

# **BGE Prepaid Pilot Evaluation**

**Final Report - Updated**

**June 2021**

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## Executive Summary

This report presents the findings from an evaluation of BGE's Prepaid Pilot Program. This program provides customers with the opportunity to pay for their energy in advance of use and make additional energy payments as needed.<sup>1</sup>

### ***Prepaid Pilot Program***

The Public Service Commission of Maryland (PSC) authorized BGE to develop a one-year Prepaid Pilot Program with 1,000 electric-only and dual-service customers to test the feasibility and customer acceptance of a utility prepay service program.

BGE's goal was to recruit 1,000 customers to participate in the Prepaid Pilot. They began recruiting customers to participate in August 2019. Most of the Prepaid participants enrolled in October and November 2019. As of December 2019, there were 527 Prepaid participants. These are the participants who are studied in this report.

The COVID-19 pandemic had impacts on the Prepaid Pilot for several reasons. Due to the pandemic, beginning in March 2020 BGE did not disconnect customers who had a zero or negative balance. Additionally, many customers had changes in their energy usage behavior because they were spending more time at home, and customers may have had more difficulty paying their energy bills because they become unemployed due to the pandemic. As a result of these program-related changes, energy usage changes, and income changes, findings from this evaluation are likely different from those that would be found during a more typical time period. While a comparison group can correct for some of these issues, we still expect that the findings presented in this report are unique to this time period. The report explains where we may expect findings to be different during a more typical time and also provides some analyses for the period prior to the onset of the pandemic.

### ***Enrollment Analysis***

Key findings on enrollment and the characteristics of customers who enrolled in the Prepaid Pilot are summarized below.

- **Invitations and Enrollment:** BGE recruited customers through emails, postcards, promotion on their home page, and recruitment by BGE customer service representatives. Only 0.2 percent of the customers who were invited to participate enrolled in the Prepaid Pilot Program.
- **Enrollment Month:** Enrollment was slow in the first two months of program outreach. The vast majority of participants, 84 percent, enrolled in October and November 2019. As of December 2019, there were 527 Prepaid participants.

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<sup>1</sup>This version updates the report filed with the Maryland PSC on June 1, 2021. Additional information on whether customers returned to post-pay during terminations and month of terminations is added on pages 109-110.

- **Low-Income:** Roughly 25 percent of program participants self-identified as low-income. However, only six percent received the OHEP energy assistance grant.
- **Retail Supply Customer:** Approximately 34 percent of participants were retail supply customers compared to 26 percent of all invited customers.
- **Risk:** On average, program participants were higher risk than the invited customers. Prepaid participants had significantly riskier credit scores, averaging 338, than all invited customers, whose credit scores averaged 217 (where lower scores indicate lower risk). Forty-seven percent of all program participants had a security deposit compared to 22 percent of invited customers.
- **Arrearages:** Program participants were more likely to have arrearages in July 2019 than all invited customers. Thirty-six percent of program participants had an arrearage compared to 18 percent of all invited customers. While 44 percent of Prepaid participants had an arrearage of \$200 or more, only 31 percent of all invited customers had an arrearage at that level. Fifty-six percent of participants had arrearages when they enrolled in the Prepaid Program between August and December 2019, compared to 36 percent in July 2019.

### ***Participant Survey***

APPRISE conducted telephone surveys with 295 participants in BGE's Prepaid Power Pilot Program in September and October 2020. Some of these participants had disenrolled by this time. The purpose of the survey was to assess participants' motivation for participation, program experiences, perceptions of the program's impact, and program satisfaction. Key findings are summarized below.

#### Customer Characteristics and Demographics

- **Vulnerable Household Members:** 27 percent of respondents reported that there was an elderly household member, 20 percent reported that there was a disabled member, and 45 percent reported a child 18 or younger. Customers who remained enrolled were more likely to have an elderly household member and less likely to have a child in the home.
- **Poverty Level:** Twelve percent had income at or below 150 percent of the poverty level, eight percent had income between 151 and 200 percent of poverty, 26 percent had income between 200 and 400 percent of poverty, and 47 percent had income above 400 percent of the poverty level.

#### Enrollment and Program Understanding

- **Source of Program Information:** When asked how they first learned about the Prepaid Power Program, 53 percent of respondents reported that they learned about the program from a BGE e-mail, 20 percent of respondents reported that they learned about the program from the BGE website, and 16 percent said they learned about it from a letter or mailing from BGE.

- **Invitation from BGE to Join the Program:** 70 percent of participants reported that they received an e-mail or post-card invitation from BGE to join the program. Of the customers who reported receipt of the invitation, 51 percent considered it very important in their decision to enroll in the program and 32 percent considered it somewhat important.
- **Reasons for Enrolling:** Respondents were asked to provide their reasons for enrolling in the program. Forty-seven percent of participants said they preferred flexible payments, 22 percent said they wanted to try it out, 14 percent said they wanted to pay off arrears or maintain services, and 13 percent said they wanted to better manage their energy use.
- **Reasons for Disenrolling:** Disenrolled customers were asked why they chose to leave the program. Thirty-three percent reported that they did not like to make frequent payments, 23 percent reported that they felt the cost was higher, and 13 percent cited a change of address as the reason they left the program.
- **Current Understanding of Program:** Forty-seven percent reported that they have a very good understanding of the program and 35 percent reported that they have a good understanding. While 55 percent of currently participating customers reported that they have a very good understanding, 34 percent of disenrolled customers reported that they have a very good understanding.

#### Program Impact

- **Control Over Energy Expenses:** 61 percent of respondents reported that they have better control over their energy expenses through the Prepaid Power Program. While 78 percent of currently enrolled customers reported improved control, 31 percent of disenrolled customers reported improved control.
- **Reduction in Overall Energy Usage:** Thirty-eight percent of respondents reported that the program caused a reduction in their usage. While 49 percent of currently enrolled customers reported a reduction in usage, 19 percent of disenrolled customers reported a reduction in usage due to the program.
- **Arrearages Prior to Enrollment:** Forty-four percent of respondents reported that they had arrearages before enrolling in the program. This was approximately the same across currently enrolled and disenrolled customers.
- **Program Impact on Paying Off Arrearages:** Thirty-four percent of respondents said the program helped them pay off past due bills. While 41 percent of currently enrolled customers reported that the program helped them pay off past due bills, 24 percent of disenrolled customers reported this benefit. Among customers who reported that they had arrearages at the time of enrollment, 78 percent reported that the program helped them pay off their arrears.
- **Program Impact on Avoiding Disconnections:** Forty-six percent of respondents reported that the program helped them to avoid or reduce the length of disconnection. While 53

percent of currently enrolled customers reported this benefit, 34 percent of disenrolled customers reported this benefit. Among customers who reported that they had arrearages at the time of enrollment, 68 percent reported that the program helped them avoid or reduce the length of disconnection.

### Customer Satisfaction

- **Satisfaction with BGE Customer Service:** Of the respondents who reported that they received help from BGE customer service, 66 percent were very satisfied and 24 percent were somewhat satisfied. While 59 percent of disenrolled customers reported that they were very satisfied with customer service, 72 percent of currently enrolled customers reported that they were very satisfied with customer service.
- **Overall Satisfaction with Program:** Fifty-two percent of respondents reported they were very satisfied with the program and 26 percent said they were somewhat satisfied. While 77 percent of currently enrolled customers said they were very satisfied, 10 percent of disenrolled customers said they were very satisfied.
- **Recommendations to Improve Prepaid Power Program:** Forty-two percent of participants provided no recommendations. The most common recommendations were to improve the website (nine percent), improve the explanation of the program (seven percent), reduce the frequency of notifications (four percent), and provide more detailed information about the customer's usage (four percent).

### Key Takeaways

This section provides a few key takeaways from the survey.

- **Recruitment:** BGE found it challenging to recruit customers to participate in the program. The most common sources of information among participants were a BGE email or the BGE website. Seventy percent of participants reported that they received an email or postcard invitation from BGE and 83 percent of these participants said that the invitation was very or somewhat important in their decision to enroll. While there is a segment of the customer population who places value on the program, it may take a long time to increase participation to a meaningful percent of the customer base.
- **Participants:** Customers who chose to participate in the Prepaid Power Program did not always match the initial expectations for those who would benefit the most. A full 47 percent of participants reported income above 400 percent of the poverty level and only 44 percent reported that they had arrearages before enrolling in the program. Customers who are not low-income or payment-troubled place value on the benefits of the Prepaid Power Program. If continued, the program should be marketed to all customers.
- **Benefits:** Participants were likely to report benefits from participation, and especially those who remained enrolled. These reported benefits include 61 percent who reported better control over energy expenses, 38 percent who reported a reduction in usage, 34 percent who said it helped them pay off arrearages, and 46 percent who reported that it helped them

avoid disconnections or reduce the length of disconnections. Percentages were higher when only examining those who remained enrolled.

- Program Continuation: A segment of the population clearly values and benefits from prepaid power. BGE should consider continuation of this program.

### ***Participation Analysis***

The participation analysis examined how long customers remained enrolled in the program and the characteristics of customers who disenrolled and who remained enrolled.

#### Overview

- Disenrollment Status: Of the 527 Prepaid participants, 41 percent disenrolled during the time period examined – from August 2019 through November 2020. Of the participants who disenrolled, 58 percent disenrolled within two months and another 28 percent disenrolled after three to five months of participation.

#### Customer Characteristics and Demographics

- Poverty Level: Twenty-eight percent of participants who disenrolled and 19 percent of participants who did not disenroll had an income at or below 200 percent of the poverty level.
- Low-Income: Twenty-nine percent of disenrolled customers reported that they were low-income while only 21 percent customers who remained enrolled reported that they were low-income.
- Annual Household Income: Customers who disenrolled were more likely to have incomes less than \$25,000. Thirteen percent of those who disenrolled were in this income category compared to seven percent of participants who remained enrolled in the pilot.
- Vulnerable Household Members: Participants who disenrolled were less likely to have an elderly household member and more likely to have a child.
- Program Participation: A similar percentage of customers who disenrolled and did not disenroll received an OHEP grant, had third-party supply, and participated in Peak Rewards and the Quick Home Energy Check-up.

#### Customer Risk

- Credit Score: Participants who remained in the program for two months or less had the highest mean credit score, 368, and participants who remained in the program a year or more had the lowest mean credit score, 322.



- Arrearages: Sixty-two percent of participants who left the pilot had arrearages compared to 52 percent of customers who remained enrolled. The mean arrearage amount for all participants was \$273. The mean amount did not differ much by months enrolled.

#### Program Understanding, Impact, and Satisfaction

- Understanding of Program: Participants who disenrolled were much more likely to have not understood the program.
- Program Impact: Customers who disenrolled were less likely to report improved control over their energy expenses and report that they reduced their energy usage. They were also less likely to report that the program helped them improve bill payment and avoid disconnections.
- Overall Satisfaction with Program: Participants who disenrolled were much less satisfied with the program than participants who did not disenroll. Almost half of participants who left the pilot were very dissatisfied or somewhat dissatisfied.

#### **Usage Analysis**

The Prepaid Pilot Program is expected to reduce energy usage because it provides more regular feedback to participants on energy usage and costs. The analysis of energy usage was complicated due to the impact of COVID-19 pandemic during the post-enrollment period. We used a comparison group to control for this, as well as other changes unrelated to the pilot that may have impacted energy usage. The final comparison group was comprised of non-invited customers, weighted for arrearages at enrollment to better represent the Prepaid participants. We found small reductions in energy usage for Prepaid Pilot participants compared to the comparison group.

- Electric Heating Participants: These participants reduced their electric usage by 247 kWh or 1.6 percent of pre-treatment usage.
- Electric Non-Heating Participants: These participants reduced their electric usage by 235 kWh or 2.4 percent of pre-treatment usage.
- Gas Usage: Participants reduced their gas usage by 16 Therms, or 2.3 percent of pre-treatment usage.
- Disconnections: An analysis that excluded periods of disconnections found very similar reductions in energy usage.
- Customers with Arrearages: An analysis only for customers with arrearages found very similar results.
- Full Year Prepaid Participants: Full year participants had higher savings. The full year electric heating participants had mean savings of 569 kWh or 3.9 percent of pre-treatment usage, the full year electric non-heating participants had mean savings of 406 kWh or 4.1

percent of pre-treatment usage, and those with gas service had mean savings of 17 Therms, or 2.6 percent of pre-treatment usage.

### **Payment Analysis**

The payment analysis also used the weighted nonparticipant comparison group. Key findings from this analysis are summarized below.

While the analysis was impacted by COVID and the resulting collections moratoriums, we found that the program had a positive impact on customers' payment compliance.

- **Bills:** Electric heating participants' total charges declined by \$83 and electric non-heating customers' total charges declined by \$74.

Full year Prepaid electric heating participants' charges declined by \$120 and full year Prepaid electric non-heating participants' charges declined by \$106.

- **Prepaid Fees:** Prepaid fees for payments made to authorized BGE vendors were charged to 495 participants. Total costs were \$9,821, with \$4,123 paid by BGE and \$5,702 paid by customers. The average amount paid by customers for these fees during their enrollment was \$11.52.
- **Payments:** There was not a statistically significant change in payments for electric heating customers, but electric non-heating customers increased their payments by \$100.

Payments made by full year Prepaid electric heating participants increased by \$111, and payments made by full year Prepaid electric non-heating participants increased by \$202.

We also examined the change in payments through February 2020, to measure the impact prior to the onset of the COVID pandemic. This analysis included four to seven months of participation, depending on when the customers enrolled. This analysis found a \$82 net increase in payments made by electric heating participants and a \$105 net increase in payments made by electric non-heating participants.

- **Number of Payments:** As expected, the number of payments increased for Prepaid Pilot participants after enrollment in the program. Participants increased their use of credit card and bank account/debit card payments. The net change was an increase of 11 payments, a doubling of the number of payments made in the pre-participation period.
- **Autopay:** There were 95 Prepaid participants who enrolled in Autopay. The average Autopay amount was \$116 and it ranged from \$10 to \$1,000. These payments are triggered when the customer reaches an estimated two days of funds remaining.
- **Coverage Rates:** Electric heating participants increased their coverage rates, the percent of the bill that was paid, by six percentage points and electric non-heating customers increased their coverage rates by ten percentage points. Those who started the Prepaid Pilot with

arrearages had an even greater increase of 20 percentage points for electric heating participants and 21 percentage points for electric non-heating participants.

Full year Prepaid electric heating participants increased their bill coverage rates by 11 percentage points and full year Prepaid electric non-heating participants increased their bill coverage rates by 17 percentage points.

The Pre-COVID analysis found that electric heating participants increased their bill coverage rates by 23 percentage points and electric non-heating participants increased their bill coverage rates by 21 percentage points.

- **Arrearages:** The analysis showed that balances declined by \$159 for electric heating Prepaid participants and by \$196 for electric non-heating Prepaid participants relative to the comparison group.<sup>2</sup>
- **Payment Arrangements:** While 24 percent of the treatment group started payment arrangements in the year prior to Prepaid enrollment, only three percent started payment arrangements in the year following enrollment. Some of this decline is likely due to COVID-related collections moratorium. However, the net change was a decline of 19 percentage points.
- **Grace Periods:** Prepaid participants can request a five-day grace period that allows them to continue using service up to five days after reaching a zero account balance. Twenty-six percent of the 527 participants requested at least one grace period.
- **Disconnections and Negative Balances:** In March 2020, BGE instituted a shutoff moratorium for residential customers in response to the COVID-19 pandemic, suspending service disconnections and waiving new late payment charges. Prepaid customers who consumed more energy than they paid for were not disconnected pursuant to the shutoff moratorium. Therefore, many Prepaid participants (30 percent) maintained negative balances.

While eight percent of Prepaid participants had one or more disconnections in the year prior to enrollment, 11 percent had one or more disconnections in the year following enrollment in the Prepaid Pilot.

- **Collections Actions:** While 70 percent of participants had one or more collections actions in the pre-enrollment period, only 29 percent had one or more actions in the post period, a reduction of 41 percentage points. The net change was a reduction of 35 percentage points.

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<sup>2</sup> The analysis found that bills that were not yet past due at the time of Prepaid enrollment and that became past due shortly after enrollment were not reduced with each Prepaid payment installment. Based on the program design, these bills should have been paid down with each purchase of power. Due to the fact that payments were not applied in this manner, participant balances increased on average. However, these arrearages were excluded from the analysis, as participants were not given the opportunity to pay down these amounts. This exclusion was made to all analyses of balances and arrearages.

The net reduction in the number of collections actions per participant from the pre-enrollment to the Prepaid pilot participation year was 4.1 actions.

The Pre-COVID analysis found that participants had a net decline in collections actions of 31 percentage points. Their net reduction in the number of collections actions per participant was 1.7 actions.

### ***Cost Analysis***

BGE reported total Prepaid Pilot development costs of approximately \$3.5 million. They estimated that the cost would be approximately half that amount for a transition to full deployment. They also estimated ongoing costs for running a Prepaid Program to be approximately \$95,000 per year for fees to their PayGo vendor.

BGE estimated savings of approximately \$26 per customer for a reduction in the need for cash working capital. There was no measured change in collections costs, likely due to the impact of COVID-19 on the shutoff moratorium.

The analysis found that the cost savings from the Prepaid Pilot were small compared to the development and ongoing costs. However, an analysis during a normal collections period is needed to develop a better estimate of program savings.

### ***Findings and Recommendations***

The Prepaid Pilot has had several benefits for program participants.

- Participants reported improved control over energy expenses.
- Participants reported that the program helped them to pay off their arrearages.
- Participants reported that the program helped them to avoid or reduce the length of disconnections.
- Participants who remained enrolled reported high levels of satisfaction with the program.
- Participants reduced their energy usage according to a weather-normalized, comparison group adjusted billing analysis.
- Participants improved their energy payments according to a comparison group adjusted billing analysis.
- The program has not appeared to pay for itself with reduced costs. Given the high fixed costs, BGE would need to scale up the program to achieve cost-effectiveness. BGE was challenged to recruit participants, so it may take a few years to increase participation to this level.
- The Prepaid Pilot was studied during an extremely unique period when customers were home more than usual and used more energy, and BGE suspended disconnections for a

long period of time. Given these unique circumstances, it is difficult to make firm conclusions about the program. BGE would need to conduct another study during a more usual time to develop more information on how the program impacts participants, specifically with respect to arrearages and collections actions and costs.

## I. Introduction

This report presents the findings from an evaluation of BGE's Prepaid Pilot Program. This program provides customers with the opportunity to pay for their energy in advance of use and add to their energy payments as needed.

### A. *Research Goals*

The research aimed to estimate the impact of the Prepaid Pilot Program on several parameters. While the report presents findings for all targeted areas, some of the analyses were impacted by COVID-19 during the participation period and the associated shutoff moratorium.

- **Energy Usage:** Did participants reduce their energy usage as a result of participating in the Prepaid Pilot Program? How did that change when accounting for periods when service was terminated?
- **Energy Costs:** Did participants reduce their energy costs as a result of participating in the Prepaid Pilot Program?
- **Payment Compliance:** Did participants improve their payment practices and reduce arrearages as a result of participating in the Prepaid Pilot Program?
- **Collections Actions:** Did participants have fewer collections actions as a result of participating in the Prepaid Pilot Program?
- **Disconnections:** How much time did participants spend disconnected after they enrolled in the Prepaid Pilot Program?
- **Costs for Service Customers:** What was the net cost of the Prepaid Pilot Program after accounting for savings from reduced carrying costs and reduced collections costs?

### B. *Organization of the Report*

Eight sections follow this introduction.

- **Section II – Prepaid Pilot Program:** This section provides information about the design and implementation of the program.
- **Section III – Enrollment Analysis:** This section provides an analysis of the characteristics of the BGE customers who enrolled in the Prepaid Pilot Program.
- **Section IV – Participant Survey:** This section provides a summary of the findings from the survey with program participants, including the perceived impact of the program and satisfaction with the program.

- Section V – Participation Analysis: This section provides an analysis of the length of time customers remain enrolled in the program and the characteristics that are associated with longer program participation.
- Section VI – Usage Analysis: This section provides an analysis of the impact of the Prepaid Pilot Program on participants' energy usage.
- Section VII – Payment Analysis: This section provides an analysis of the impact of the Prepaid Pilot Program on bills, payments, arrearages, payment arrangements, disconnections, collections actions, and investigations.
- Section VIII – Cost Analysis: This section compares the cost of the Prepaid Pilot implementation and ongoing costs to the savings from the program.
- Section IX – Findings and Recommendations: This section provides a summary of the findings and recommendations from all of the analyses in this report.

APPRISE prepared this report under contract to BGE. BGE facilitated this research by furnishing program data to APPRISE. Any errors or omissions in this report are the responsibility of APPRISE. Further, the statements, findings, conclusions, and recommendations are solely those of analysts from APPRISE and do not necessarily reflect the views of BGE.

## II. Prepaid Pilot Program

This section provides information on the design and implementation of BGE's Prepaid Pilot Program.

### A. Design

The Public Service Commission of Maryland (PSC) authorized BGE to develop a one-year Prepaid Pilot Program with 1,000 electric-only and dual-service customers to test the feasibility and customer acceptance of a utility prepay service program.

Participation would be limited in the following manner.

- Retail choice customers were eligible.
- Gas only customers were not eligible.
- Customers must have AMI electric and gas (for dual fuel customers) meters to participate.
- Residences with a medical certification on file were not eligible.
- Customers participating in net metering or community solar were not eligible.
- Prepaid participants should not consist of more than 40 percent low-income customers.

The program had the following payment parameters.

- Customers would be required to submit a minimum payment of \$40 in advance of consumption.
- Customers could add to their account at any time.
- The first payment during a month would not include a transaction fee.
- Monthly customer charges, non-commodity taxes, and fees would be allocated daily.
- Customers starting new service with BGE would not be charged a security deposit.
- Prepaid participants could not participate in budget billing.

BGE was required to provide the following communication to customers.

- Instead of receiving monthly bills, customers would receive monthly statements with standard billing notices including information on taxes and surcharges and information about BGE programs.
- Regular notification of estimated "days remaining" in their account via email, text, or phone call.
- Notification would be provided when the customer had five, three, and one day of estimated service remaining.
- Customers would receive notification when their balance reached zero and when they were disconnected.

The plan had the following disconnection requirements.

- Customers would be remotely disconnected from electric services as soon as one business day after the account balance reached \$0.
- If the customer remained disconnected for more than 20 days, the account would be finalized and gas service could be disconnected manually.
- Customers could request a five-day grace period after they run out of their balance.



- No late or disconnection fees would apply.
- Customers would need to fund the account to at least \$15 to restore service. No reconnection or late fees would be charged.
- The winter moratorium that required no termination of service when the temperature forecast at 6:00am was 32 degrees Fahrenheit or below would remain in effect. BGE would not disconnect customers when temperatures were forecasted to be above 95 degrees Fahrenheit.
- BGE would not disconnect customers on weekends or on major holidays.

Arrearages would be paid off by Prepaid participants.

- Participation would be limited to customers with a maximum arrearage of \$600.
- No down payment would be required.
- Customers with arrearages would pay off the arrearage over time with 75 percent of each payment applied to current service and 25 percent applied to the arrearage.
- Security deposits would be returned to customers according to BGE's current rules on security deposits.

The following parameters were developed with respect to returning to "postpay".

- Customers could switch back to traditional "postpay" at any time.
- If the customer returned to "postpay", BGE could not require an additional security deposit before service was restored.
- BGE must unenroll customers if they receive a new or amended medical certification, learn of a violation of Prepaid Pilot eligibility, or discover extenuating circumstances that make the customer unsuitable for the Prepaid Pilot.
- Customers who returned to "postpay" with a deferred balance would have that balance charged to their first bill.

## ***B. Outreach and Enrollment***

BGE's goal was to recruit 1,000 customers to participate in the Prepaid Pilot. They began recruiting customers to participate in August 2019 by sending emails and postcards to a stratified random sample of customers. Customers were stratified by the following characteristics to aim for invitations that represented their customer base.

- Arrearage Level
- County
- Electric Supplier or Default Service
- Limited Income/OHEP Recipient
- Deposit

Outreach through emails and postcards did not obtain the expected number of participants, so BGE employed additional recruitment techniques to enroll customers. These additional techniques included a promotion on the home page of BGE's website that invited customers to call in and enroll, and recruitment by BGE customer service representatives when customers called BGE about billing issues or to set up a new account.

Most Prepaid participants enrolled in October and November 2019. As of December 2019, there were 527 Prepaid participants. However, more than 1,000 customers began the enrollment process but failed to complete the required steps. The steps to enroll were as follows.

- Read and submit their acceptance of the Terms and Conditions.
  - Initially this was a document on a BGE.com web page. The customer had to read to the bottom and click a box.
  - Later the terms were incorporated into the online enrollment form, which allowed customers to do this in one step.
- Confirm receipt of the test email BGE sent by clicking a link within the email.
- Confirm receipt of one or both of the following, depending on which additional communication method(s) the customer chose.
  - Confirm receipt of test text message by responding with the word REPLY.
  - Confirm receipt of test phone call by answering (personally or electronically).
- Make at least a \$40 payment.

These steps were required to be completed within five business days of when enrollment was initiated. If they were not completed in that timeframe, enrollment would close, and the customer would have to begin the enrollment process again.

Due to initial technical limitations between BGE's system and the third-party notification vendor, once a Prepaid enrollment was started, there was a one-hour delay before the test alerts could be sent. This lag contributed to the drop-off in many enrollments. BGE believes that they will have a more streamlined process ready if they initiate a new enrollment period.

### **C. COVID Impacts**

BGE began a disconnection moratorium on March 13, 2020 due to the COVID-19 pandemic. This meant that Prepaid participants could have a negative balance in their account and not be disconnected. BGE was planning to transfer negative balances to participants' deferred balances in November 2020 when the moratorium was lifted, and then to resume disconnections when participants' balances were depleted. However, due to technical issues that resulted from a billing system upgrade, they have not yet implemented this change. As such, the analyses provided in this report mostly relate to a time when Prepaid participants could not be disconnected, and results during a regular time period may be different from what is presented in this evaluation report.

### III. Enrollment Analysis

This section provides findings from an analysis of the characteristics of BGE's customers who enrolled in the Prepaid Pilot.

#### A. Response to Prepaid Invitation

Table III-1 shows that only 0.2 percent of invited customers accepted the invitation to participate in the Prepaid Pilot. BGE initially planned to send half of the customers postcard invitations, as shown in the table below. However, they later decided only to send postcards to 24,000 customers, since the postcards did not appear to improve the participation rate.

**Table III-1  
Initial Planned Invitation Method**

Invitation Method	Invited Customers		Prepaid Participants		Percent of Invited Customers Who Enrolled
			Invited Customers		
	#	%	#	%	
E-mail & Postcard	125,744	50%	249	53%	0.2%
E-mail Only	124,871	50%	218	47%	0.2%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>0.2%</b>

Table III-2 shows the number of customers who were invited to participate by invitation wave. The table shows that customers enrolled in the Prepaid Program at roughly the same rate across the invitation waves.

**Table III-2  
Wave of Invitation**

Wave	Invited Customers		Prepaid Participants		Percent of Invited Customers Who Enrolled
			Invited Customers		
	#	%	#	%	
1-10	38,295	15%	72	15%	0.2%
11-20	39,488	16%	68	15%	0.2%
21-30	47,832	19%	86	18%	0.2%
31-40	50,000	20%	109	23%	0.2%
41-50	50,000	20%	86	18%	0.2%
51-55	25,000	10%	46	10%	0.2%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>0.2%</b>

Table III-3 displays the program enrollment month for all program participants. The table shows that enrollment was slow in the first two months of program enrollment. The vast majority of participants, 84 percent, enrolled in October and November 2019.

**Table III-3  
Prepaid Program Enrollment Month**

Enrollment Month	Prepaid Participants					
	Invited		Not Invited		Total	
	#	%	#	%	#	%
08/2019	18	4%	-	-	18	3%
09/2019	54	12%	1	2%	55	10%
10/2019	198	42%	6	10%	204	39%
11/2019	196	42%	53	88%	249	47%
12/2019	1	< 1%	-	-	1	< 1%
<b>Total</b>	<b>467</b>	<b>100%</b>	<b>60</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

One of the goals of this evaluation is to understand the types of customers who enrolled in the Prepaid Pilot. We analyzed characteristics of those customers who chose to participate in the program compared to all customers who were invited to participate. Findings from the enrollment analysis are presented in the following sections.

- Customer Characteristics
- Customer Risk
- Energy Usage

### **B. Customer Characteristics**

This section shows how the Prepaid participants compared to all invited customers in terms of county, reported low-income status, fuels, and program participation.

Table III-4 displays the county of residence for program participants compared to all invited customers. The percentage of Prepaid Pilot participants roughly matches the percent of customers invited from each county, representative of the BGE customer population.

**Table III-4  
County of Residence**

County of Residence	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
AA, Calvert, PG	73,316	29%	143	31%	16	37%	159	31%
Baltimore City	40,371	16%	93	20%	8	19%	101	20%

County of Residence	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
Baltimore County	68,565	27%	128	27%	9	21%	137	27%
Carroll/Cecil/Frederick/Harford	35,082	14%	47	10%	6	14%	53	10%
Howard/Montgomery	33,281	13%	56	12%	4	9%	60	12%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>43</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Note: 17 Not-Invited Prepaid Participants were excluded due to missing county code data.

Table III-5 shows the percent of program participants that reported living in a low-income household at the time of enrollment. The table below shows that 25 percent of participants self-identified as low-income.

**Table III-5  
Self-Reported Low-Income**

Low-Income	Prepaid Participants					
	Invited		Not Invited		Total	
	#	%	#	%	#	%
Low-Income	115	25%	15	25%	130	25%
Not Low-Income	352	75%	45	75%	397	75%
<b>Total</b>	<b>467</b>	<b>100%</b>	<b>60</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table III-6 compares the characteristics of Prepaid participants to all customers invited to participate. The following characteristics were compared.

- Dual Fuel: 59 percent of Prepaid participants were dual fuel customers, approximately the same as the percent of invited customers.
- Office of Home Energy Program (OHEP) Grant: Six percent of Prepaid participants received the OHEP energy assistance grant, compared to three percent of invited customers.
- Retail Supply Customer: 34 percent of Prepaid participants were retail supply customers, compared to 26 percent of all invited customers.
- BGE's Peak Rewards Programs: Peak Rewards are a set of four energy efficiency programs that help customers save money by reducing energy demand. Customers receive incentives such as programmable thermostats and bill credits that aim to reduce energy consumption during peak energy demand periods. Thirty-nine percent of Prepaid participants were part of BGE's Peak Rewards programs compared to 30 percent of all invited customers.
- BGE's Quick Home Energy Check-Up: The Quick Home Energy Check-Up offers BGE customers the opportunity to learn about their home's energy efficiency and reduce energy consumption. As part of the check-up, a certified checkup professional will perform a walk-through of the home, complete a report with recommendations to reduce energy usage, and install energy-savings products at no additional cost. Twenty-two percent of Prepaid

participants participated in BGE's Quick Home Energy Check-Up Program compared to 13 percent of all invited customers.

The table shows that more engaged customers, those who participated in assistance and energy efficiency programs, were more likely to participate in the Prepaid Pilot than the overall group of invited customers.

**Table III-6  
Customer Characteristics**

Customer Characteristics	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
Dual Fuel	134,950	54%	277	59%	25	58%	302	59%
OHEP Grant	7,475	3%	24	5%	5	12%	29	6%
Retail Supply	65,374	26%	157	34%	14	33%	171	34%
Peak Participation	75,661	30%	185	40%	18	30%	203	39%
QHEC Participation	33,696	13%	108	23%	7	12%	115	22%

Note: 17 Not-Invited Prepaid Participants were excluded due to missing dual-fuel, low-income, and standard offer customer data.

### C. Customer Risk

This section provides information on the risk characteristics of the Prepaid Pilot participants compared to all invited customers.

Table III-7 shows BGE's internal credit score for all invited customers and program participants. This score reflects how likely a customer is to make their payments on time. A lower credit score means that a customer is more likely to make these payments on time. On average, Prepaid participants had significantly riskier credit scores, averaging 338, than all invited customers, whose credit scores averaged 217.

**Table III-7  
Internal Credit Score**

Internal Credit Score	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
≤ 100	76,298	30%	68	15%	4	9%	72	14%
101 - 200	72,644	29%	78	17%	7	16%	85	17%
201 - 300	33,812	13%	62	13%	2	5%	64	13%
301 - 400	26,932	11%	68	15%	9	21%	77	15%
≥ 401	40,929	16%	191	41%	21	49%	212	42%

Internal Credit Score	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>43</b>	<b>100%</b>	<b>510</b>	<b>100%</b>
<b>Mean Credit Score</b>	<b>217</b>		<b>333</b>		<b>393</b>		<b>338</b>	

Note: 17 Not-Invited Prepaid Participants were excluded due to missing credit score data.

Table III-8 displays the TSI Risk Segment, another risk assessment, for all invited customers and program participants. Customers with a score of 1 or 2 are considered low-risk, those with a score of 3 or 4 are considered medium-low risk, those with a score of 5 or 6 are considered medium-high risk, and those with a score of 7 or 8 are considered high risk. BGE calculates this statistic using the following seven variables.

- Number of collection actions
- Number of late payment charges
- Amount of arrearages
- Age of arrearage
- Time as a customer
- Time at premise
- Number of months since last payment

The table below shows that 34 percent of Prepaid participants had a segment score of five or seven, meaning they were considered medium-high to high risk customers, compared to 13 percent of all invited customers. This finding is consistent with Table III-1 that showed customers with high-risk credit scores were more likely to enroll in the Prepaid Program than customers with low-risk credit scores.

**Table III-8**  
**TSI Risk Segment**

Segment	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
1	138,919	55%	137	29%	10	23%	147	29%
3	79,043	32%	172	37%	14	33%	186	36%
4	1	< 1%	-	-	-	-	-	-
5	30,653	12%	152	33%	18	42%	170	33%
7	1,999	1%	6	1%	1	2%	7	1%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>43</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Note: 17 Not-Invited Prepaid Participants were excluded due to missing segment data.

Table III-9A displays the percent of invited customers and program participants with a security deposit. Program participants were significantly more likely to have a deposit than the invited

customers, again indicating their higher risk. Forty-seven percent of program participants had a security deposit compared to 22 percent of all invited customers.

**Table III-9A**  
**Percent Security Deposit**

Security Deposit	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
Security Deposit	56,017	22%	222	48%	24	40%	246	47%
No Security Deposit	194,598	78%	245	52%	36	60%	281	53%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>60</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table III-9B displays the security deposit amount for all invited customers and program participants that had a security deposit. The table shows that for those customers with a security deposit, the mean deposit amount was approximately \$300. The mean security deposit amount was approximately the same for all invited customers and program participants. BGE generally charges a deposit that is worth approximately two months of service or does not charge a deposit at all.

**Table III-9B**  
**Security Deposit Amount**

Security Deposit	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
\$1 - \$150	9,107	16%	36	16%	1	4%	37	15%
\$151 - \$300	21,326	38%	86	39%	14	58%	100	41%
\$301 - \$450	15,825	28%	70	32%	7	29%	77	31%
> \$450	9,759	17%	30	14%	2	8%	32	13%
<b>Total</b>	<b>56,017</b>	<b>100%</b>	<b>222</b>	<b>100%</b>	<b>24</b>	<b>100%</b>	<b>246</b>	<b>100%</b>
<b>Mean Deposit</b>	<b>\$307</b>		<b>\$298</b>		<b>\$293</b>		<b>\$297</b>	

Table III-10A shows the proportion of BGE customers who had unpaid balances at least one day past due as of July 21, 2019. The table shows that significantly more program participants had arrearages at this point in the year than the group of all invited customers. Thirty-six percent of program participants had an arrearage compared to 18 percent of all invited customers.



**Table III-10A**  
**Percent with Arrearages at End of July 2019**

Arrearages	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
Arrearages	45,029	18%	160	34%	22	51%	182	36%
No Arrearages	205,586	82%	307	66%	21	49%	328	64%
<b>Total</b>	<b>250,615</b>	<b>100%</b>	<b>467</b>	<b>100%</b>	<b>43</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Note: 17 Not-Invited Prepaid Participants were excluded due to missing segment data.

Table III-10B provides a snapshot of customers' arrearages at the end of July 2019, for those who had arrearages. The mean arrearage was \$200 for Prepaid participants compared to \$160 for all invited customers. While 44 percent of Prepaid participants had an arrearage of \$200 or more, only 31 percent of all invited customers had an arrearage at that level.

**Table III-10B**  
**Arrearages at End of July 2019 Amount**

Arrearages	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
\$1 - \$100	16,232	36%	36	23%	2	9%	38	21%
\$101 - \$200	14,995	33%	56	35%	7	32%	63	35%
\$201 - \$300	8,032	18%	40	25%	6	27%	46	25%
> \$300	5,770	13%	28	18%	7	32%	35	19%
<b>Total</b>	<b>45,029</b>	<b>100%</b>	<b>160</b>	<b>100%</b>	<b>22</b>	<b>100%</b>	<b>182</b>	<b>100%</b>
<b>Mean Arrearages</b>	<b>\$160</b>		<b>\$189</b>		<b>\$284</b>		<b>\$200</b>	

Note: 17 Not-Invited Prepaid Participants were excluded due to missing segment data.

Table III-11A shows the percentage of BGE customers who had arrearages at the time of program enrollment. Fifty-six percent of participants had arrearages when they enrolled in the Prepaid Program between August and December 2019, compared to 36 percent in July 2019.

**Table III-11A**  
**Percent with Arrearages at Prepaid Program Enrollment**

Arrearages	Prepaid Participants					
	Invited		Not Invited		Total	
	#	%	#	%	#	%
Arrearages	258	55%	38	63%	296	56%
No Arrearages	209	45%	22	37%	231	44%
<b>Total</b>	<b>467</b>	<b>100%</b>	<b>60</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table III-11B displays the arrearages at program enrollment for program participants who had arrearages at that time. The table shows that customers who did not receive an invitation to participate were more likely to have arrearage amounts exceeding \$300 than those participants that did receive an invitation. This shows that the customers who chose to enroll without invitation were a select group of customers who were more likely to be in debt and to have higher levels of debt than invited customers who chose to participate. (Note: customers with an arrearage over \$600 were not invited to enroll.)

**Table III-11B**  
**Arrearages at Prepaid Program Enrollment Amount**

Arrearages	Prepaid Participants					
	Invited		Not Invited		Total	
	#	%	#	%	#	%
\$1 - \$100	71	28%	8	21%	79	27%
\$101 - \$200	46	18%	5	13%	51	17%
\$201 - \$300	40	16%	3	8%	43	15%
> \$300	101	39%	22	58%	123	42%
<b>Total</b>	<b>467</b>	<b>100%</b>	<b>60</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

#### **D. Energy Usage**

This section provides information on customer type and energy usage in the year prior to the start of the Prepaid Pilot.

Table III-12 displays the electric tariffs for all invited customers and program participants. The electric tariffs show whether the customer uses electric heat, has an electric vehicle, is on the Time of Use Rate (TOU), and is served by a third-party supplier. The distribution of electric tariffs for Prepaid participants roughly matches the distribution for invited customers. They broke down as follows.

- Non-Electric Heat: 46 percent
- Alternate Supplier, Non-Electric Heat: 22 percent

- Electric Heat: 20 percent
- Alternate Supplier, Electric Heat: nine percent
- Time of Use Rate and Electric Vehicle: three percent

**Table III-12**  
**Electric Tariffs**

Electric Tariff	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
<b>BGE Supplied – Electric Residential</b>								
Non-Electric Heat	125,104	50%	219	47%	19	38%	238	46%
With-Electric Heat	51,615	21%	91	20%	14	28%	105	20%
Owner of Electric Vehicle	71	< 1%	-	-	1	2%	1	< 1%
Non-Electric Heat TOU	5,644	2%	7	2%	1	2%	8	2%
With-Electric Heat TOU	4,842	2%	2	< 1%	-	-	2	< 1%
<b>Served by Supplier – Electric Residential</b>								
Non-Electric Heat	42,659	17%	100	21%	12	24%	112	22%
With-Electric Heat	15,886	6%	42	9%	3	6%	45	9%
Non-Electric Heat TOU	2,077	1%	5	1%	-	-	5	1%
With-Electric Heat TOU	1,837	1%	-	-	-	-	-	-
<b>Total</b>	<b>249,734</b>	<b>100%</b>	<b>466</b>	<b>100%</b>	<b>50</b>	<b>100%</b>	<b>516</b>	<b>100%</b>

Table III-13 displays the gas tariff for all invited customers and program participants. The distribution of gas tariffs for Prepaid participants also roughly matched the distribution for invited customers. These broke down as follows.

- BGE Gas Heat: 69 percent
- Supplier Gas Heat: 27 percent
- BGE Non-Gas Heat: three percent
- Supplier Non-Gas Heat: one percent

**Table III-13**  
**Gas Tariff**

Gas Tariff	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
<b>BGE Supplied – Gas Residential</b>								
With-Gas Heat	95,506	73%	182	69%	19	70%	201	69%
Non-Gas Heat	8,687	7%	9	3%	-	-	9	3%

Gas Tariff	Invited Customers		Prepaid Participants					
			Invited		Not Invited		Total	
	#	%	#	%	#	%	#	%
<b>Served by Supplier – Gas Residential</b>								
With-Gas Heat	24,416	19%	72	27%	7	26%	79	27%
Non-Gas Heat	1,959	2%	2	1%	1	4%	3	1%
<b>Total</b>	<b>130,568</b>	<b>100%</b>	<b>265</b>	<b>100%</b>	<b>27</b>	<b>100%</b>	<b>292</b>	<b>100%</b>

Table III-14 displays the attrition statistics for the usage analysis. This analysis compares pre-treatment electric and gas usage to the usage of program participants and invited customers in the year prior to the start of the Prepaid Pilot. There were 250,615 customers who received an invitation to participate and 527 who participated in the program. Customers were excluded from the analysis if all their read dates were missing, they did not have at least nine bills in the pre-enrollment period, they had too many estimated bills, or they were usage outliers. Ninety-eight percent of invited customers and 82 percent of participants were included in the electric usage analysis. Ninety-five percent of invited customers and 86 percent of Prepaid participants were included in the gas usage analysis.

**Table III-14**  
**Attrition Analysis**

Exclusion Reason	Invited Customers				Prepaid Participants			
	Electric Usage		Gas Usage		Electric Usage		Gas Usage	
	N	%	N	%	N	%	N	%
Original Accounts	250,615	100%	131,584	100%	527	100%	303	100%
Non-Missing Read Dates	249,919	> 99%	131,238	> 99%	526	> 99%	301	> 99%
Enough Usage Data	245,142	98%	127,705	97%	494	94%	276	91%
Complete Usage Data	245,139	98%	127,652	97%	494	94%	271	89%
No Outliers	244,916	98%	125,099	95%	430	82%	262	86%
<b>Analysis Sample</b>	<b>244,916</b>	<b>98%</b>	<b>125,099</b>	<b>95%</b>	<b>430</b>	<b>82%</b>	<b>262</b>	<b>86%</b>

Table III-15 displays the annual raw and weather-normalized gas and electric usage. In addition to the degree day normalization approach, PRISM normalization was also conducted for Prepaid participants. The two normalization methods provided very similar results, within about three percentage points of one another. The degree day normalized results show that program participants, on average, consumed less energy than the invited customers. However, this difference is not statistically significant.

**Table III-15**  
**Annual Gas and Electric Usage**

Fuel Type	Normalization Method	Invited Customers		Prepaid Participants					
				Invited		Not Invited		Total	
		#	Usage	#	Usage	#	Usage	#	Usage
Electric (kWh)	Raw	244,916	11,775	396	11,333	34	11,377	430	11,336
	Degree Day	244,916	11,562	396	11,082	34	11,235	430	11,094
	PRISM	-	-	396	10,812	34	11,011	430	10,828
Gas (Therms)	Raw	125,099	659	240	640	22	670	262	643
	Degree Day	125,099	691	240	675	22	725	262	679
	PRISM	-	-	240	654	22	698	262	658

Table III-16 displays the distribution of weather normalized electric usage for program participants in the year prior to enrollment. The table shows that most participants, 52 percent, used less than or equal to 10,000 kWh a year. The table also shows that the distribution of energy usage was similar for both invited participants and not invited participants.

**Table III-16**  
**Weather Normalized Annual Electric Usage**

Electric Usage Data (kWh)	Prepaid Participants					
	Invited Customers		Not Invited		Total	
	#	%	#	%	#	%
≤ 5,000	62	16%	4	12%	66	15%
5,001 – 10,000	146	37%	12	35%	158	37%
10,001 – 15,000	93	23%	11	32%	104	24%
15,001 – 20,000	54	14%	5	15%	59	14%
> 20,000	41	10%	2	6%	43	10%
<b>Total</b>	<b>396</b>	<b>100%</b>	<b>34</b>	<b>100%</b>	<b>430</b>	<b>100%</b>

Table III-17 displays the distribution of weather-normalized electric usage for Prepaid participants that use electric heat and that use non-electric heat. The table shows that some of these customers have high electric usage. While 21 percent of the electric heating customers had annual usage over 20,000 kWh, 14 percent of the non-electric heating customers had annual electric usage over 15,000 kWh.

**Table III-17**  
**Weather Normalized Annual Electric Usage**  
**By Electric Heating**

Electric Usage Data (kWh)	Prepaid Participants					
	Electric Heating		Non-Electric Heating		Total	
	#	%	#	%	#	%
≤ 5,000	7	5%	59	20%	66	15%
5,001 – 10,000	22	17%	136	45%	158	37%
10,001 – 15,000	43	33%	61	20%	104	24%
15,001 – 20,000	31	24%	28	9%	59	14%
> 20,000	28	21%	15	5%	43	10%
<b>Total</b>	<b>131</b>	<b>100%</b>	<b>299</b>	<b>100%</b>	<b>430</b>	<b>100%</b>

Table III-18 displays the weather normalized annual gas usage for program participants in the year prior to enrollment. The table shows that most participants had annual gas usage of 1,000 Therms or less.

**Table III-18**  
**Weather Normalized Annual Gas Usage**

Gas Usage Data (Therms)	Prepaid Participants					
	Invited Customers		Not Invited		Total	
	#	%	#	%	#	%
≤ 500	86	36%	5	23%	91	35%
501-1,000	118	49%	14	64%	132	50%
1,001 – 1,500	29	12%	3	14%	32	12%
1,501 – 2,000	5	2%	-	-	5	2%
> 2,000	2	1%	-	-	2	1%
<b>Total</b>	<b>240</b>	<b>100%</b>	<b>22</b>	<b>100%</b>	<b>262</b>	<b>100%</b>

### **E. Summary**

This section provides a summary of key findings from the enrollment analysis.

- **Invitations and Enrollment:** BGE recruited customers through emails, postcards, promotion on their home page, and recruitment by BGE customer service representatives. Only 0.2 percent of the customers who were invited to participate enrolled in the Prepaid Pilot.
- **Enrollment Month:** Enrollment was slow in the first two months of program outreach. The vast majority of participants, 84 percent, enrolled in October and November 2019.

- **County of Residence:** The percentage of Prepaid Pilot participants roughly matched the percent of customers invited from each county, representative of the BGE customer population.
- **Low-Income:** Twenty-five percent of program participants self-identified as low-income. However, only six percent received the OHEP energy assistance grant.
- **Retail Supply Customer:** Approximately 34 percent of participants were retail supply customers compared to 26 percent of all invited customers.
- **Program Participation:** Thirty-nine percent of Prepaid participants were part of BGE's Peak Rewards programs compared to 30 percent of all invited customers. Twenty-two percent of Prepaid participants participated in BGE's Quick Home Energy Check-Up Program compared to 13 percent of all invited customers.
- **Risk:** On average, program participants were higher risk. Prepaid participants had significantly riskier credit scores, averaging 338, than all invited customers, whose credit scores averaged 217. Forty-seven percent of all program participants had a security deposit compared to 22 percent of invited customers.
- **Arrearages:** Program participants were more likely to have arrearages in July 2019 than all invited customers. Thirty-six percent of program participants had an arrearage compared to 18 percent of all invited customers. While 44 percent of Prepaid participants had an arrearage of \$200 or more, only 31 percent of all invited customers had an arrearage at that level. Fifty-six percent of participants had arrearages when they enrolled in the Prepaid Program between August and December 2019, compared to 36 percent in July 2019.
- **Participant Arrearages:** Customers who did not receive an invitation to participate were more likely to have arrearage amounts exceeding \$300 than those participants that did receive an invitation. While 58 percent of not invited Prepaid participants had an arrearage over \$300 at the time of enrollment, 39 percent of invited Prepaid participants had an arrearage over \$300 at the time of enrollment. This shows that the customers who chose to enroll without directed invitation were a select group of customers who were more likely to be in debt and to have higher levels of debt than invited customers who chose to participate.
- **Tariffs:** The distribution of electric and gas tariffs for Prepaid participants roughly matched the distribution for invited customers.
- **Energy Usage:** While 21 percent of the electric heating participants had annual usage over 20,000 kWh, 14 percent of the non-electric heating participants had annual electric usage over 15,000 kWh. Most participants had annual gas usage of 1,000 Therms or less.

## IV. Participant Survey

This section describes the findings from telephone surveys conducted with participants in BGE's Prepaid Power pilot program.

### A. *Overview and Methodology*

APPRISE conducted telephone surveys with participants in BGE's Prepaid Power pilot program in September and October 2020. The purpose of the survey was to assess participants' motivation for participation, program experiences, perceptions of the program's impact, and program satisfaction.

All 527 program participants with complete contact information were included in the survey sample. As of August 26, 2020, 331 participants were still enrolled in the program and 196 participants had disenrolled. All customers in the sample were sent an advance letter via e-mail which notified them that they would be called to participate in the survey, explained the purpose of the survey, and provided the option to call a toll-free number to complete the survey at their convenience (though most surveys were completed through outbound calling). The survey took approximately ten minutes to complete.

Table IV-1 furnishes information on the final disposition for each contact in the sample by enrollment status. Surveys were conducted with program participants who confirmed that they had participated in the program. A total of six participants were marked as ineligible for the survey.

Surveys were completed with 56 percent of the sample, with a completion rate of 64 percent for enrolled participants and 42 percent for disenrolled participants. The most common non-interview reason was that there was no response from the participant. The cooperation rate, the completion rate for customers who were contacted and who were eligible for the survey, was 94 percent. The response rate was 61 percent.

Because the enrolled customers were overrepresented in the survey respondents, the total column of each table is weighted so that the statistics represent the customers proportionately to their representation in the population of program participants.



**Table IV-1  
Survey Response**

	Enrollment Status				All Participants	
	Disenrolled		Enrolled		Number	Percent
	Number	Percent	Number	Percent		
<b>Total Selected</b>	<b>196</b>	<b>100%</b>	<b>331</b>	<b>100%</b>	<b>527</b>	<b>100%</b>
Voicemail/No Answer	79	30%	95	29%	174	33%
Wrong Number/Phone Problem	7	4%	5	2%	12	2%
Refusal	10	5%	9	3%	19	4%
Non-Working Number	8	4%	5	2%	13	2%
Hearing/Language Barrier	2	1%	2	1%	4	1%
Not Eligible	6	3%	0	0%	6	1%
Not Available/Ill/Deceased	0	0%	1	< 1%	1	< 1%
<b>Complete</b>	<b>83</b>	<b>42%</b>	<b>212</b>	<b>64%</b>	<b>295</b>	<b>56%</b>
Cooperation Rate	-	<b>89%</b>	-	<b>96%</b>	-	<b>94%</b>
Response Rate	-	<b>52%</b>	-	<b>67%</b>	-	<b>61%</b>

Findings from the survey are presented in the following sections.

- Customer Characteristics and Demographics
- Enrollment and Program Understanding
- Program Impact
- Customer Satisfaction
- Summary of Findings and Recommendations

### **B. Participant Characteristics**

This section provides information on the customers' characteristics and demographics. Customers were asked about the number of people living in their household. Table IV-2 shows that 28 percent of customers reported a household size of two people, the most common. Large household sizes were not common among program participants; roughly 70 percent of participants reported a household size of three or fewer people.

**Table IV-2  
Number of People in Household**

How many people live in your household?			
Household Size	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
One	18%	18%	<b>18%</b>
Two	29%	27%	<b>28%</b>
Three	20%	25%	<b>24%</b>
Four	23%	18%	<b>20%</b>
Five or More	10%	10%	<b>10%</b>
Refused	0%	1%	<b>1%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked if any members of their household were at least 62 years old or had a disability. Table IV-3 shows that 27 percent of respondents reported that there was an elderly household member, 20 percent reported a disabled member, and 62 percent of respondents reported neither. Enrolled customers were more likely to report that there was an elderly household member.

**Table IV-3  
Elderly or Disabled Household Member**

Is there anyone in your household that is aged 62 or older? Is there anyone in your household with a disability?			
Elderly or Disabled Household Member	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
Household Member $\geq$ 62 Years	20%	31%	<b>27%</b>
Disabled Member in Household	19%	21%	<b>20%</b>
No Elderly or Disabled Member in Household	67%	59%	<b>62%</b>
Don't Know*	1%	0%	<b>&lt; 1%</b>

\*One respondent answered that they did not know whether there was a disabled member in the household, but they said there was an elderly member of the household.

Respondents were asked if any members of their household were aged 18 or younger and, subsequently, they were asked if any members were aged two or younger. Table IV-4 shows that 45 percent of respondents reported at least one member of their household was 18 or younger, and eight percent reported that their household included someone aged two or younger. Disenrolled customers were much more likely to have a child.

**Table IV-4  
Children in Household**

<b>Is there anyone in your household that is aged 18 or younger? Is there anyone in your household that is aged 2 or younger?</b>			
<b>Children in Household</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Household Member ≤ 18 Years	54%	39%	<b>45%</b>
Household Member ≤ 2 Years	11%	6%	<b>8%</b>
No Children in Household	46%	61%	<b>55%</b>

Respondents were asked for their annual household income and were given the option to select a range if they refused to share or did not know their exact income. Table IV-5 shows that nine percent of respondents reported incomes at or below \$25,000, 22 percent reported income between \$25,000 and \$50,000, and 30 percent of respondents reported annual income exceeding \$100,000. Four percent of respondents refused to provide an income range and one percent reported that they did not know their income.

**Table IV-5  
Annual Household Income**

<b>What is your annual household income?</b>			
<b>Household Income</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
≤ \$25,000	12%	7%	<b>9%</b>
\$25,001 - \$50,000	17%	25%	<b>22%</b>
\$50,001 - \$75,000	20%	17%	<b>18%</b>
\$75,001 - \$100,000	12%	18%	<b>16%</b>
> \$100,000	31%	29%	<b>30%</b>
Don't Know	2%	1%	<b>1%</b>
Refused	5%	3%	<b>4%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table IV-6 uses the respondents' household size and income to determine their poverty level category. For customers who provided income ranges instead of precise incomes, the midpoint of the range was used to compute the poverty level category. The table shows that 12 percent of respondents had income at or below 150 percent of the poverty level, eight percent had income between 151 and 200 percent of poverty, 26 percent had income between 200 and 400 percent of poverty, and 47 percent had income above 400 percent of the poverty level.

**Table IV-6  
Participant Poverty Level**

Poverty Group	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
≤ 50%	4%	1%	<b>2%</b>
51-100%	4%	3%	<b>3%</b>
101-150%	10%	6%	<b>7%</b>
151-200%	8%	8%	<b>8%</b>
201-300%	11%	17%	<b>15%</b>
301-400%	8%	13%	<b>11%</b>
>400%	48%	47%	<b>47%</b>
Don't Know	2%	1%	<b>1%</b>
Refused	5%	4%	<b>4%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: Customers who selected the income range “at or below \$25,000” were treated as having an income of \$12,500 for this table. This was the case for two respondents. Customers who selected the income range “above \$100,000” were treated as having an income of \$125,000 for this table. This was the case for 18 respondents.

### **C. Enrollment and Program Understanding**

This section addresses how participants learned about the program, their level of understanding, and their reasons for enrolling. Respondents were asked how they first learned about the Prepaid Power Program. Table IV-7 shows that 53 percent of respondents reported that they learned about the program from a BGE e-mail, 20 percent of respondents said the BGE website was where they learned about the program, 16 percent said their initial source of information was a letter or mailing from BGE, and five percent said they did not know how they learned about the program.

**Table IV-7  
Source of Information about Prepaid Power Program**

How did you learn about BGE's Prepaid Power Program?			
Source of Information about Prepaid Program	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
BGE Email	48%	55%	<b>53%</b>
BGE Website	20%	20%	<b>20%</b>
BGE Letter	13%	17%	<b>16%</b>

<b>How did you learn about BGE's Prepaid Power Program?</b>			
<b>Source of Information about Prepaid Program</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
BGE Call/Text message	5%	5%	<b>5%</b>
Call to BGE about Account or Billing	2%	5%	<b>4%</b>
Social Media/Online Source	5%	3%	<b>4%</b>
Word of Mouth	4%	1%	<b>2%</b>
BGE App	2%	1%	<b>2%</b>
BGE Bill	2%	1%	<b>1%</b>
Other	0%	< 1%	<b>&lt; 1%</b>
Don't Know	6%	4%	<b>5%</b>

Respondents were asked if they received an e-mail or postcard invitation from BGE for the Prepaid Power Program. Table IV-8 shows that 70 percent of participants reported that they received such an invitation, 13 percent reported that they did not receive the invitation, and 17 percent did not know if they received it. Enrolled customers were more likely to report receipt of the invitation.

**Table IV-8  
Received Email or Post-Card Invitation from BGE**

<b>Did you receive an email or post-card from BGE inviting you to participate in the Prepaid Power Program?</b>			
<b>Received Invitation</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Received Email or Post-Card Invitation	64%	73%	<b>70%</b>
Did Not Receive Email or Post-Card Invitation	17%	11%	<b>13%</b>
Don't Know	19%	16%	<b>17%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents who reported receipt of the invitation were asked about the importance of that invitation in their decision to enroll in the program. Table IV-9 shows that 51 percent of invitation recipients considered the invitation very important. Enrolled customers were much more likely to report that the invitation was very important.

**Table IV-9**  
**Importance of Email or Post-Card Invitation from BGE**

<b>How important was the email or post-card invitation sent by BGE in your decision to enroll in the Prepaid Power Program?</b>			
<b>Importance of Invitation</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	53	155	<b>208</b>
Very Important	42%	55%	<b>51%</b>
Somewhat Important	30%	34%	<b>32%</b>
Of Little Importance	15%	5%	<b>8%</b>
Not at All Important	13%	6%	<b>9%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked to provide their reason(s) for enrolling in the Prepaid Power Program. Table IV-10 shows that the most common answer, provided by 47 percent of participants, was that the customer preferred flexible payments to a monthly bill amount. Enrolled customers were more likely than disenrolled customers to provide this response. The second most common answer, provided by 22 percent of respondents, was that the customer was curious about the program and wanted to try it out. Fourteen percent said they wanted to pay off old charges or maintain service, 13 percent said they wanted to better manage their energy use, and ten percent thought the program would save them money.

**Table IV-10**  
**Reason for Enrolling in Program**

<b>Why did you decide to enroll in the Prepaid Power Program?</b>			
<b>Reason for Enrollment</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Prefer Flexible Payments	36%	54%	<b>47%</b>
Curiosity/Wanted to Try It Out	30%	17%	<b>22%</b>
Pay off Old Charges/Maintain Service	11%	15%	<b>14%</b>
Manage Energy Use	10%	15%	<b>13%</b>
Save Money	12%	8%	<b>10%</b>
Convenient	8%	10%	<b>9%</b>
More Control	5%	10%	<b>8%</b>
Helps with Budget	4%	7%	<b>6%</b>
Issues with Budget Billing	0%	2%	<b>1%</b>
Notifications are Helpful	0%	1%	<b>1%</b>

<b>Why did you decide to enroll in the Prepaid Power Program?</b>			
<b>Reason for Enrollment</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Lower Fees	1%	1%	<b>1%</b>
Other	5%	3%	<b>4%</b>
Don't Know	0%	< 1%	<b>&lt; 1%</b>

Disenrolled customers were asked why they chose to leave the program. Table IV-11 shows that the most common response, provided by 33 percent of disenrolled participants, was that the individual did not like to make frequent payments. The second most common response, provided by 23 percent of disenrolled participants, was that the individual felt that the cost was higher than regular billing. Thirteen percent of disenrolled participants reported that they left the program because they changed addresses.

**Table IV-11**  
**Reason for Disenrolling from Program**

<b>Why did you choose to leave the Prepaid program and return to regular monthly billing?</b>	
<b>Reason for Disenrollment</b>	<b>Disenrolled</b>
Respondents	83
Don't Like Frequent Payments	33%
Higher Cost than Regular Billing	23%
Not Beneficial	17%
Difficult to Track Remaining Funds	14%
Frequent Notifications	14%
Confusing	14%
Address Change	13%
Disconnection Risk	5%
Website Difficulties	5%
Unaffordable	5%
Anxiety about Balance	4%
Insufficient Arrears Impact	4%
Other	1%

Respondents were asked to rate their level of program understanding. Table IV-12 shows that 47 percent reported that they had a very good understanding of the program, 35 percent reported that they had a good understanding, 13 percent reported that they somewhat understood the program, and six percent of respondents reported that they did not understand the program. Enrolled customers were much more likely to report a very good understanding

of the program. Only two percent of enrolled customers reported that they did not understand the program compared to 11 percent of disenrolled customers.

**Table IV-12**  
**Understanding of Program**

<b>How would you rate your current understanding or lack of understanding of the Prepaid Power Program?</b>			
<b>Program Understanding</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Very Good Understanding	34%	55%	<b>47%</b>
Good Understanding	37%	33%	<b>35%</b>
Somewhat Understand	18%	9%	<b>13%</b>
Do Not Understand	11%	2%	<b>6%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents who did not report a good or very good understanding of the program were asked to elaborate on the topics that they did not understand. Six percent of respondents overall, and eleven percent of disenrolled customers, said that they did not understand how the balance or the amount due was calculated. Four percent of respondents reported that they did not understand how the program benefits them and four percent of respondents reported general confusion with the program.

**Table IV-13**  
**Topics Participants Do Not Understand**

<b>What do you not understand about the Prepaid Power Program?</b>			
<b>Topics Participants Do Not Understand</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Balance/Amount Due Calculation	11%	3%	<b>6%</b>
Program Benefit	7%	3%	<b>4%</b>
General Confusion	6%	3%	<b>4%</b>
Checking Remaining Balance	4%	1%	<b>2%</b>
Credit Accounting	1%	2%	<b>2%</b>
Fund Contribution Frequency or Amount	4%	< 1%	<b>2%</b>
Adding Funds	1%	1%	<b>1%</b>
Deferred Payments	1%	1%	<b>1%</b>
Other	0%	1%	<b>1%</b>



<b>What do you not understand about the Prepaid Power Program?</b>			
<b>Topics Participants Do Not Understand</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Don't Know/Refused	2%	0%	<b>1%</b>
Good Understanding of Program	71%	88%	<b>82%</b>

#### **D. Program Impact**

This section addresses the impact of the program on participants' energy usage, arrearages, and shutoffs. Respondents were asked if they felt that they had better control over energy expenses through the Prepaid Power Program. Table IV-14 shows that 61 percent of participants reported improved control over energy expenses. However, only 31 percent of disenrolled customers reported improved control compared to 78 percent of enrolled customers.

**Table IV-14  
Control Over Energy Expenses**

<b>Do you feel that you have/had better control over your energy expenses through the Prepaid Power Program than when on regular billing?</b>			
<b>Control Over Energy Expenses</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Improved Control	31%	78%	<b>61%</b>
Not Improved	69%	18%	<b>37%</b>
Don't Know/Refused	0%	3%	<b>2%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked if they felt that the program resulted in a reduction in their household's overall energy usage. Table IV-15 shows that 38 percent of respondents reported that the program caused a reduction in their usage. While 19 percent of disenrolled customers reported a reduction in usage due to the program, 49 percent of enrolled customers reported a reduction in usage due to the program.

**Table IV-15**  
**Reduction in Overall Energy Usage**

<b>Do you feel that your household has reduced its overall energy usage as a result of the Prepaid Power Program?</b>			
<b>Reduced Energy Usage</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Reduced Usage	19%	49%	<b>38%</b>
Did Not Reduce Usage	77%	41%	<b>55%</b>
Don't Know	4%	10%	<b>8%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked if, at the time of enrollment, they had outstanding arrearages. Table IV-16 shows that 44 percent of participants reported that they had arrearages.

**Table IV-16**  
**Participants with Arrearages Prior to Enrollment**

<b>Did you owe money to BGE for past bills that were not paid prior to the Prepaid Power Program?</b>			
<b>Arrearages Before Enrollment</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Had Arrearages	41%	46%	<b>44%</b>
Did Not Have Arrearages	55%	53%	<b>54%</b>
Don't Know	4%	1%	<b>2%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents who reported that they had arrearages were asked if they felt that the program helped them pay off past due amounts. Table IV-17A shows that 34 percent of participants said that the program helped pay off past due bills. While 41 percent of enrolled customers said the program helped them pay off past bills, 24 percent of disenrolled customers said the program helped them to pay off past bills.

**Table IV-17A**  
**Program Impact on Paying Off Past Due Bills**

<b>Do you feel that the Prepaid Power Program has helped you pay off your past due amounts?</b>			
<b>Impact on Paying Past Due Bills</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Program Helped Pay Off Past Due Bills	24%	41%	<b>34%</b>
Program Did Not Help Pay Off Past Due Bills	13%	4%	<b>8%</b>
Don't Know	4%	1%	<b>2%</b>
Did Not Have Past Due Bills	59%	54%	<b>56%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table IV-17B shows the results of the same question, but only for the customers who reported that they had arrearages prior to enrollment in the Prepaid Power Program. Of those customers who reported that they had arrearages at the time of enrollment in the Prepaid Power Program, 78 percent said that they program helped them pay off their arrearages. While 89 percent of enrolled customers reported that the program helped them to pay off past bills, 59 percent of disenrolled customers reported that the program helped them to pay off past bills.

**Table IV-17B**  
**Program Impact on Paying Off Past Due Bills for Customers with Arrearages**

<b>Do you feel that the Prepaid Power Program has helped you pay off your past due amounts?</b>			
<b>Impact on Paying Past Due Bills</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	34	97	<b>131</b>
Program Helped Pay Off Past Due Bills	59%	89%	<b>78%</b>
Program Did Not Help Pay Off Past Due Bills	32%	9%	<b>17%</b>
Don't Know	9%	2%	<b>4%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked if the program helped them avoid or reduce the length of disconnections. Table IV-18A shows that 46 percent of respondents reported that the program helped avoid disconnections. Enrolled customers were more likely to report that the program helped to avoid disconnections.

**Table IV-18A**  
**Program Impact on Disconnections**

Do you feel that the Prepaid Program has helped you avoid or reduce the length of disconnection and continue your utility service?			
Impact on Avoiding Disconnections	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
Helped Avoid Disconnections	34%	53%	<b>46%</b>
Did Not Help Avoid Disconnections	61%	41%	<b>48%</b>
Don't Know	5%	6%	<b>5%</b>
Refused	0%	< 1%	<b>&lt; 1%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Many respondents initially found the question about disconnections difficult to answer because they had not faced a concern about disconnection. These customers typically answered that the program did not help them avoid disconnections. It is likely that a majority of “no” responses in the above table were comprised of customers who felt shutoffs were never an issue for them.

Table IV-18B displays the responses to the disconnection question, but only for those customers who reported that they had arrearages prior to enrollment in the Prepaid Power Program. The table shows that 68 percent of these respondents reported that the program helped them avoid disconnections. While 78 percent of enrolled customers reported that the program helped them to avoid disconnection, 50 percent of disenrolled customers reported that the program helped them to avoid disconnection.

**Table IV-18B**  
**Program Impact on Disconnections for Customers with Arrearages**

Do you feel that the Prepaid Program has helped you avoid or reduce the length of disconnection and continue your utility service?			
Impact on Avoiding Disconnections	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	34	97	<b>131</b>
Helped Avoid Disconnections	50%	78%	<b>68%</b>
Did Not Help Avoid Disconnections	44%	21%	<b>29%</b>
Don't Know	6%	1%	<b>3%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked if they ever paid their bill using the Auto Reload feature. Table IV-19 shows that 36 percent of respondents reported that they had used the Auto Reload feature.

**Table IV-19  
Use of Auto Reload Feature**

<b>Did you pay your bill using the Auto Reload feature, which automatically makes payments in the amount you choose any time your Prepaid account falls within two days of service remaining?</b>			
<b>Auto Reload Use</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Used Auto Reload	35%	36%	<b>36%</b>
Did Not Use Auto Reload	59%	64%	<b>62%</b>
Don't Know	6%	0%	<b>2%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked what payment methods they use to add funds to their prepaid account. Table IV-20 shows that 70 percent said they added funds online, the most common method. Checking account was the second most chosen option, with 57 percent of respondents providing that response.

**Table IV-20  
Payment Methods**

<b>What payment methods did you use to add funds to your BGE prepaid account?</b>			
<b>Payment Methods</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Online	70%	69%	<b>70%</b>
Checking Account	52%	59%	<b>57%</b>
Credit Card	29%	31%	<b>30%</b>
Debit Card	13%	16%	<b>15%</b>
By Telephone	6%	10%	<b>8%</b>
Cash	2%	1%	<b>1%</b>
At a Store	1%	1%	<b>1%</b>
Other	1%	1%	<b>1%</b>
Don't Know	2%	< 1%	<b>1%</b>

Note: Respondents could provide more than one method.

### E. Participant Satisfaction

This section addresses respondents' satisfaction with BGE's customer service and the Prepaid Power Program in general. Respondents were asked if they had received help from BGE customer service specifically for the Prepaid Power Program. Table IV-21 shows that 61 percent of participants reported that they received help from customer service. Disenrolled customers were much more likely to report that they received help from BGE customer service.

**Table IV-21**  
**Received Help from BGE Customer Service Representatives**

Did you receive help from BGE customer service representatives for the Prepaid Power Program?			
Customer Service Assistance	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
Received Help from Customer Service Reps	71%	55%	<b>61%</b>
Did Not Receive Help from Customer Service Reps	23%	43%	<b>36%</b>
Don't Know	6%	1%	<b>3%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents who reported that they received help from BGE customer service were asked to describe the type of assistance that they received. Table IV-22 shows that the most common type of customer service participants reported was a general explanation of the program, which also included answering basic questions about the program. The second most common type of assistance was enrollment assistance.

Disenrolled customers were generally more likely than enrolled customers to receive help understanding aspects of the program. For example, 30 percent of disenrolled customers reported that they received general help, while 20 percent of enrolled customers received that type of assistance.

**Table IV-22**  
**Reason for Contacting BGE Customer Service Representatives**

What kind of help did you receive from BGE customer service representatives?			
Customer Service Assistance	Enrollment Status		Total
	Disenrolled	Enrolled	
Respondents	83	212	<b>295</b>
General Explanation / Answered Questions	30%	20%	<b>24%</b>
Enrollment	12%	17%	<b>15%</b>
Adding Funds	13%	9%	<b>11%</b>
Disenrollment	12%	2%	<b>6%</b>

<b>What kind of help did you receive from BGE customer service representatives?</b>			
<b>Customer Service Assistance</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Five Day Extension	4%	5%	<b>5%</b>
Online System	4%	6%	<b>5%</b>
Billing	4%	4%	<b>4%</b>
Checking Remaining Funds	5%	1%	<b>3%</b>
Charges or Fees	1%	3%	<b>2%</b>
Distribution of Payments <sup>1</sup>	4%	1%	<b>2%</b>
Balance Remaining	5%	0%	<b>2%</b>
Auto Reload	2%	1%	<b>2%</b>
Service Restoration	1%	1%	<b>1%</b>
App	1%	1%	<b>1%</b>
Banking Issue	1%	1%	<b>1%</b>
Other	0%	< 1%	<b>&lt; 1%</b>
Don't Know/Refused	2%	1%	<b>1%</b>
Did Not Receive Help	29%	45%	<b>39%</b>

<sup>1</sup> This refers specifically to the process of newly added funds being divided between arrearages and the current bill.

Respondents who received help from BGE customer service were asked about their level of satisfaction with the experience. Table IV-23 shows that 66 percent of customers who received assistance were very satisfied, 24 percent were somewhat satisfied, five percent were somewhat dissatisfied, and five percent were very dissatisfied with BGE customer service. Though a clear majority of each group reported that they were very satisfied, enrolled customers were more likely than disenrolled customers to report that they were very satisfied.

**Table IV-23**  
**Satisfaction with BGE Customer Service Representatives**

<b>How satisfied or dissatisfied were you with the customer assistance you received from BGE about the Prepaid Power Program?</b>			
<b>Satisfaction</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	59	117	<b>176</b>
Very Satisfied	59%	72%	<b>66%</b>
Somewhat Satisfied	27%	21%	<b>24%</b>
Somewhat Dissatisfied	7%	4%	<b>5%</b>
Very Dissatisfied	7%	4%	<b>5%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked about their thoughts on the frequency of notifications they received regarding the Prepaid Power Program. Table IV-24 shows that 72 percent of respondents reported that the number of notices was fine, 20 percent reported that they received too many notices, five percent reported that they received too few notices, and three percent reported that they were unsure. Enrolled customers were much more likely than disenrolled customers to say they received the right number of notices. While 30 percent of disenrolled customers reported too many notices, 15 percent of enrolled customers reported too many notices.

**Table IV-24**  
**Number of Notifications Received**

<b>When you think about how often you receive notifications from BGE about your Prepaid balance and account activities, would you say you received too many notices, too few notices, or the right amount of notices?</b>			
<b>Notification Frequency</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Right Amount of Notices	58%	81%	<b>72%</b>
Too Many Notices	30%	15%	<b>20%</b>
Too Few Notices	6%	4%	<b>5%</b>
Don't Know	6%	< 1%	<b>3%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked to report their overall level of satisfaction with the Prepaid Power Program. Table IV-25 shows that 52 percent of participants reported that they were very satisfied, 26 percent reported that they were somewhat satisfied, 12 percent reported that they were somewhat dissatisfied, and ten percent reported that they were very dissatisfied with the program.

The level of satisfaction varied significantly between the two enrollment status groups. While 77 percent of enrolled customers reported that they were very satisfied, only ten percent of disenrolled customers reported that they were very satisfied. While only four percent of enrolled customers reported dissatisfaction with the program, roughly 55 percent of disenrolled customers reported dissatisfaction with the program.



**Table IV-25**  
**Satisfaction with Prepaid Power Program**

<b>Overall, how satisfied are you with the Prepaid Power Program?</b>			
<b>Satisfaction</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Very Satisfied	10%	77%	<b>52%</b>
Somewhat Satisfied	36%	19%	<b>26%</b>
Somewhat Dissatisfied	27%	4%	<b>12%</b>
Very Dissatisfied	28%	0%	<b>10%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Respondents were asked if they had any recommendations for improving the Prepaid Power Program. Table IV-26 shows that 42 percent of participants provided no recommendation, nine percent recommended improving the website, and seven percent recommended improving the explanation of the program. Other less common suggestions included reducing the frequency of notifications, providing more detailed info about the customer's usage, improving customer service, and eliminating the need for online users to log in more than once.

Some recommendations were more likely to be provided by one group of respondents than the other. Among disenrolled participants, twelve percent recommended improving the explanation of the program, while only four percent of enrolled participants provided that recommendation. Among enrolled participants, 12 percent recommended improving the website, while only four percent of disenrolled participants provided that recommendation.

**Table IV-26**  
**Recommendations for Prepaid Power Program**

<b>Do you have any recommendations for BGE to improve the Prepaid Program that you would like to share?</b>			
<b>Recommendation</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Respondents	83	212	<b>295</b>
Improve Website	4%	12%	<b>9%</b>
Improve Program Explanation	12%	4%	<b>7%</b>
Reduce Notification Frequency	4%	4%	<b>4%</b>
More Detailed Customer Usage Information	5%	4%	<b>4%</b>
Improve Browser Compatibility on Website	2%	5%	<b>4%</b>
Improve Customer Service	5%	2%	<b>3%</b>
Allow Easy Balance Payment on the App	0%	3%	<b>2%</b>
Eliminate Fees	0%	3%	<b>2%</b>

<b>Do you have any recommendations for BGE to improve the Prepaid Program that you would like to share?</b>			
<b>Recommendation</b>	<b>Enrollment Status</b>		<b>Total</b>
	<b>Disenrolled</b>	<b>Enrolled</b>	
Lengthen Disconnection Grace Period	4%	1%	<b>2%</b>
Consider COVID-19 Impact	1%	2%	<b>2%</b>
Continue/Expand Program	1%	3%	<b>2%</b>
Clarify Balance Calculation	1%	2%	<b>2%</b>
Set Fixed Monthly Payment	4%	1%	<b>2%</b>
Improve Portability	2%	1%	<b>1%</b>
Allow Change to Payment Distribution	1%	1%	<b>1%</b>
Provide a Monthly Statement/Bill	0%	2%	<b>1%</b>
Customize Notification Methods	0%	2%	<b>1%</b>
Provide Discount/Benefit	2%	1%	<b>1%</b>
Other	18%	8%	<b>11%</b>
No Recommendations*	37%	44%	<b>42%</b>

\*This category includes customers who responded that they did not know if they had recommendations.

## **F. Summary**

APPRISE conducted a telephone survey with participants in BGE's Prepaid Power pilot program to understand participants' satisfaction with the program and the impact of the program on customers' usage. Key findings from the survey are summarized below.

### Customer Characteristics and Demographics

- **Vulnerable Household Members:** 27 percent of respondents reported that there was an elderly household member, 20 percent reported that there was a disabled member, and 45 percent reported a child 18 or younger. Enrolled customers were more likely to have an elderly household member and less likely to have a child in the home.
- **Poverty Level:** Twelve percent had income at or below 150 percent of the poverty level eight percent had income between 151 and 200 percent of poverty, 26 percent had income between 200 and 400 percent of poverty, and 47 percent had income above 400 percent of the poverty level.

### Enrollment and Program Understanding

- **Source of Program Information:** When asked how they first learned about the Prepaid Power Program, 53 percent of respondents reported that they learned about the program from a BGE e-mail, 20 percent of respondents reported that they learned about the program from the BGE website, and 16 percent said they learned about it from a letter or mailing from BGE.
- **Invitation from BGE to Join the Program:** 70 percent of participants reported that they received an e-mail or post-card invitation from BGE to join the program. Of the customers

who reported receipt of the invitation, 51 percent considered it very important in their decision to enroll in the program and 32 percent considered it somewhat important.

- **Reasons for Enrolling:** Respondents were asked to provide their reasons for enrolling in the program. Forty-seven percent of participants said they preferred flexible payments, 22 percent said they wanted to try it out, 14 percent said they wanted to pay off arrears or maintain services, and 13 percent said they wanted to better manage their energy use.
- **Reasons for Disenrolling:** Disenrolled customers were asked why they chose to leave the program. Thirty-three percent reported that they did not like to make frequent payments, 23 percent reported that they felt the cost was higher, and 13 percent cited a change of address as the reason they left the program.
- **Current Understanding of Program:** Forty-seven percent reported that they have a very good understanding of the program and 35 percent reported that they have a good understanding. While 55 percent of enrolled customers reported that they have a very good understanding, 34 percent of disenrolled customers reported that they have a good understanding.

#### Program Impact

- **Control Over Energy Expenses:** 61 percent of respondents reported that they have better control over their energy expenses through the Prepaid Power Program. While 78 percent of enrolled customers reported improved control, 31 percent of disenrolled customers reported improved control.
- **Reduction in Overall Energy Usage:** Thirty-eight percent of respondents reported that the program caused a reduction in their usage. While 49 percent of enrolled customers reported a reduction in usage, 19 percent of disenrolled customers reported a reduction in usage due to the program.
- **Arrearages Prior to Enrollment:** Forty-four percent of respondents reported that they had arrearages before enrolling in the program. This was approximately the same across enrolled and disenrolled customers.
- **Program Impact on Paying Off Arrearages:** Thirty-four percent of respondents said the program helped them pay off past due bills. While 41 percent of enrolled customers reported that the program helped them pay off past due bills, 24 percent of disenrolled customers reported this benefit. Among customers who reported that they had arrearages at the time of enrollment, 78 percent reported that the program helped them pay off their arrears.
- **Program Impact on Avoiding Disconnections:** Forty-six percent of respondents reported that the program helped avoid or reduce the length of disconnection. While 53 percent of enrolled customers reported this benefit, 34 percent of disenrolled customers reported this benefit. Among customers who reported that they had arrearages at the time of enrollment,

68 percent reported that the program helped them avoid or reduce the length of disconnection.

### Customer Satisfaction

- **Satisfaction with BGE Customer Service:** Of the respondents who reported that they received help from BGE customer service, 66 percent were very satisfied and 24 percent were somewhat satisfied. While 59 percent of disenrolled customers reported that they were very satisfied with customer service, 72 percent of enrolled customers reported that they were very satisfied with customer service.
- **Overall Satisfaction with Program:** Fifty-two percent of respondents reported they were very satisfied with the program and 26 percent said they were somewhat satisfied. While 77 percent of enrolled customers said they were very satisfied, 10 percent of disenrolled customers said they were very satisfied.
- **Recommendations to Improve Prepaid Power Program:** Forty-two percent of participants provided no recommendations. The most common recommendations were to improve the website (nine percent), improve the explanation of the program (seven percent), reduce the frequency of notifications (four percent), and provide more detailed information about the customer's usage (four percent).

### Key Takeaways and Recommendations for BGE's Prepaid Power Program

This section provides a few key takeaways and recommendations.

- **Recruitment:** BGE found it challenging to recruit customers to participate in the program. The most common sources of information among participants were a BGE email or the BGE website. Seventy percent of participants reported that they received an email or postcard invitation from BGE and 83 percent of these participants said that the invitation was very or somewhat important in their decision to enroll. While there is a segment of the customer population who places value on the program, it may take a long time to increase participation to a meaningful percent of the customer base. BGE may consider how to reduce the steps required to enroll, given that more than 1,000 customers began the enrollment process but failed to complete the required steps. BGE has already taken some steps to improve the process.
- **Participants:** Customers who chose to participate in the Prepaid Power Program did not always match the initial expectations for those who would benefit the most. A full 47 percent of participants had income above 400 percent of the poverty level and only 44 percent reported that they had arrearages before enrolling in the program. Customers who are not low income or payment-troubled place value on the benefits of the Prepaid Power Program. If continued, the program should be marketed to all customers.
- **Benefits:** Participants were likely to report benefits from participation, especially those who remain enrolled. These reported benefits include 61 percent who reported better control over energy expenses, 38 percent who reported a reduction in usage, 34 percent who said it helped them pay off arrearages, and 46 percent who reported that it helped them

avoid disconnections or reduce the length of disconnections. Percentages were higher when only examining those who remained enrolled.

- Program Continuation: A segment of the population clearly values and benefits from prepaid power. BGE should consider continuation of this program.

## V. Participation Analysis

This section describes findings on the characteristics of customers who disenrolled compared to those who remained on the program.

### A. Program Disenrollment

APPRISE conducted an analysis of participation in BGE's Prepaid Power Pilot program approximately one year following program implementation. The purpose of the analysis was to assess the length of participation and participation status by customer characteristics.

Table V-1 displays information on disenrollment. Of the 527 Prepaid participants, 41 percent disenrolled during the time period examined, which was between one year and 15 months depending on when the participant enrolled.

**Table V-1  
Disenrollment Status**

Disenrolled	#	%
Yes	217	41%
No	310	59%
<b>Total</b>	<b>527</b>	<b>100%</b>

Table V-2 displays information on the length of participation by disenrollment status. Of the participants who disenrolled, 58 percent disenrolled within two months and another 28 percent disenrolled after three to five months of participation. Fewer than three percent participated for a full year prior to disenrolling.

Of those who did not disenroll, 77 percent participated for 12 to 13 months and 23 percent participated for 14 to 15 months.

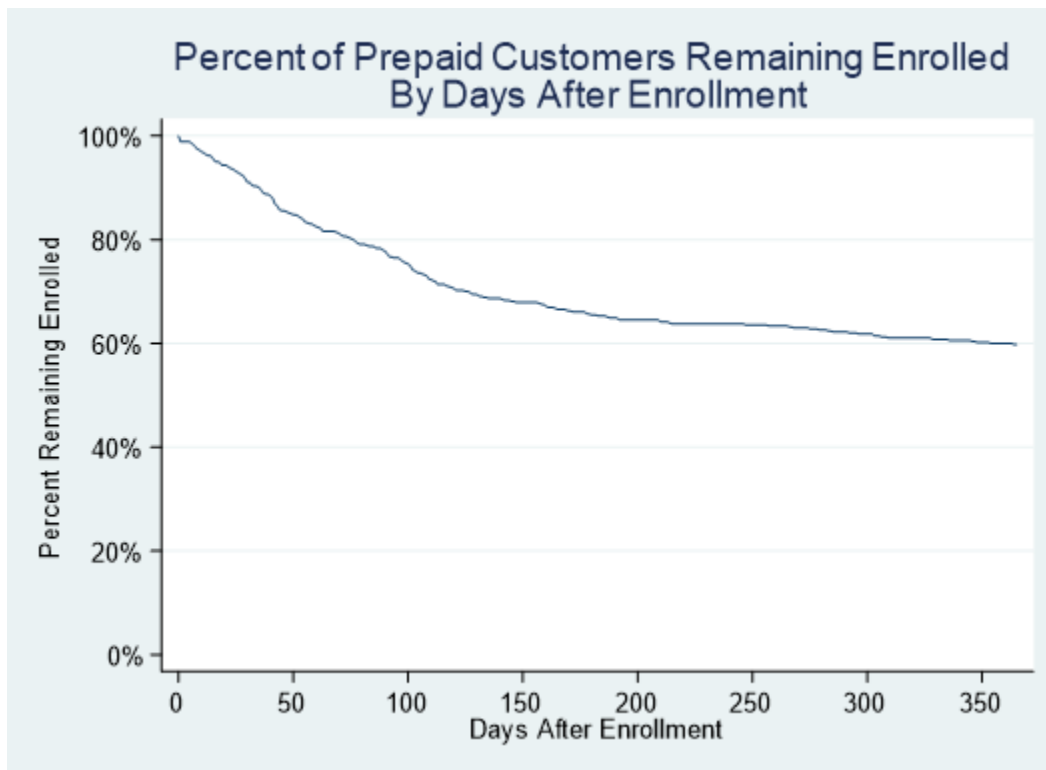
**Table V-2  
Months Enrolled in Prepaid Program by Disenrollment Status**

Months Enrolled in Prepaid Program	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
≤ 2 Months	123	58%	0	0%	<b>123</b>	<b>23%</b>
3-5 Months	60	28%	0	0%	<b>60</b>	<b>11%</b>
6-8 Months	12	6%	0	0%	<b>12</b>	<b>2%</b>
9-11 Months	17	8%	0	0%	<b>17</b>	<b>3%</b>
12-13 Months	4	2%	240	77%	<b>244</b>	<b>46%</b>

Months Enrolled in Prepaid Program	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
14-15 Months	1	<1%	70	23%	<b>71</b>	<b>13%</b>
<b>Total</b>	<b>217</b>	<b>100%</b>	<b>310</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Chart V-1 provides a picture of the percent of participants remaining enrolled in the year after enrollment. There is a decline to approximately 70 percent within the first 100 days, but then participation stabilizes and decreases slowly until the end of the year when approximately 60 percent remain enrolled.

**Chart V-1**  
**Percent of Participants Remaining Enrolled**



**B. Participant Characteristics**

This section provides information on customer characteristics and demographics by disenrollment status and length of participation. Table V-3 displays the poverty level group by participation status. Poverty level was calculated using household size and income, variables which were only available for 279 of the 527 participants who responded to the Prepaid participant survey. For customers who provided income ranges instead of precise incomes, the midpoint of the range was used to compute the poverty level. The table shows that, among

those with poverty level data, 28 percent of participants who disenrolled and 19 percent of participants who did not disenroll had an income at or below 200 percent of the poverty level.

**Table V-3**  
**Poverty Level by Disenrollment Status**

Poverty Level	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	%	%	#	%
≤ 100%	6	7%	10	5%	<b>16</b>	<b>6%</b>
101-200%	18	21%	27	14%	<b>45</b>	<b>16%</b>
201-300%	11	13%	34	18%	<b>45</b>	<b>16%</b>
301-400%	8	9%	26	13%	<b>34</b>	<b>12%</b>
> 400%	42	49%	97	50%	<b>139</b>	<b>50%</b>
<b>Total</b>	<b>85</b>	<b>100%</b>	<b>194</b>	<b>100%</b>	<b>279</b>	<b>100%</b>
Survey Not Completed	132	-	116	-	248	

Table V-4 displays the poverty level category for respondents by length of enrollment in the Prepaid Power Program. Thirty percent of the participants who remained in the program for two months or less had income at or below 200 percent of the poverty level, compared to 26 percent who remained in the program for three to 11 months, and 19 percent of those who remained in the program for 12 months or longer.

**Table V-4**  
**Poverty Level by Months Enrolled**

Poverty Level	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
≤ 100%	3	6%	3	9%	10	5%	<b>16</b>	<b>6%</b>
101-200%	12	24%	6	17%	27	14%	<b>45</b>	<b>16%</b>
201-300%	5	10%	6	17%	34	18%	<b>45</b>	<b>16%</b>
301-400%	6	12%	2	6%	26	13%	<b>34</b>	<b>12%</b>
> 400%	24	48%	18	51%	97	50%	<b>139</b>	<b>50%</b>
<b>Total</b>	<b>50</b>	<b>100%</b>	<b>35</b>	<b>100%</b>	<b>194</b>	<b>100%</b>	<b>279</b>	<b>100%</b>
Survey Not Completed	73	-	54	-	121	-	248	-

Table V-5 displays information on participants' county of residence by participation status. The region with the highest number of participants, 159, is the region just east of Washington



D.C., consisting of Anne Arundel, Calvert, and Prince George's Counties. Participants who disenrolled were more likely to reside in Baltimore City than participants who did not disenroll.

**Table V-5**  
**County of Residence by Disenrollment Status**

County of Residence	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
AA, Calvert, PG	60	29%	99	33%	<b>159</b>	<b>31%</b>
Baltimore City	52	25%	49	16%	<b>101</b>	<b>20%</b>
Baltimore County	53	25%	84	28%	<b>137</b>	<b>27%</b>
Carroll/Cecil/Frederick/Harford	18	9%	35	12%	<b>53</b>	<b>10%</b>
Howard/Montgomery	25	12%	35	12%	<b>60</b>	<b>12%</b>
<b>Total</b>	<b>208</b>	<b>100%</b>	<b>302</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Table V-6 breaks down county of residence by length of participation in the program. Participants who remained in the program for two months or less were most likely to reside in Baltimore City. Thirty-two percent of those who remained in the program for up to two months live in Baltimore City compared to 20 percent of all Prepaid participants.

**Table V-6**  
**County of Residence by Months Enrolled**

County of Residence	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
AA, Calvert, PG	30	26%	29	33%	100	33%	<b>159</b>	<b>31%</b>
Baltimore City	37	32%	14	16%	50	16%	<b>101</b>	<b>20%</b>
Baltimore County	29	25%	22	25%	86	28%	<b>137</b>	<b>27%</b>
Carroll/Cecil/Frederick/Harford	10	9%	8	9%	35	11%	<b>53</b>	<b>10%</b>
Howard/Montgomery	11	9%	14	16%	35	11%	<b>60</b>	<b>12%</b>
<b>Total</b>	<b>117</b>	<b>100%</b>	<b>87</b>	<b>100%</b>	<b>306</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Table V-7 displays participants' enrollment status based on their self-reported income status. Those who left the pilot were more likely to report that they were low-income compared to those who did not disenroll. Twenty-nine percent of disenrolled customers reported that they were low-income while only 21 percent customers who remained enrolled reported that they were low-income.

**Table V-7**  
**Self-Reported Low-Income by Disenrollment Status**

Self-Reported Income Status	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Low-Income	64	29%	66	21%	<b>130</b>	<b>25%</b>
Not Low-Income	153	71%	244	79%	<b>397</b>	<b>75%</b>
<b>Total</b>	<b>217</b>	<b>100%</b>	<b>310</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table V-8 compares the calculated poverty level to self-reported low-income status. Forty-nine percent of participants who reported that they were low-income were at or below 200 percent of the poverty level, while 23 percent had incomes higher than 400 percent of the poverty level. Among those who did not report that they were low-income, 14 percent had income at or below 200 percent of the poverty level and 58 percent had income greater than 400 percent of the poverty level.

**Table V-8**  
**Poverty Level by Self-Reported Low-Income Status**

Poverty Level	Self-Reported Status			
	Low-Income		Not Low-Income	
	#	%	#	%
≤ 100%	11	18%	5	2%
101-200%	19	31%	26	12%
201-300%	13	21%	32	15%
301-400%	5	8%	29	13%
> 400%	14	23%	125	58%
<b>Total</b>	<b>62</b>	<b>100%</b>	<b>217</b>	<b>100%</b>
Survey Not Completed	68	-	180	-

Table V-9A displays several customer characteristics by disenrollment status. Those who did and did not disenroll were similar in most of these characteristics. The greatest difference was for dual fuel customers. Sixty-four percent of disenrolled customers had dual fuel compared to 56 percent of customers who remained enrolled in the program.

**Table V-9A**  
**Customer Characteristics by Disenrollment Status**

Customer Characteristics	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Participants with Information	208	-	302	-	510	-
Dual Fuel	134	64%	168	56%	<b>302</b>	<b>59%</b>
OHEP Grant	16	8%	13	4%	<b>29</b>	<b>6%</b>
Retail Supply	63	30%	108	36%	<b>171</b>	<b>34%</b>
Peak Participation	77	35%	126	41%	<b>203</b>	<b>39%</b>
QHEC Participation	51	24%	64	21%	<b>115</b>	<b>22%</b>

Table V-9B breaks down the customer characteristics by months enrolled in the Prepaid Program. The table displays the following percent of full year participants with each characteristic.

- Dual Fuel: 56 percent
- OHEP Grant: 4 percent
- Retail Supply: 36 percent
- Peak Participation: 41 percent
- Quick Home Energy Check-up (QHEC): 21 percent

While 11 percent of participants enrolled for two months or less were OHEP grant recipients, only about four percent of participants in the other enrollment groups were grant recipients.

**Table V-9B**  
**Customer Characteristics by Months Enrolled**

Customer Characteristics	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
Participants with Information	117	-	87	-	306	-	510	-
Dual Fuel	79	68%	53	61%	170	56%	<b>302</b>	<b>59%</b>
OHEP Grant	13	11%	3	3%	13	4%	<b>29</b>	<b>6%</b>
Retail Supply	36	31%	26	30%	109	36%	<b>171</b>	<b>34%</b>
Peak Participation	45	37%	30	34%	128	41%	<b>203</b>	<b>39%</b>
QHEC Participation	30	24%	19	21%	66	21%	<b>115</b>	<b>22%</b>

Customers who completed the participant survey were asked if any of their household members were at least 62 years old, disabled, and had children 18 or younger. Table V-10 shows that

participants who disenrolled were less likely to have an elderly household member and more likely to have a child.

**Table V-10**  
**Household Demographics by Disenrollment Status**

Vulnerable Household Member	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Participants with Information	92	-	203	-	295	-
Elderly Member	19	21%	64	32%	<b>83</b>	<b>28%</b>
Disabled Member	19	21%	42	21%	<b>61</b>	<b>21%</b>
Child	48	52%	80	39%	<b>128</b>	<b>43%</b>
Survey Not Completed	125	-	107	-	232	-

Table V-11 displays participants' annual household income by their disenrollment status. The table shows that customers who disenrolled were more likely to have income less than \$25,000. Thirteen percent of those who disenrolled were in this income category compared to seven percent of participants who remained enrolled in the pilot.

**Table V-11**  
**Annual Household Income by Disenrollment Status**

Annual Household Income	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
≤ \$25,000	11	13%	14	7%	<b>25</b>	<b>9%</b>
\$25,001 - \$50,000	19	22%	47	24%	<b>66</b>	<b>24%</b>
\$50,001 - \$75,000	18	21%	35	18%	<b>53</b>	<b>19%</b>
\$75,001 - \$100,000	11	13%	37	19%	<b>48</b>	<b>17%</b>
> \$100,000	26	31%	62	32%	<b>88</b>	<b>31%</b>
<b>Total</b>	<b>85</b>	<b>100%</b>	<b>195</b>	<b>100%</b>	<b>280</b>	<b>100%</b>
Survey Not Completed	132	-	115	-	247	-

### **C. Participant Risk**

This section provides information on customer risk, including participants' credit scores, security deposits, and arrearages at enrollment. Table V-12 displays participants' internal credit score. Participants who remained in the pilot were more likely to have a credit score of 200 or less.

**Table V-12**  
**Internal Credit Score by Disenrollment Status**

Credit Score	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
≤ 200	54	26%	103	34%	<b>157</b>	<b>31%</b>
201- 400	56	27%	85	28%	<b>141</b>	<b>28%</b>
401- 600	81	39%	89	29%	<b>170</b>	<b>33%</b>
> 600	17	8%	25	8%	<b>42</b>	<b>8%</b>
<b>Total</b>	<b>208</b>	<b>100%</b>	<b>302</b>	<b>100%</b>	<b>510</b>	<b>100%</b>
<b>Mean Credit Score</b>	<b>362</b>		<b>322</b>		<b>338</b>	

Table V-13 displays participants' internal credit score by length of participation. The table shows that participants who remained in the program for two months or less had the highest mean credit score, 368, and participants who remained in the program a year or more had the lowest mean credit score, 322.

**Table V-13**  
**Internal Credit Score by Months Enrolled**

Credit Score	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
≤ 200	31	27%	22	25%	104	34%	<b>157</b>	<b>31%</b>
201- 400	30	26%	25	29%	86	28%	<b>141</b>	<b>28%</b>
401- 600	44	38%	35	40%	91	30%	<b>170</b>	<b>33%</b>
> 600	12	10%	5	6%	25	8%	<b>42</b>	<b>8%</b>
<b>Total</b>	<b>117</b>	<b>100%</b>	<b>87</b>	<b>100%</b>	<b>306</b>	<b>100%</b>	<b>510</b>	<b>100%</b>
<b>Mean Credit Score</b>	<b>368</b>		<b>356</b>		<b>322</b>		<b>338</b>	

Table V-14 shows customers' TSI risk segment, which is a function of credit score. Participants who disenrolled from the pilot were less likely to be in the lowest risk segment.

**Table V-14**  
**TSI Risk Segment by Disenrollment Status**

TSI Risk Segment	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
1	49	24%	98	32%	<b>147</b>	<b>29%</b>
3	77	37%	109	36%	<b>186</b>	<b>36%</b>
5	78	38%	92	30%	<b>170</b>	<b>33%</b>
7	4	2%	3	1%	<b>7</b>	<b>1%</b>
<b>Total</b>	<b>208</b>	<b>100%</b>	<b>302</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Table V-15 displays whether customers had a security deposit. The table shows that a similar percentage of participants had security deposits, regardless of whether they disenrolled from the pilot. Approximately 47 percent of both customers who disenrolled and did not disenroll had security deposits.

**Table V-15**  
**Percent Security Deposit by Disenrollment Status**

Security Deposit	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Security Deposit	104	48%	142	46%	<b>246</b>	<b>47%</b>
No Security Deposit	113	52%	168	54%	<b>281</b>	<b>53%</b>
<b>Total</b>	<b>217</b>	<b>100%</b>	<b>310</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table V-16A shows the security deposit amount for Prepaid customers with a security deposit. A similar percentage of participants were in each category, regardless of whether they disenrolled.

**Table V-16A**  
**Security Deposit Amount by Disenrollment Status**

Security Deposit Amount	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
\$1 - \$150	17	16%	20	14%	<b>37</b>	<b>15%</b>
\$151 - \$300	43	41%	57	40%	<b>100</b>	<b>41%</b>
\$301 - \$450	33	32%	44	31%	<b>77</b>	<b>31%</b>

Security Deposit Amount	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
> \$450	11	11%	21	15%	32	13%
<b>Total</b>	<b>104</b>	<b>100%</b>	<b>142</b>	<b>100%</b>	<b>246</b>	<b>100%</b>
<b>Mean Deposit</b>	<b>\$296</b>		<b>\$298</b>		<b>\$297</b>	

Table V-16B displays the security deposit amount by length of participation in the pilot. The mean deposit amount was \$297. The mean amount did not differ significantly by months enrolled.

**Table V-16B**  
**Security Deposit Amount by Months Enrolled**

Security Deposit Amount	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
\$1 - \$150	11	21%	6	12%	20	14%	37	15%
\$151 - \$300	20	38%	23	47%	57	40%	100	41%
\$301 - \$450	17	32%	14	29%	46	32%	77	31%
> \$450	5	9%	6	12%	21	15%	32	13%
<b>Total</b>	<b>53</b>	<b>100%</b>	<b>49</b>	<b>100%</b>	<b>144</b>	<b>100%</b>	<b>246</b>	<b>100%</b>
<b>Mean Deposit</b>	<b>\$290</b>		<b>\$299</b>		<b>\$299</b>		<b>\$297</b>	

Table V-17 displays the percent of customers with an arrearage at the time they enrolled in the pilot program. While 62 percent of participants who left the pilot had an arrearage, 52 percent of customers who remained enrolled had an arrearage.

**Table V-17**  
**Percent with Arrearages at Prepaid Program Enrollment**  
**By Disenrollment Status**

Arrearages at Enrollment	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Arrearage	134	62%	162	52%	296	56%
No Arrearage	83	38%	148	48%	231	44%
<b>Total</b>	<b>217</b>	<b>100%</b>	<b>310</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table V-18 displays the arrearage amount for participants with arrearages at the time of enrollment. Twenty-nine percent of disenrolled participants and 25 percent of participants who did not disenroll had arrearages greater than \$400.

**Table V-18**  
**Arrearages at Prepaid Program Enrollment Amount by Disenrollment Status**

Arrearage Amount	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
\$1 - \$100	31	23%	48	30%	<b>79</b>	<b>27%</b>
\$101 - \$200	27	20%	24	15%	<b>51</b>	<b>17%</b>
\$201 - \$300	18	13%	25	15%	<b>43</b>	<b>15%</b>
\$301- \$400	19	14%	25	15%	<b>44</b>	<b>15%</b>
> \$400	39	29%	40	25%	<b>79</b>	<b>27%</b>
<b>Total</b>	<b>134</b>	<b>100%</b>	<b>162</b>	<b>100%</b>	<b>296</b>	<b>100%</b>
<b>Mean Arrearages</b>	<b>\$283</b>		<b>\$265</b>		<b>\$273</b>	

Table V-19 displays the arrearage amount by length of participation. The mean arrearage amount for all participants was \$273. The mean amount did not differ significantly by months enrolled.

**Table V-19**  
**Arrearages at Prepaid Program Enrollment Amount by Months Enrolled**

Arrearage Amount	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
\$1 - \$100	19	24%	11	21%	49	30%	<b>79</b>	<b>27%</b>
\$101 - \$200	17	22%	10	19%	24	15%	<b>51</b>	<b>17%</b>
\$201 - \$300	11	14%	7	13%	25	15%	<b>43</b>	<b>15%</b>
\$301- \$400	12	15%	7	13%	25	15%	<b>44</b>	<b>15%</b>
> \$400	20	25%	17	33%	42	25%	<b>79</b>	<b>27%</b>
<b>Total</b>	<b>79</b>	<b>100%</b>	<b>52</b>	<b>100%</b>	<b>165</b>	<b>100%</b>	<b>296</b>	<b>100%</b>
<b>Mean Arrearages</b>	<b>\$272</b>		<b>\$297</b>		<b>\$266</b>		<b>\$273</b>	



### D. Energy Usage

This section provides information on customers' electric and gas usage. Table V-20 illustrates the distribution of electric heating type by customers' participation status in the Prepaid Power Program. Seventy-three percent of customers who left the pilot and 69 percent of customers who did not leave had non-electric heating.

**Table V-20  
Electric Heating Type by Disenrollment Status**

Electric Heating Type	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Electric Heating	57	27%	96	31%	<b>153</b>	<b>30%</b>
Non-Electric Heating	154	73%	209	69%	<b>363</b>	<b>70%</b>
<b>Total</b>	<b>211</b>	<b>100%</b>	<b>305</b>	<b>100%</b>	<b>516</b>	<b>100%</b>

Table V-21 shows whether pilot participants are supplied by BGE or by a third-party supplier. Overall, 34 percent used a third-party supplier.

**Table V-21  
Third-Party Supplier Status by Disenrollment Status**

Third-Party Supplier Status	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
BGE Supplied	145	70%	194	64%	<b>339</b>	<b>66%</b>
Served by Supplier	63	30%	108	36%	<b>171</b>	<b>34%</b>
<b>Total</b>	<b>208</b>	<b>100%</b>	<b>302</b>	<b>100%</b>	<b>510</b>	<b>100%</b>

Table V-22 displays the electric tariffs for program participants. The electric tariffs show whether the customer uses electric heat, has an electric vehicle, is on the Time of Use Rate (TOU), and is served by a third-party supplier. The distribution of electric tariffs did not vary significantly by disenrollment status.

**Table V-22**  
**Electric Tariff by Disenrollment Status**

Electric Tariff	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
<b>BGE Supplied – Electric Residential</b>						
Non-Electric Heat	105	48%	133	43%	<b>238</b>	<b>45%</b>
With-Electric Heat	44	20%	61	20%	<b>105</b>	<b>20%</b>
Owner of Electric Vehicle / TOU	3	1%	8	3%	<b>11</b>	<b>2%</b>
<b>Served by Supplier – Electric Residential</b>						
Non-Electric Heat	45	21%	67	22%	<b>112</b>	<b>21%</b>
With-Electric Heat	12	6%	33	11%	<b>45</b>	<b>9%</b>
TOU	2	1%	3	1%	<b>5</b>	<b>1%</b>
Missing Electric Tariff Data	6	3%	5	2%	<b>11</b>	<b>2%</b>
<b>Total</b>	<b>217</b>	<b>100%</b>	<b>310</b>	<b>100%</b>	<b>527</b>	<b>100%</b>

Table V-23 displays the gas tariff for program participants with gas service agreements. The distribution of gas tariffs did not vary significantly by disenrollment status.

**Table V-23**  
**Gas Tariff by Disenrollment Status**

Gas Tariff	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%		
<b>BGE Supplied – Gas Residential</b>						
With-Gas Heat	92	71%	109	67%	<b>201</b>	<b>69%</b>
Non-Gas Heat	1	1%	8	5%	<b>9</b>	<b>3%</b>
<b>Served by Supplier – Gas Residential</b>						
With-Gas Heat	34	26%	45	28%	<b>79</b>	<b>27%</b>
Non-Gas Heat	2	2%	1	1%	<b>3</b>	<b>1%</b>
<b>Total</b>	<b>129</b>	<b>100%</b>	<b>163</b>	<b>100%</b>	<b>292</b>	<b>100%</b>

Table V-24 displays the attrition statistics for the usage analysis. Customers were excluded from the analysis if all their read dates were missing, they did not have at least nine bills in the pre-enrollment period, they had too many estimated bills, or they were usage outliers. Eighty-two percent of participants were included in the electric usage analysis and 86 percent of participants were included in the gas usage analysis.

**Table V-24**  
**Attrition Analysis**

Exclusion Reason	Prepaid Participants			
	Electric Usage		Gas Usage	
	#	%	#	%
Original Accounts	527	100%	303	100%
Non-Missing Read Dates	526	> 99%	301	> 99%
Enough Usage Data	494	94%	276	91%
Complete Usage Data	494	94%	271	89%
No Outliers	430	82%	262	86%
<b>Analysis Sample</b>	<b>430</b>	<b>82%</b>	<b>262</b>	<b>86%</b>

Table V-25 displays the weather-normalized annual electric usage for electric heating customers. Participants who left the pilot were much more likely to have high electric usage. Forty-two percent of disenrolled participants had electric heating usage greater than 25,000 kWh compared to 27 percent of participants who did not disenroll.

**Table V-25**  
**Weather-Normalized Annual Electricity Usage by Disenrollment Status**  
**Electric Heating Participants**

Electric Heating (kWh)	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
≤ 10,000	1	2%	6	6%	<b>7</b>	<b>5%</b>
10,0001 – 15,000	12	21%	10	10%	<b>22</b>	<b>14%</b>
15,001 – 20,000	9	16%	34	35%	<b>43</b>	<b>28%</b>
20,0001 – 25,000	11	19%	20	21%	<b>31</b>	<b>20%</b>
> 25,000	24	42%	26	27%	<b>50</b>	<b>33%</b>
<b>Total</b>	<b>57</b>	<b>100%</b>	<b>96</b>	<b>100%</b>	<b>153</b>	<b>100%</b>
<b>Mean Electricity Usage</b>	<b>15,697</b>		<b>14,587</b>		<b>14,969</b>	

Table V-26 displays the electric heating usage by length of participation in the program. Participants enrolled in the program for two months or less had the highest electric usage, at 17,093 kWh compared to 14,969 kWh overall.

**Table V-26**  
**Weather-Normalized Annual Electricity Usage by Months Enrolled**  
**Electric Heating Participants**

Electric Heating (kWh)	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
≤ 10,000	0	0%	1	4%	6	6%	7	5%
10,0001 – 15,000	7	23%	5	20%	10	10%	22	14%
15,001 – 20,000	4	13%	5	20%	34	35%	43	28%
20,0001 – 25,000	3	10%	7	28%	21	21%	31	20%
> 25,000	16	53%	7	28%	27	28%	50	33%
<b>Total</b>	<b>30</b>	<b>100%</b>	<b>25</b>	<b>100%</b>	<b>98</b>	<b>100%</b>	<b>153</b>	<b>100%</b>
<b>Mean Electricity Usage</b>	<b>17,093</b>		<b>13,857</b>		<b>14,638</b>		<b>14,969</b>	

Table V-27 displays the weather-normalized annual electricity usage for non-electric heating participants. The distribution of usage did not differ significantly by disenrollment status.

**Table V-27**  
**Weather-Normalized Annual Electricity Usage by Disenrollment Status**  
**Non-Electric Heating**

Non-Electric Heating (kWh)	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
≤ 5,000	28	18%	31	15%	59	16%
5,001 – 10,000	57	37%	79	38%	136	37%
10,001 – 15,000	28	18%	33	16%	61	17%
15,001 – 20,000	9	6%	19	9%	28	8%
> 20,000	32	21%	47	22%	79	22%
<b>Total</b>	<b>154</b>	<b>100%</b>	<b>209</b>	<b>100%</b>	<b>363</b>	<b>100%</b>
<b>Mean Electricity Usage</b>	<b>8,959</b>		<b>9,715</b>		<b>9,397</b>	

Table V-28 displays the non-electric heating usage by length of participation. The table shows that participants enrolled in the program for two months or less had the lowest mean usage, at 8,594 kWh compared to 9,397 kWh overall.

**Table V-28**  
**Weather-Normalized Annual Electricity Usage by Months Enrolled**  
**Non-Electric Heating**

Non-Electric Heating (kWh)	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
≤ 5,000	21	24%	7	11%	31	15%	<b>59</b>	<b>16%</b>
5,001 – 10,000	32	36%	25	40%	79	37%	<b>136</b>	<b>37%</b>
10,001 – 15,000	15	17%	12	19%	34	16%	<b>61</b>	<b>17%</b>
15,001 – 20,000	6	7%	3	5%	19	9%	<b>28</b>	<b>8%</b>
> 20,000	15	17%	15	24%	49	23%	<b>79</b>	<b>22%</b>
<b>Total</b>	<b>89</b>	<b>100%</b>	<b>62</b>	<b>100%</b>	<b>212</b>	<b>100%</b>	<b>363</b>	<b>100%</b>
<b>Mean Electricity Usage</b>	<b>8,594</b>		<b>9,474</b>		<b>9,725</b>		<b>9,397</b>	

Table V-29 displays the weather-normalized annual gas usage for program participants. Thirty-nine percent of participants who remained in the program and 29 percent of participants who left had gas usage of 500 Therms or less.

**Table V-29**  
**Weather-Normalized Annual Gas Usage by Disenrollment Status**

Gas Usage (Therms)	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
≤ 500	34	29%	57	39%	<b>91</b>	<b>35%</b>
501-750	32	27%	48	33%	<b>80</b>	<b>31%</b>
751-1,000	33	28%	19	13%	<b>52</b>	<b>20%</b>
1,001 – 1,500	14	12%	18	12%	<b>32</b>	<b>12%</b>
> 1,500	4	3%	3	2%	<b>7</b>	<b>3%</b>
<b>Total</b>	<b>117</b>	<b>100%</b>	<b>145</b>	<b>100%</b>	<b>262</b>	<b>100%</b>
<b>Mean Gas Usage</b>	<b>710</b>		<b>653</b>		<b>679</b>	

Table V-30 displays participants' gas usage by months enrolled in the Prepaid Program. Participants enrolled for a full year had somewhat lower gas usage.

**Table V-30**  
**Weather-Normalized Annual Gas Usage by Months Enrolled**

Gas Usage (Therms)	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
≤ 500	24	33%	9	21%	58	39%	<b>91</b>	<b>35%</b>
501-750	15	21%	17	40%	48	33%	<b>80</b>	<b>31%</b>
751-1,000	23	32%	9	21%	20	14%	<b>52</b>	<b>20%</b>
1,001 – 1,500	9	12%	5	12%	18	12%	<b>32</b>	<b>12%</b>
> 1,500	2	3%	2	5%	4	2%	<b>7</b>	<b>3%</b>
<b>Total</b>	<b>73</b>	<b>100%</b>	<b>42</b>	<b>100%</b>	<b>147</b>	<b>100%</b>	<b>262</b>	<b>100%</b>
<b>Mean Gas Usage</b>	<b>707</b>		<b>722</b>		<b>652</b>		<b>679</b>	

### **E. Program Enrollment and Understanding**

This section compares enrollment reasons and program understanding for those who did and did not leave the pilot. Table V-31 shows that while flexible payments and curiosity were the most common reasons for enrolling among those who disenrolled, flexible payments was the most common reason among those who did not disenroll.

**Table V-31**  
**Reasons for Enrolling in Program by Disenrollment Status**

Reason for Enrolling in Program	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Survey Participants	92		203		295	
Flexible Payments	35	38%	110	54%	<b>145</b>	<b>49%</b>
Curiosity	26	28%	36	18%	<b>62</b>	<b>21%</b>
Pay Off Charges/Maintain Services	11	12%	30	15%	<b>41</b>	<b>14%</b>
Manage Energy Usage	8	9%	31	15%	<b>39</b>	<b>13%</b>
Save Money	11	12%	16	8%	<b>27</b>	<b>9%</b>
Survey Not Completed	125	-	107	-	232	-

Participants who completed the participant survey were asked to rate their level of program understanding. Table V-32 shows that participants who disenrolled were much more likely to have not understood the program. Twenty-eight percent of disenrolled customers did not have a good or very good understanding of the pilot, compared to 11 percent of customers who never disenrolled.

**Table V-32**  
**Understanding of the Program by Disenrollment Status**

Program Understanding	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Do Not Understand	9	10%	5	2%	<b>14</b>	<b>5%</b>
Somewhat Understand	17	18%	18	9%	<b>35</b>	<b>12%</b>
Good Understanding	35	38%	67	33%	<b>102</b>	<b>35%</b>
Very Good Understanding	31	34%	113	56%	<b>144</b>	<b>49%</b>
<b>Total</b>	<b>92</b>	<b>100%</b>	<b>203</b>	<b>100%</b>	<b>295</b>	<b>100%</b>
Survey Not Completed	125	-	107	-	232	-

### **F. Program Impact and Satisfaction**

This section compares the impact of the program on participants' energy usage, arrearages, and shutoffs for those who did and did not disenroll. The information in this section was gathered from the participant survey. There were large differences between those who did and did not disenroll, as shown in Table V-33.

- Improved Control: Only 38 percent of those who disenrolled said they had improved control with the Prepaid Program, compared to 77 percent of those who did not disenroll.
- Reduced Energy Usage: Only 23 percent of those who disenrolled said they had reduced energy usage with the Prepaid Program, compared to 49 percent of those who did not disenroll.
- Helped with Bill Payment: Only 26 percent of those who disenrolled said the program helped with bill payment, compared to 40 percent of those who did not disenroll.
- Avoided Disconnections: Only 37 percent of those who disenrolled said the program helped them to avoid disconnection, compared to 53 percent of those who did not disenroll.

**Table V-33**  
**Prepaid Impact by Disenrollment Status**

Prepaid Impact	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Participants with Information	92	-	203	-	295	-
Improved Control	35	38%	157	77%	<b>192</b>	<b>65%</b>
Reduced Usage	21	23%	99	49%	<b>120</b>	<b>41%</b>
Improved Bill Payment	24	26%	82	40%	<b>106</b>	<b>36%</b>

Prepaid Impact	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Avoided Disconnection	34	37%	107	53%	<b>141</b>	<b>48%</b>
Survey Not Completed	125	-	107	-	232	-

Survey respondents were asked to report their overall level of satisfaction with the Prepaid Power Program. Table V-34A shows that participants who disenrolled were much less satisfied with the program than participants who did not disenroll. Almost half of participants who left the pilot were very dissatisfied or somewhat dissatisfied. Seventy-seven percent of customers who remained enrolled in the pilot were very satisfied.

**Table V-34A**  
**Overall Satisfaction with Prepaid Power Program by Disenrollment Status**

Program Satisfaction	Participation Status					
	Disenrolled		Did Not Disenroll		All Participants	
	#	%	#	%	#	%
Very Dissatisfied	23	25%	0	0%	<b>23</b>	<b>8%</b>
Somewhat Dissatisfied	22	24%	8	4%	<b>30</b>	<b>10%</b>
Somewhat Satisfied	33	36%	38	19%	<b>71</b>	<b>24%</b>
Very Satisfied	14	15%	157	77%	<b>171</b>	<b>58%</b>
<b>Total</b>	<b>92</b>	<b>100%</b>	<b>203</b>	<b>100%</b>	<b>295</b>	<b>100%</b>
Survey Not Completed	125	-	107	-	232	-

Table V-34B breaks down program satisfaction by months enrolled. Fifty-six percent of participants enrolled for two months or less and 41 percent of participants enrolled for three to 11 months were somewhat or very dissatisfied with the program.

**Table V-34B**  
**Overall Satisfaction with Prepaid Power Program by Months Enrolled**

Program Satisfaction	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
Very Dissatisfied	12	23%	11	28%	0	0%	<b>23</b>	<b>8%</b>
Somewhat Dissatisfied	17	33%	5	13%	8	4%	<b>30</b>	<b>10%</b>



Program Satisfaction	Length of Participation							
	≤ 2 Months		3-11 Months		≥ 12 Months		All Participants	
	#	%	#	%	#	%	#	%
Somewhat Satisfied	18	35%	14	36%	39	19%	<b>71</b>	<b>24%</b>
Very Satisfied	5	10%	9	23%	157	77%	<b>171</b>	<b>58%</b>
<b>Total</b>	<b>52</b>	<b>100%</b>	<b>39</b>	<b>100%</b>	<b>204</b>	<b>100%</b>	<b>295</b>	<b>100%</b>
Survey Not Completed	71	-	50	-	111	-	232	-

## G. Summary

This section provides a summary of key findings from the participation analysis.

### Overview

- **Disenrollment Status:** Of the 527 Prepaid participants, 41 percent disenrolled during the time period examined. Of the participants who disenrolled, 58 percent disenrolled within two months and another 28 percent disenrolled after three to five months of participation.

### Customer Characteristics and Demographics

- **Poverty Level:** Twenty-eight percent of participants who disenrolled and 19 percent of participants who did not disenroll had an income at or below 200 percent of the poverty level. Thirty percent of the participants who remained in the program for two months or less had income at or below 200 percent of the poverty level, compared to 26 percent who remained in the program for three to 11 months, and 19 percent of those who remained in the program for 12 months or longer.
- **County of Residence:** Participants who remained in the program for two months or less were most likely to reside in Baltimore City. Thirty-two percent of those participants live in Baltimore City compared to 16 percent of both participants who remained enrolled for three to 11 months and participants who remained enrolled for at least a year.
- **Low-Income:** Twenty-nine percent of disenrolled customers reported that they were low-income while only 21 percent customers who remained enrolled reported that they were low-income. Forty-nine percent of participants who reported that they were low-income were at or below 200 percent of the poverty level, while 23 percent had incomes higher than 400 percent of the poverty level.
- **Customer Characteristics:** A similar percentage of customers who disenrolled and did not disenroll received an OHEP grant, had retail supply, and participated in Peak Rewards and the Quick Home Energy Check-up. While 11 percent of participants enrolled for two months or less were OHEP grant recipients, only about four percent of participants in the other enrollment groups were grant recipients.

- **Vulnerable Household Members:** Participants who disenrolled were less likely to have an elderly household member and more likely to have a child.
- **Annual Household Income:** Customers who disenrolled were more likely to have incomes less than \$25,000. Thirteen percent of those who disenrolled were in this income category compared to seven percent of participants who remained enrolled in the pilot.

#### Customer Risk

- **Credit Score:** Participants who remained in the program for two months or less had the highest mean credit score, 368, and participants who remained in the program a year or more had the lowest mean credit score, 322.
- **Security Deposit:** About 47 percent of participants had security deposits, regardless of whether they disenrolled from the pilot. The mean deposit amount was \$297. The mean amount did not differ significantly by months enrolled.
- **Arrearages:** Sixty-two percent of participants who left the pilot had arrearages compared to 52 percent of customers who remained enrolled. The mean arrearage amount for all participants was \$273. The mean amount did not differ much by months enrolled.

#### Energy Usage

- **Heating Type:** Seventy-three percent of customers who left the pilot and 69 percent of customers who did not leave had non-electric heating. Overall, 34 percent used a third-party supplier.
- **Tariffs:** The distribution of electric and gas tariffs for participants who disenrolled from the pilot roughly matches the distribution for participants who did not disenroll.
- **Energy Usage:** Participants enrolled in the program for two months or less had the highest electric heating usage, at 17,093 kWh. Participants enrolled in the program for two months or less had the lowest mean non-electric heating usage, at 8,594 kWh. Participants enrolled for at least a year had the lowest mean gas usage, at 652 Therms.

#### Program Enrollment and Understanding

- **Reasons for Enrolling:** While flexible payments and curiosity were the most common reasons for enrolling among those who disenrolled, flexible payments was the most common reason among those who did not disenroll.
- **Understanding of Program:** Participants who disenrolled were much more likely to have not understood the program.

Program Impact and Satisfaction

- **Program Impact:** Customers who disenrolled were less likely to have improved control over their energy expenses and have reduced their energy usage. They were also less likely to report that the program helped them improve bill payment and avoid disconnections.
- **Overall Satisfaction with Program:** Participants who disenrolled were much less satisfied with the program than participants who did not disenroll. Almost half of participants who left the pilot were very dissatisfied or somewhat dissatisfied.

## VI. Usage Analysis

This section provides a description of the research methodology and a summary of the findings from an analysis of the energy usage for participants in BGE's Prepaid Power Program.

### A. Methodology

This section describes the evaluation data and methodology for the usage impact analysis.

#### **Evaluation Data**

BGE provided APPRISE with a list of all Prepaid Program participants, a list of randomly selected BGE residential customers who did not enroll in the program, program participation data, and customer usage data from January 2018 to December 2020.

APPRISE analyzed the energy usage statistics for both the program participants and the nonparticipants in the pre- and post-analysis periods, discussed below. To mitigate the impact of extraneous factors such as changes in weather, changes in the economy, and notably for this analysis, the impact of COVID-19, APPRISE weather normalized the usage data and conducted a differences-in-differences analysis to assess the average change for the BGE Prepaid participants compared to the nonparticipant comparison group. The difference between the pre- and post-treatment statistics is the gross change. The difference between the gross change of the Prepaid Pilot participants and the gross change of the comparison groups is the net change. This is our best estimate of the impact of the program on participants' energy usage.

#### **BGE Prepaid Participants**

All 527 BGE customers who enrolled in the Prepaid Power Program as of December 2, 2019 were considered for inclusion in the enrollee treatment group. The first program enrollment occurred on August 12, 2019, but the majority of program enrollment occurred in October and November 2019.

#### **Matched Nonparticipants**

A matched nonparticipants comparison group was developed to match program nonparticipants and Prepaid Pilot participants who shared similar energy characteristics and consumption patterns in the pre-period. Two matched nonparticipants were selected for each treatment group customer based on their pre-enrollment usage, heating fuel, and whether they had time of use rates.

The first step in the matched analysis was to group customers with the same electric and gas heating and billing types. All customers with an electric tariff were categorized into one of five bins depending on whether they were an electric heating customer, were on a time of use tariff, and were on an electric vehicle tariff. Similarly, gas customers were categorized into one of two bins depending on whether they had gas heating. Separating customers into bins ensured that treatment group customers were only matched with nonparticipants who had the same heating and billing types.

The second step was to use the customers' usage history to match participants to nonparticipants with similar usage patterns. Only the nonparticipants who had usage data spanning the pre-treatment period and who had at least nine bills in this period were kept as potential comparison group matches.

We calculated each customer's average daily energy usage for the months in the pre-treatment period. The Sum of Squared Differences (SSD) in average daily energy usage was used to find the best matches between treatment group customers and nonparticipants. SSD is calculated as the sum of the squared difference in average daily usage for all usage months in the pre-treatment period. A low SSD implies a good match. Each of the 482 treatment group customers with electric accounts and 262 with gas accounts were matched with the two comparison group customers with the lowest SSD.

### **Nonparticipant Comparison Group with Arrearage Characteristics**

We also used the full random sample of customers who did not participate in the BGE Prepaid Power Program. Given that most Prepaid Power participants enrolled in the last quarter of 2019, the quasi-enrollment date for the comparison group was set at November 15, 2019, the midpoint of the last quarter. Because these customers were less likely to have arrearages than the prepaid participants, we weighted the nonparticipants to match the participants' percent of arrearages at the time of enrollment in the program. As such, we refer to this group as the Weighted Q4 Comparison Group.

### **Summary of Groups**

Table VI-1 describes the three groups used in this usage analysis. Customers in all three groups had pre- and post-analysis periods that spanned a year. The analysis periods for the BGE prepaid participants were based on the program enrollment date. The analysis periods for the matched nonparticipants were based on the enrollment date of the matched treatment group customer. The analysis periods for the Q4 comparison group were based on the quasi-enrollment date of November 15, 2019.

**Table VI-1  
Treatment and Comparison Group Definitions**

	<b>Prepaid Participants</b>	<b>Matched Nonparticipants</b>	<b>Weighted Q4 Comparison Group</b>
Description	<ul style="list-style-type: none"> <li>BGE Prepaid Participants</li> </ul>	<ul style="list-style-type: none"> <li>Did not participate in BGE Prepaid Program.</li> <li>Similar pre period usage as Prepaid participants</li> </ul>	<ul style="list-style-type: none"> <li>Did not participate in BGE Prepaid Program</li> </ul>
Pre-Participation Dates	<ul style="list-style-type: none"> <li>1 year prior to enrollment</li> </ul>	<ul style="list-style-type: none"> <li>1 year prior to enrollment of matched treatment customer</li> </ul>	<ul style="list-style-type: none"> <li>1 year prior to quasi-enrollment date of 11/15/2019</li> </ul>
Post-Participation Dates	<ul style="list-style-type: none"> <li>1 year after enrollment</li> </ul>	<ul style="list-style-type: none"> <li>1 year after enrollment of matched treatment customer</li> </ul>	<ul style="list-style-type: none"> <li>1 year after quasi-enrollment date of 11/15/2019</li> </ul>

Table VI-2 provides the attrition analysis for the program participants. All customers who enrolled in the Prepaid Power Program through December 2, 2020 were considered for inclusion in the analysis group. Customers were considered ineligible for analysis if they did

not have sufficient usage data in the pre or post-treatment period. Customers were only included in the analysis if they had at least nine bills, at least 270 days of usage data, and at least four real reads in both periods. Customers who were extreme outliers in terms of usage were excluded from the analysis group. The table shows that 90 percent of electric customers and 77 percent of gas customers survived Degree Day attrition. These customers make up the final analysis group. We also conducted a PRISM analysis for comparison, but the report focuses on the Degree Day analysis results.

**Table VI-2  
Treatment Group Attrition Analysis**

Inclusion Reason	Prepaid Participants			
	Electric Usage		Gas Usage	
	N	%	N	%
Original Accounts	527	100%	316	100%
Non-Missing Read Dates	527	100%	312	99%
Enough Pre & Post Usage Data ( $\geq 9$ Bills)	491	93%	269	85%
Enough Pre & Post Usage Days ( $\geq 270$ Days)	482	91%	259	82%
Enough Pre & Post Real Reads ( $\geq 4$ Real Reads)	482	91%	258	82%
<b>Sufficient Usage Data</b>	<b>482</b>	<b>91%</b>	<b>258</b>	<b>82%</b>
No Extreme Change in Degree Day Usage ( $\leq 65\%$ Change)	473	90%	258	82%
No Additional Degree Day Outliers	473	90%	243	77%
<b>Survived Degree Day Attrition</b>	<b>473</b>	<b>90%</b>	<b>243</b>	<b>77%</b>
No Extreme Change in PRISM Usage ( $\leq 65\%$ Change)	447	85%	232	73%
No Additional PRISM Outliers	447	85%	232	73%
PRISM Goodness of Fit (High $R^2$ & Low Variation)	308	58%	226	72%
<b>Survived Degree Day &amp; PRISM Attrition</b>	<b>308</b>	<b>58%</b>	<b>226</b>	<b>72%</b>

Table VI-3 provides the attrition analysis for the matched nonparticipants and for the Q4 comparison group. Customers were considered ineligible for the analysis if they had an insufficient usage history or if they were extreme outliers in terms of usage. The table shows that 98 percent of electric accounts and 95 percent of gas accounts survived Degree Day attrition for the matched comparison group. In turn, 83 percent of electric accounts and 75 percent of gas accounts survived Degree Day attrition for the Q4 comparison group.

**Table VI-3  
Comparison Groups Attrition Analysis**

Inclusion Reason	Nonparticipants							
	Matched Nonparticipants				Q4 Comparison Group			
	Electric Usage		Gas Usage		Electric Usage		Gas Usage	
	N	%	N	%	N	%	N	%
Original Accounts	964	100%	512	100%	49,994	100%	27,629	100%
Non-Missing Read Dates	964	100%	512	100%	49,994	100%	27,318	99%
Enough Pre & Post Usage ( $\geq 9$ Bills)	964	100%	512	100%	45,966	92%	24,043	87%
Enough Pre & Post Usage ( $\geq 270$ Days)	964	100%	512	100%	43,311	87%	22,837	83%
Enough Pre & Post Real Reads ( $\geq 4$ )	964	100%	512	100%	43,306	87%	22,656	82%
No Change in Degree Day > 65%	941	98%	501	98%	41,994	84%	21,935	79%
No Additional Degree Day Outliers	940	98%	487	95%	41,734	83%	20,839	75%
<b>Survived Degree Day Attrition</b>	<b>940</b>	<b>98%</b>	<b>487</b>	<b>95%</b>	<b>41,734</b>	<b>83%</b>	<b>20,839</b>	<b>75%</b>
No Extreme in PRISM > 65%	896	93%	482	94%	41,734	83%	20,839	75%
No Additional PRISM Outliers	895	93%	482	94%	41,720	83%	20,839	75%
PRISM Goodness of Fit	688	71%	453	88%	40,102	80%	20,701	75%
<b>Survived Degree Day &amp; PRISM Attrition</b>	<b>688</b>	<b>71%</b>	<b>453</b>	<b>88%</b>	<b>40,102</b>	<b>80%</b>	<b>20,701</b>	<b>75%</b>

Table VI-4A compares the characteristics of all Prepaid participants and comparison group customers with electric heating (“All”) to those electric heating customers who had enough usage data to be included in the analysis groups (“Analysis Group”). In general, the “All” groups and the “Analysis Groups” were very similar in terms of all observed characteristics. This provides confidence that the impacts estimated in the usage analysis can be attributed to the entire population.

The matched participants differ in some respects from the treatment group.

- Matched participants are less likely to have a security deposit.
- Matched participants are less likely to have arrearages.

As noted above, the Q4 comparison group was weighted to match the comparison group to the treatment group with respect to the presence of arrears, as this is an important factor in the decision to enroll in the program and is related to energy usage.

**Table VI-4A  
Customer Characteristics Comparison – Electric Heating Accounts**

	Treatment Group		Matched Nonparticipants		Q4 Comparison Group	
	All	Analysis Group	All	Analysis Group	All	Weighted Analysis Group
<b>Observations</b>	<b>153</b>	<b>144</b>	<b>288</b>	<b>284</b>	<b>14,580</b>	<b>12,423</b>
County of Residence						
AA, Calvert, PG	33%	33%	30%	31%	35%	35%
Baltimore City	11%	11%	6%	6%	7%	7%
Baltimore County	21%	21%	27%	27%	21%	22%
Carroll/Cecil/Frederick/Harford	13%	12%	17%	17%	18%	19%
Howard/Montgomery	22%	23%	19%	19%	19%	18%
Security Deposit	44%	43%	14%	14%	21%	37%
Arrearages at Enrollment*	50%	49%	15%	15%	18%	49%
OHEP Grant	3%	3%	4%	4%	3%	5%
Third Party Supplier	32%	32%	27%	27%	23%	24%
PEAK	41%	40%	36%	36%	34%	34%
QHEC	25%	26%	18%	18%	13%	14%
Electric Heating	100%	100%	100%	100%	100%	100%

\* For the comparison groups, the arrearages at enrollment variable shows the proportion of customers who had arrearages at the start of the pre-analysis period.

Note: Eleven prepaid participants and 176 Q4 comparison group customers were missing electric heating type and were excluded from this table.

Table VI-4B compares the characteristics of all Prepaid participants and comparison group customers with non-electric heating to those non-electric heating customers who had enough usage data to be included in the analysis groups. As in the table above, the All groups and the Analysis Groups were very similar in terms of all observed characteristics.

The Matched Comparison group again differs from the treatment group in that these customers are less likely to have a security deposit, less likely to have arrearages at enrollment, and less likely to have Peak pricing. The Q4 comparison group also differed on these characteristics, but the weighting to represent the percentage of customers with arrearages in the treatment group corrected for much of the differences in the other characteristics as well.



**Table VI-4B**  
**Customer Characteristics Comparison – Electric Non-Heating Accounts**

	Treatment Group		Matched Nonparticipants		Q4 Comparison Group	
	All	Analysis Group	All	Analysis Group	All	Weighted Analysis Group
<b>Observations</b>	<b>363</b>	<b>328</b>	<b>676</b>	<b>656</b>	<b>35,238</b>	<b>29,311</b>
County of Residence						
AA, Calvert, PG	31%	30%	26%	26%	26%	24%
Baltimore City	23%	23%	19%	19%	20%	24%
Baltimore County	29%	30%	32%	31%	30%	31%
Carroll/Cecil/Frederick/Harford	9%	10%	13%	13%	12%	12%
Howard/Montgomery	7%	7%	10%	11%	11%	9%
Security Deposit	49%	49%	21%	22%	23%	40%
Arrearages at Enrollment*	58%	58%	21%	21%	22%	58%
OHEP Grant	7%	5%	2%	2%	3%	6%
Third Party Supplier	34%	34%	27%	28%	27%	28%
PEAK	38%	40%	27%	27%	29%	28%
QHEC	21%	22%	13%	13%	14%	16%
Electric Heating	0%	0%	0%	0%	0%	0%

\* For the comparison groups, the arrearages at enrollment variable shows the proportion of customers who had arrearages at the start of the pre-analysis period.

Note: Eleven prepaid participants and 176 Q4 comparison group customers were missing electric heating type and were excluded from this table.

Table VI-5 compares the characteristics of all Prepaid participants and comparison group natural gas customers to those gas customers who had enough usage data to be included in the analysis groups. The Q4 comparison analysis group is also weighted to represent the percent in the treatment group with arrearages at enrollment.

**Table VI-5**  
**Customer Characteristics Comparison – Gas Accounts**

	Treatment Group		Matched Nonparticipants		Q4 Comparison Group	
	All	Analysis Group	All	Analysis Group	All	Weighted Analysis Group
<b>Observations</b>	<b>316</b>	<b>243</b>	<b>512</b>	<b>487</b>	<b>27,629</b>	<b>20,839</b>
County of Residence						
AA, Calvert, PG	23%	21%	19%	20%	19%	16%

	Treatment Group		Matched Nonparticipants		Q4 Comparison Group	
	All	Analysis Group	All	Analysis Group	All	Weighted Analysis Group
Baltimore City	28%	28%	21%	20%	24%	29%
Baltimore County	33%	34%	35%	35%	33%	34%
Carroll/Cecil/Frederick/Harford	9%	9%	14%	13%	11%	11%
Howard/Montgomery	8%	7%	12%	12%	12%	9%
Security Deposit	49%	49%	24%	25%	24%	40%
Arrearages at Enrollment*	58%	56%	22%	22%	22%	56%
OHEP Grant	8%	7%	4%	4%	3%	7%
Third Party Supplier	36%	37%	27%	27%	27%	29%
PEAK	35%	39%	33%	33%	30%	29%
QHEC	22%	26%	14%	14%	15%	19%

\* For the comparison groups, the arrearages at enrollment variable shows the proportion of customers who had arrearages at the start of the pre-analysis period.

## B. Usage Impacts

This section provides findings on the impact of the Prepaid Pilot Program on energy usage. Table VI-6 displays the change in energy usage for the Prepaid participants and the weighted Q4 Comparison Group. The table shows the following results.

- **Electric Heating Participants:** The net change in usage was a reduction of 247 kWh or 1.6 percent of pre-treatment usage. The PRISM analysis on a smaller sample of participant shows higher net savings than the Degree Day normalization on that same sample. We have seen this inconsistency in results when conducting analysis with small sample sizes. We focus on the Degree Day results as the best estimate, as these changes are more similar to the net savings for the electric non-heating savings and the gas savings.
- **Electric Non-Heating Participants:** The net change in usage was a reduction of 235 kWh or 2.4 percent of pre-treatment usage. The gross change was an increase in usage, likely due to the impact of COVID on customers spending more time at home. However, the comparison group, controlling for this and other exogenous factors, showed an even larger increase in usage, resulting in the net decline in electric usage. Net changes are very close for Degree Day and Prism results.
- **Gas Usage:** The net change in usage was a decline of 16 Therms, or 2.3 percent of pre-treatment usage. Net changes are very close for Degree Day and Prism results.

**Table VI-6**  
**Annual Energy Usage**  
**Treatment and Weighted Q4 Comparison Group**

Normalization Method	#	Total Savings				#	Total Savings				Net Change	
		Usage		Annual Savings	% Saved		Usage		Annual Savings	% Saved	Save	% Saved
		Pre	Post				Pre	Post				
Treatment Group						Weighted Q4 Comparison Group						
<b>Electric Heating (kWh)</b>												
Non-Normalized	144	15,133	14,123	1,010**	6.7%	12,423	16,022	14,800	1,222**	7.6%	-212	-1.4%
Degree Day Normalized	144	15,196	14,846	350#	2.3%	12,423	16,018	15,915	103**	0.6%	247	1.6%
Degree Day-PRISM cases	106	15,224	14,670	554*	3.6%	1,079	16,867	16,751	116	0.7%	439#	2.9%
PRISM Normalized	106	14,782	15,063	-281	-1.9%	1,079	16,373	17,446	-1,073**	-6.6%	792**	5.4%
<b>Electric Non-Heating (kWh)</b>												
Non-Normalized	328	9,992	9,651	342**	3.4%	29,311	10,193	9,890	303**	3.0%	39	0.4%
Degree Day Normalized	328	9,615	9,740	-124	-1.3%	29,311	9,781	10,140	-359**	-3.7%	235*	2.4%
Degree Day-PRISM cases	202	9,652	9,897	-245#	-2.5%	2,205	9,656	9,977	-321**	-3.3%	75	0.9%
PRISM Normalized	202	9,399	9,978	-579**	-6.2%	2,205	9,411	10,069	-658**	-7.0%	80	0.8%
<b>Gas (Therms)</b>												
Non-Normalized	243	659	569	91**	13.7%	20,839	699	595	104**	14.9%	-13#	-2.0%
Degree Day Normalized	243	689	649	40**	5.8%	20,839	735	712	24**	3.2%	16*	2.3%
Degree Day-PRISM cases	226	699	656	44**	6.2%	2,453	766	741	25**	3.3%	19*	2.6%
PRISM Normalized	226	674	684	-10	-1.5%	2,453	738	765	-27**	-3.6%	17*	2.5%

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VI-7 displays the usage results with the matched nonparticipant group. This table shows similar reductions in energy usage to the Weighted Q4 Comparison Group shown above. The PRISM results differ from the Degree Day results for the treatment and comparison groups, but the net change is approximately the same except for the electric non-heating results which are not statistically significant.

**Table VI-7**  
**Annual Energy Usage**  
**Treatment and Matched Nonparticipants**

Normalization Method	#	Total Savings				#	Total Savings				Net Change	
		Usage		Annual Savings	% Saved		Usage		Annual Savings	% Saved	Save	% Saved
		Pre	Post				Pre	Post				
Treatment Group						Matched Nonparticipants						
<b>Electric Heating (kWh)</b>												
Non-Normalized	144	15,133	14,123	1,010**	6.7%	284	15,201	14,502	699**	4.6%	311	2.1%
Degree Day Normalized	144	15,196	14,846	350#	2.3%	284	15,214	15,302	-88	-0.6%	438#	2.9%
Degree Day-PRISM cases	106	15,224	14,670	554*	3.6%	227	15,733	15,683	50	0.3%	505*	3.3%
PRISM Normalized	106	14,782	15,063	-281	-1.9%	227	15,257	16,161	-904**	-5.9%	623*	4.2%
<b>Electric Non-Heating (kWh)</b>												
Non-Normalized	328	9,992	9,651	342**	3.4%	656	9,967	9,794	173**	1.7%	169	1.7%
Degree Day Normalized	328	9,615	9,740	-124	-1.3%	656	9,575	9,868	-293**	-3.1%	168	1.8%
Degree Day-PRISM cases	202	9,652	9,897	-245#	-2.5%	461	9,817	10,022	-205**	-2.1%	-41	-0.4%
PRISM Normalized	202	9,399	9,978	-579**	-6.2%	461	9,581	10,186	-605**	-6.3%	26	0.3%
<b>Gas (Therms)</b>												
Non-Normalized	243	659	569	91**	13.7%	487	644	564	80**	12.4%	11	1.6%
Degree Day Normalized	243	689	649	40**	5.8%	487	663	638	25**	3.7%	15*	2.2%
Degree Day-PRISM cases	226	699	656	44**	6.2%	453	683	659	23**	3.4%	20**	2.9%
PRISM Normalized	226	674	684	-10	-1.5%	453	666	689	-23**	-3.4%	13*	1.9%

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VI-8 displays the heating and cooling degree data that were used in the weather normalization process. The table shows that there was a reduction in cooling and heating degree days from the pre- to the post-treatment period, which is why the weather-normalized energy savings are significantly lower than the non-normalized savings.

**Table VI-8**  
**Average Heating and Cooling Degree Days**  
**Relative to 20-year Average**

Analysis Group	#	Pre-CDD	Post-CDD	CDD Difference		Pre-HDD	Post-HDD	HDD Difference	
				#	%			#	%
<b>Electric (kWh)</b>									
Treatment Group	473	1,012	937	-74**	-7.4%	4,353	3,842	-511**	-11.7%
Matched Nonparticipants	940	1,013	927	-86**	-8.5%	4,351	3,839	-512**	-11.8%
Q4 Comparison Group	41,734	1,007	934	-72**	-7.2%	4,329	3,620	-709**	-16.4%

Analysis Group	#	Pre-CDD	Post-CDD	CDD Difference		Pre-HDD	Post-HDD	HDD Difference	
				#	%			#	%
<b>Gas (therms)</b>									
Treatment Group	243	-	-	-	-	4,346	3,827	-519**	-11.9%
Matched Nonparticipants	487	-	-	-	-	4,350	3,823	-526**	-12.1%
Q4 Comparison Group	20,839	-	-	-	-	4,311	3,613	-698**	-16.2%
20-Year Average (2001-2020)		741				4,460			

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

There is a concern that customers reduce their usage on the Prepaid plan because they have their service disconnected when their paid balance is eliminated, and they are unable to use electric or gas service at that time. We conducted an analysis that excluded periods of disconnections to assess this issue. However, due to shutoff moratoriums during COVID, there are few disconnections in the data. Therefore, the results are about the same as they were prior for this adjustment.

**Table VI-9A  
Annual Energy Usage  
Controlling for Disconnections**

Normalization Method	#	Total Savings				#	Total Savings				Net Change		
		Usage		Annual Savings	% Saved		Usage		Annual Savings	% Savings	Save	% Saved	
		Pre	Post				Pre	Post					
<b>Treatment Group</b>						<b>Weighted Q4 Comparison Group</b>							
<b>Electric Heating (kWh)</b>													
Degree Day	144	15,196	14,846	350#	2.3%	12,423	16,018	15,915	103**	0.6%	247	1.6%	
Disconnection Adj.	144	15,201	14,868	333#	2.2%	12,423	16,031	15,918	113**	0.7%	220	1.4%	
<b>Electric Non-Heating (kWh)</b>													
Degree Day	328	9,615	9,740	-124	-1.3%	29,311	9,781	10,140	-359**	-3.7%	235*	2.4%	
Disconnection Adj.	328	9,641	9,743	-102	-1.1%	29,311	9,790	10,142	-352**	-3.6%	249*	2.6%	
<b>Gas (Therms)</b>													
Degree Day	243	689	649	40**	5.8%	20,839	735	712	24**	3.2%	16*	2.3%	
Disconnection Adj.	243	689	648	41**	5.9%	20,839	735	711	24**	3.3%	17*	2.4%	

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VI-9B displays the energy savings for customers who had arrearages at the time of enrollment in the Prepaid Pilot Program. This table shows that savings for this group were approximately the same as savings for the participants as a whole.

**Table VI-9B**  
**Annual Energy Usage**  
**Customers with Arrearages at Enrollment**  
**Controlling for Disconnections**

Normalization Method	#	Total Savings				#	Total Savings				Net Change	
		Usage		Annual Savings	% Saved		Usage		Annual Savings	% Saved	Save	% Saved
		Pre	Post				Pre	Post				
Treatment Group						Q4 Comparison Group						
<b>Electric Heating (kWh)</b>												
Degree Day	70	15,546	15,087	460	3.0%	2,131	15,870	15,679	191**	1.2%	269	1.7%
Disconnection Adj.	70	15,547	15,124	423	2.7%	2,131	15,893	15,685	209**	1.3%	214	1.4%
<b>Electric Non-Heating (kWh)</b>												
Degree Day	190	9,670	9,782	-112	-1.2%	6,271	9,490	9,810	-320**	-3.4%	208	2.2%
Disconnection Adj.	190	9,708	9,787	-79	-0.8%	6,271	9,504	9,813	-309**	-3.3%	230	2.4%
<b>Gas (Therms)</b>												
Degree Day	137	643	604	39**	6.0%	4,458	740	714	25**	3.4%	13	2.1%
Disconnection Adj.	137	641	603	39**	6.0%	4,458	739	713	26**	3.5%	13	2.0%

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VI-9C displays the energy savings for customers who participated in the Prepaid Program for all of the post-enrollment analysis. This table shows higher savings for these full year participants. The full year electric heating participants had mean savings of 569 kWh or 3.9 percent of pre-treatment usage, the full year electric non-heating participants had mean savings of 406 kWh or 4.1 percent of pre-treatment usage, and those with gas had mean savings of 17 Therms, or 2.6 percent of pre-treatment usage.

**Table VI-9C**  
**Annual Energy Usage**  
**Full Year Participants**  
**Controlling for Disconnections**

Normalization Method	#	Total Savings				#	Total Savings				Net Change	
		Usage		Annual Savings	% Saved		Usage		Annual Savings	% Savings	Save	% Saved
		Pre	Post				Pre	Post				
Treatment Group						Weighted Q4 Comparison Group						
<b>Electric Heating (kWh)</b>												
Degree Day	94	14,636	13,964	672**	4.6%	12,423	16,018	15,915	103**	0.6%	569*	3.9%
Disconnection Adj.	94	14,649	13,981	669**	4.6%	12,423	16,031	15,918	113**	0.7%	556*	3.8%

Normalization Method	#	Total Savings				#	Total Savings				Net Change	
		Usage		Annual Savings	% Saved		Usage		Annual Savings	% Savings	Save	% Saved
		Pre	Post				Pre	Post				
	Treatment Group					Weighted Q4 Comparison Group						
<b>Electric Non-Heating (kWh)</b>												
Degree Day	202	9,810	9,763	48	0.5%	29,311	9,781	10,140	-359**	-3.7%	406**	4.1%
Disconnection Adj.	202	9,846	9,767	79	0.8%	29,311	9,790	10,142	-352**	-3.6%	431**	4.4%
<b>Gas (Therms)</b>												
Degree Day	141	662	620	41**	6.2%	20,839	735	712	24**	3.2%	17*	2.6%
Disconnection Adj.	141	661	619	42**	6.3%	20,839	735	711	24**	3.3%	18*	2.7%

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

### C. Summary

The Prepaid Pilot Program is expected to reduce energy usage because it provides more regular feedback to participants on the amount their energy usage and costs. The analysis of energy usage was complicated due to the impact of the COVID-19 pandemic during the post-enrollment period. We used a comparison group to control for this and other changes unrelated to the pilot that may have impacted energy usage. We found small reductions in energy usage for Prepaid Pilot participants compared to the comparison group.

- Electric Heating Participants: These participants reduced their electric usage by 247 kWh, or 1.6 percent of pre-treatment usage.
- Electric Non-Heating Participants: These participants reduced their electric usage by 235 kWh, or 2.4 percent of pre-treatment usage.
- Gas Usage: Participants reduced their gas usage by 16 Therms, or 2.3 percent of pre-treatment usage.
- Disconnections: An analysis that excluded periods of disconnections found very similar reductions in energy usage.
- Customers with Arrearages: An analysis only for customers with arrearages found very similar results.
- Full Year Prepaid Participants: The full year electric heating participants had mean savings of 569 kWh, or 3.9 percent of pre-treatment usage; the full year electric non-heating participants had mean savings of 406 kWh, or 4.1 percent of pre-treatment usage; and those with gas had mean savings of 17 Therms, or 2.6 percent of pre-treatment usage.

## VII. Payment Analysis

This section provides a description of the research methodology and a summary of the findings from an analysis of the payment statistics for participants in BGE's Prepaid Power Program.

### A. Methodology

This section describes the evaluation data and methodology for the payment impact analysis. The data and approach are the same as those used for the usage impact analysis with the Weighted Q4 Comparison Group. However, the attrition differs where transactions data were either not fully available or were extreme outliers for bills and/or payments.

Table VII-1A displays the attrition analysis. Eighty-three percent of the treatment group and 84 percent of the comparison group were included in the analysis. Because the payment data cannot be weather-normalized, we require a full 11 months of usage charges in the pre- and post-participation period to include the participants in the analysis. That accounts for the somewhat higher attrition rate than was found in the usage analysis.

**Table VII-1A  
Attrition Analysis**

<b>Exclusion Reason</b>	<b>Treatment Group</b>	<b>Weighted Q4 Comparison Group</b>
Original Population	527	49,994
Fewer Than 11 Months of Usage Charges in Pre/Post Period	442	42,599
Outliers Removed	438	42,045
<b>Analysis Group</b>	<b>438</b>	<b>42,045</b>
<b>Percent Included</b>	<b>83%</b>	<b>84%</b>

In addition to analyzing key metrics in the year prior to enrollment and the year following enrollment, we perform a restricted analysis that ends before March 2020 when COVID-19 impacted household behavior and income, as well as utility collections practices. In this analysis, we examine the same calendar months in the pre- and post-enrollment periods to control for seasonal effects. The limited Pre-COVID analysis is only conducted for the payment-related metrics because the weather-normalized usage analysis cannot be conducted for the shortened period.

For participants who enrolled in August 2019, the analysis includes seven months of transactions data in the pre and post periods. However, for customers who enrolled in November 2019, the analysis includes only four months of pre- and post-enrollment data. The distribution of enrollment month for program participants is as follows.

- Four percent of participants enrolled in August 2019.
- Ten percent of participants enrolled in September 2019.
- Thirty-nine percent of participants enrolled in October 2019.



- Forty-seven percent of participants enrolled in November 2019.

The comparison group was constructed to have this same distribution. For example, four percent of eligible comparison group customers were randomly selected to constitute the group whose post-enrollment period would begin in August 2019.

Table VII-1B displays the attrition for the Pre-COVID analysis. The initial population consisted of accounts with enough data to be included in the full evaluation period analysis. Eighty-six percent of that full treatment group and 93 percent of that full comparison group were included in the Pre-COVID analysis.

**Table VII-1B  
Pre-COVID Attrition Analysis**

<b>Exclusion Reason</b>	<b>Treatment Group</b>	<b>Weighted Q4 Comparison Group</b>
Accounts Used in Full-Year Evaluation	438	42,045
Pre and Post Billing Periods With Matching Calendar Months	384	39,513
Outliers Removed	376	39,152
<b>Analysis Group</b>	<b>376</b>	<b>39,152</b>
<b>Percent Included</b>	<b>86%</b>	<b>93%</b>

Table VII-2A displays a comparison of customer characteristics for the treatment and comparison group for electric heating accounts. After weighting for arrearages at enrollment, the comparison group is similar to the treatment group in most of the characteristics examined.

**Table VII-2A  
Customer Characteristics Comparison – Electric Heating Accounts**

	<b>Treatment Group</b>		<b>Q4 Comparison Group</b>	
	<b>All</b>	<b>Analysis Group</b>	<b>All</b>	<b>Weighted Analysis Group</b>
<b>Observations</b>	<b>153</b>	<b>135</b>	<b>14,580</b>	<b>12,238</b>
County of Residence				
AA, Calvert, PG	33%	33%	35%	35%
Baltimore City	11%	11%	7%	6%
Baltimore County	21%	21%	21%	23%
Carroll/Cecil/Frederick/Harford	13%	11%	18%	18%
Howard/Montgomery	22%	23%	19%	18%
Security Deposit	44%	44%	21%	34%
Arrearages at Enrollment*	50%	44%	18%	44%

	Treatment Group		Q4 Comparison Group	
	All	Analysis Group	All	Weighted Analysis Group
OHEP Grant	3%	4%	3%	4%
Third Party Supplier	32%	31%	23%	24%
PEAK	41%	42%	34%	34%
QHEC	25%	26%	13%	14%
Electric Heating	100%	100%	100%	100%

\* For the comparison group, the arrearages at enrollment variable shows the proportion of customers who had arrearages at the start of the pre-analysis period.

Table VII-2B displays a comparison of customer characteristics for the treatment and comparison group for electric non-heating accounts. After weighting for arrearages at enrollment, the comparison group is similar to the treatment group in most of the characteristics examined.

**Table VII-2B**  
**Customer Characteristics Comparison – Electric Non-Heating Accounts**

	Treatment Group		Q4 Comparison Group	
	All	Analysis Group	All	Weighted Analysis Group
<b>Observations</b>	<b>363</b>	<b>303</b>	<b>35,238</b>	<b>29,807</b>
County of Residence				
AA, Calvert, PG	31%	30%	26%	25%
Baltimore City	23%	21%	20%	23%
Baltimore County	29%	30%	30%	33%
Carroll/Cecil/Frederick/Harford	9%	11%	12%	11%
Howard/Montgomery	7%	8%	11%	9%
Security Deposit	49%	48%	23%	41%
Arrearages at Enrollment*	58%	60%	22%	60%
OHEP Grant	7%	5%	3%	6%
Third Party Supplier	34%	33%	27%	27%
PEAK	38%	41%	29%	28%
QHEC	21%	20%	14%	16%
Electric Heating	0%	0%	0%	0%

\* For the comparison group, the arrearages at enrollment variable shows the proportion of customers who had arrearages at the start of the pre-analysis period.

## B. Bills and Payments

This section examines bills and payments for the Prepaid participants and the comparison group. Table VII-3A shows that electric heating participants' charges declined by \$83 compared to the comparison group and electric non-heating customers' charges declined by \$74 compared to the comparison group. Part of the reduction in charges is due to the warmer winter weather and the cooler summer weather, but this is controlled for with the use of the comparison group that also had a reduction in charges during this time period.

**Table VII-3A  
Bill Amount**

Bill Type	Electric Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	135			12,238			
Electric Charges	\$1,999	\$1,837	-\$162**	\$2,063	\$1,945	-\$118**	-\$44
Gas Charges	\$44	\$62	\$19 <sup>#</sup>	\$46	\$55	\$10**	\$9
Other Charges <sup>†</sup>	\$58	\$8	-\$50**	\$19	\$17	-\$2	-\$48**
Total Charges	\$2,101	\$1,908	-\$193**	\$2,128	\$2,018	-\$110**	-\$83*
Bill Type	Electric Non-Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	303			29,807			
Electric Charges	\$1,359	\$1,309	-\$50**	\$1,350	\$1,328	-\$22**	-\$28 <sup>#</sup>
Gas Charges	\$624	\$613	-\$10	\$618	\$612	-\$7**	-\$4
Other Charges <sup>†</sup>	\$57	\$12	-\$45**	\$26	\$23	-\$3*	-\$42**
Total Charges	\$2,040	\$1,934	-\$106**	\$1,995	\$1,963	-\$32**	-\$74**

<sup>†</sup> The "Other Charges" category includes deposits, payment arrangements, dollar deposits, and third-party charges.  
 \*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Prepaid fees for payments made to authorized BGE vendors were charged to 495 participants. Total costs were \$9,821, with \$4,123 paid by BGE and \$5,702 paid by customers. The average amount paid by customers for these fees during their enrollment was \$11.52.

Table VII-3B displays changes in bills for full year Prepaid participants. The table shows that charges declined by more than for all Prepaid participants, mostly due to a large reduction in electric charges. The net reduction in full year Prepaid electric heating participants' charges was \$120 and the net reduction for full year Prepaid electric non-heating participants was \$106.

**Table VII-3B  
Bill Amount  
Full Year Participants**

Bill Type	Electric Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	87			12,238			
Electric Charges	\$1,927	\$1,729	-\$198**	\$2,063	\$1,945	-\$118**	-\$80*
Gas Charges	\$32	\$53	\$21#	\$46	\$55	\$10**	\$12
Other Charges†	\$54	\$0	-\$54**	\$19	\$17	-\$2	-\$52**
Total Charges	\$2,013	\$1,782	-\$230**	\$2,128	\$2,018	-\$110**	-\$120**
Bill Type	Electric Non-Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	187			29,807			
Electric Charges	\$1,401	\$1,319	-\$82**	\$1,350	\$1,328	-\$22**	-\$60**
Gas Charges	\$591	\$588	-\$4	\$618	\$612	-\$7**	\$3
Other Charges†	\$52	\$0	-\$52**	\$26	\$23	-\$3*	-\$49**
Total Charges	\$2,045	\$1,906	-\$138**	\$1,995	\$1,963	-\$32**	-\$106**

† The “Other Charges” category includes deposits, payment arrangements, dollar deposits, and third-party charges.

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-3C displays the change in the bill amount from the pre-enrollment to post-enrollment period for the months prior to March 2020, the Pre-COVID analysis. As discussed above, this includes between four and seven months of pre-enrollment and post-enrollment data, depending on when the customers enrolled. The table shows that the net change was a \$23 reduction in total charges for electric heating customers and a \$13 reduction in charges for electric non-heating customers.

**Table VII-3C  
Pre-COVID Analysis: Bill Amount**

Bill Type	Electric Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
<b># of Customers</b>	<b>119</b>			<b>11,380</b>			
Electric Charges	\$627	\$566	-\$61**	\$671	\$620	-\$51**	-\$10
Gas Charges	\$8	\$8	<\$1	\$14	\$14	<-\$1	<\$1
Other Charges <sup>†</sup>	\$14	\$0	-\$14**	\$5	\$5	<-\$1	-\$14**
Total Charges	\$649	\$574	-\$74**	\$691	\$639	-\$52**	-\$23*
Bill Type	Electric Non-Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
<b># of Customers</b>	<b>256</b>			<b>27,743</b>			
Electric Charges	\$337	\$308	-\$29**	\$382	\$359	-\$24**	-\$5
Gas Charges	\$235	\$232	-\$3	\$241	\$239	-\$3**	-\$1
Other Charges <sup>†</sup>	\$10	\$3	-\$7*	\$7	\$7	-\$1	-\$7*
Total Charges	\$582	\$543	-\$39**	\$631	\$604	-\$27**	-\$13

<sup>†</sup> The "Other Charges" category includes deposits, payment arrangements, dollar deposits, and third-party charges.  
 \*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-4A shows that there was not a statistically significant change in payments for electric heating customers and that electric non-heating customers increased their payments by \$100 as compared to the comparison group.

**Table VII-4A  
Payment Amount**

Payment Type	Electric Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	135			12,238			
Customer Payments	\$2,022	\$1,787	-\$235**	\$2,085	\$1,817	-\$268**	\$32
Grant Payments	\$4	< \$1	-\$4#	\$4	< \$1	-\$4**	- < \$1
Total Payments	\$2,026	\$1,787	-\$240**	\$2,089	\$1,818	-\$271**	\$32
Payment Type	Electric Non-Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	303			29,807			
Customer Payments	\$1,978	\$1,853	-\$125**	\$1,958	\$1,735	-\$223**	\$98**
Grant Payments	\$5	< \$1	-\$5**	\$7	< \$1	-\$7**	\$2
Total Payments	\$1,983	\$1,853	-\$130**	\$1,965	\$1,735	-\$230**	\$100**

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

There were 95 Prepaid participants who enrolled in Autopay. The average Autopay amount was \$116 and it ranged from \$10 to \$1,000. These payments are triggered when the customer reaches an estimated two days of funds remaining.

Table VII-4B displays payments made by full year Prepaid participants and the comparison group. The table shows that these customers had larger increases in payments than the full participant group. Payments made by full year Prepaid electric heating participants increased by \$111, and payments made by full year Prepaid electric non-heating participants increased by \$202.

**Table VII-4B  
Payment Amount  
Full Year Participants**

Payment Type	Electric Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	87			12,238			
Customer Payments	\$1,933	\$1,776	-\$157**	\$2,085	\$1,817	-\$268**	\$111*
Grant Payments	\$4	\$0	-\$4	\$4	< \$1	-\$4**	- < \$1
Total Payments	\$1,937	\$1,776	-\$161**	\$2,089	\$1,818	-\$271**	\$111*
Payment Type	Electric Non-Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	187			29,807			
Customer Payments	\$1,992	\$1,968	-\$24	\$1,958	\$1,735	-\$223**	\$199**
Grant Payments	\$4	\$0	-\$4**	\$7	< \$1	-\$7**	\$3
Total Payments	\$1,996	\$1,968	-\$28	\$1,965	\$1,735	-\$230**	\$202**

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-4C displays the change in the payment amount from the pre-enrollment to post-enrollment period for the months prior to March 2020, the Pre-COVID analysis. Electric heating customers increased payments by \$82 and electric non-heating customers increased payments by \$105 compared to the comparison group that reduced their payments during this period.

**Table VII-4C  
Pre-COVID Analysis: Payment Amount**

Payment Type	Electric Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	119			11,380			
Customer Payments	\$686	\$695	\$9	\$735	\$662	-\$73**	\$82**
Grant Payments	\$0	\$0	\$0	< \$1	< \$1	< \$1	- < \$1
Total Payments	\$686	\$695	\$9	\$735	\$662	-\$73**	\$82**

Payment Type	Electric Non-Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	256			27,743			
Customer Payments	\$592	\$642	\$51**	\$678	\$623	-\$55**	\$105**
Grant Payments	\$0	\$0	\$0	<\$1	<\$1	<\$1	<-\$1
Total Payments	\$592	\$642	\$51**	\$678	\$623	-\$55**	\$105**

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-5 displays the type and number of payments made by the treatment and comparison groups. As expected, payments increase for Prepaid Pilot participants after enrollment in the program. Participants increased their use of credit card and bank account/debit card payments. The net change was an increase of 11 payments, a doubling of the number of payments made in the pre-participation period.

**Table VII-5  
Number of Payments**

Payment Method	Analysis Group						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	438			42,045			
Credit Card	3.3	10.2	7.0**	2.7	2.5	-0.2**	7.1**
Bank Account/Debit	2.2	9.4	7.2**	2.4	4.5	2.1**	5.2**
Online	5.2	1.5	-3.8**	4.6	2.1	-2.5**	-1.2**
Check	0.2	0.1	-0.2*	0.7	0.6	-0.1**	<-0.1
Field Collection	< 0.1	0	<- 0.1#	< 0.1	< 0.1	<- 0.1**	<- 0.1
Grant	< 0.1	0	<- 0.1**	< 0.1	< 0.1	<- 0.1**	< 0.1
<b>Total Payments</b>	<b>11.0</b>	<b>21.1</b>	<b>10.2**</b>	<b>10.5</b>	<b>9.7</b>	<b>-0.8**</b>	<b>11.0**</b>

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level.  
#Denotes significance at the 90 percent level.

Table VII-6 displays the number of each type of payments made by Prepaid participants in the year after enrollment. The table shows that customers were most likely to make credit card and debit card payments. There were additional online payments that did not specify whether a credit or debit card was used. While ten percent of customers made a total of more than 40 payments in the first year of enrollment in the Prepaid Pilot, half made more than 16 payments.



**Table VII-6  
Number of Payments Distribution**

Payment Method	Prepaid Participants									
	Customers w/ Payment		# of Payments Within One Year of Enrollment							
	#	%	Mean	Min	P10	P25	P50	P75	P90	Max
Credit Card	297	68%	10	0	0	0	4	16	29	84
Bank Account/Debit	265	61%	9	0	0	0	3	14	27	82
Online	59	14%	1	0	0	0	0	0	2	56
Check	10	2%	< 1	0	0	0	0	0	0	9
Field Collection	0	0%	-	-	-	-	-	-	-	-
Grant	0	0%	-	-	-	-	-	-	-	-
<b>All Payment Types</b>	<b>437*</b>	<b>&gt;99%</b>	<b>21</b>	<b>0</b>	<b>8</b>	<b>11</b>	<b>16</b>	<b>27</b>	<b>40</b>	<b>104</b>

\* One program participant made no payments in the post-enrollment analysis period.

### C. Coverage Rates

This section analyzes bill coverage rates for the Prepaid participants and the comparison group. The cash coverage rate is defined as the customer's payments divided by the asked to pay amount in the year before and after program enrollment. The total coverage rate is defined as all payments (including assistance received) divided by the asked to pay amount in the year before and after program enrollment.

Table VII-7A shows that while the electric heating treatment group decreased their coverage rate by two percentage points, the comparison group had a reduction in their coverage rate of eight percentage points, resulting in a net increase of six percentage points. The treatment group's shortfall, the difference between the full bill and the amount they paid, increased by \$47, but was lower than the increase for the comparison group, so the net change was a reduction of \$115.

The analysis showed that balances declined by \$159 for electric heating Prepaid participants and by \$196 for electric non-heating Prepaid participants relative to the comparison group.<sup>3</sup>

<sup>3</sup> The analysis found that bills that were not yet past due at the time of Prepaid enrollment and that became past due shortly after enrollment were not reduced with each Prepaid payment installment. Based on the program design, these bills should have been paid down with each purchase of power. Due to the fact that payments were not applied in this manner, participant balances increased on average. However, these arrearages were excluded from the analysis, as participants were not given the opportunity to pay down these amounts. This exclusion was made to all analyses of balances and arrearages.

**Table VII-7A  
Bill Coverage and Change in Balance**

Bill Coverage	Electric Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	135			12,238			
Cash Coverage Rate	95%	94%	-2%	98%	90%	-8% **	6% *
Total Coverage Rate	96%	94%	-2%	98%	90%	-8% **	6% *
Shortfall	\$74	\$121	\$47	\$39	\$201	\$161 **	-\$115 **
Change in Balance	\$4	-\$74	-\$78 **	-\$26	\$55	\$81 **	-\$159 **
Bill Coverage	Electric Non-Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	303			29,807			
Cash Coverage Rate	96%	96%	- <1%	98%	88%	-10% **	10% **
Total Coverage Rate	96%	96%	-1%	98%	88%	-10% **	10% **
Shortfall	\$57	\$81	\$25	\$30	\$228	\$198 **	-\$174 **
Change in Balance	-\$19	-\$100	-\$81 **	-\$42	\$73	\$115 **	-\$196 **

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-7B displays the same results only for those customers who had arrearages when they enrolled in the program. The table shows a greater net impact for these customers compared to the comparison group.

**Table VII-7B  
Bill Coverage and Change in Balance  
Customers with Arrearages at the Time of Enrollment**

Bill Coverage	Electric Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	59			2,146			
Cash Coverage Rate	95%	99%	4%	99%	83%	-16%**	20%**
Total Coverage Rate	95%	99%	4%	99%	83%	-16%**	20%**
Shortfall	\$98	\$28	-\$70	\$19	\$333	\$314**	-\$384**
Change in Balance	\$14	-\$145	-\$159*	-\$75	\$112	\$187**	-\$347**
Bill Coverage	Electric Non-Heating Customers						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	181			6,485			
Cash Coverage Rate	93%	98%	5%*	99%	83%	-15%**	21%**
Total Coverage Rate	93%	98%	5%*	99%	83%	-16%**	21%**
Shortfall	\$118	\$37	-\$81#	\$19	\$318	\$299**	-\$380**
Change in Balance	-\$17	-\$141	-\$124**	-\$80	\$113	\$193**	-\$317**

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-7C displays bill coverage rates for Prepaid participants who remained in the program for the full year. Participants who remained in the Prepaid Program for the full year had greater improvements in their coverage rates and greater reductions in their bill shortfall. Full year Prepaid electric heating participants increased their bill coverage rates by 11 percentage points and full year Prepaid electric non-heating participants increased their bill coverage rates by 17 percentage points.

**Table VII-7C**  
**Bill Coverage and Change in Balance**  
**Full Year Participants**

Bill Coverage	Electric Heating Customers							Net Change
	Prepaid Participants			Weighted Q4 Comparison Group				
	Pre	Post	Change	Pre	Post	Change		
# of Customers	87			12,238				
Cash Coverage Rate	95%	98%	3%	98%	90%	-8%**	11%**	
Total Coverage Rate	95%	98%	3%	98%	90%	-8%**	11%**	
Shortfall	\$76	\$6	-\$69#	\$39	\$201	\$161**	-\$231**	
Change in Balance	\$9	-\$89	-\$98**	-\$26	\$55	\$81**	-\$179**	
Bill Coverage	Electric Non-Heating Customers							Net Change
	Prepaid Participants			Weighted Q4 Comparison Group				
	Pre	Post	Change	Pre	Post	Change		
# of Customers	187			29,807				
Cash Coverage Rate	97%	104%	7%**	98%	88%	-10%**	17%**	
Total Coverage Rate	97%	104%	7%**	98%	88%	-10%**	17%**	
Shortfall	\$48	-\$62	-\$110**	\$30	\$228	\$198**	-\$308**	
Change in Balance	-\$18	-\$158	-\$140**	-\$42	\$73	\$115**	-\$255**	

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-7D displays the change in the bill coverage and balance from the pre-enrollment to post-enrollment period for the months prior to March 2020, the Pre-COVID analysis. Electric heating customers increased their total coverage rates by 23 percentage points and electric non-heating customers increased their total coverage rates by 21 percentage points.

**Table VII-7D**  
**Pre-COVID Analysis: Bill Coverage and Change in Balance**

Bill Coverage	Electric Heating Customers							Net Change
	Prepaid Participants			Weighted Q4 Comparison Group				
	Pre	Post	Change	Pre	Post	Change		
# of Customers	119			11,380				
Cash Coverage Rate	106%	126%	20%**	109%	105%	-3%**	23%**	
Total Coverage Rate	106%	126%	20%**	109%	105%	-3%**	23%**	

Bill Coverage	Electric Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	119			11,380			
Shortfall	-\$37	-\$120	-\$83**	-\$45	-\$23	\$22**	-\$105**
Change in Balance	-\$7	-\$77	-\$71**	-\$4	\$15	\$19**	-\$90**
Bill Coverage	Electric Non-Heating Customers						Net Change
	Prepaid Participants			Weighted Q4 Comparison Group			
	Pre	Post	Change	Pre	Post	Change	
# of Customers	256			27,743			
Cash Coverage Rate	105%	122%	17%**	111%	107%	-4%**	21%**
Total Coverage Rate	105%	122%	17%**	111%	107%	-4%**	21%**
Shortfall	-\$9	-\$99	-\$90**	-\$47	-\$19	\$28**	-\$118**
Change in Balance	-\$11	-\$75	-\$64**	-\$19	\$13	\$33**	-\$97**

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-8A displays the distribution of the total bill coverage rate for Prepaid participants and the comparison group. The table shows that there was almost no change in the percent of electric heating and non-heating Prepaid participants who paid their full bill compared to a decline for the comparison group.

**Table VII-8A  
Total Bill Coverage Rates**

Coverage Rate	Electric Heating Customers			
	Prepaid Participants		Weighted Q4 Comparison Group	
	Pre	Post	Pre	Post
Observations	135		12,238	
≥ 100%	33%	36%	39%	23%
90%-99%	46%	30%	45%	47%
80%-89%	10%	16%	8%	12%
< 80%	11%	18%	8%	18%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Coverage Rate</b>	<b>96%</b>	<b>94%</b>	<b>98%</b>	<b>90%</b>

<b>Electric Non-Heating Customers</b>				
<b>Coverage Rate</b>	<b>Prepaid Participants</b>		<b>Q4 Comparison Group</b>	
	<b>Pre</b>	<b>Post</b>	<b>Pre</b>	<b>Post</b>
<b>Observations</b>	<b>303</b>		<b>29,807</b>	
≥ 100%	40%	48%	44%	24%
90%-99%	35%	22%	38%	41%
80%-89%	12%	15%	9%	12%
< 80%	13%	15%	9%	22%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Coverage Rate</b>	<b>96%</b>	<b>96%</b>	<b>98%</b>	<b>88%</b>

Table VII-8B displays the distribution of the total bill coverage rate for Prepaid participants and the comparison group for the months prior to March 2020, the Pre-COVID analysis. The table shows that the Prepaid participants were more likely to pay their full bill after enrolling in the Prepaid Pilot, and the comparison group percentage remained about the same.

**Table VII-8B  
Pre-COVID Analysis: Total Bill Coverage Rates**

<b>Electric Heating Customers</b>				
<b>Coverage Rate</b>	<b>Prepaid Participants</b>		<b>Weighted Q4 Comparison Group</b>	
	<b>Pre</b>	<b>Post</b>	<b>Pre</b>	<b>Post</b>
<b>Observations</b>	<b>119</b>		<b>11,380</b>	
≥ 100%	61%	72%	68%	66%
90%-99%	12%	5%	11%	11%
80%-89%	8%	5%	6%	6%
< 80%	19%	18%	15%	17%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Coverage Rate</b>	<b>106%</b>	<b>126%</b>	<b>109%</b>	<b>105%</b>

Electric Non-Heating Customers				
Coverage Rate	Prepaid Participants		Weighted Q4 Comparison Group	
	Pre	Post	Pre	Post
<b>Observations</b>	<b>256</b>		<b>27,743</b>	
≥ 100%	56%	74%	68%	66%
90%-99%	14%	7%	10%	10%
80%-89%	5%	4%	6%	6%
< 80%	25%	15%	16%	18%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Coverage Rate</b>	<b>105%</b>	<b>122%</b>	<b>111%</b>	<b>107%</b>

#### D. Arrearages and Payment Arrangements

This section provides an analysis of arrearages and payment arrangements for the Prepaid participants and the comparison group. Table VII-9A shows the distribution of arrearages at the time of enrollment and one year later for the participants and the comparison group. The table shows that arrearages declined over this time period for the treatment group but increased for the comparison group. While the mean arrearage for the treatment group declined by \$92, the mean arrearage for the comparison group increased by \$67.

**Table VII-9A**  
**Arrearages**

Arrearages	Analysis Group			
	Treatment Group		Weighted Q4 Comparison Group	
	Enrollment	Year After Enrollment	Enrollment	Year After Enrollment
<b>Observations</b>	<b>438</b>		<b>42,045</b>	
\$0	56%	79%	61%	68%
≤\$100	8%	8%	11%	6%
\$101 - \$200	12%	3%	13%	7%
\$201 - \$300	12%	3%	7%	4%
\$301 - \$400	5%	2%	3%	3%
>\$400	6%	5%	5%	12%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Arrearages</b>	<b>\$99</b>	<b>\$7</b>	<b>\$84</b>	<b>\$151</b>

Table VII-9B displays the change in arrearages for Prepaid participants who remained in the program for the full year. Participants who remained in the Prepaid Program for the full year had their arrearages decline by an average of \$136, somewhat more than all participants.

**Table VII-9B  
Arrearages  
Full Year Participants**

Arrearages	Analysis Group			
	Treatment Group		Weighted Q4 Comparison Group	
	Enrollment	Year After Enrollment	Enrollment	Year After Enrollment
<b>Observations</b>	<b>274</b>		<b>42,045</b>	
\$0	59%	87%	61%	68%
≤\$100	7%	9%	11%	6%
\$101 - \$200	11%	1%	13%	7%
\$201 - \$300	12%	2%	7%	4%
\$301 - \$400	4%	1%	3%	3%
>\$400	7%	< 1%	5%	12%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Arrearages</b>	<b>\$98</b>	<b>-\$38</b>	<b>\$84</b>	<b>\$151</b>

Table VII-9C displays the Pre-COVID analysis of arrearages. This table shows that the arrearages declined for participants and increased for nonparticipants.

**Table VII-9C  
Pre-COVID Analysis: Arrearages**

Arrearages	Analysis Group			
	Treatment Group		Weighted Q4 Comparison Group	
	Enrollment	February 2020	Enrollment	February 2020
<b>Observations</b>	<b>376</b>		<b>39,152</b>	
\$0	57%	88%	65%	67%
≤\$100	9%	3%	10%	8%
\$101 - \$200	11%	2%	11%	9%
\$201 - \$300	12%	2%	6%	6%
\$301 - \$400	5%	1%	3%	4%
>\$400	6%	3%	5%	7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Arrearages</b>	<b>\$97</b>	<b>\$21</b>	<b>\$72</b>	<b>\$86</b>



Table VII-10 displays the amount of arrearages paid off by participants who had arrearages at the time of enrollment. The table shows that across all participants who had arrearages at the time of enrollment in the Prepaid Pilot, arrearages declined by an average of \$142. Only those who remained in the program for two months or less were not successful in reduce their arrearages.

**Table VII-10**  
**Average Arrears Paid Off by Length of Participation**  
**Program Participants with Arrearages at Enrollment**

Length of Participation	Treatment Group								
	Arrears Paid Off								
	Obs.	Mean	Min	P10	P25	P50	P75	P90	Max
≤ 2 Months	63	-\$100	-\$1,614	-\$613	-\$128	\$0	\$65	\$257	\$797
3-11 Months	37	\$247	-\$471	-\$303	\$52	\$200	\$463	\$729	\$1,099
≥ 12 Months	140	\$223	-\$340	\$0	\$0	\$157	\$368	\$649	\$1,189
<b>Total</b>	<b>240</b>	<b>\$142</b>	<b>-\$1,614</b>	<b>-\$123</b>	<b>\$0</b>	<b>\$103</b>	<b>\$316</b>	<b>\$548</b>	<b>\$1,189</b>

Table VII-11 displays the number of payment arrangements experienced by the Prepaid participants and the comparison group. The table shows that there was a greater reduction in payment arrangements for the treatment group than the comparison group. While 24 percent of the treatment group started payment arrangements in the year prior to Prepaid enrollment, only three percent started payment arrangements in the year following enrollment. Customers would only begin payment arrangements after leaving the Prepaid Program. The net change in the number of payment arrangements started was a decline of 20 percentage points.

**Table VII-11**  
**Payment Arrangements**

Payment Arrangement Characteristics	Analysis Group						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
<b># of Customers</b>	<b>119</b>			<b>3,168</b>			
Number Started	106	14	-87%	1,830	1,547	-15%	-71%
Number Ended	89	29	-67%	1,838	1,443	-21%	-46%
<b># of Arrangements</b>	<b>162</b>			<b>4,487</b>			
Number Started	130	15	-88%	2,141	1,779	-17%	-72%
Number Ended	115	31	-73%	2,144	1,575	-27%	-47%

Payment Arrangement Characteristics	Analysis Group						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	438			42,045			
Percent Started	24%	3%	-21% **	4%	4%	-1% **	-20% **
Percent Ended	20%	7%	-14% **	4%	3%	-1% **	-13% **

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-12 displays the amounts of the payment arrangements that were initiated for Prepaid participants and the comparison group in the year prior to participation and the year after enrolling. While there were many fewer customers with payment arrangements in the year following enrollments, those who did have payment arrangements, had a large increase in the amount of those arrangements.

**Table VII-12  
Payment Arrangement Amount**

Payment Arrangement Characteristics	Analysis Group						
	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	8			497			
Inception Amount	\$375	\$704	\$329*	\$419	\$688	\$269**	\$60
Installment Amount	\$76	\$95	\$19	\$94	\$79	-\$15**	\$33
# of Arrangements	145			3,965			
Inception Amount	\$372	\$572	\$200**	\$374	\$568	\$194**	\$6
Installment Amount	\$86	\$79	-\$7	\$86	\$74	-\$12**	\$5

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

### **E. Grace Periods**

Prepaid participants can request a five-day grace period that allows them to continue using service up to five days after reaching a zero account balance. Table VII-13 shows that 26 percent of the 527 participants requested at least one grace period. Half of those who requested a grace period requested only one, while 13 percent requested five or more grace periods.

**Table VII-13  
Grace Period Status**

Grace Period Status	Number of Prepaid Participants	
	Observations	Percent
Requested Grace Period	138	26%
Did Not Request Grace Period	389	74%
<b>Total</b>	<b>527</b>	<b>100%</b>
<b>Number of Grace Periods Requested</b>		
1	70	51%
2	27	20%
3-4	24	17%
5-6	12	9%
7-9	5	4%
<b>Total</b>	<b>138</b>	<b>100%</b>

Table VII-14 shows that participants made payments during 55 percent of the total of 309 grace periods requested by 138 customers.

**Table VII-14  
Payment Made During Grace Period**

Payment Made During Grace Period	Number of Grace Periods	
	Observations	Percent
At Least One Payment	171	55%
No Payment Made	138	45%
<b>Total</b>	<b>309</b>	<b>100%</b>

Table VII-15 shows that participants made one payment during 39 percent of the grace periods and made two or more payments during 16 percent of the grace periods.

**Table VII-15  
Number of Payments Made During Grace Period**

Number of Payments	Number of Grace Periods	
	Observations	Percent
None	138	45%
1	120	39%
2	38	12%
3	10	3%

Number of Payments	Number of Grace Periods	
	Observations	Percent
4	3	1%
<b>Total</b>	<b>309</b>	<b>100%</b>

Table VII-16 provides information on the day of the grace period in which payments were made. Some customers made more than one payment during the grace period, so this table shows the day of the last payment made. The table shows that payments were distributed across the grace period.

**Table VII-16**  
**Payment Day of Last Grace Period Payment**

Day of Grace Period on Which Last Payment was Made	Number of Grace Periods	
	Observations	Percent
First Day	39	23%
Second Day	33	19%
Third Day	18	11%
Fourth Day	27	16%
Fifth Day	23	13%
Sixth Day	31	18%
<b>Total</b>	<b>171</b>	<b>100%</b>

Table VII-17 shows that only nine percent of the participants who had one or more grace periods returned to post-pay during their grace periods. Only nine percent of participants returned to post-pay during a grace period and participants only returned to post-pay during four percent of the 309 grace periods.

**Table VII-17**  
**Participant Returned to Post-Pay during Grace Period**

Returned to Post-Pay	Number of Participants with Grace Periods		Number of Grace Periods	
	Observations	Percent	Observations	Percent
Yes	13	9%	13	4%
No	125	91%	296	96%
<b>Total</b>	<b>138</b>	<b>100%</b>	<b>309</b>	<b>100%</b>

## F. Disconnections and Negative Balances

In March 2020, BGE instituted a shutoff moratorium for residential customers in response to the COVID-19 pandemic, suspending service disconnections and waiving new late payment charges. Prepaid customers who consumed more energy than they paid for were not disconnected pursuant to the shutoff moratorium. However, BGE kept track of customers with negative balances through weekly reports beginning March 25, 2020. These reports extended through the time of data acquisition on January 4, 2021. Table VII-18 shows the number of prepaid customers who had a negative account balance at any point between the start of the shutoff moratorium in March 2020 and January 2021. The table shows that thirty percent of the participants had at least one instance where their account reached a negative balance. Ten percent of Prepaid participants had a negative balance four or more times during this period.

**Table VII-18  
Balance Status**

<b>Balance Status</b>	<b>Number of Prepaid Participants</b>	<b>Percent of Prepaid Participants</b>
No Negative Balance	369	70%
At Least One Negative Balance	158	30%
<b>Instances of Negative Balance</b>		
Never	369	70%
1 Time	61	12%
2 Times	33	6%
3 Times	15	3%
4 Times	19	4%
5-8 Times	22	4%
9-13 Times	8	2%
<b>Total</b>	<b>527</b>	<b>100%</b>

Between March 2020 and January 2021, Prepaid participants had 481 instances of negative balances. Table VII-19 shows how many customers had negative balances of each length and how many instances there were of each length. Negative balances were most likely to last for six to ten days, but eight percent lasted more than 50 days.

**Table VII-19  
Negative Balance Length**

<b>Negative Balance Length</b>	<b>Number of Prepaid Participants</b>	<b>Number of Instances</b>	<b>Percent of Instances</b>
≤ 5 Days	18	20	2%
6 – 10 Days	97	218	26%
11 – 15 Days	44	65	8%

Negative Balance Length	Number of Prepaid Participants	Number of Instances	Percent of Instances
16 – 25 Days	40	57	7%
26 – 50 Days	40	52	6%
51 – 75 Days	16	19	2%
> 75 Days	46	50	6%
<b>Total</b>	-	<b>481</b>	<b>100%</b>
<b>Mean Length</b>	<b>18 Days</b>		

Table VII-20 shows the longest period of time over which prepaid customers retained a negative balance. Eight percent had their longest negative balance last more than 100 days.

**Table VII-20**  
**Longest Negative Balance Length**

Negative Balance Length	Number of Prepaid Participants	Percent of Prepaid Participants
None	369	70%
≤ 15 Days	51	10%
16 – 30 Days	34	6%
31 – 50 Days	15	3%
51 – 100 Days	18	3%
101 – 200 Days	24	5%
> 200 Days	16	3%
<b>Total</b>	<b>527</b>	<b>100%</b>
<b>Mean Longest Length</b>	<b>21 Days</b>	

Table VII-21 shows the cumulative number of days that prepaid customers had a negative balance during the shutoff moratorium. While only 21 percent had a total length of more than 25 days, six percent had a total length of more than 200 days.

**Table VII-21**  
**Cumulative Negative Balance Length**

Negative Balance Length	Number of Prepaid Participants	Percent of Prepaid Participants
None	369	70%
≤ 25 Days	49	9%
26-50 Days	24	5%
51-100 Days	27	5%
101 – 150 Days	12	2%

Negative Balance Length	Number of Prepaid Participants	Percent of Prepaid Participants
151 – 200 Days	14	3%
201 – 250 Days	12	2%
> 250 Days	20	4%
<b>Total</b>	<b>527</b>	<b>100%</b>
<b>Mean Cumulative Length</b>	<b>30 Days</b>	

Table VII-22 shows the lowest negative balance reached during the shutoff moratorium for all 527 prepaid participants. While 86 percent of participants did not have a balance over \$100, eight percent had a balance over \$200, and four percent had a balance over \$400.

**Table VII-22**  
**Lowest Negative Balance**

Lowest Negative Balance	Number of Prepaid Participants	Percent of Prepaid Participants
None	369	70%
≤ \$25	37	7%
\$26 - \$100	48	9%
\$101 - \$200	28	5%
\$201 - \$300	15	3%
\$301 - \$400	7	1%
> \$400	23	4%
<b>Total</b>	<b>527</b>	<b>100%</b>
<b>Mean Negative Balance</b>	<b>\$56</b>	

Table VII-23 shows the average balance by negative balance length. Those with longer balance lengths had greater balances, reaching an average of \$213 for those with a length of more than 75 days.

**Table VII-23**  
**Average Negative Balance by Balance Length**

Negative Balance Length	Number of Prepaid Participants	Number of Instances	Average Balance
≤ 5 Days	18	20	\$9
6 – 10 Days	97	218	\$16
11 – 15 Days	44	65	\$29
16 – 25 Days	40	57	\$58
26 – 50 Days	40	52	\$51

Negative Balance Length	Number of Prepaid Participants	Number of Instances	Average Balance
51 – 75 Days	16	19	\$100
> 75 Days	46	50	\$213
<b>Total</b>	-	<b>481</b>	<b>\$50</b>

Table VII-24 shows the number of Prepaid participants with negative balances by month. Customers could have a negative balance in more than one month. The balances were distributed over the entire period examined.

**Table VII-24**  
**Number of Customers with Negative Balances by Month**

Month	Number of Prepaid Participants	Percent of Prepaid Participants
<b>Observations</b>	<b>527</b>	<b>100%</b>
March 2020	50	9%
April 2020	90	17%
May 2020	73	14%
June 2020	67	13%
July 2020	76	14%
August 2020	76	14%
September 2020	89	17%
October 2020	85	16%
November 2020	84	16%
December 2020	70	13%
January 2021	49	9%

Table VII-25A examines the number of disconnections for those customers included in the payment analysis. The table shows that eight percent of Prepaid participants had one or more disconnections in the year prior to enrollment and 11 percent had one or more disconnections in the year following enrollment in the Prepaid Pilot. The table also shows that 33 percent of Prepaid participants had one or more disconnections or periods of negative balances in the year following enrollment.



**Table VII-25A**  
**Number of Disconnections**  
**Prepaid Program Participants**

Number of Disconnections Only or Disconnections and Negative Balances	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>437*</b>		<b>437*</b>	
0	92%	89%	92%	67%
1	6%	6%	6%	12%
2 - 4	2%	4%	2%	14%
> 4	0%	< 1%	0%	7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean # Disconnections</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>1.0</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-25B examines the number of disconnections and negative balances for those customers included in the payment analysis who had arrearages at the time of enrollment. The table shows that a somewhat higher percentage of these participants had disconnections or negative balances than all participants. While nine percent of Prepaid participants with arrearages had one or more disconnections in the year prior to enrollment, 14 percent had one or more disconnections in the year following enrollment. Forty-four percent had one or more disconnections or periods of negative balances in the year following enrollment.

**Table VII-25B**  
**Number of Disconnections**  
**Participants with Arrearages at Enrollment**

Number of Disconnections Only or Disconnections and Negative Balances	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>239*</b>		<b>239*</b>	
0	91%	86%	91%	56%
1	8%	8%	8%	14%
2 - 4	1%	6%	1%	19%
> 4	0%	< 1%	0%	11%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean # Disconnections</b>	<b>0.1</b>	<b>0.3</b>	<b>0.1</b>	<b>1.5</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-25C examines the number of disconnections for those customers included in the payment analysis who remained on the Prepaid Program for a full year. While eight percent of full year Prepaid participants had one or more disconnections in the year prior to enrollment, 11 percent had one or more disconnections in the year following enrollment. Forty percent had one or more disconnections or periods of negative balances in the year following enrollment.

**Table VII-25C  
Number of Disconnections  
Full Year Prepaid Program Participants**

Number of Disconnections Only or Disconnections and Negative Balances	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>273*</b>		<b>273*</b>	
0	92%	89%	92%	60%
1	7%	5%	7%	12%
2 - 4	1%	5%	1%	18%
> 4	0%	< 1%	0%	10%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean # Disconnections</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>1.3</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-25D examines the number of disconnections and negative balances for those customers included in the payment analysis who had arrearages at the time of enrollment and who remained enrolled for a full year. While 11 percent of full year Prepaid participants with arrearages had one or more disconnections in the year prior to enrollment, 16 percent had one or more disconnections in the year following enrollment, and 56 percent had one or more disconnections or periods of negative balances in the year following enrollment.

**Table VII-25D  
Number of Disconnections  
Full Year Prepaid Program Participants with Arrearages at Enrollment**

Number of Disconnections Only or Disconnections and Negative Balances	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>138*</b>		<b>138*</b>	
0	89%	84%	89%	44%
1	9%	8%	9%	12%
2 - 4	1%	7%	1%	26%

Number of Disconnections Only or Disconnections and Negative Balances	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
> 4	0%	1%	0%	17%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean # Disconnections</b>	<b>0.1</b>	<b>0.4</b>	<b>0.1</b>	<b>2.1</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-26A displays the distribution of the length of the disconnections and negative balances. The table shows that the mean length of disconnections in the pre period was less than a half day, and the mean length of disconnections in the post period was less than a tenth of a day. The mean length of disconnections and negative balances in the post period was 24 days. Nineteen percent of participants had a period of 25 days or more with a disconnection and/or a negative balance in the Prepaid Program.

**Table VII-26A**  
**Cumulative Length of Disconnections**  
**Prepaid Program Participants**

Cumulative Length	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>437*</b>		<b>437*</b>	
0 Days	92%	90%	92%	67%
1 Day	5%	10%	5%	4%
2 Days	0%	< 1%	0%	0%
3 Days	0%	< 1%	0%	< 1%
4 Days	0%	0%	0%	0%
5 Days	< 1%	0%	< 1%	< 1%
6 – 10 Days	1%	< 1%	1%	4%
11 – 15 Days	< 1%	0%	< 1%	3%
16 – 25 Days	1%	0%	1%	2%
> 25 Days	0%	0%	0%	19%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Length in Days</b>	<b>0.3</b>	<b>&lt; 0.1</b>	<b>0.3</b>	<b>24.4</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-26B displays the distribution of the length of the disconnections and negative balances for Prepaid participants with arrearages at enrollment. The table shows that the mean length of disconnections after enrollment was one tenth of a day and the mean length of

disconnections and negative balances was 38.4 days, higher than the 24.4 days for all participants. Twenty-eight percent of participants with arrearages at enrollment had a period of more than 25 days with a disconnection and/or a negative balance in the Prepaid Program.

**Table VII-26B**  
**Cumulative Length of Disconnections**  
**Participants with Arrearages at Enrollment**

Cumulative Length	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>239*</b>		<b>239*</b>	
0 Days	91%	86%	91%	56%
1 Day	6%	13%	6%	5%
2 Days	0%	< 1%	0%	0%
3 Days	0%	< 1%	0%	< 1%
4 Days	0%	0%	0%	0%
5 Days	1%	0%	1%	< 1%
6 – 10 Days	1%	< 1%	1%	4%
11 – 15 Days	< 1%	0%	< 1%	4%
16 – 25 Days	1%	0%	1%	2%
> 25 Days	0%	0%	0%	28%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Length in Days</b>	<b>0.3</b>	<b>0.1</b>	<b>0.3</b>	<b>38.4</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-26C displays the distribution of the length of the disconnections and negative balances for full year Prepaid participants. The table shows that six percent had a total time disconnected of one day in the year prior to enrollment and ten percent had a total disconnection time of one day in the year following enrollment. The mean length of disconnections and negative balances after enrollment was 32.5 days, higher than the 24.4 days for all participants. Twenty-five percent of full year participants had a period of more than 25 days with a disconnection and/or a negative balance in the Prepaid Program.

**Table VII-26C**  
**Cumulative Length of Disconnections**  
**Full Year Prepaid Program Participants**

Cumulative Length	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>273*</b>		<b>273*</b>	
0 Days	92%	89%	92%	60%
1 Day	6%	10%	6%	2%
2 Days	0%	< 1%	0%	0%
3 Days	0%	0%	0%	0%
4 Days	0%	0%	0%	0%
5 Days	0%	0%	0%	< 1%
6 – 10 Days	1%	< 1%	1%	5%
11 – 15 Days	1%	0%	1%	5%
16 – 25 Days	1%	0%	1%	2%
> 25 Days	0%	0%	0%	25%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Length in Days</b>	<b>0.3</b>	<b>&lt; 0.1</b>	<b>0.3</b>	<b>32.5</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

Table VII-26D displays the distribution of the length of the disconnections and negative balances for full year Prepaid participants with arrearages at enrollment. The table shows that while nine percent had a total time disconnected of one day in the year prior to enrollment, 14 percent had a total time disconnected of one day in the year following enrollment. The mean length of disconnections and negative balances after enrollment was 54 days, higher than the 24.4 days for all participants. Forty percent of full year participants with arrearages at enrollment had a period of more than 25 days with a disconnection and/or a negative balance in the Prepaid Program.

**Table VII-26D**  
**Cumulative Length of Disconnections**  
**Full Year Prepaid Program Participants with Arrearages at Enrollment**

Cumulative Length	Disconnections Only		Disconnections and Negative Balances	
	Year Before Enrollment	Year After Enrollment	Year Before Enrollment	Year After Enrollment
<b>Customers</b>	<b>138*</b>		<b>138*</b>	
0 Days	89%	84%	89%	44%
1 Day	9%	14%	9%	4%
2 Days	0%	1%	0%	0%
3 Days	0%	0%	0%	0%
4 Days	0%	0%	0%	0%
5 Days	0%	0%	0%	1%
6 – 10 Days	1%	1%	1%	4%
11 – 15 Days	1%	0%	1%	7%
16 – 25 Days	1%	0%	1%	1%
> 25 Days	0%	0%	0%	40%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Mean Length in Days</b>	<b>0.3</b>	<b>0.1</b>	<b>0.3</b>	<b>54.0</b>

\*One outlier disconnection that was 382 days long was excluded from this analysis.

### **G. Collections Actions**

This section examines the change in collections actions for the Prepaid participants and the comparison group. Table VII-27A shows that there was a very large reduction in collections actions for the participants, and a smaller reduction for the comparison group. While 70 percent of participants had one or more actions in the pre-enrollment period, only 29 percent had one or more action in the post period, a reduction of 41 percentage points. The comparison group had a reduction of six percentage points, so the net change was a reduction of 35 percentage points. Participants had the greatest reduction in calls, letters, and reminder notices. Note that there were no write-offs for the customers included in the analysis, so they are not shown in the table.

**Table VII-27A**  
**Percent with Collections Actions**

Collections Actions	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	438			46,481			
Outbound Calls	67%	17%	-50% **	42%	36%	-6% **	<b>-44% **</b>
Letters	49%	7%	-43% **	27%	21%	-6% **	<b>-37% **</b>
Reminder Notices	37%	6%	-31% **	23%	15%	-8% **	<b>-23% **</b>
IVR Inbound Calls <sup>1</sup>	3%	3%	<1%	21%	14%	-7% **	<b>7% **</b>
CSR Inbound Calls <sup>2</sup>	4%	4%	<1%	22%	17%	-5% **	<b>5% **</b>
Disconnections	8%	11%	3%	5%	1%	-4% **	<b>7% **</b>
Reconnections	8%	12%	4% #	5%	2%	-4% **	<b>7% **</b>
Any Collection Action	70%	29%	-41% **	51%	46%	-6% **	<b>-35% **</b>

Calls handled by interactive voice response. <sup>2</sup> Calls handled by customer service representatives.

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-27B displays the percent with collections actions before March 2020, the Pre-COVID Analysis. The table shows that the participants reduced their collections actions by 35 percentage points and the comparison group only had their collections actions decline by four percentage points, so the net change was a decline of 31 percentage points.

**Table VII-27B**  
**Pre-COVID Analysis: Percent with Collections Actions**

Collections Actions	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	376			39,152			
Outbound Calls	52%	8%	-44% **	34%	31%	-3% **	<b>-41% **</b>
Letters	39%	5%	-34% **	20%	18%	-2% **	<b>-32% **</b>
Reminder Notices	19%	1%	-18% **	14%	11%	-2% **	<b>-16% **</b>
IVR Inbound Calls <sup>1</sup>	1%	1%	0%	14%	10%	-4% **	<b>4% **</b>
CSR Inbound Calls <sup>2</sup>	2%	2%	<1%	12%	9%	-3% **	<b>3% **</b>
Disconnections	2%	10%	8% **	1%	1%	<1% *	<b>8% **</b>
Reconnections	2%	10%	8% **	1%	1%	<1% #	<b>8% **</b>
Any Collection Action	57%	22%	-35% **	42%	38%	-4% **	<b>-31% **</b>

<sup>1</sup> Calls handled by interactive voice response. <sup>2</sup> Calls handled by customer service representatives.

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-28A displays the mean number of each type of collections action experienced by the participants and the comparison group. The table shows a reduction of 8.3 actions for the treatment group and a reduction of 4.2 actions for the comparison group, for a net reduction of 4.1 actions.

**Table VII-28A**  
**Number of Collections Actions**

Collections Actions	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	438			46,481			
Outbound Calls	5.3	0.4	-4.9**	3.1	1.3	-1.8**	-3.1**
Letters	2.9	0.1	-2.7**	1.6	0.5	-1.0**	-1.7**
Reminder Notices	0.8	0.1	-0.7**	0.5	0.2	-0.3**	-0.4**
IVR Inbound Calls <sup>1</sup>	0.1	0.1	-0.1#	1.2	0.5	-0.7**	0.6**
CSR Inbound Calls <sup>2</sup>	0.2	0.1	-0.1#	0.8	0.5	-0.3**	0.2**
Disconnections	0.1	0.2	0.1**	0.1	<0.1	-0.1**	0.2**
Reconnections	0.1	0.2	0.1**	0.1	<0.1	-0.1**	0.2**
<b>Total # of Actions</b>	<b>9.5</b>	<b>1.2</b>	<b>-8.3**</b>	<b>7.3</b>	<b>3.1</b>	<b>-4.2**</b>	<b>-4.1**</b>

<sup>1</sup> Calls handled by interactive voice response. <sup>2</sup> Calls handled by customer service representatives.

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-28B displays the mean number of each type of collections action experienced by the participants and the comparison group prior to March 2020, the Pre-COVID Analysis. The table shows that the net change was a reduction of 1.7 collections actions.

**Table VII-28B**  
**Pre-COVID Analysis: Number of Collections Actions**

Collections Actions	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	376			39,152			
Outbound Calls	1.6	0.1	-1.5**	1.1	1.0	-0.1**	-1.4**
Letters	0.8	0.1	-0.7**	0.5	0.5	<0.1**	-0.7**
Reminder Notices	0.3	<0.1	-0.3**	0.2	0.2	<0.1**	-0.2**
IVR Inbound Calls <sup>1</sup>	<0.1	<0.1	<0.1	0.5	0.3	-0.2**	0.2**
CSR Inbound Calls <sup>2</sup>	<0.1	<0.1	<0.1	0.3	0.2	-0.1**	0.1**
Disconnections	<0.1	0.2	0.1**	<0.1	<0.1	<0.1*	0.1**
Reconnections	<0.1	0.2	0.2**	<0.1	<0.1	<0.1#	0.1**



Collections Actions	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	376			39,152			
Total # of Actions	2.8	0.6	-2.2**	2.6	2.1	-0.5**	-1.7**

<sup>1</sup> Calls handled by interactive voice response. <sup>2</sup> Calls handled by customer service representatives.

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VII-29A displays the cumulative length of disconnections for the Prepaid participants and the comparison group. The table shows that most of the disconnections for both groups lasted a total of only one day. However, the comparison group had a slightly higher percentage of customers with disconnections of more than one day in the post-enrollment comparison period.

**Table VII-29A**  
**Cumulative Length of Disconnections**

Cumulative Length	Participants				Weighted Q4 Comparison Group			
	Year Before Enrollment		Year After Enrollment		Year Before Enrollment		Year After Enrollment	
	#	%	#	%	#	%	#	%
0 Days	403	92%	392	90%	40,395	96%	41,650	99%
1 Day	23	5%	42	10%	1,141	3%	263	1%
2 Days	0	0%	1	< 1%	119	< 1%	19	< 1%
3 Days	0	0%	1	< 1%	45	< 1%	6	< 1%
4 Days	0	0%	0	0%	47	< 1%	8	< 1%
5 Days	2	< 1%	0	0%	21	< 1%	3	< 1%
6 – 10 Days	3	1%	1	< 1%	104	< 1%	28	< 1%
11 – 15 Days	2	< 1%	0	0%	46	< 1%	7	< 1%
16 – 25 Days	4	1%	0	0%	41	< 1%	7	< 1%
> 25 Days	0	0%	0	0%	79	< 1%	47	< 1%
<b>Total</b>	<b>437*</b>	<b>100%</b>	<b>437*</b>	<b>100%</b>	<b>42,038**</b>	<b>100%</b>	<b>42,038**</b>	<b>100%</b>
<b>Mean Length in Days</b>	<b>0.3</b>		<b>&lt; 0.1</b>		<b>0.3</b>		<b>0.1</b>	

\* One prepaid participant had a total disconnection length of 382 days and was therefore excluded from this analysis.

\*\*Seven comparison group customers had total disconnection lengths ranging from 400 to 750 days and were therefore excluded from this analysis.

Table VII-29B displays the cumulative length of disconnections for the Prepaid participants and the comparison group in the Pre-COVID analysis period. The table also shows that most of the disconnections for both groups lasted a total of only one day. However, the comparison group again had a slightly higher percentage of customers with disconnections of more than

one day in the post-enrollment comparison period and a small increase in the average length of the disconnections compared to the decline for Prepaid participants.

**Table VII-29B**  
**Pre-COVID Analysis: Cumulative Length of Disconnections**

Cumulative Length	Participants Disconnections Only				Weighted Q4 Comparison Group Disconnections Only			
	Pre		Post		Pre		Post	
	#	%	#	%	#	%	#	%
0 Days	368	98%	342	91%	38,777	99%	38,776	99%
1 Day	4	1%	34	9%	284	1%	260	1%
2 Days	0	0%	0	0%	20	< 1%	23	< 1%
3 Days	0	0%	0	0%	14	< 1%	9	< 1%
4 Days	0	0%	0	0%	7	< 1%	9	< 1%
5 Days	0	0%	0	0%	5	< 1%	2	< 1%
6 – 10 Days	3	1%	0	0%	24	< 1%	25	< 1%
11 – 15 Days	0	0%	0	0%	13	< 1%	6	< 1%
16 – 25 Days	1	< 1%	0	0%	2	< 1%	5	< 1%
> 25 Days	0	0%	0	0%	5	< 1%	36	< 1%
<b>Total</b>	<b>376</b>	<b>100%</b>	<b>376</b>	<b>100%</b>	<b>39,151*</b>	<b>100%</b>	<b>39,151*</b>	<b>100%</b>
<b>Mean Length in Days</b>	<b>0.1</b>		<b>&lt; 0.1</b>		<b>&lt; 0.1</b>		<b>0.1</b>	
<b>Mean Length in Days for Those with Disconnections</b>	<b>5.8</b>		<b>0.2</b>		<b>2.6</b>		<b>9.4</b>	

\*One comparison group customer had a total disconnection length of 429 days and was therefore excluded from this analysis.

Table VII-30 examines whether customers with disconnections returned to post-pay during the termination period. The table shows the following.

- During the 76 disconnections, the customer remained on pre-pay 48 times and returned to post-pay 28 times.
- Six customers returned to post-pay on the day of the termination and one customer returned to post-pay one day into the termination.
- Of the 21 who returned to post-pay not within the termination period, there was only one account that disenrolled before a disconnection (roughly 3 months prior).

**Table VII-30**  
**Participant Return to Post-Pay During Termination Period**  
**Analysis Group Customers with Disconnections**

<b>Customers with Disconnections</b>	<b>Number of Prepaid Participants</b>	<b>Percent of Analysis Group</b>
Remained on Pre-Pay Program	48	63%
Returned to Post-Pay	28	37%
<b>Total</b>	<b>76</b>	<b>100%</b>
<b>Number of Days into Termination Period</b>		
Same Day	6	21%
1 Day	1	4%
Not Within Termination Period	21	75%
<b>Total</b>	<b>28</b>	<b>100%</b>

Table VII-31 displays the month of each disconnection.

**Table VII-31**  
**Month of Disconnection for Prepaid Participants**

<b>Month</b>	<b>Number of Disconnections</b>	<b>Percent of Total Disconnections</b>
January	40	27%
February	30	20%
March	11	7%
April	8	5%
May	1	1%
June	8	5%
July	1	1%
August	7	5%
September	10	7%
October	15	10%
November	6	4%
December	10	7%
<b>Total Disconnections</b>	<b>147</b>	<b>100%</b>

## H. Investigations

Table VII-32 displays information on the percent of customers with an investigation for the Prepaid participants and the comparison group. Only about one percent of the treatment and comparison groups had investigations, so there was no significant change in this indicator.

**Table VII-32**  
**Percent of Customers with an Investigation**

Investigation Type	Prepaid Participants			Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
<b>Total # of Customers</b>	<b>438</b>			<b>46,481</b>			
High Bill	0%	0%	0%	< 1%	< 1%	- < 1%	< 1%
Identity Theft	0%	0%	0%	< 1%	< 1%	< 1%	- < 1%
Public Service Commission	1%	< 1%	- < 1%	< 1%	< 1%	- < 1%	- < 1%
Theft of Energy	0%	0%	0%	< 1%	< 1%	- < 1%	< 1%
Customers with at Least One Investigation	<b>1%</b>	<b>&lt; 1%</b>	<b>- &lt; 1%</b>	<b>&lt; 1%</b>	<b>&lt; 1%</b>	<b>- &lt; 1%</b>	<b>- &lt; 1%</b>

Table VII-33 displays information on the number of investigations for the Prepaid participants and the comparison group. There were only five participants who had an investigation, three in the period prior to enrollment in the Prepaid Program and two in the period following enrollment. The comparison group had a larger number of investigations and a larger decline in the number of investigations.

**Table VII-33**  
**Number of Investigations**

Investigation Type	Prepaid Participants			Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
<b># of Customers</b>	<b>438</b>			<b>46,481</b>			
High Bill	0	0	0	11	5	-6	<b>6</b>
Identity Theft	0	0	0	1	4	-3	<b>3</b>
Public Service Commission	3	2	-1	73	43	-30	<b>29</b>
Theft of Energy	0	0	0	10	7	-3	<b>3</b>
<b>Total</b>	<b>3</b>	<b>2</b>	<b>-1</b>	<b>95</b>	<b>59</b>	<b>-36</b>	<b>35</b>

## I. Summary

This section provided an analysis of the impact of the Prepaid Pilot Program on customer payments. While the information is impacted by the impact of COVID and the resulting collections moratoriums, we found that the program had a positive impact on customers' payment compliance.

- **Bills:** Electric heating participants' total charges declined by \$83 compared to the comparison group and electric non-heating customers' total charges declined by \$74 compared to the comparison group.

The net reduction in full year Prepaid electric heating participants' charges was \$120 and the net reduction for full year Prepaid electric non-heating participants was \$106.

- **Payments:** There was not a statistically significant change in payments for electric heating customers, but electric non-heating customers increased their payments by \$100 as compared to the comparison group.

Payments made by full year Prepaid electric heating participants increased by \$111 and payments made by full year Prepaid electric non-heating participants increased by \$202.

We also examined the change in payments through February 2020, to measure the impact prior to the onset of the COVID pandemic. This analysis included four to seven months of participation, depending on when the customers enrolled. This analysis found a \$82 net increase in payments made by electric heating participants and a \$105 net increase in payments made by electric non-heating participants.

- **Number of Payments:** As expected, payment frequency increased for Prepaid Pilot participants after enrollment in the program. Participants increased their use of credit card and bank account/debit card payments. The net change was an increase of 11 payments, a doubling of the number of payments made in the pre-participation period.
- **Coverage Rates:** Electric heating participants increased their coverage rates, the percent of the bill paid, by six percentage points and electric non-heating customers increased their coverage rates by ten percentage points. Those who started the Prepaid Pilot with arrearages had an even greater increase of 12 percentage points for electric heating participants and 14 percentage points for electric non-heating participants.

Full year Prepaid electric heating participants increased their bill coverage rates by 11 percentage points and full year Prepaid electric non-heating participants increased their bill coverage rates by 17 percentage points.

The Pre-COVID analysis found that electric heating participants increased their bill coverage rates by 23 percentage points and electric non-heating participants increased their bill coverage rates by 21 percentage points.

- **Arrearages:** Arrearages increased over this time period for the treatment and comparison groups. This may be related to the utility discontinuing collections practices during the COVID-19 pandemic. Across all participants who had arrearages at the time of enrollment in the Prepaid Pilot, arrearages increased by an average of \$131.
- **Payment Arrangements:** While 24 percent of the treatment group started payment arrangements in the year prior to Prepaid enrollment, only three percent started payment

arrangements in the year following enrollment. Some of this decline is likely due to the COVID-related collections moratorium. However, the net change was a decline of 19 percentage points.

- **Grace Periods:** Prepaid participants can request a five-day grace period that allows them to continue using service up to five days after reaching a zero account balance. Twenty-six percent of the 527 participants requested at least one grace period.
- **Disconnections and Negative Balances:** In March 2020, BGE instituted a shutoff moratorium for residential customers in response to the COVID-19 pandemic, suspending service disconnections and waiving new late payment charges. Prepaid customers who consumed more energy than they paid for were not disconnected pursuant to the shutoff moratorium. However, BGE kept track of customers with negative balances through weekly reports beginning March 25, 2020.

While eight percent of Prepaid participants had one or more disconnections in the year prior to enrollment, 11 percent had one or more disconnections in the year following enrollment in the Prepaid Pilot.

- **Collections Actions:** While 70 percent of participants had one or more collections actions in the pre-enrollment period, only 29 percent had one or more action in the post period, a reduction of 41 percentage points. The net change was a reduction of 35 percentage points. The net reduction in the number of collections actions per participant from the pre-enrollment to the Prepaid pilot participation year was 5.3 actions.

The Pre-COVID analysis found that participants had a net decline in collections actions of 31 percentage points. Their net reduction in the number of collections actions per participant was 1.7 actions.

## VIII. Cost Analysis

This section provides an analysis of the costs of the Prepaid Pilot Program.

BGE provided information on the Prepaid Pilot development costs. They reported a total cost of approximately \$3.5 million. They estimated that the cost would be approximately half that amount for a transition to full deployment. They also estimated ongoing costs for running a Prepaid Program to be approximately \$95,000 per year for fees to their PayGo vendor.

BGE estimated savings of approximately \$26 per customer for a reduction in the need for cash working capital. Table VIII-1 provides our analysis of the change in collections costs. Because of the increase in inbound calls, we estimated an increase in costs of three dollars per participant. However, this analysis is impacted by the COVID-related collections moratoriums and the impact for Prepaid participants during a non-COVID period is expected to be a cost reduction. The Pre-COVID Analysis found a cost increase of \$1, but this was not able to include a full year of analysis.

**Table VIII-1**  
**Cost of Collections Actions**

Average Cost of Actions (\$)	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	438			46,481			
Outbound Calls <sup>1</sup>	\$1	< \$1	-\$1**	< \$1	< \$1	- < \$1**	- < \$1**
Letters	\$1	< \$1	-\$1**	\$1	< \$1	-\$1**	-\$1**
IVR Inbound Calls <sup>2</sup>	< \$1	< \$1	- < \$1*	< \$1	< \$1	- < \$1**	< \$1**
CSR Inbound Calls <sup>3</sup>	\$3	\$4	\$1	\$12	\$9	-\$3**	\$4**
<b>Total Cost of Actions</b>	<b>\$5</b>	<b>\$4</b>	<b>-\$1</b>	<b>\$13</b>	<b>\$9</b>	<b>-\$4**</b>	<b>\$3**</b>

<sup>1</sup> The cost of outbound calls was estimated at \$0.04 per minute. The mean IVR inbound call length for each analysis group was used as a proxy for the length of outbound calls to calculate the cost.

<sup>2</sup> Calls handled by interactive voice response. <sup>3</sup> Calls handled by customer service representatives.

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

Table VIII-2 provides an analysis of the change in collections costs for full year Prepaid participants. This table shows approximately the same results as for all Prepaid participants.

**Table VIII-2**  
**Cost of Collections Actions**  
**Full Year Participants**

Average Cost of Actions (\$)	Prepaid Participants			Weighted Q4 Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
# of Customers	274			46,481			
Outbound Calls <sup>1</sup>	\$1	\$0	-\$1**	< \$1	< \$1	- < \$1**	- < \$1**
Letters	\$1	\$0	-\$1**	\$1	< \$1	-\$1**	-\$1**
IVR Inbound Calls <sup>2</sup>	< \$1	< \$1	- < \$1 <sup>#</sup>	< \$1	< \$1	- < \$1**	< \$1**
CSR Inbound Calls <sup>3</sup>	\$2	\$3	\$1	\$12	\$9	-\$3**	\$5**
<b>Total Cost of Actions</b>	<b>\$4</b>	<b>\$3</b>	<b>- &lt; \$1</b>	<b>\$13</b>	<b>\$9</b>	<b>-\$4**</b>	<b>\$4**</b>

\*\*Denotes significance at the 99 percent level. \*Denotes significance at the 95 percent level. #Denotes significance at the 90 percent level.

The analysis found that the cost savings from the Prepaid Pilot were small compared to the development and ongoing costs. However, an analysis during a normal collections period is needed to develop a better estimate of program savings.



## IX. Findings and Recommendations

This report provided a comprehensive analysis of the implementation and impacts of BGE's Prepaid Power Program. Based on this research, we summarize key findings and recommendations for the program.

The Prepaid Pilot had several benefits for program participants.

- Customers who chose to participate in the Prepaid Power Program did not always match the initial expectations for those who would benefit the most. A full 47 percent of participants reported income above 400 percent of the poverty level and only 44 percent reported that they had arrearages before enrolling in the program. Customers who are not low-income or payment-troubled place value on the benefits of the Prepaid Power Program. If continued, the program should be marketed to all customers.
- Participants reported improved control over energy expenses. While 78 percent of currently enrolled customers reported improved control, 31 percent of disenrolled customers reported improved control.
- Participants reported that the program helped them to pay off their arrearages. While 41 percent of currently enrolled customers reported that the program helped them pay off past due bills, 24 percent of disenrolled customers reported this benefit. Among customers who reported that they had arrearages at the time of enrollment, 78 percent reported that the program helped them pay off their arrears.
- Participants reported that the program helped them to avoid or reduce the length of disconnections. While 53 percent of currently enrolled customers reported this benefit, 34 percent of disenrolled customers reported this benefit. Among customers who reported that they had arrearages at the time of enrollment, 68 percent reported that the program helped them avoid or reduce the length of disconnection.
- Participants who remained enrolled reported high levels of satisfaction with the program. While 77 percent of currently enrolled customers said they were very satisfied, 10 percent of disenrolled customers said they were very satisfied.
- Participants reduced their energy usage according to a weather-normalized, comparison group adjusted billing analysis. The full year electric heating participants had mean savings of 569 kWh or 3.9 percent of pre-treatment usage, the full year electric non-heating participants had mean savings of 406 kWh or 4.1 percent of pre-treatment usage, and full year participants with gas service had mean savings of 17 Therms, or 2.6 percent of pre-treatment usage.
- Participants improved their energy payments according to a comparison group adjusted billing analysis. Full year Prepaid electric heating participants increased their bill coverage rates, the percent of bills paid, by 11 percentage points and full year Prepaid electric non-heating participants increased their bill coverage rates by 17 percentage points.

The Pre-COVID analysis found that electric heating participants increased their bill coverage rates by 23 percentage points and electric non-heating participants increased their bill coverage rates by 21 percentage points.

- The program has not appeared to pay for itself with reduced costs. Given the high fixed costs, BGE would need to scale up the program to achieve cost-effectiveness. BGE was challenged to recruit participants, so it may take a few years to increase participation to this level.

The Prepaid Pilot was studied during an extremely unique period when customers were home more than usual and used more energy, and BGE suspended disconnections for a long period of time. Given these unique circumstances, it is difficult to make firm conclusions about the program. BGE would need to conduct another study during a more usual time to develop more information on how the program impacts participants, specifically with respect to arrearages and collections actions and costs.