benefits	\$108,928,284
TRC Net Benefits (\$)	\$70,419,197
TRC Net Benefit (Ratio)	2.8
Levelized Delivery Cost	
\$/MWh	\$26.83





6.3 Custom Program

Table 6-3 summarizes the results of the cost effectiveness assessment for the Custom Program.

Table 6-3. Custom Program Cost-Effectiveness

Metric	Value
Program Administrator Cost (PAC)	
PAC Costs	(\$6,702,015)
PAC Benefits	\$33,620,964
PAC Net Benefits (\$)	\$26,918,949
PAC Net Benefit (Ratio)	5.0
Ratepayer Impact Measure (RIM)	
RIM Costs	(\$58,513,629)
RIM Benefits	\$33,620,964
RIM Net Benefits (\$)	(\$24,892,665)
RIM Net Benefit (Ratio)	0.6
Total Resource Cost (TRC)	
TRC Costs	(\$14,462,497)
TRC Benefits	\$30,211,459
TRC Net Benefits (\$)	\$15,748,962
TRC Net Benefit (Ratio)	2.1
Levelized Delivery Cost	
\$/MWh	\$20.86





6.4 Prescriptive Program

Table 6-4 summarizes the results of the cost effectiveness assessment for the Prescriptive Program.

Table 6-4. Prescriptive Program Cost-Effectiveness

Metric	Value
Program Administrator Cost (PAC)	
PAC Costs	(\$15,004,384)
PAC Benefits	\$83,413,740
PAC Net Benefits (\$)	\$68,409,356
PAC Net Benefit (Ratio)	5.6
Ratepayer Impact Measure (RIM)	
RIM Costs	(\$169,129,654)
RIM Benefits	\$83,413,740
RIM Net Benefits (\$)	(\$85,715,913)
RIM Net Benefit (Ratio)	0.5
Total Resource Cost (TRC)	
TRC Costs	(\$19,221,029)
TRC Benefits	\$76,837,676
TRC Net Benefits (\$)	\$57,616,648
TRC Net Benefit (Ratio)	4.0
Levelized Delivery Cost	
\$/MWh	\$23.77





6.5 Midstream Products Program

Table 6-5 summarizes the results of the cost effectiveness assessment for the Midstream Products Program.

Table 6-5: Midstream Products Program Cost-Effectiveness

Metric	Value
Program Administrator Cost (PAC)	
PAC Costs	(\$1,250,894)
PAC Benefits	\$1,192,184
PAC Net Benefits (\$)	(\$58,710)
PAC Net Benefit (Ratio)	1.0
Ratepayer Impact Measure (RIM)	
RIM Costs	(\$4,121,121)
RIM Benefits	\$1,192,184
RIM Net Benefits (\$)	(\$2,928,937)
RIM Net Benefit (Ratio)	0.3
Total Resource Cost (TRC)	
TRC Costs	(\$1,532,081)
TRC Benefits	\$1,200,937
TRC Net Benefits (\$)	(\$331,144)
TRC Net Benefit (Ratio)	0.8
Levelized Delivery Cost	
\$/MWh	\$165.06

The program is not passing the major cost-effectiveness threshold hurdle of 1.0 largely because of low net-to-gross results and no program cost inefficiencies were noted that would impact cost-effectiveness.

6.6 SCDI

Because the program was only in operation for several months at the time of the evaluation, the evaluation team is unable to obtain a reasonable and representative time frame of costs to assess cost effectiveness. Implementer and program staff standby and startup costs outweigh the limited savings from a disproportionately short time frame of program operation.

6.7 Behavioral

Pending impact evaluation results.





Appendix A Glossary

ACRONYMS

CV	Coefficient of Variation
DSM	Demand Side Management
EM&V	Evaluation, Measurement, and Verification
EUL	Effective Useful Life
FR	Free-Ridership
HIM	High Impact Measure
HVAC	Heating, Ventilating, and Air Conditioning
IDI	In-Depth Interview
IPMVP	International Performance Measurement and Verification Protocol
ISR	In-Service Rate
kW	Kilowatt
kWh	Kilowatt-Hour
LED	Light-Emitting Diode
LLF	Line Loss Factor
MSRP	Manufacturer Suggested Retail Price
M&V	Measurement and Verification
MW	Megawatt
MWh	Megawatt-Hour
NPV	Net Present Value
NTG	Net-to-Gross
NTGR	Net-to-Gross Ratio
PY	Program Year: e.g., 2020, from January 1, 2020 to December 31, 2020





RCT	Randomized Control Trial
ROB	Replace on Burnout
SO	Spillover
TRC	Total Resource Cost
TRM	Technical Reference Manual
WACC	Weighted Average Cost of Capital

Within the body of this report, there are several technical terms that require explanation. Additionally, some of the terms may appear to be similar at first review; however, have very different means. Terms such as “reported” and “verified” can easily be confused by the reader and are thus defined as following:

Attribution	The process of determining the percentage of a program’s savings that are directly related to the programs influences. Its value is determined through the use of survey techniques, and the Attribution Survey used for this project can be found in the process evaluation report.
Baseline	The expected energy usage level of a specific measure or project before improvements are implemented. This becomes the comparison value for all energy savings calculations.
Deemed Savings	Amount of savings for a particular measure provided by documented and validated sources or reference materials. Often used when confidence is high for a specific measure, databases lack sufficient information, or costs of measurement and verification greatly outweigh the benefits.
Early Replacement	Refers to an efficiency measure or efficiency program that seeks to encourage the replacement of functional equipment before the end of its operating life with higher-efficiency units.
Free-rider	A participant who, on some level, would have acquired the energy efficiency measure regardless of the program influence. Determining free-ridership values is a large component in calculating the Net-to-Gross ratio.
Gross Savings	Total amount of a parameter of interest (kWh or kW) saved by a project/program.
Net-to-Gross Ratio	A ratio value determined through the process of surveying decision makers who implemented projects in order to account for free-ridership and other attribution effects. The net-to-gross (NTG) ratio is multiplied by gross verified savings to





produce net savings. (NTG is typically calculated for a statistically significant sample of projects and then extrapolated to the population as a whole)

Net Savings	Total amount of a parameter of interest (kWh, kW) saved by a program that is directly related to the program. It takes into account the realization rate, as well as results of the attribution analysis (free-riders), to provide a value of energy savings directly related to the program influence. Net Savings is calculated by multiplying the gross verified savings by the net-to-gross (NTG) ratio.
Nonparticipant Spillover	Savings from efficiency projects implemented by those who did not directly participate in a program, but which nonetheless occurred due to the influence of the program.
Participant Cost	The cost to the participant to participate in an energy efficiency program.
Participant Spillover	Additional energy efficiency actions taken by program participants as a result of program influence, but actions that go beyond those directly subsidized or required by the program.
Project	A single activity (lighting retrofit, refrigeration replacement, HVAC replacement, insulation install, etc.).
Program	A group of projects with similar technology characteristics that are installed in similar applications.
Realization Rate	A measure of the amount of verified saving for a project/program compared to the reported savings. It is defined as the ratio of Gross Verified Savings to Gross Reported Savings.
<i>Realization Rate (%) = (Gross Verified Savings)/(Gross Reported Savings)</i>	
Replace-on-burnout	A DSM measure is not implemented until the existing technology it is replacing fails or burns out. An example would be a unitary air conditioning rooftop unit being purchased after the failure of the existing rooftop unit at the end of its useful life.
Reported Savings	Savings calculated and reported by Georgia Power. This also referred to as Ex-Ante savings.
Stratify	The process of breaking down a population of projects into groups with similar characteristics (technical, financial, size, location, etc.). This is used during population sampling and allows projects with greater uncertainty or higher budgets to be accurately weighted to assess their impact on a program.
Sub-Strata	The individual groups remaining once a population has been stratified.





Stipulated Savings Same as Deemed Savings

Verified Savings Savings determined by the evaluation team through the collection of data at on-site inspections, phone surveys, and engineering analysis. This also referred to as Ex-Post savings.

Appendix B Winter Peak Results

B.1 Custom/Prescriptive

The Custom and Prescriptive Programs are currently estimating and tracking summer demand savings values for all projects. Winter demand is not estimated by the program at this time. The evaluation team independently developed winter peak estimates for all projects in the evaluation sample. To estimate the verified gross winter peak savings for the program, the evaluation team developed demand-to-energy ratios for the sample and applied to gross verified energy savings for each stratum. Table B-1 shows the total winter peak savings calculation for the evaluated sample.



*Table B-1. Winter Peak Demand Savings*

Component	Stratum	Verified Gross kWh	Demand-to-Energy Ratio	Verified Gross kW - Winter
Lighting	Large (\geq 500 MWh)	37,556,020	0.000101	3,774
	Small ($<$ 500 MWh)	80,757,124	0.000122	9,833
	Adj. Large (\geq 500 MWh)	19,414,550	0.000114	2,212
	Adj. Small ($<$ 500 MWh)	35,401,946	0.000158	5,602
	Sub-Total	173,129,640		21,421
Non-Lighting	HVAC	1,171,149	0.000087	19
	Refrigeration	5,761,301	0.000234	274
	VSD	2,463,337	0.000063	360
	Miscellaneous	224,128	0.000303	746
	Sub-Total	9,619,915		1,399
PRESCRIPTIVE TOTAL		182,749,555		22,820
Custom	Jumbo (\geq 10 GWh)	26,227,738	0.000222	5,149
	Large (1 to 10 GWh)	25,989,758	0.000024	626
	Small ($<$ 1 GWh)	23,226,670	0.000153	4,022
CUSTOM TOTAL		75,444,166		9,797

B.2 Midstream Products

The Midstream Program is currently estimating and tracking summer demand savings values for all projects. Winter demand is not estimated by the program at this time. Food service measures were assigned winter demand savings per the 2019 Georgia Power TRM. Table D-1 shows the per-unit winter demand savings values applied to each rebated unit in the program's tracking database.



*Table D-1. Food Service Per-Unit Winter Demand Savings*

Equipment Type	Winter kW/unit
Commercial Hot Food Holding Cabinet	0.20
High-Efficiency Combination Oven	0.40
High-Efficiency Griddle	0.10
Commercial Steam Cooker	0.70
High-Efficiency Fryer	0.00

The TRM does not provide winter demand estimates for HVAC measures. Cooling-only measures (split & package AC and VRM mini split AC) are assumed to have zero winter demand savings. The evaluation team independently developed winter peak estimates for heat pump projects. To estimate the verified gross winter peak savings for the program, the evaluation team developed a summer-to-winter demand ratio of 91.3% through a loadshape analysis using the eQUEST energy simulation tool and applied to gross verified summer demand savings for each heat pump in the tracking database. Table D-2 shows the total winter peak savings for the program.

Table D-2. 2020 Program Verified Winter kW by Measure

Equipment Type	Evaluated Winter kW
Split & Package AC	0
Split & Package HP	32
VRF Mini Split AC	0
VRF Mini Split HP	125
HVAC Subtotal	157
Commercial Hot Food Holding Cabinet	33
High-Efficiency Combination Oven	56
High-Efficiency Griddle	2
Commercial Steam Cooker	29
High-Efficiency Fryer	0
Food Service Subtotal	120
TOTAL	277





B.3 Small Commercial Direct Install

Winter CF values were determined based on research of operating hours for each installation location whose information was publicly available. It was then determined what proportion of the time each installation location's business hours were coincident with the seasonal system peak. Winter system peak was defined as 8AM-9AM on January weekdays.

These coincident proportions were then weighted according to each install location's total reported kW savings and summed to arrive at a final CF for each season.

Table B-2. SCDI Program Evaluated Savings and Demand by Component

Equipment Type	Evaluated Gross kWh	Evaluated Gross Winter kW
(1) 48in T8 Lamp LED replacing (1) 48in T8 Linear Fluorescent	370,192	47
(1) 96in T8 Lamp LED replacing (1) 96in T8/T12 Linear Fluorescent	129,838	14
12 Watt Down Light (Non Res) LED Fixture	4,601	1
23 Watt Down Light (Non Res) LED Fixture	1,045	0
A19 LED 9.5W	15,733	2
LED Candelabra: 4 Watt	92	0
LED Canopy 33w	5,642	1
LED Exit Sign	2,902	0
LED Flood 50w	6,306	1
LED Flood 70w	13,366	1
LED High/Low Bay 40 to 131 Watts Replacing 175W PSMH	182,853	22
LED PAR30: 11 to <12 Watt	364	0
LED PAR38: 13 to <14 Watt	3,261	0
LED PAR38: 15 to <16 Watt	4,076	0
LED R/BR Lamp: 11 Watt	10,164	2
LED Retrofit Kits 2x2	2,454	0
LED Retrofit Kits 2x4	10,900	1
Wall Pack 15w	2,686	0
Wall Pack 20w	85,572	8
TOTAL	852,048	102





Appendix C Impact Evaluation

C.1 Lighting Measures Savings Methodology

The evaluation team based its savings methodology on National Renewable Energy Laboratory (NREL) Uniform Methods Project (UMP) Commercial and Industrial Lighting Evaluation Protocol.²⁵ The energy and demand savings algorithms used were as follows:

$$\Delta kW = [(Qty \times Watts \times CtrlF)_{Base} - (Qty \times Watts \times CtrlF)_{Efficient}] * \frac{1 kW}{1,000 W}$$

$$\Delta kWh = HOU \times (1 + IF_{energy}) \times \Delta kW$$

$$\Delta kW_{Peak} = CF \times (1 + IF_{demand}) \times \Delta kW$$

Where:

Qty	=	Quantity baseline and installed/efficient lamps or fixtures
Watts	=	Rated wattage of baseline and installed/efficient equipment (varies by measure)
CtrlF	=	Control factor to account for reduced lamp operation in baseline and efficient condition because of occupancy controls, daylighting controls, etc.
HOU	=	Annual hours of use
IF	=	Interactive factor for energy and demand, to account for interactive impacts between the lighting project and the building's heating and cooling systems
CF	=	Summer or winter peak coincidence factor

Controls factors were applied to the baseline and efficient condition as appropriate, as shown in Table C-1. All SCDI projects were assumed to have a light switch resulting a control factor of 100%.

Table C-1. Lighting Controls Factors

Control Type	Control Factor (CtrlF)
Light Switch	100%
Occupancy Sensor	76%
Daylighting Sensor	72%

Interactive factors used for the evaluation of lighting projects are shown in Table C-2. These factors were developed using energy simulation modeling by facility type and heating system type (non-electric, heat

²⁵ National Renewable Energy Laboratory. October 2017. *The Uniform Methods Project*. "Chapter 2: Commercial and Industrial Lighting Evaluation Protocol." Available at <https://www.nrel.gov/docs/fy17osti/68558.pdf>.





pump, and electric resistance) using the Atlanta, GA weather station. Interactive factors for nonconditioned buildings are zero.

Table C-2. Interactive Factors for Energy and Demand, by Facility Type

Facility Type	IF _{energy}			IF _{demand}
	Non-Electric	Heat Pump	Electric Resistance	
Assembly	12%	-7%	-23%	27%
Education - Primary	9%	-9%	-30%	31%
Education - Secondary	9%	-7%	-21%	25%
Education - Community College	17%	-5%	-18%	27%
Education - University	21%	-4%	-14%	31%
Hospital	13%	-21%	-68%	8%
Hotel	21%	-6%	-21%	21%
Manufacturing - Light Industrial	9%	-3%	-10%	24%
Motel	6%	0%	0%	28%
Nursing	22%	-9%	-30%	33%
Office - Small	7%	-4%	-11%	15%
Office - Large	6%	-7%	-21%	24%
Restaurant - Fast Food	4%	-4%	-14%	9%
Restaurant - Sitdown	10%	-11%	-36%	31%
Retail - Large	10%	-6%	-21%	28%
Retail - Small	3%	-3%	-11%	7%
Storage - Conditioned	11%	-9%	-28%	40%
Other	6%	-5%	-16%	19%
Non-Conditioned	0%	0%	0%	0%
SCDI	7.4% (all types)			7.4%

Hours of use (HOU) as well as summer and winter coincidence factor values were determined based on independent data collection for the evaluation sample. The evaluation team collected site specific operating schedules through interviews with site contacts and review of publicly available operating hours. For coincident factors, the evaluation team determined what proportion of the time each installation location's





operating hours were coincident with the seasonal system peaks. The system peak window was defined as follows:

- ▶ Winter - 8AM-9AM on January weekdays
- ▶ Summer - 4PM-5PM on July weekdays

Wattages for efficient equipment were determined through review of manufacturer specification sheets and DLC listings for the specific products installed. Baseline wattages were developed by determining the appropriate baseline equipment and using associated wattages from the evaluation team's standard wattage table. The evaluation team's assignment of baseline equipment types included these adjustments for outdated technologies:

- ▶ Existing T12 fluorescent lamp baselines were corrected to T8-equivalent baseline wattages.
 - This correction was uncommon and only applicable for the Prescriptive program.
 - SCDI is an early replacement program, so if a T12 baseline was confirmed, that was allowed.
- ▶ Incandescent bulbs baselines were corrected to an EISA-compliant halogen-equivalent baseline.

C.2 Prescriptive Lighting Hours of Use Comparison Analysis

Comparative analysis was completed for hours of use for evaluated Prescriptive lighting projects, because this evaluation found that this parameter was sensitive to realization rate. Figure C-1 Illustrates the comparison of lighting hours of use for unique business types from the following sources:

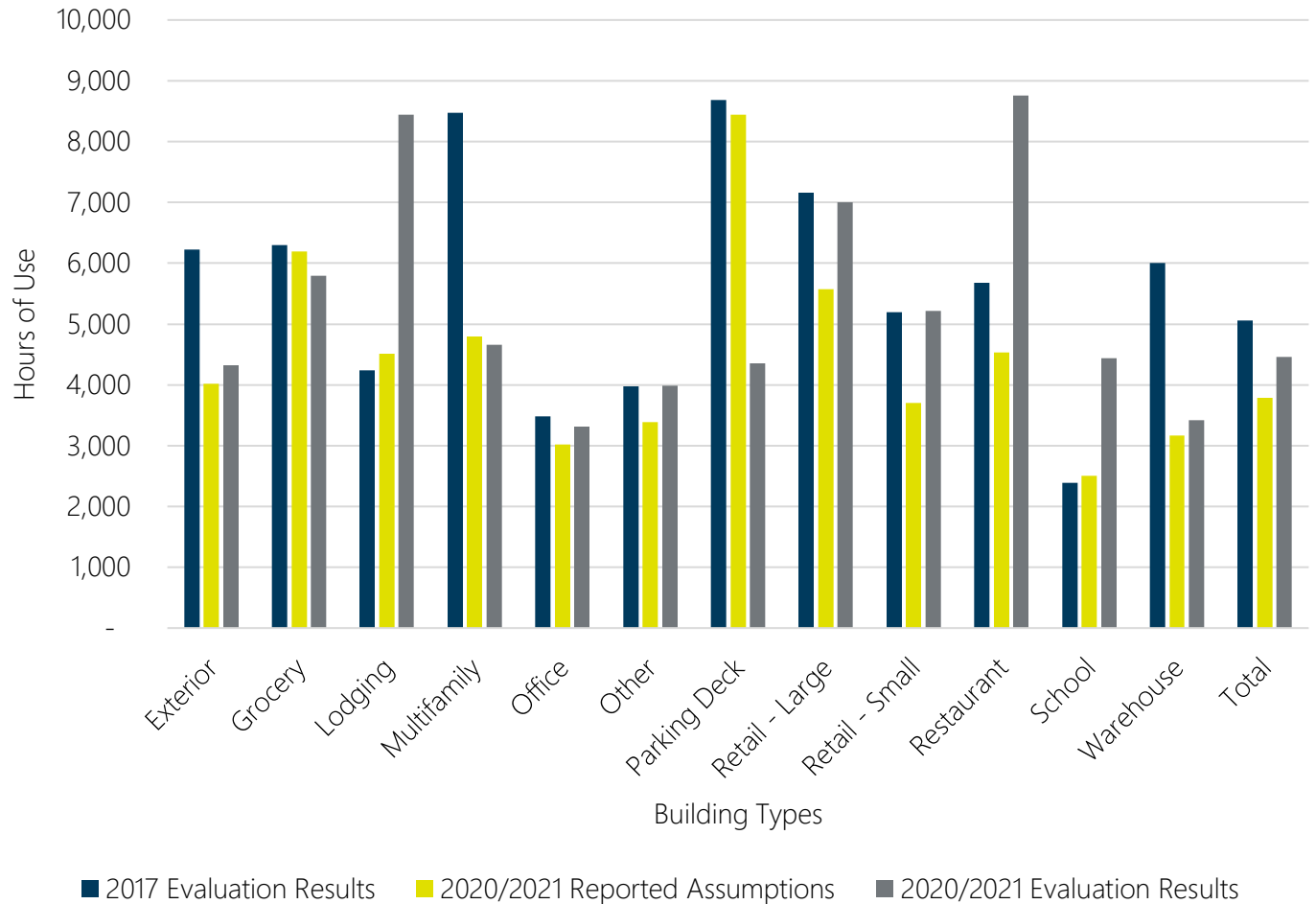
- ▶ 2017 Georgia Power Prescriptive Program Hours of Use Analysis for Prescriptive Lighting program (table 12-27, page 441).
- ▶ 2020/2021 Georgia Power Prescriptive Lighting Hour of Use Reported Assumptions (within CLEAResult project calculation tools).
- ▶ 2020/2021 Georgia Power Prescriptive Lighting Hour of Use Evaluation Results.

This table illustrates the higher commercial lighting hours of use for high-impact business types, such as Retail and all business types at-large.





Figure C-1. Prescriptive Program Lighting Hours of Use for Different Building Types



C.3 Midstream Products HVAC Measures

To determine the program's *ex post* gross savings for HVAC measures, Cadmus multiplied the values for energy and demand savings per ton from the evaluation of the prior program cycle's (2017-2019) Commercial HVAC Program to the rated capacity recorded in the program's tracking database for each rebated unit. Table C-3 shows the per-ton energy and demand savings for each capacity bin.



*Table C-3. HVAC Energy and Demand Savings per Ton*

Equipment Type	kWh/ton	kW/ton
Split & Package AC < 65,000 Btuh	251.657	0.066
Split & Package AC 65,000<=134,999 Btuh	258.067	0.067
Split & Package AC 135,000<=239,999 Btuh	300.308	0.173
Split & Package AC 759,999>=240,000 Btuh	110.470	0.022
Split & Package ASHP < 65,000 Btuh	323.635	0.067
Split & Package ASHP 65,000<=134,999 Btuh	270.256	0.055
Split & Package ASHP 135,000<=239,999 Btuh	246.088	0.142
VRF Mini Split AC	251.657	0.066
VRF Mini Split HP	2291.29	0.291

C.4 Midstream Products Measures

To determine the program's *verified* gross savings for Food Service measures, the evaluation team applied the deemed values in the 2019 Georgia Power TRM. Table C-4 shows the per-unit energy and demand savings values applied to each rebated unit in the program's tracking database.

Table C-4. Food Service Per-Unit Energy and Demand Savings

Equipment Type	kWh/unit	kW/unit
Commercial Hot Food Holding Cabinet	2,000	0.367
High-Efficiency Combination Oven	4,860	0.786
High-Efficiency Griddle	1,909	0.307
Commercial Steam Cooker	7,787	1.144
High-Efficiency Fryer	330	0.053

Appendix D Net-to-Gross Evaluation

D.1 Custom/Prescriptive

The evaluation team assessed free-ridership and participant spillover by interviewing 110 Prescriptive Program participants and 20 Custom Program participants. One of the Custom Program participants represents 38% of the Custom Program's verified gross program population savings. The evaluation team is reporting this large Custom project's NTG results and savings separately from the other 19 Custom Program respondents. The NTG results from the 19 Custom respondents are being applied to the 62% of Custom Program verified gross savings that are not associated with the jumbo project. Table D-1 presents the NTG results for CEEP.



*Table D-1. Custom and Prescriptive NTG Results*

Program	Responses	Estimated Free-ridership	Estimated Participant Spillover	NTG Ratio
PRESCRIPTIVE TOTAL	110	30.0%¹	1.0%	71.0%
Custom - Large and Small	19	9.2% ¹	0.2%	91.0%
Custom - Jumbo	1	18.8%	0.0%	81.2%
CUSTOM TOTAL	20	12.5%²	0.1%²	87.6%
CEEP TOTAL	130	24.9%³	0.7%³	75.8%

¹ The evaluation team weighted the estimate by respondents' verified gross program kWh savings to arrive at the estimates for the total program.

² The evaluation team weighted the Custom Program stratum estimates by their population verified gross program kWh savings to arrive at the estimates for the Custom Program total.

³ The evaluation team weighted the specific Prescriptive Program total and Custom Program total estimates by their population verified gross program kWh savings to arrive at the estimates for the CEEP total.

D.1.1 Free-Ridership

D.1.1.1 Intention Free-Ridership Scoring

The evaluation team estimated intention free-ridership scores for participants based on responses to the intention-focused free-ridership questions. Table D-2 illustrates how initial responses are translated into whether the response is *yes*, *no*, or *partially* indicative of free-ridership (in parentheses). The value in brackets is the scoring decrement associated with each response option. Each participant free-ridership score starts with 50%, which the evaluation team then decremented based on responses to the questions. After assigning an intention free-ridership score to every survey respondent, the evaluation team calculated a savings-weighted average intention free-rider score for the program.





Table D-2. Raw Survey Responses Translation to Intention Free-ridership Scoring Matrix Terminology and Scoring

Without the rebate and information from Georgia Power, would you still have purchased the [MEASURE GROUP]?	Had your organization already ordered or purchased the [MEASURE GROUP] before your organization heard about the Georgia Power rebates?	Did your organization have specific plans to install the [MEASURE GROUP] before learning about the Georgia Power direct install program?	Prior to learning about Georgia Power's commercial rebate program, was the purchase and installation of the [MEASURE GROUP] included in your company's capital budget?	So, without the rebate and information or education from Georgia Power, you would not have installed [MEASURE GROUP] at all? Is that correct?	And would you have most likely installed the same quantity of [MEASURE GROUP] without the rebate and information or education from Georgia Power?	Without the rebate and information or education from Georgia Power, would you most likely have purchased a lower efficiency [MEASURE GROUP], the same efficiency [MEASURE GROUP], or a higher efficiency [MEASURE GROUP] than the one you purchased?	Without the rebate and information or education from Georgia Power, when would you most likely have installed this equipment? Would you have installed it?	Does your organization use a minimum acceptable return on investment (ROI) or hurdle rate when selecting energy efficiency projects?	Was the program rebate influential to meeting this investment criteria?
Yes (Yes) [-0%]	Yes (Yes) [50% intention free-rider score assigned]	Yes (Yes) [-0%]	Yes (Yes) [-0%]	Yes/correct (No) [-50%]	Yes, same quantity (Yes) [-0%]	Lower efficiency (No) [-50%]	Within the same year? (Yes) [-0%]	Yes (No) [-0%]	Yes (No) [-25%]
No (No) [-25%]	No (No) [-0%]	No (No) [-25%]	No (No) [-25%]	No, not correct (Yes) [-0%]	No, I would have installed fewer (Partial2) [-25%]	Same efficiency (Yes) [-0%]	Within one to two years? (Partial2) [-25%]	No (Yes) [-0%]	No (Yes) [-0%]
DK/RF (Partial) [-12.5%]	DK/RF (No) [-0%]	DK/RF (Partial) [-12.5%]	DK/RF (Partial) [-12.5%]	DK/RF (Partial) [-12.5%]	No, would not have installed any at all (No) [-50%]	Higher efficiency (Yes) [-0%]	Within three to five years? (No) [-50%]	Don't know (Partial) [-0%]	Don't know (Partial) [-0%]
					No, I would have installed more (Yes) [-0%]	DK/RF (Partial) [-12.5%]	In more than 5 years? (No) [-50%]		
					DK/RF (Partial) [-12.5%]		DK/RF (Partial) [-12.5%]		

DK = don't know; RF = refused





Table D-3 shows the unique participant response combinations resulting from the intention free-ridership questions, along with the intention score assigned to each combination and the number of responses for each combination. An “x” indicates that a question was skipped because of the participant’s response to a previous question. The *yes*, *partial*, and *no* values in the table represent whether the respondent’s answer to a given question was indicative of free-ridership. We weighted participants’ intention scores by their respective verified gross kWh savings to calculate savings weighted intention-based free-rider scores of 24.8% for Prescriptive Program participants and 5.6% for Custom Program participants. Then, the evaluation team averaged the Prescriptive Program and Custom Program participant intention scores, weighting by the population verified gross energy savings for each program pathway to derive an overall CEEP intention score of 19.2%. An intention score of 6.3% was estimated for the jumbo Custom Program participant interviewed.





Table D-3. Frequency of Intention Scoring Combinations

1. Installed same measure without incentive?	2. Already ordered or installed?	3. Already planning to purchase?	4. In capital budget?	[Ask if 1=No] 5. Confirm, would not have installed any measure?	6. Installed same quantity?	7. Installed same efficiency?	8. Installed at the same time?	9. Organization has ROI goal?	[Ask if 9=Yes] 10. Program incentive was key to meeting goal?	Intention Score	Prescriptive Response Frequency (n=110)	Custom Response Frequency (n=20)
Yes	Yes	x	x	x	x	x	x	x	x	50%	26	4
Yes	No	Yes	Yes	x	Yes	Yes	Yes	Yes	x	50%	12	4
Yes	No	Yes	Yes	x	Yes	Yes	Yes	Partial	x	50%	4	0
Yes	No	Yes	Yes	x	Yes	Yes	Yes	No	Yes	50%	3	0
Yes	No	Yes	Yes	x	Yes	Yes	Yes	No	No	25%	8	2
Yes	No	Yes	Yes	x	Yes	Yes	Partial2	Yes	x	25%	2	1
Yes	No	Yes	Yes	x	Yes	Yes	Partial2	Partial	x	25%	1	0
Yes	No	Yes	Yes	x	Yes	Yes	Partial2	No	No	6.25%	2	0
Yes	No	Yes	Yes	x	Yes	Yes	No	x	x	0%	3	1
Yes	No	Yes	Yes	x	Yes	Partial	Yes	Partial	x	37.5%	1	0
Yes	No	Yes	Yes	x	Yes	Partial	Partial2	No	No	0%	1	0
Yes	No	Yes	Yes	x	Yes	No	x	x	x	0%	2	1
Yes	No	Yes	Yes	x	Partial	Yes	Partial2	No	No	0%	1	0
Yes	No	Yes	Yes	x	Partial	No	x	x	x	0%	0	1
Yes	No	Yes	Yes	x	Partial2	Yes	Yes	Yes	x	25%	3	0
Yes	No	Yes	Yes	x	Partial2	Yes	Yes	No	No	6.25%	2	0
Yes	No	Yes	Yes	x	Partial2	Yes	Partial2	Yes	x	6.25%	3	0
Yes	No	Yes	Yes	x	Partial2	Yes	Partial2	No	No	0%	2	0
Yes	No	Yes	Yes	x	Partial2	Partial	Yes	Partial	x	12.5%	1	0
Yes	No	Yes	Yes	x	Partial2	Partial	Partial2	Partial	x	0%	1	0
Yes	No	Yes	Yes	x	Partial2	No	x	x	x	0%	1	0
Yes	No	Yes	Yes	x	No	x	x	x	x	0%	1	0
Partial	Yes	x	x	x	x	x	x	x	x	50%	2	0
Partial	No	Yes	Yes	x	Yes	Yes	Yes	Yes	x	37.5%	1	0
Partial	No	Yes	Yes	x	Yes	Yes	Yes	No	No	12.5%	1	0



*Table D-3. Frequency of Intention Scoring Combinations cont.*

1. Installed same measure without incentive?	2. Already ordered or installed?	3. Already planning to purchase?	4. In capital budget?	[Ask if 1=No] 5. Confirm, would not have installed any measure?	6. Installed same quantity?	7. Installed same efficiency?	8. Installed at the same time?	9. Organization has ROI goal?	[Ask if 9=Yes] 10. Program incentive was key to meeting goal?	Intention Score	Prescriptive Response Frequency (n=110)	Custom Response Frequency (n=20)
Partial	No	Yes	Yes	x	Yes	No	x	x	x	0%	1	1
Partial	No	Yes	Yes	x	Yes	Yes	No	x	x	0%	1	0
Partial	No	Yes	Yes	x	Partial	No	x	x	x	0%	0	1
Partial	No	Yes	Yes	x	Partial2	Yes	Partial2	Yes	x	0%	1	0
Partial	No	Yes	Yes	x	Partial2	Yes	Partial2	No	No	0%	1	0
Partial	No	Yes	Yes	x	No	x	x	x	x	0%	2	0
No	x	x	x	Yes	Yes	Yes	No	x	x	0%	1	0
No	x	x	x	Yes	Partial2	Yes	No	x	x	0%	1	0
No	x	x	x	Yes	Partial2	No	x	x	x	0%	1	1
No	x	x	x	Yes	No	x	x	x	x	0%	1	0
No	x	x	x	Partial	Partial2	No	x	x	x	0%	1	0
No	x	x	x	No	x	x	x	x	x	0%	15	2





D.1.1.2 Influence Free-Ridership Scoring

To estimate influence free-ridership scores, the evaluation team asked participants questions with several options to identify how program elements influenced their decisions about the energy efficiency measure they implemented. The influence of any one of the program elements determined how influential the program was in their decisions to install program-qualifying equipment. A respondent's influence score was determined from the maximum rating of any single program element, rather than an average, because it was assumed that if any given element had a great influence on the respondent's decision, then the program itself was successful in influencing the respondent's decision.²⁶

Table D-4 shows the distribution of responses to the influence question: "I'm going to read a list of possible factors that contributed to your decision to install [MEASURE] through the program. Please rate each factor on how important it was on your decision to purchase the [MEASURE]. Please use a scale from 1, meaning *not at all important*, to 5, meaning the item was *very important* in your decision." The evaluation team assessed influence free-ridership from participants' ratings to the relative importance of various program elements in their purchasing decisions. Table D-4 lists these program elements, along with a count and the average rating participants gave for each factor.

²⁶ Based on the evaluation team's experience fielding self-report surveys, the language in the influence questions asks participants about the importance of the utility program, rebate, and product rather than its influence. Using the term *important* rather than *influence* reduces possible customer bias because of the perceived reluctance to report being influenced when making an investment decision.



*Table D-4. CEEP Free-ridership Influence Responses*

Influence Rating	Influence Score	Georgia Power or CLEAResult staff		Rebates for the equipment		Information about energy efficiency that Georgia Power provided		Previous participation in a Georgia Power energy efficiency program	
		Prescriptive	Custom	Prescriptive	Custom	Prescriptive	Custom	Prescriptive	Custom
1 - Not at all important	50%	15	5	0	0	1	0	2	0
2	37.5%	10	0	6	4	4	4	7	5
3	25%	19	3	21	10	15	5	6	4
4	12.5%	17	6	21	10	15	5	6	4
5 - Very important	0%	38	2	8	11	18	17	7	8
Don't know	25%	6	3	5	1	2	0	18	9
Not applicable	25%	5	0	5	1	2	0	18	9
Average Rating		3.5	3.0	3.6	3.8	3.8	4.1	3.3	3.7





The evaluation team used the maximum rating given by each participant for any factor in Table D-4 to determine the participant's influence score presented in Table D-5. The team weighted individual influence scores by each participant's respective verified gross kilowatt-hour program savings associated with the total survey sample to arrive at a savings-weighted average influence score of 5.2% for Prescriptive Program participants and 3.9% for Custom Program participants. The jumbo Custom Program participant gave a maximum program factor rating of 4 ('rebates for the equipment') and their influence score is 12.5%.

Table D-5. Program Influence Score

Maximum Influence Rating	Influence Score	Prescriptive			Custom		
		Count ¹	Total Analysis Sample Verified Gross Savings (kWh)	Influence Score Savings (kWh)	Count ¹	Total Analysis Sample Verified Gross Savings (kWh)	Influence Score Savings (kWh)
1 - Not at all important	50%	4	271,972	135,986	2	202,289	101,144
2	37.5%	4	283,171	106,189	1	67,304	25,239
3	25%	4	63,513	15,878	1	578,514	144,628
4	12.5%	15	746,427	93,303	4	1,101,808	137,726
5 - Very important	0%	82	5,535,642	0	9	14,735,008	0
Not applicable/Don't know	25%	1	52,763	13,191	2	1,139,855	284,964
Average Maximum Influence Rating – Simple Average			4.5			4.0	
Average Influence Score – Weighted by Verified Gross kWh Savings			5.2%			3.9%	

¹ Refers to the number of responses for each factor/influence score response option.

D.1.2 Participant Spillover

Participant spillover reflects activities, purchases, and installations of high-efficiency equipment that result from program participation, but that are not funded through a Georgia Power program. The evaluation team estimated participant spillover based on the following information: (1) the installation and description of energy efficiency measures not rebated by Georgia Power since starting participation in CEEP, (2) an estimate of the energy savings generated by the measures, and (3) the influence of the CEEP participation on the decision to make the energy efficiency improvements. Surveys collected this information via questions that asked program participants if the program prompted a decision to install *other* energy efficient measures or to make *other* energy efficient improvements beyond what was specifically rebated through the program. The key questions used were these:





- ▶ Since participating in the program, has the company installed any other energy efficient products or equipment, or made any energy efficiency improvements for which they did not receive a rebate from Georgia Power?
- ▶ Were these actions, in their view, influenced by the program?
- ▶ How do they know the additional equipment installed is high efficiency? (The survey included equipment specific follow-up questions.)

The survey asked respondents about the level of influence program elements and Georgia Power had on their decisions to install the additional measures. Table D-6 provides the question designed to capture program influence on spillover and example influence ratings.

Table D-6. Calculating Program Spillover Influence Score

Rate Influence of Program Elements							
	1. Not at all Important				5. Very Important		
Information about energy savings from Georgia Power marketing, program staff, or contractors	1	②	3	4	5	DK	N/A
Your satisfaction with the equipment for which you received a rebate	1	2	3	4	⑤	DK	N/A
Your experience with the Georgia Power small commercial direct install program in general	1	2	③	4	5	DK	N/A

The evaluation team assigned a maximum influence rating to a value that determined what proportion of the relevant measures' savings is attributed to the program:

- ▶ A rating of 5 = 1.0 (full savings attributed to the program).
- ▶ A rating of 4 = 0.5 (half of the savings attributed to the program).
- ▶ A rating of 1 or 2 or 3 = 0 (no savings attributed to the program).

Table [D-7](#) shows the steps the evaluation team used to determine program participant spillover.



*Table D-7. Participant Spillover Calculation*

Variable	Variable Description	Source
A	Survey Sample Size (n)	Survey Data
B	Total Survey Sample Spillover kWh Savings	Survey Data / Engineering Estimates
C	Average Spillover kWh Savings Per Survey Respondent	Variable B ÷ Variable A
D	Program Participant Population	Program Tracking Data
E	Spillover kWh Savings Extrapolated to the Participant Population	Variable C × Variable D
F	Evaluated Program Population Verified Gross kWh Savings	Evaluated Gross Impact Analysis
G	Spillover Percent Estimate	Variable E ÷ Variable F

Ten Prescriptive Program participants reported that after participating in the program they installed additional high-efficiency measures for which they did not receive an incentive and Georgia Power was important in their decision to install these measures. Table D-8 lists the spillover measures, along with the respondents' maximum rating of the importance of different key program elements on their decision to invest in the additional energy efficient improvements. The gross energy savings estimated for the spillover measures are alignment with this evaluation and the 2019 Georgia Power TRM. The reported spillover activity accounts for energy savings of 96,978 kWh, which represents Variable B in the Prescriptive program spillover algorithm in Table D-7.



*Table D-8. Prescriptive Program Attributed Spillover Measures*

Spillover Response	Spillover Measure	Quantity	Total Spillover kWh Savings	Maximum Influence Rating	Influence Attribution Percentage	Attributed Spillover kWh Savings	Total Survey Sample Spillover kWh Savings
1	LED Lighting	100	6,128.5	5	100%	6,128.5	96,978
2	LED Lighting	1	963.6	5	100%	963.6	
3	LED Lighting	1	569.4	5	100%	569.4	
4	LED Lighting	300	18,385.5	5	100%	18,385.5	
6	LED Lighting	32	3,749.2	5	100%	3,749.2	
7	LED Lighting	30	574.6	4	50%	287.3	
8	Efficient Lighting Controls	2	20.7	5	100%	20.7	
9	Efficient Lighting Controls	300	9,576.0	4	50%	4,788.0	
10	Air Source Heat Pump	1	717.1	4	50%	358.5	
11	Central Air Conditioner	1	571.4	5	100%	571.4	
12	Central Air Conditioner	1	717.1	5	100%	717.1	
13	Central Air Conditioner	1	717.1	5	100%	717.1	
14	Chiller	1	105,000.0	4	50%	52,500.0	
15	High Efficiency Motor	1	6,706.5	4	50%	3,353.2	
16	Refrigeration Equipment	1	208.0	5	100%	208.0	
17	Water Heating Equipment	1	2,440.4	5	100%	2,440.4	
18	Water Heating Equipment	1	2,440.4	4	50%	1,220.2	

One Custom Program participant reported that after participating in the program they installed additional high-efficiency measures for which they did not receive an incentive and Georgia Power was important in their decision to install these measures. Table D-9 lists the spillover measure, along with the respondent's maximum rating of the importance of different key program elements on their decision to invest in the additional energy efficient improvements. The reported spillover activity accounts for energy savings of 10,193 kWh, which represents Variable B in the Custom Program spillover algorithm in Table D-7.

Table D-9. Custom Program Attributed Spillover Measures

Spillover Response	Spillover Measure	Quantity	Total Spillover kWh Savings	Maximum Influence Rating	Influence Attribution Percentage	Attributed Spillover kWh Savings	Total Survey Sample Spillover kWh Savings
1	LED Lighting	87	10,193	5	100%	10,193	10,193





D.2 Custom/Prescriptive

To estimate free-ridership and participant spillover for the SCDI program, the evaluation team performed surveys with 14 participants. Table D-10 shows the overall 89.5% NTG estimate for the SCDI program, calculated based on the following NTG formula: $\text{NTG Ratio} = 1 - \text{Free-ridership} + \text{Participant Spillover}$.

Table D-10. SCDI Program NTG

Responses	Estimated Free-ridership	Estimated Participant Spillover	NTG Ratio
14	10.5%	0.0%	89.5%

D.3 SCDI

D.3.1.1 Intention Free-Ridership Scoring

The evaluation team estimated intention free-ridership scores for participants based on responses to the intention-focused free-ridership questions. Table D-11 illustrates how initial responses are translated into whether the response is *yes*, *no*, or *partially* indicative of free-ridership (in parentheses). The value in brackets is the scoring decrement associated with each response option. Each participant free-ridership score starts with 50%, which the evaluation team then decremented based on responses to the questions. After assigning an intention free-ridership score to every survey respondent, the evaluation team calculated a savings-weighted average intention free-rider score for the program.





Table D-11. Raw Survey Responses Translation to Intention Free-ridership Scoring Matrix Terminology and Scoring

Without the rebate and information from Georgia Power would you still have purchased the [MEASURE GROUP]?	Had your organization already ordered or purchased the [MEASURE GROUP] before your organization heard about the Georgia Power rebates?	Did your organization have specific plans to install the [MEASURE GROUP] before learning about the Georgia Power direct install program?	Prior to learning about Georgia Power's commercial direct install program, was the purchase and installation of the [MEASURE GROUP] included in your company's capital budget?	So, without the rebate and information or education from Georgia Power, you would not have installed [MEASURE GROUP] at all? Is that correct?	And would you have most likely installed the same quantity of [MEASURE GROUP] without the rebate and information or education from Georgia Power?	Without the rebate and information or education from Georgia Power, would you most likely have purchased a lower efficiency [MEASURE GROUP], the same efficiency [MEASURE GROUP], or a higher efficiency [MEASURE GROUP] than the one you purchased?	Without the rebate and information or education from Georgia Power, when would you most likely have installed this equipment? Would you have installed it ...	Does your organization use a minimum acceptable return on investment (ROI) or hurdle rate when selecting energy efficiency projects?	Was the program rebate influential to meeting this investment criteria?
Yes (Yes) [-0%]	Yes (Yes) [50% intention free-rider score assigned]	Yes (Yes) [-0%]	Yes (Yes) [-0%]	Yes/correct (No) [-50%]	Yes, same quantity (Yes) [-0%]	Lower efficiency (No) [-50%]	Within the same year? (Yes) [-0%]	Yes (No) [-0%]	Yes (No) [-25%]
No (No) [-25%]	No (No) [-0%]	No (No) [-25%]	No (No) [-25%]	No, not correct (Yes) [-0%]	No, I would have installed fewer (Partial2) [-25%]	Same efficiency (Yes) [-0%]	Within one to two years? (Partial2) [-25%]	No (Yes) [-0%]	No (Yes) [-0%]
DK/RF (Partial) [-12.5%]	DK/RF (No) [-0%]	DK/RF (Partial) [-12.5%]	DK/RF (Partial) [-12.5%]	DK/RF (Partial) [-12.5%]	No, I would not have installed any at all (No) [-50%]	Higher efficiency (Yes) [-0%]	Within three to five years? (No) [-50%]	Don't know (Partial) [-0%]	Don't know (Partial) [-0%]
					No, I would have installed more (Yes)[-0%]	DK/RF (Partial) [-12.5%]	In more than 5 years? (No) [--50%]		
					DK/RF (Partial) [-12.5%]		DK/RF (Partial)[-12.5%]		

DK = don't know; RF = refused





The evaluation team estimated intention free-ridership scores based on participant responses to the intention-focused free-ridership questions. The team translated their responses into a matrix value and applied a consistent, rules-based calculation to obtain the final score. The evaluation team then weighted participant’s intention scores by verified gross kilowatt-hour program savings to arrive at an 8.4% intention score for the SCDI program. Table D-12 shows the unique participant response combinations resulting from the intention free-ridership questions, along with the intention score assigned to each combination and the number of responses for each combination. An “x” indicates that a question was skipped because of the participant’s response to a previous question. The *yes*, *partial*, and *no* values in the table represent whether the respondent’s answer to a given question was indicative of free-ridership. The team weighted individual influence scores by each participant’s respective verified gross kilowatt-hour program savings associated with the total survey sample to arrive at a savings-weighted average influence score of 8.4% for SCDI program participants.





Table D-12. Frequency of Intention Scoring Combinations (n=14)

1. Installed same measure without incentive?	2. Already ordered or installed?	3. Already planning to purchase?	4. In capital budget?	[Ask if 1=No] 5. Confirm, would not have installed any measure?	6. Installed same quantity?	7. Installed same efficiency?	8. Installed at the same time?	9. Organization has ROI goal?	[Ask if 9=Yes] 10. Program incentive was key to meeting goal?	Intention score	Response frequency
Yes	Yes	X	x	x	x	x	x	x	x	50%	1
Yes	No	Yes	Yes	x	Yes	Yes	Yes	Yes	x	50%	1
Yes	No	Yes	Yes	x	Yes	Yes	No	x	x	0%	1
Yes	No	Yes	Yes	x	No	x	x	x	x	0%	1
Partial	No	Yes	Yes	x	Yes	Yes	Partial	No	No	6%	1
Partial	No	Yes	Yes	x	Partial2	Yes	Partial2	Yes	x	0%	1
Partial	No	Yes	Yes	x	No	x	x	x	x	0%	2
No	x	X	x	Partial	Yes	Yes	Partial2	Partial	x	0%	1
No	x	X	x	No	x	x	x	x	x	0%	5

Partial2 = 25% decrement





D.3.1.2 Influence Free-Ridership Scoring

To estimate influence free-ridership scores, the evaluation team asked participants questions with several options to identify how program elements influenced their decisions about the energy efficiency measure they implemented. The influence of any one of the program elements determined how influential the program was in their decisions to install program-qualifying equipment. A respondent's influence score was determined from the maximum rating of any single program element, rather than an average, because it was assumed that if any given element had a great influence on the respondent's decision, then the program itself was successful in influencing the respondent's decision.²⁷

Table D-4 shows the distribution of responses to the influence question: "I'm going to read a list of possible factors that contributed to your decision to install [MEASURE GROUP] through the program. Please rate each factor on how important it was on your decision to purchase the [MEASURE GROUP]. Please use a scale from 1, meaning *not at all important*, to 5, meaning the item was *very important* in your decision." The evaluation team assessed influence free-ridership from participants' ratings to the relative importance of various program elements in their purchasing decisions. Table D-13 lists these program elements, along with a count and the average rating participants gave for each factor.

Table D-13. SCDI Program Free-ridership Influence Responses (n=14)

Question Response Options	Influence Score	Georgia Power or FCI staff	Cost-sharing for the equipment	Information about energy efficiency that Georgia Power provided	The free lighting assessment for your business	Previous participation in a Georgia Power energy efficiency program
1 – Not at all important	50%	2	0	0	0	6
2	37.5%	0	0	0	0	1
3	25%	5	1	3	2	0
4	12.5%	3	0	2	1	1
5 - Very important	0%	4	12	8	9	3
Don't Know	25%	0	1	1	0	1
Not Applicable	25%	0	0	0	1	2
Average		3.5	4.8	4.4	4.5	2.5

The evaluation team used the maximum rating given by each participant for any factor to determine the participant's influence score presented in Table D-14. The team weighted individual influence scores by each

²⁷ Based on the evaluation team's experience fielding self-report surveys, the language in the influence questions asks participants about the importance of the utility program, rebate, and product rather than its influence. Using the term *important* rather than *influence* reduces possible customer bias because of the perceived reluctance to report being influenced when making an investment decision.





participant's respective verified gross kilowatt-hour program savings associated with the total survey sample to arrive at a savings-weighted average influence score of 2.1% for SCDI program participants.

Table D-14. Program Influence Score (n=14)

Maximum Influence Rating	Influence Score	Count ¹	Verified Gross kWh Savings	Influence Score kWh Savings
1 – Not at all important	50%	0	0	0
2	37.5%	0	0	0
3	25%	1	16,176	4,044
4	12.5%	0	0	0
5 - Very important	0%	13	178,246	0
Average Maximum Influence Rating - Simple Average		4.9		
Average Influence Score - Weighted by Ex Post Savings			2.1%	

¹ Refers to the number of responses for each factor/influence score response option.

D.3.2 Participant Spillover

Participant spillover reflects activities, purchases, and installations of high-efficiency equipment that result from program participation, but that are not funded through a Georgia Power program. The evaluation team estimated participant spillover based on the following information: (1) the installation and description of energy efficiency measures not rebated by Georgia Power since starting SCDI program participation, (2) an estimate of the energy savings generated by the measures, and (3) the influence of the SCDI program participation on the decision to make the energy efficiency improvements. Surveys collected this information via questions that asked program participants if the program prompted a decision to install *other* energy-efficient measures or to make *other* energy-efficient improvements beyond what was specifically rebated through the program. The key questions used were these:

- ▶ Since participating in the program, has the company installed any other energy-efficient products or equipment, or made any energy efficiency improvements for which they did not receive a rebate from Georgia Power?
- ▶ Were these actions in their view influenced by the program?
- ▶ How do they know the additional equipment installed is high efficiency? (The survey included equipment specific follow-up questions.)

The survey asked respondents about the level of influence program elements and Georgia Power had on their decisions to install the additional measures. Table D-15 provides the question designed to capture program influence on spillover and example influence ratings.

Table D-15. Calculating Program Spillover Influence Score





On a 1 to 5 scale, with 1 meaning “not at all important,” to 5, meaning the item was “very important” to your decisions, how important were each of the following on your decision to install [INSERT ITEM FROM Q50] without a rebate from Georgia Power?

Rate Influence of Program Elements							
	1. Not at all Important				5. Very Important		
Information about energy savings from Georgia Power marketing, program staff, or installation contractors	1	②	3	4	5	DK	N/A
Your satisfaction with the equipment for which you received a rebate	1	2	3	4	⑤	DK	N/A
Your experience with the Georgia Power small commercial direct install program in general	1	2	③	4	5	DK	N/A

The evaluation team assigned a maximum influence rating to a value that determined what proportion of the relevant measures' savings is attributed to the program:

- ▶ A rating of 5 = 100% (full savings attributed to the program).
- ▶ A rating of 4 = 50% (half of the savings attributed to the program).
- ▶ A rating of 1 or 2 or 3 = 0% (no savings attributed to the program).

Table D-16 shows the steps the evaluation team used to determine like program participant spillover.

Table D-16. Program Participant Spillover Calculation

Variable	Variable Description	Source
A	Survey Sample Size (n)	Survey Data
B	Total Survey Sample Spillover kWh Savings	Survey Data / Engineering Estimates
C	Average Spillover kWh Savings Per Survey Respondent	Variable B ÷ Variable A
D	Program Participant Population	Program Tracking Data
E	Spillover kWh Savings Extrapolated to the Participant Population	Variable C × Variable D
F	Evaluated Program Population Verified Gross kWh Savings	Evaluated Gross Impact Analysis
G	Spillover Percent Estimate	Variable E ÷ Variable F





None of the surveyed participants reported that, after participating in the program, they had installed additional Georgia Power program eligible equipment for which they could confirm they did not receive an incentive and that participation in the SCDI program was important in their decision. Therefore, no spillover is attributed to the program.

Appendix E Process Evaluation

E.1 Custom and Prescriptive

Table E-1 and Table E-2 present the summary sample counts and response rates for the surveys conducted with participants and with participating and nonparticipating contractors, including actual sample counts for both phone and email survey attempts, and the final count of completed surveys. Phone and email response rates averaged 10% for the participant survey, with a slightly higher response rate for Custom participants. Response rate for this evaluation cycle is lower than for the 2018 evaluation, which averaged a response rate of 13%. The response rate for contractors averaged 6%, which is significantly lower than the 2018 evaluation, which achieved a 17% response rate. Response rates were lower for this evaluation than in prior evaluation years most likely because of the COVID-19 pandemic, leading to most people working from home and less likely to answer a direct office phone line.

Table E-1. Custom/Prescriptive Participant Survey Disposition

	Prescriptive	Custom	Total
Number of Applications	2001	156	2157
Unique Participant Phone Numbers	563	82	645
Unique Participant Email Addresses	594	83	677
Phone Completes	86	11	97
Email Completes	24	9	33
Total Completes	110	20	130
Phone Response Rate	15%	13%	15%
Email Response Rate	4%	11%	5%
Final Response Rate	10%	12%	10%

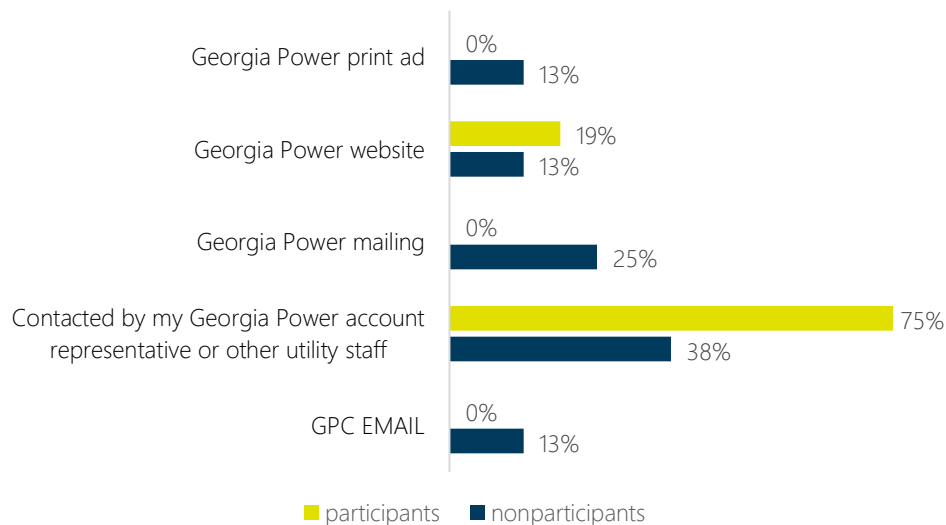


*Table E-2. Contractor Survey Disposition*

	Participating	Nonparticipating	Total
Trade Allies	99	1407	1506
Trade Allies with Phone Numbers	99	1038	1137
Phone Completes	28	42	70
Email Completes	N/A	N/A	N/A
Total Completes	28	42	70
Phone Response Rate	28%	4%	6%
Email Response Rate	N/A	N/A	N/A
Final Response Rate	28%	4%	6%

E.1.1 Program Awareness

As noted in Section 2.5.1, when respondents were asked their preferred source of program awareness, the majority of participants (36%) and nonparticipants (53%) noted an email from Georgia Power as the preferred method, however very few nonparticipants are learning about the program this way (13%) and no participating customers noted this as the way they learned about the program (Figure E-1).

Figure E-1. Customer Awareness Through Georgia Power

Source: Custom/Prescriptive Participant Survey and Nonparticipant Survey. Questions Q1/Q2. "How did you hear about these programs through Georgia Power?" Participants n=32; Nonparticipants n=20

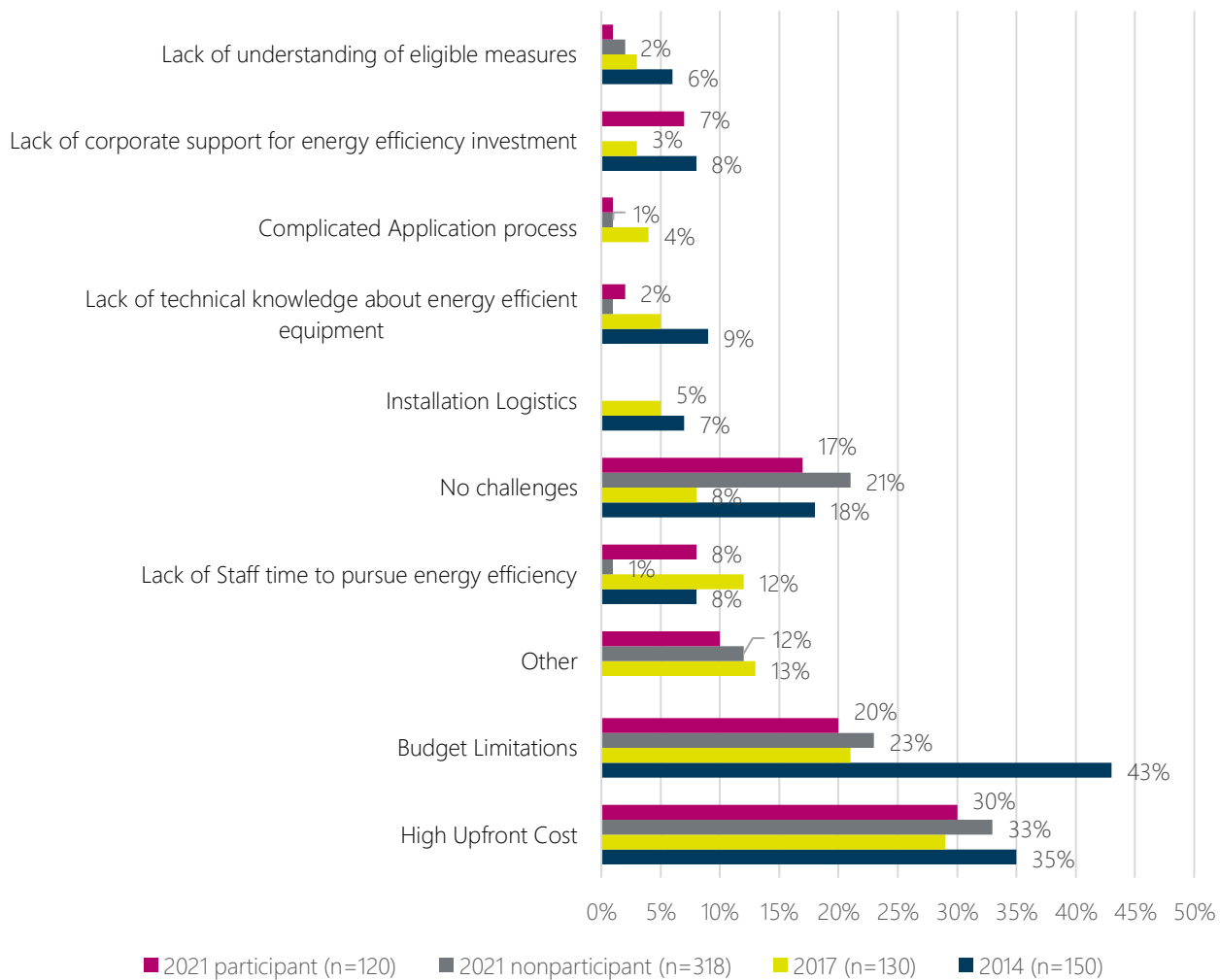




E.1.2 Market Barriers

As noted in Section 2.5.3, similar to prior years, cost (both initial cost and overall budget limitations) was the largest barrier to participation (noted by 50% of participants and 56% of nonparticipants), while 17% of participants and 21% of nonparticipants noted no barriers to participation. An interesting trend is that the barrier “lack of technical knowledge and understanding of eligible measures” has been on the decline since 2014, which is a positive indication that the overall commercial market is becoming more informed and knowledgeable of the program and technical information around energy efficiency (Figure E-2).

Figure E-2. Trends in Barriers to Participation



Source: Custom/Prescriptive Participant Survey. Questions Q37. “What are the most significant challenges to installing energy efficiency equipment at companies like yours”

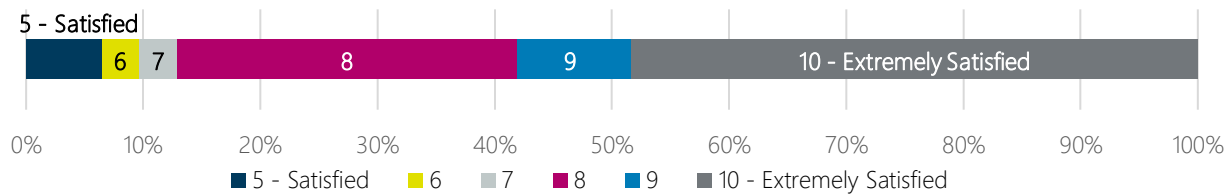




E.1.3 Satisfaction and COVID Impacts

As noted in Section 2.5.4, nonparticipating contractors' satisfaction with Georgia Power overall was high, with more than 85% of respondents providing a rating of 8 or higher, and no respondents providing a rating under 5 (Figure E-3).

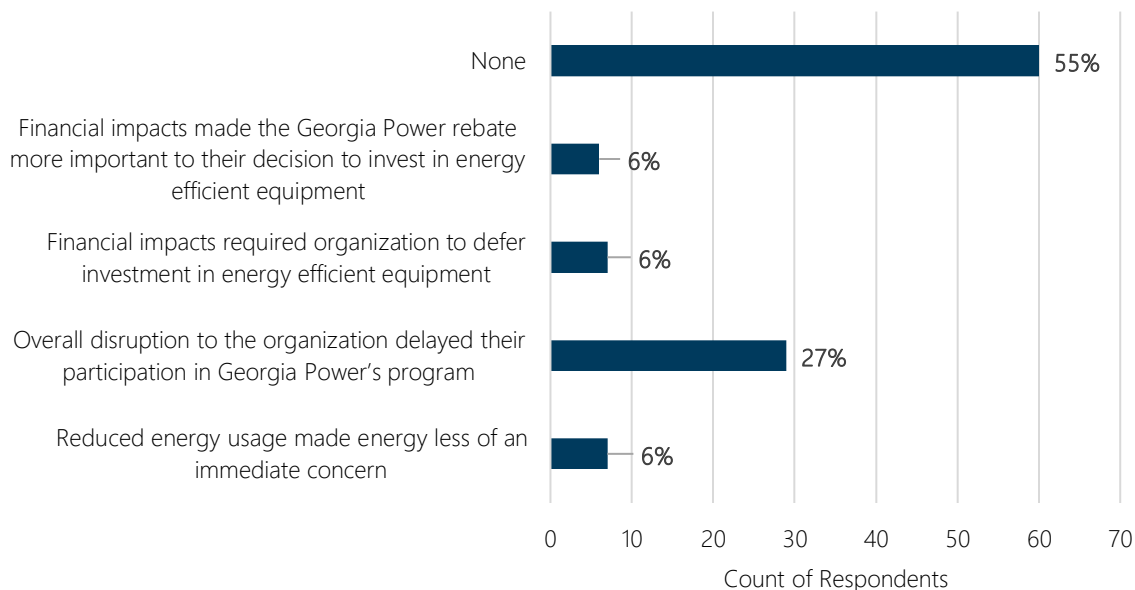
Figure E-3. Nonparticipating Contractors Satisfaction with Georgia Power



Source: Commercial Nonparticipating Contractor Survey, Q14: "I would like to know your level of satisfaction with Georgia Power Company overall. Please tell me how satisfied you are on a 1 to 10 scale where 1 means "extremely dissatisfied" and 10 means "extremely satisfied." (n=42)

As noted in Section 2.5.4, the evaluation team asked participants and nonparticipants about impacts on their business due to the COVID-19 pandemic. Thirty percent (33%) of participants noted that business decisions around EE were delayed due to COVID-19 (Figure E-4).

Figure E-4. Impacts of COVID on Participating Businesses



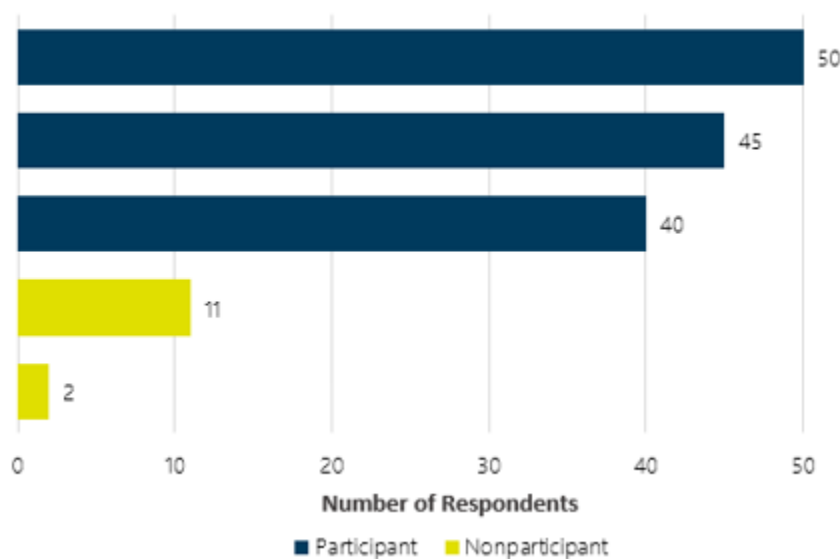


Source: Custom/Prescriptive Participant Survey. Questions Q16. "What impacts, if any, did the COVID-19 pandemic have on your organization's participation in Georgia Power's Commercial Energy Efficiency Program?" n=124

E.2 Midstream Products

Five of the six Food Service participant distributors and the nonparticipant distributor provide service throughout the state of Georgia, and the remaining participant distributor said their organization served mainly in the southeast portion of the state. The Food Service nonparticipant distributors estimated that 75% of their commercial kitchen equipment sales fall within the greater Atlanta metro area. The three HVAC participant distributors provide service throughout the state of Georgia, and the two nonparticipant distributors estimated that between 50% to 60% of their commercial HVAC equipment sales fall within the greater Atlanta metro area. The number of employees that serve customers in Georgia varied greatly among distributors, from one to fifty, and interviewed nonparticipant distributors have fewer employees than participant distributors. Figure 6-1 and Figure 6-2 shows a full breakdown of participant and nonparticipant distributor employee counts.

Figure 6-1. HVAC Participant and Nonparticipant Distributor Size by Number of Employees

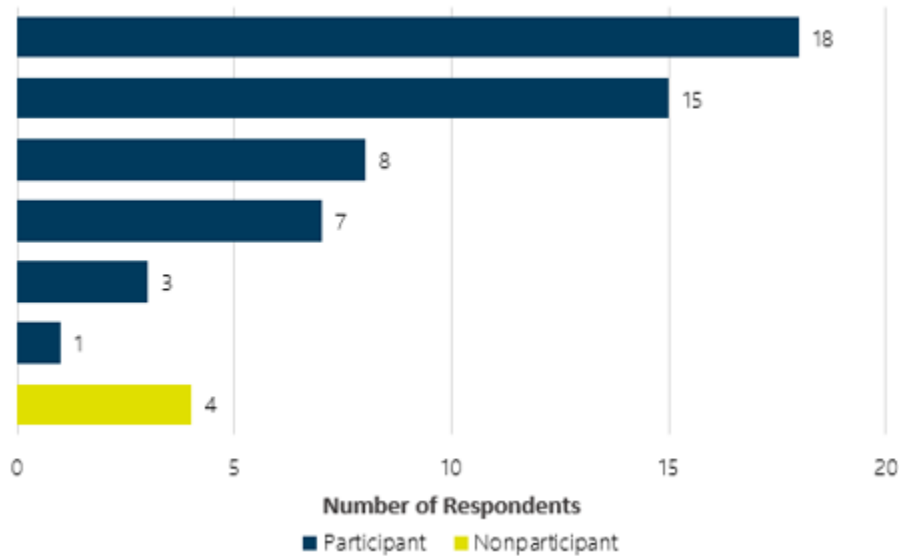


Source: Midstream Products Program HVAC Participant and Nonparticipant Distributor Interviews. Questions Q10/Q15.
 "Approximately how many people does your company employ to serve customers in Georgia?" Participant n=3;
 Nonparticipant n=2





Figure 6-2 Food Service Participant and Nonparticipant Distributor Size by Number of Employees



Source: Midstream Products Program Food Service Participant and Nonparticipant Distributor Interviews. Questions Q10/Q15.
"Approximately how many people does your company employ to serve customers in Georgia?" Participant n=6; Nonparticipant n=1

E.3 SCDI

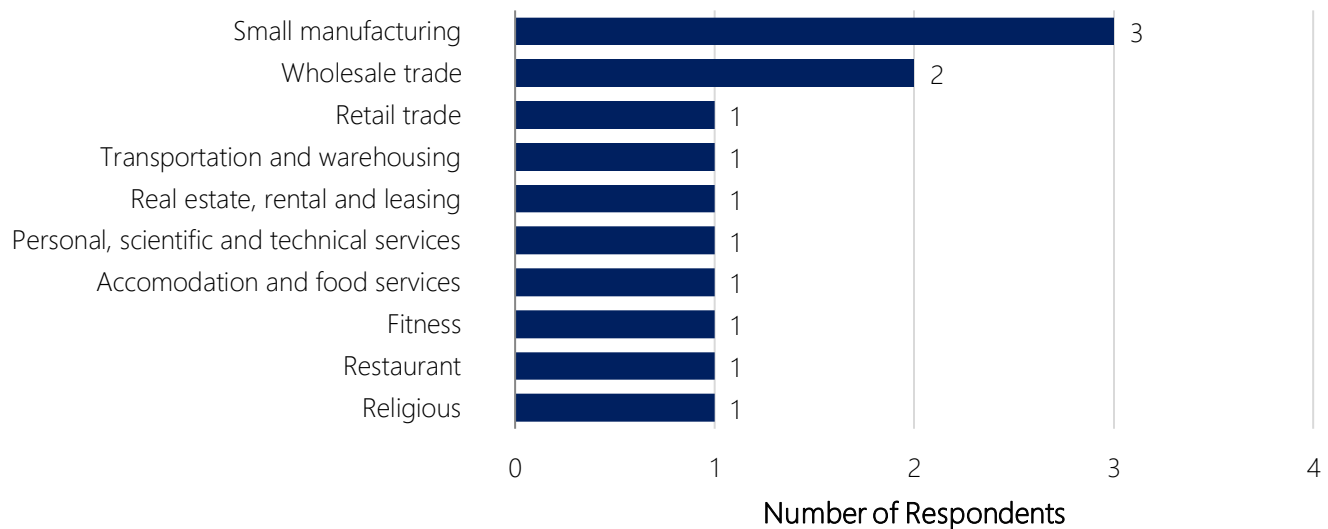
E.3.1 Participant Survey Firmographics

Respondents shared some information about their companies and the facilities included in this program. Figure E-5 lists the primary industries of the participating organizations. Small manufacturing is the most common.





Figure E-5. SCDI Program Participant Primary Industries



Source: SCDI Program Participant Survey. Question Q57. "What is the primary industry of your organization?" n=13

Seven of 12 respondents who provided the square footage of their facility said it was under 4,000 square feet, while the remaining five respondents said their site was over 10,000 square feet. Most participants also shared whether their conditioned spaces and water were heated with gas or electricity (Table E-3).

Table E-3. SCDI Program Participant Facility Metrics

Square Footage	Under 4,000	Over 10,000	Don't Know/Refused
Number of respondents	7	5	2
Heating Type	Natural Gas	Electric	
Conditioned space heating	9	4	1
Water heating	5	6	3

Source: Participant Survey. Question Q58-60. "What is the approximate square footage of heated and cooled space in your facility?" "Is your facility conditioned space heated primarily with electricity or gas?" and "Is your facility's water heated primarily with electricity or gas?" n=14.

E.3.2 Installation Contractor Interview Firmographics



The company size of the three participating installation contractors ranged from 15 to 45 employees (including full and part-time employees; no subcontractors). The two installation contractors with the most employees provide services throughout the state, while the installation contractor with the fewest employees concentrates its services in the Atlanta metro area.





Figure E-6 describes the company size and service areas represented by the three installation contractors.

Figure E-6. Installation Contractors' Company Size and Service Areas

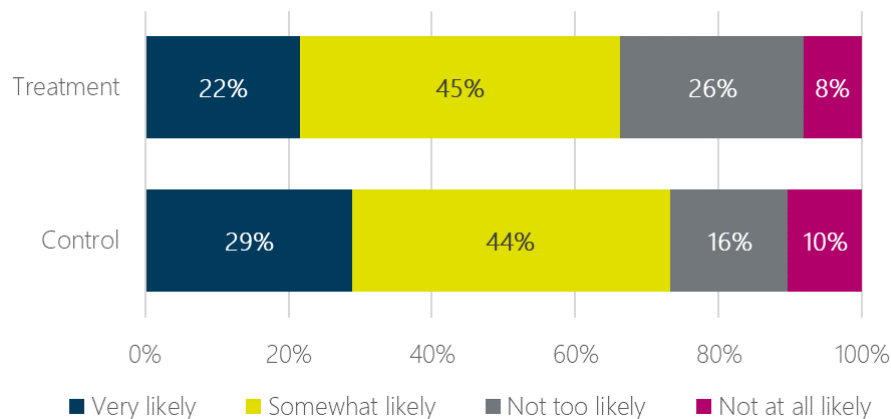
	Respondent 1	Respondent 2	Respondent 3
 Number of employees in Georgia	45	20	15
 Served areas of Georgia	All four corners of the state	All four corners of the state, but need business justification to go 100 miles outside of company's home base	Mostly Atlanta metro area with some service to the south, but not beyond Macon

Source: Installation Contractor Interviews. Questions Q22 and 23. "Please tell me approximately how many people your company employs to serve customers in Georgia." and "What geographic areas in Georgia does your company provide services to?" n= 3.

E.4 Behavioral

This section contains additional analysis from the treatment and control group survey.

Figure E-7. Likelihood to Participate in a Georgia Power Program in the Next Six Months

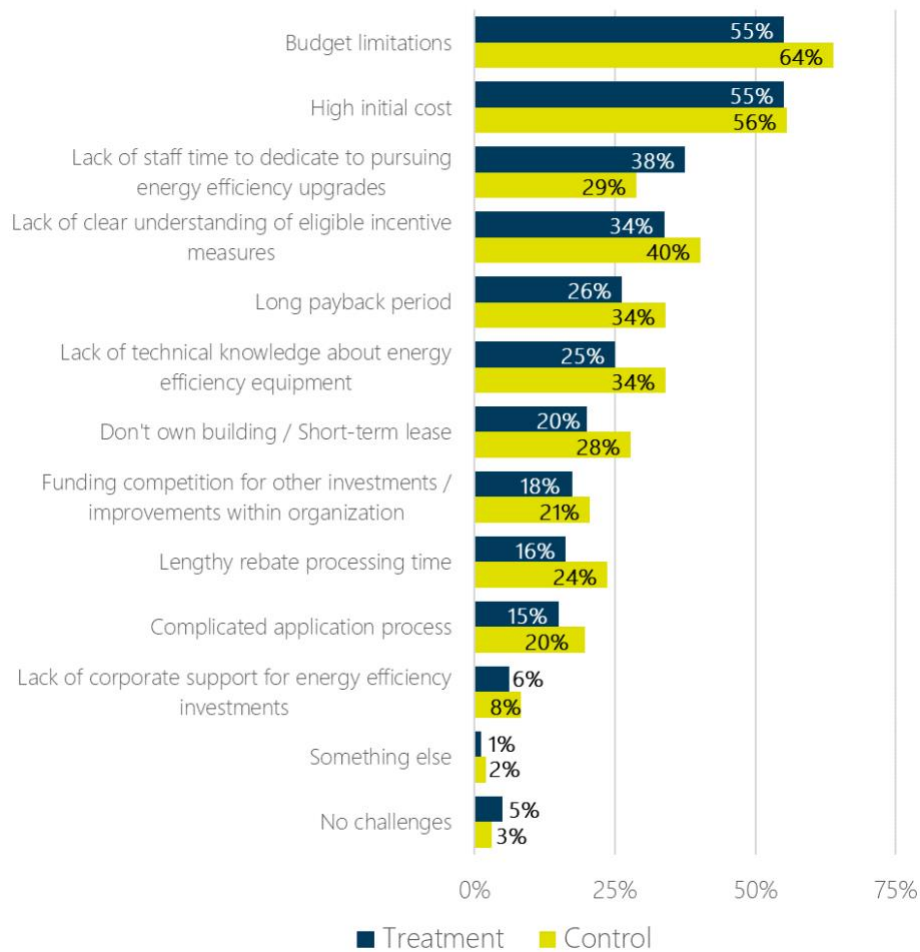


Source: Commercial Behavioral Program Treatment and Control Survey. Question Q7. "The Georgia Power Commercial Energy Efficiency programs provide commercial customers like you with rebates and incentives to install energy-efficient equipment such as lighting, chillers, smart Wi-Fi thermostats, variable frequency drives, pumps, motors, kitchen equipment, and other equipment. How likely do you think your business would be to participate in one of these programs in the next six months?" Treatment n=74; Control n=97. Percentages may not add to 100% due to rounding.





Figure E-8. Challenges to Making Energy Efficiency Upgrades

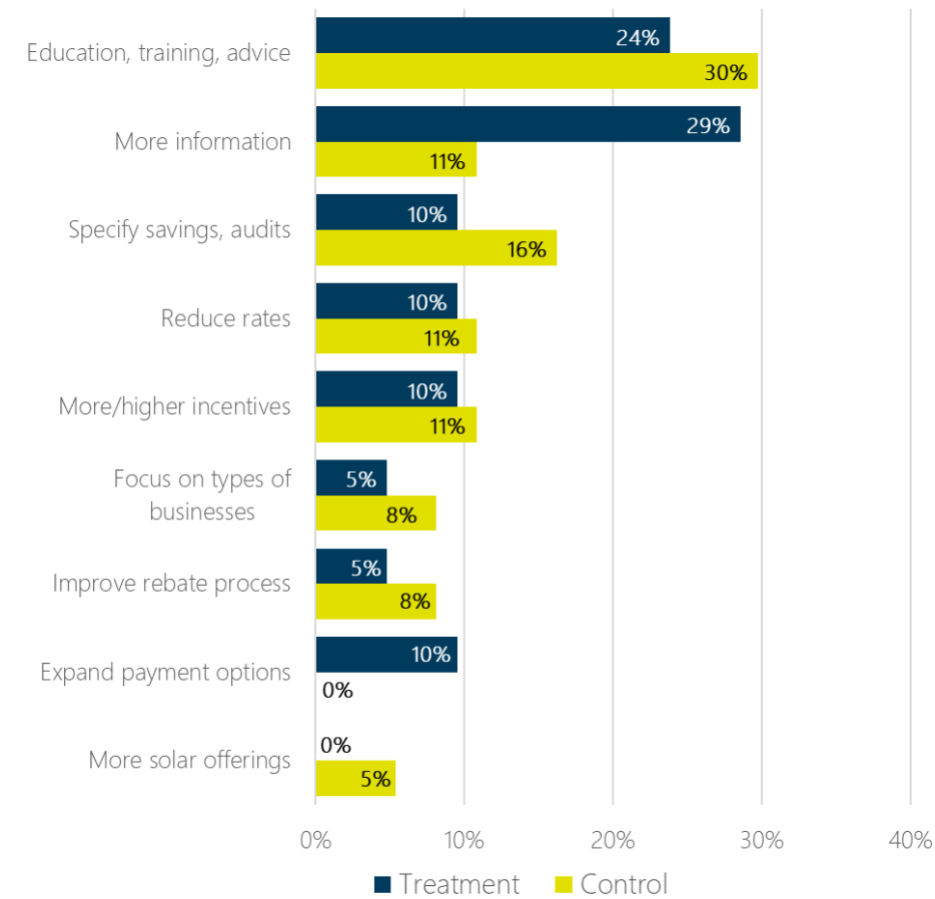


Source: Commercial Behavioral Program Treatment and Control Survey. Question Q14. "Generally speaking, what are the challenges to making energy efficient improvements in your business? Please check all that apply. [LIST OF ITEMS]" Treatment n=80; Control n=97.





Figure E-9. Suggestions for How Georgia Power Can Help Businesses Overcome Challenges

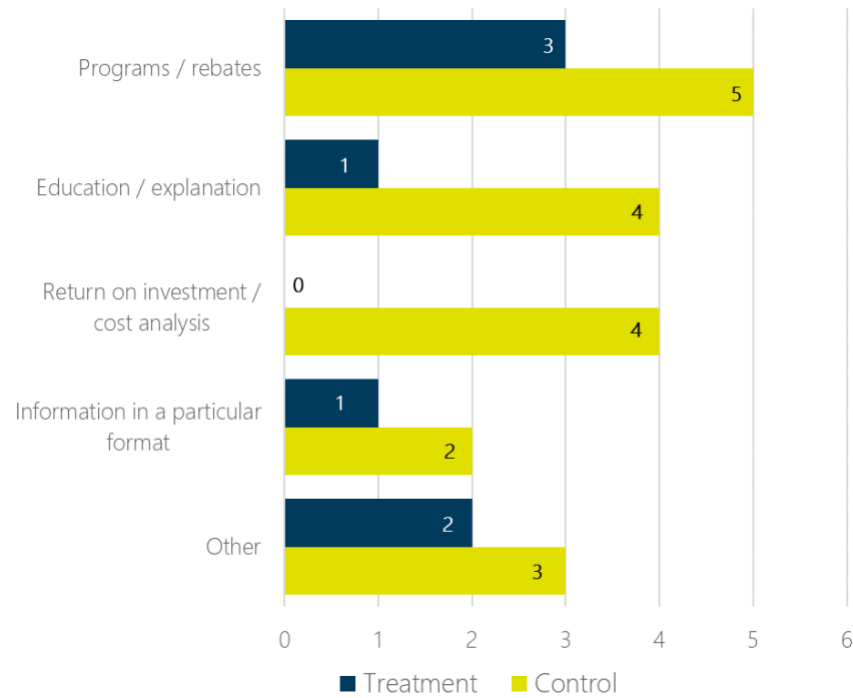


Source: Commercial Behavioral Program Treatment and Control Survey. Question Q15. "What could Georgia Power do to help your business overcome these challenges?" Treatment n=21 suggestions; Control n=37 suggestions. Percentages may not total to 100% due to rounding.





Figure E-10. Additional Information that Would Motivate Upgrades

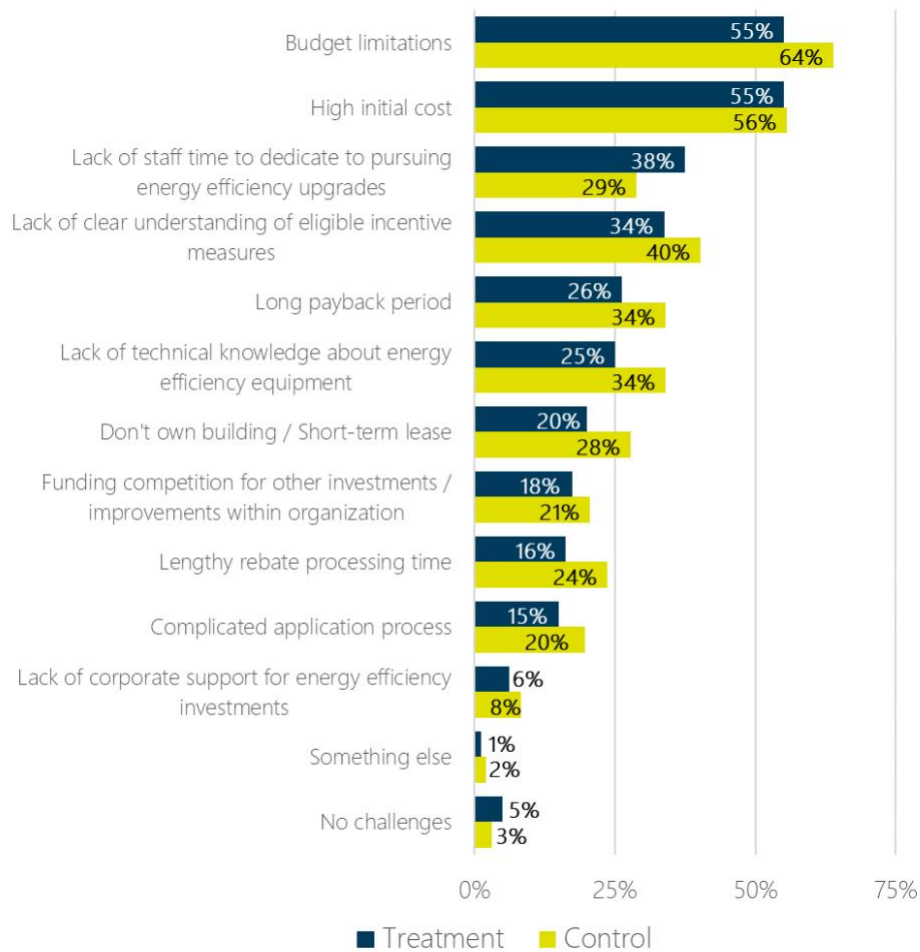


Source: Commercial Behavioral Program Treatment and Control Survey. Question Q17. "What kind of information from Georgia Power would motivate you to make more energy-efficient purchases or upgrades on current equipment?" Treatment n=7; Control n=18.





Figure E-11. Challenges to Making Energy Efficiency Upgrades



Source: Commercial Behavioral Program Treatment and Control Survey. Question Q14. "Generally speaking, what are the challenges to making energy efficient improvements in your business? Please check all that apply. [LIST OF ITEMS]" Treatment n=80; Control n=97.





Appendix F Behavioral Focus Group Findings, Conclusions and Recommendations

This section includes findings from the focus groups,²⁸ organized by research objective. Focus group respondents were not actual BEA recipients and responded to example reports to provide their feedback early on in the implementation process.

F.1 Awareness, Understanding, and Challenges to Saving Energy

As a pre-discussion activity, the evaluation team posed the following questions to respondents through a virtual poll:

- ▶ How familiar are you with ways to save energy at your business?
- ▶ What level of priority is reducing energy use at your business?
- ▶ What is the greatest value of energy efficiency to your business?

All respondents agreed that the greatest value of energy efficiency to their businesses was reducing cost. Most respondents considered reducing energy use to be a high priority, while some considered it a medium priority. Respondents indicated a range of familiarity with ways to save energy at their businesses; one respondent expressed no familiarity at all while others felt both very and somewhat familiar with ways to save energy.

After completion of the poll, the moderator asked respondents to share their challenges with making energy saving improvements at their businesses.²⁹ Most respondents said they had made all of the energy efficiency improvements possible to their facilities or were not able to reduce their energy use more than they already had. One food service respondent said, “I’m not sure what we can do—I can’t turn off the walk-in freezers and refrigerators. I installed LEDs, and we have the AC running all the time for customers. Where else can I save?” Similarly, a healthcare respondent said, “Our ultrasound equipment must have enough power to work. No matter how much I want to reduce it, the manufacturer won’t let the equipment consume less power and perform the same.” Further, a respondent in the education sector said, “We’re cooling a large building, which is very expensive. We’ve focused on efficiency within those systems, changed all lights to LED, added occupancy sensors, replaced windows... we made a lot efficiency [improvements] when we came into the building through grants, now they are all incremental changes.” Other respondents agreed, expressing uncertainty about where to look for additional savings opportunities at their businesses.

²⁸ Due to the design of focus groups as a discussion and not a survey or interview, not every respondent provides an answer to every question, so responses are described in general terms.

²⁹ Due to time limitations and the need to get detailed feedback on the BEA design, the evaluation team shortened the discussion on this topic for the second group. This resulted in some questions only being asked to one group.





One respondent raised the complicating factor of not owning their own space. This respondent, who rented a building, said, “[The] landlord is not interested in making [the building] more energy efficient. In the summer, [we’re losing money] on the air conditioning because it’s going out the windows since they aren’t sealed properly.” Another respondent who rented their facility raised a different barrier: they were not aware they could upgrade equipment to more energy-efficient models without landlord involvement.

Furthermore, before reviewing the BEA with respondents, respondents in one group were asked about their familiarity with ways Georgia Power can help businesses manage energy use. All said they barely remembered anything about Georgia Power’s program offerings. Only one food service sector respondent mentioned that they “remember seeing an email, but I didn’t know what I could do [to save energy] so I didn’t follow up.”

F.2 Perceptions of the BEA and Potential Enhancements

Respondents spent most of the focus group providing feedback on the clarity and applicability of the information presented on the front and back of the BEA.

F.2.1 Front of the BEA

During the focus group, the evaluation team tested three sections on the front of the BEA:

- ▶ Energy usage comparisons
- ▶ What impacts your bill
- ▶ Case study

F.2.1.1 Energy Usage Comparisons

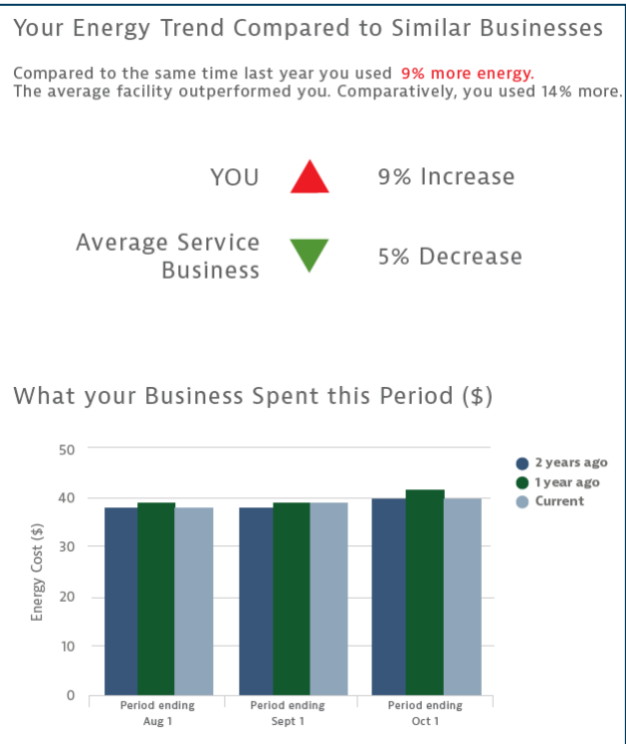
Respondents reacted unfavorably toward the section comparing the customer’s energy use against a similar business because the BEA did not define a “similar business” (Figure F-1, top half). One retail respondent said, “You can’t compare a new building to an old building. I need to know what similar business means.” All respondents indicated that they would need a clearer understanding of what was included in the comparison to find it valuable. Specifically, respondents requested information on the similar business beyond the business type, such as the size of building, type of space, and occupancy level (all of these items were requested by an education sector respondent; the other respondent did not give specifics).





Some respondents were confused about information that is being conveyed in the percentage of energy increase/decrease comparison (e.g., “YOU” compared to the “Average Service Business”). For example, one

Figure F-1. Energy Usage Comparisons



respondent did not understand how someone paid less (referring to the “What your Business Spent this Period” comparison graph) when the “YOU” figure showed their usage went up 9% compared to the prior year. In the example provided in Figure F-1, the top section refers to energy usage in kilowatt-hours, while the bottom section refers to energy cost; the respondent assumed that changes in energy use and spending would align with one another.

The graph of the customer’s energy spending (lower half of Figure F-1) received mixed reviews from respondents. While one respondent said it did not provide any new information, noting this is what they could get from their bill, the other respondents liked the feeling of familiarity between this information and what they could find on their bill. Additionally, these respondents said such a graph could help them track their energy usage over time. One education sector respondent stated, “You can see changes when you

make upgrades, which you can show to [important stakeholders].”



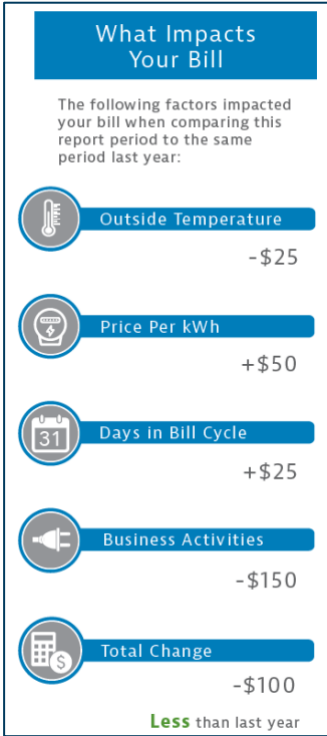


F.2.1.2 What Impacts Your Bill

Out of all elements on the front page of the BEA, respondents found the What Impacts Your Bill section the most valuable (Figure F-2), but still thought improvements were needed. Specifically, respondents found the Business Activities item appealing because it is the only aspect of energy use addressed in this section that they can control. However, three respondents were confused about the term “Business Activities.” A healthcare sector respondent said, “It’s hard to know what it means when business activities are different for everyone.” Despite confusion over the term, this same respondent said that including this information in the context of other factors could be useful, because it could help explain why a bill goes up even if the company’s level of business activities goes down (such as having fewer employees in the building due to COVID restrictions). One food service sector respondent said it would be helpful to see the business activity usage broken down by equipment type (such as lighting, HVAC, etc.), but acknowledged the complexity of doing so.

Respondents commented that the other three items (excluding the Total Change line)—Outside Temperature, Price Per kWh, and Days in Bill Cycle—are not aspects they have control over. One respondent said, “the outside temperature, price per kilowatt hour, days in a bill cycle – those are out of our control... I have to be open to make a profit, so this information isn’t helpful [to identify ways to reduce my energy cost].” When discussing outdoor temperature, respondents said it can have a big impact on energy consumption. An office sector respondent stated, “Adding the [actual temperature] might help people better understand why they spend more or less.” This reflected the sentiments of multiple respondents who all agreed that they would like to see the actual temperature from the billing period. A healthcare sector respondent also thought comparing temperature to the prior year might improve the usefulness of the energy usage graph that compares current costs to the prior period. Finally, in response to the Days in Bill Cycle item, one education sector respondent thought of energy use as a daily average rather than a monthly total, making the displayed data less useful.

Figure F-2. What Impacts Your Bill



F.2.1.3 Case Study

The evaluation team tested an alternate version of the front of the BEA that contained a short case study (Figure F-3) while keeping all other aspects of the BEA the same as the first test version. Overall, respondents liked the idea of having a case study on the BEA, with one respondent stating that “this is a helpful way to communicate savings.” Respondents also pointed out that it needed to be relatable and tailored to their specific size and type of business for the message to resonate. Specifically, one education sector respondent said, “It’s very important [that the case study is for my industry], because there’s no relevance otherwise.”





Respondents agreed that the example case study covering a commercial real estate owner was not relatable because of the type of work highlighted (office retrofits by the building owner) and the size of the project (\$2.3 million). One food service sector respondent said, “The case study wasn’t helpful [to me] because we’re a small business—our landlord owns the air conditioning and windows—so much of the savings is out of our control. [In contrast, Banyan Street Capital] has control [over more aspects of their energy usage].” While it is unclear from the case study tested in the focus group whether the example business owned its building, the respondent’s comments illustrate the need for additional details to connect with customers.

Figure F-3. Case Study



Additionally, all respondents wanted more information included in the case study to help them understand what type of work can be done, what the associated costs are, and what incentives are available to help offset project costs with specific breakdowns by equipment type. One food service respondent said, “All I know is what they saved, the incentive amount, and the project cost. If they included the upgrades they completed, then maybe I’d be interested in finding out more.” This comment illustrates the desire for more information and how including it could prompt this respondent to take further action.

F.2.2 Back of the BEA

After reviewing the two versions of the front of the BEA, the moderator moved the discussion to explore the back of the BEA and focused on the Energy Saving Tips and Programs for Your Business section (Figure F-4). This section included a series of three boxes that contained either a tip on saving energy or a reference to a specific Georgia Power program. All respondents were generally enthusiastic about this content, calling out the practical guidance on reducing energy use such as the energy saving tips and programs in which they can participate. One food service sector respondent said, “This is more practical [than the front of the BEA] because it’s providing specific things we can do.” Another food service respondent who was not aware that Georgia Power offered lighting rebates said, “I should look into [these lighting rebates]. There’s a contact number and URL—that’s helpful,” further emphasizing the importance of including easy next steps. This respondent then proceeded to type the URL into his web browser and explore the options available to him.





Figure F-4. Energy Saving Tips and Programs for Your Business

Energy Savings Tips and Programs for Your Business

Georgia Power is here to help you save with top energy-saving tips and programs for your business with clear next steps to get you started.

No Cost Tip



Most systems are set to 72–75 degrees F and 50 percent relative humidity. By raising the thermostat to 78 degrees F and 55 percent relative humidity, you can reduce the energy required for cooling by roughly 13 percent.

Find more energy savings tips at georgiapower.com/biztips

Annual Savings Up to \$100

Prescriptive Program



Energy-efficient lighting not only reduces costs but can also increase productivity and customer satisfaction. Our rebates make interior and exterior lighting upgrades more affordable.

Learn more about eligible equipment at georgiapower.com/smartenergy

Learn More Online

EnergyDirect



There is no need to sacrifice time or money from your business to reduce energy costs. EnergyDirect, our energy management tool, helps you identify areas where your business can save on your energy bill.

Sign up now at georgiapower.com/energymangement

Sign Up Today

In reaction to the types of tips and programs featured on the back of the BEA, all but one respondent said they were more likely to act if the actions were easy to do and the benefits were tangible. One office sector respondent said, “[We] get so busy with our business; we don’t think about saving money and just pay the bills.” This respondent found it helpful to see the reminder about reducing energy costs with efficient lighting. An education sector respondent said, “Everyone knows about the thermostat settings, but it’s a great reminder”—a sentiment echoed by other respondents in the groups. Three respondents said they specifically liked seeing some actions they were already aware of as a reminder (an acknowledgement that they were on the right path), in addition to new ideas for saving money.

F.3 Effective Engagement with BEA Content

After reviewing the BEAs in detail, the moderator asked respondents to talk about what would prompt them to take action to reduce energy usage if they received a BEA, the process of transitioning to the website after viewing the BEA, and their preferences for digital versus physical receipt of the BEA.

When discussing what would motivate them to take action, all respondents agreed that the financial impact of making energy-saving improvements was the most important factor in motivating them to engage with the BEA. One food service sector respondent said, “Show me how [the actions in the BEA] could affect my bottom line,” which underscores the need to tie energy savings to financial savings. Another education sector respondent specifically mentioned energy savings and bills stating, “Cooling a large building is very





expensive, and it's very hot here. Our bills are much higher in August and September compared to February, even with [thermostat setbacks." A healthcare sector respondent who had similar sentiments said, "Energy is part of my primary budget. It's good to see how I can reduce consumption because I am fighting for budget on a daily basis." This feedback was consistent with the responses to the poll administered at the beginning of the focus group, where all five respondents said that reducing cost was the greatest value of energy savings to their businesses.

Regarding taking next steps based on content in the BEA, respondents wanted the transition to the website to be easy, including short links, clear steps, and additional key details. One respondent from the education sector said they would "go to the link that is provided and see if it looks promising... [and] try to find the right person to follow up with." This respondent expected a shortened link on the BEA to go directly to the referenced content, such as a page about Georgia Power's lighting program. All respondents from one group agreed that they would go to Georgia Power's website to learn more about anything that caught their interest in the BEA.³⁰ In addition, these respondents said they would like the phone number of a Georgia Power representative who could discuss their specific circumstances. A retail sector respondent summed up this sentiment by saying, "I like looking at program information online because you can see everything possible. If I [can't figure it out online], I'll call."

While Georgia Power plans to send a hard copy of the BEA via postal mail, three respondents thought it would be more effective to receive the report via email. These respondents said the current amount of mail and hard-copy items they had on hand was an issue and they thought the BEA could get misplaced. One respondent said, "I prefer email—I just do autopay for everything, so I don't look [at most mail.]" In contrast, another respondent said they were likely to open the BEA if they received it in the mail because "it's from Georgia Power and might affect my business."

F.4 Experience with the Landing Page

Finally, the groups discussed the Commercial Behavioral program landing page. First, the moderator asked respondents what they expected to see and then the group reviewed the landing page to see how it met their expectations. Respondents said they expected to find details on energy-saving opportunities and energy data specific to their businesses to supplement the BEA. They also said that they expected to see links to relevant programs to apply for rebates. After viewing a screen shot of the actual landing page (Figure F-5), respondents liked the focus on lowering their next electric bill, with one respondent exclaiming, "Perfect! There's the save money part!" A retail sector respondent said the landing page generally aligned with their expectations, but that they had, "expected the Get Energy-Saving Tips icon to be a button [that takes you to the relevant webpage.]" Another food service respondent had a similar reaction and said, "I

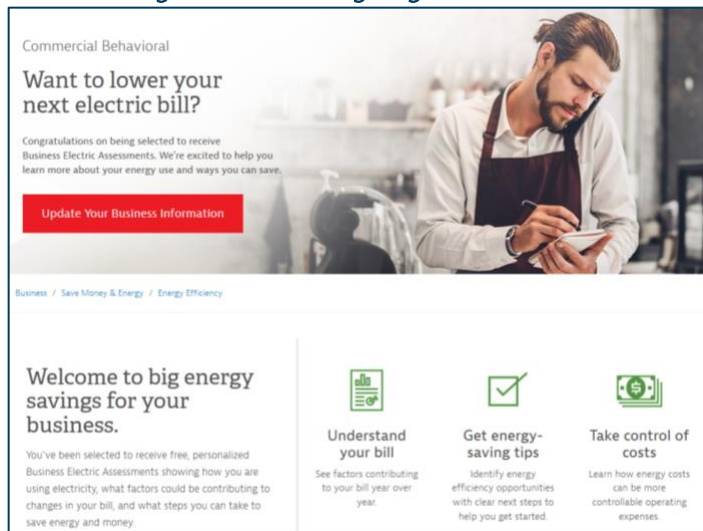
³⁰ This question was only asked to one of the two focus groups due to time constraints.





would expect it to show me supporting data [from the BEA] and how I can apply for rebates.” This demonstrated the respondents’ desire for clear linkages between the BEA and the content on the landing page. One respondent was confused by the name *Commercial Behavioral* at the top of the landing page

Figure F-5. Landing Page Initial View



and asked, “What do they mean by ‘Commercial Behavioral’? Do they mean staff action?”

A core feature of the landing page is the opportunity for customers to provide additional information to improve the accuracy of the BEA. All respondents said they were willing to provide this information on Georgia Power’s website if it was used to improve the output of the BEA. One education sector respondent said, “We’re a public organization, so we’re comfortable with everyone knowing everything. Nonprofits and public institutions shouldn’t have a problem [with providing additional

information.]” A food service sector respondent was also comfortable providing this information because “[Georgia Power] is a reputable company.” However, this respondent also said it was important to know how providing this information would benefit their company, so it is important to clearly note the reason Georgia Power is collecting the additional information.

F.5 Conclusions and Recommendations

This section presents the evaluation team’s conclusions and recommendations from the focus groups, which were finalized in November 2020.

Conclusion 1: The purpose of the BEA aligns with customers’ strong desires and motivations to save energy and the need for education on energy-saving opportunities relevant to their circumstances.

All respondents indicated that reducing energy costs was a high priority, but most said they were not as familiar with the ways they could reduce energy use. Only two respondents said they were very familiar with ways to reduce energy use. Furthermore, all respondents were highly motivated by saving money and interested in understanding energy saving opportunities, but only when relevant to their circumstances. The goal of the BEA is to provide information on energy use and savings opportunities and to demonstrate alignment between customer needs and program objectives. However, respondents were interested in having more information on how to save energy (such as what changes can be made as a building tenant versus as a landlord). For example, most respondents were uncertain about where to look for additional savings opportunities beyond the energy saving measures they already completed. These respondents





thought they had done everything they could and were pleased to learn that there may be more they could do (for example, one respondent did not know about Georgia Power's lighting program).

Recommendation: Provide compelling, specific (to the extent feasible) messaging about the availability of additional energy saving opportunities and distinguish messages applicable to renters and owners. Provide tailored insights to renters given the limited scope of what they can change within their buildings.

Conclusion 2: While customers appreciated several elements of the BEA, especially those over which they have control, confusion about the information presented on bill cycle, price and temperature elements is a barrier to action.

Respondents found value in several elements of the BEA, such as the graph with energy spending information, the Business Activities line item in the What Impacts Your Bill section, and the tips and program listings on the back of the BEA. Respondents found these elements to be more valuable than other elements because they have control over their usage, while other parts of the BEA, such as the Days in Bill Cycle and Price per kWh, are elements they cannot control. Additionally, respondents also noted aspects of the BEA that they found confusing based on the current content and layout (mostly on the front page):

- ▶ All respondents said they needed to know more about the similar business they were being compared to for the insights to resonate. This was true for both the peer comparison and case study BEA stimuli tested.
- ▶ All respondents said that adding corresponding kilowatt-hour usage data alongside the energy spending data (in dollars) in the energy spending graph (located in the What Impacts Your Bill section) would help them understand the BEA better.
- ▶ Respondents said it would be useful to see the average monthly outdoor temperature along with the dollar impact as a point of reference.
- ▶ Respondents wanted more detail on what was included in the Business Activities line item, as they did not understand this term.

Recommendation: Provide a definition for the similar business used as a comparison to improve the sense of relevance, and customer trust in the insights.

Recommendation: Include energy use and savings values in dollars and kilowatt-hours to mirror the types of information customers already receive and are comfortable with from their bills.

Recommendation: Modify the layout and wording of the What Impacts Your Bill section to make it easier to understand, such as highlighting the items that customers can control and providing a definition for the Business Activities line item.

Conclusion 3: Customers want and value case studies to understand the types of energy-saving opportunities available to them and placed greater value on stories most relatable to their industry and relevant to their size and type of business.





When discussing case studies in general, all respondents said there was potential value for the case studies to help them understand what types of work can be done to reduce energy costs. However, the case study tested in the focus groups did not resonate with respondents due to multiple aspects: the size of the project completed was larger than what most respondents could relate to, the type of work completed (commercial office retrofits) was not relatable to some respondents (such as those in the food service sector), and the case study did not provide information on what measures were installed or the specific work completed. All respondents wanted more information included about the case study to help them understand what type of work can be done, what the associated costs are, and what incentives are available to help offset project costs with specific breakdowns by equipment type.

Recommendation: Ensure case studies are for business types that face similar challenges to BEA recipients, are of a similar size, and include some details on the work they completed. Include links to featured case studies on the landing page.

Conclusion 4: The BEA has the potential to spur action with relatable content, easy links to online content, and succinct tips for taking action, but could benefit from refinements to make both the BEA and landing page content more relevant and useful.

Respondents reacted favorably to the example BEA content, and repeatedly stressed the importance of knowing that the content reflected them. Respondents said that they would be more likely to act upon receiving the BEA if the content was reflective of their businesses' patterns and needs, including energy data specific to their businesses. Specifically, all respondents said highlighting the financial impact of making energy-saving improvements would increase the likelihood that they seek out more information. Additionally, respondents said the transition from the BEA to the website should be easy—including short links, clear steps, and additional key details—and expressed interest in taking further action if the process was simple.

Once on the landing page, three respondents said they expected to see additional details beyond the information contained in the BEAs they received. Specifically, one respondent had expected the top of the landing page to have clickable images and text to take visitors to relevant program pages. All respondents said they were willing to provide additional information via the Georgia Power website if it improves the content and accuracy of the BEA (i.e., if it can help tailor the information they receive to more specifically address their circumstances and help them understand how they can save money at their facility).

Recommendation: Ensure the connection between the BEA and Georgia Power's online resources is strong, such as including clear call-to-actions that direct customers to the appropriate resources via shortened links.

Recommendation: Feature a variety of relevant tips and programs on the back of the BEA to increase customer interest.





Recommendation: Create more direct linkages between the landing page and the types of content featured in each BEA, including substantive and tailored content that customers can readily use to access savings.

Appendix G Prescriptive Program Details

Table G-1. Program Measure Offerings

Category	Equipment Type	Incentive
Interior Lighting	LED Screw-In	\$2/Lamp
Interior Lighting	LED Décor/Candelabra	\$4/Lamp
Interior Lighting	TLEDs	\$3/Lamp
Interior Lighting	LED Troffer Fixture/Retrofit Kit	\$25/Fixture
Interior Lighting	Linear Retrofit Kit	\$10/Fixture
Interior Lighting	LED Can, Track, Pendant	\$10/Fixture
Interior Lighting	LED Stairwell Fixture (with Integrated Controls)	\$20/Fixture
Interior Lighting	LED Exit Signs	\$7/Fixture
Interior Lighting	LED High Bay	\$30-100/Fixture
Interior Lighting	New Fluorescent T5HO/Low Bay Fixture	\$20-50/Fixture
Interior Lighting	LED High Bay Retrofit Kit	\$15-50/Kit
Interior Lighting	Lighting Occupancy Sensor (Wall or Fixture Mounted)	\$7/Control
Interior Lighting	Daylight Sensor	\$25/Control
Exterior Lighting	LED Exterior	\$10-120/Fixture
Exterior Lighting	LED Exterior Retrofit Kit	\$10-95/Kit
Exterior Lighting	Parking Garage LED Light	\$30-50/Fixture
Exterior Lighting	LED Parking Garage Light Retrofit Kit	\$15-30/Kit
Exterior Lighting	Gas Station Canopy LED Light	\$50/Fixture
Exterior Lighting	LED Gas Station Canopy Light Retrofit Kit	\$25/Kit
Exterior Lighting	LED Pole-Mounted Fixture	\$10-120/Fixture
Exterior Lighting	LED Pole-Mounted Retrofit Kit	\$10-95/Kit
Exterior Lighting	Mogul Screw-base HID Replacement	\$15/Lamp
New Construction Lighting	New Construction Lighting	\$0.04/kWh saved
Business Equipment	High-Efficiency Servers	\$100/server
Business Equipment	Server Virtualization	\$1,200/10 servers
Business Equipment	High Efficiency Battery Charger	\$200/unit
Business Equipment	PC Power Management	\$10-20/device





Category	Equipment Type	Incentive
Food Service/Grocery	Commercial Dishwasher	\$250/Unit
Food Service/Grocery	Commercial Ice Machine	\$150/Unit
Food Service/Grocery	Commercial Solid Door Freezers and Refrigerators	\$75/Unit
Food Service/Grocery	Grocery Display Case LED Lighting	\$30/Cooler Door
Food Service/Grocery	Anti-Sweat Heat Control- Humidistat	\$15/Cooler Door
Food Service/Grocery	High-Efficiency Case Motors	\$15/Unit
Food Service/Grocery	High-Efficiency Walk-In Motors	\$25/Unit
Food Service/Grocery	Grocery Case Door Gaskets	\$2/Linear Foot
Food Service/Grocery	Low-Flow Pre-Rinse Spray Valves	\$10/Unit
Food Service/Grocery	Display Case Night Covers	\$3/Linear Foot
Food Service/Grocery	Anti-Sweat Refrigerated Case Doors	\$50/Door
Food Service/Grocery	Open Glass Refrigerated Case Doors	\$100/Unit
Food Service/Grocery	Strip Curtains	\$3/Square Foot
Food Service/Grocery	High-Efficiency Ventilation Hoods	\$200/HP
HVAC	Smart, WiFi-Enabled Thermostat	\$75/Unit
HVAC	Variable Frequency Drives (VFDs)	\$50/HP
HVAC	Hotel Key Card Room Energy Control System	\$100/Guest Room
HVAC	Commercial Door Air Infiltration Reduction	Exterior Doors: \$2/LF Overhead Doors: \$8/LF
HVAC	HVAC Dock Door Seals	\$175/Unit
HVAC	HVAC CoolSaver AC Tune-Up	\$150-\$1,500/unit
Pumps	Variable Speed Irrigation Pump	\$50/HP
Pumps	Variable Speed Pool Pump	\$193/unit
Water Heaters	Heat Pump Water Heater	\$250/unit





Appendix H Midstream Products Verified Savings Detail

This appendix shows the measure and per-unit level detail for reported and verified gross savings. Table 6-6 shows the reported savings and measure totals for each equipment type. Table 6-7 shows the total quantity and verified per-unit energy and demand savings for each measure rebated through the program.

Table 6-6. Midstream Products Program Reported Participation and Savings by Measure

Equipment Type	Number of Measures	Reported kWh	Reported kW
Split & Package AC	921	2,283,682	980.36
Split & Package HP	150	159,918	37.42
VRF Mini Split AC	22	81,753	10.35
VRF Mini Split HP	309	1,073,813	135.92
HVAC Subtotal	1,402	3,599,166	1,164
Commercial Hot Food Holding Cabinet	166	332,000	60.92
High-Efficiency Combination Oven	140	680,400	110.04
High-Efficiency Griddle	15	28,635	4.61
Commercial Steam Cooker	41	319,308	46.90
High-Efficiency Fryer	211	69,630	11.18
Food Service Subtotal	573	1,429,973	234
TOTAL	1,975	5,029,139	1,398



*Table 6-7. Per-Unit Verified Energy and Demand Savings by Measure*

Equipment Type	Quantity	Verified Gross kWh/Unit	Verified Gross kW/Unit
Split & Package AC < 65,000	377	918	0.241
Split & Package AC 65,000<=134,999	232	2,146	0.557
Split & Package AC 135,000<=239,999	251	4,934	2.843
Split & Package AC 759,999>=240,000	61	2,989	0.595
Split & Package ASHP < 65,000	117	681	0.141
Split & Package ASHP 65,000<=134,999	31	2,368	0.482
Split & Package ASHP 135,000<=239,999	2	3,404	1.964
VRF Mini Split AC	22	408	0.107
VRF Mini Split HP	309	3,487	0.443
Commercial Hot Food Holding Cabinet	166	2,000	0.367
High-Efficiency Combination Oven	140	4,860	0.786
High-Efficiency Griddle	15	1,909	0.307
Commercial Steam Cooker	41	7,787	1.144
High-Efficiency Fryer	211	330	0.053

The evaluation team calculated reported savings using the same methodology as reported, so the program's realization rate is equal to the verified savings ratio. Table 6-8 shows the total verified energy savings and realization rate by measure.



*Table 6-8. Midstream Program Verified kWh and Realization Rate by Measure*

Equipment Type	Reported kWh	Verified Gross kWh	Realization Rate
Split & Package AC	2,283,682	2,264,631	99%
Split & Package HP	159,918	159,950	100%
VRF Mini Split AC	81,753	8,976	11%
VRF Mini Split HP	1,073,813	1,077,423	100%
HVAC Subtotal	3,599,166	3,510,980	98%
Commercial Hot Food Holding Cabinet	332,000	332,000	100%
High-Efficiency Combination Oven	680,400	680,400	100%
High-Efficiency Griddle	28,635	28,635	100%
Commercial Steam Cooker	319,308	319,267	100%
High-Efficiency Fryer	69,630	69,630	100%
Food Service Subtotal	1,429,973	1,429,932	100%
TOTAL	5,029,139	4,940,912	98%

Table 6-9 shows verified demand savings and realization rate by measure.





Table 6-9. 2020 Program Verified kW and Realization Rate by Measure

Equipment Type	Reported Ex Ante kW	Evaluated Ex Post kW	Realization Rate
Split & Package AC	980.36	969.77	99%
Split & Package HP	37.42	35.38	95%
VRF Mini Split AC	10.35	2.35	23%
VRF Mini Split HP	135.92	136.84	101%
HVAC Subtotal	1,164.05	1,144.33	98%
Commercial Hot Food Holding Cabinet	60.92	60.92	100%
High-Efficiency Combination Oven	110.04	110.04	100%
High-Efficiency Griddle	4.61	4.61	100%
Commercial Steam Cooker	46.90	46.90	100%
High-Efficiency Fryer	11.18	11.18	100%
Food Service Subtotal	234	233.65	100%
TOTAL	1,397.71	1,377.99	99%





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GROUP

1711 Pearl Street, Suite 200
Boulder, CO 80302
(303) 792-8662
www.brightlinegroup.com