



PHILADELPHIA GAS WORKS

800 West Montgomery Avenue • Philadelphia, PA 19122

March 28, 2019

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Philadelphia Gas Works 2019 Universal Service Programs Impact Evaluation

Dear Secretary Chiavetta:

The Philadelphia Gas Works ("PGW") hereby submits its 2019 Universal Service Programs Impact Evaluation to be filed. Please feel free to contact me if you have any questions or concerns regarding this filing.

Sincerely,

Tyra Jackson
Director, Regulatory Compliance
Philadelphia Gas Works

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cc: Joseph Magee

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**Philadelphia Gas Works
Universal Service Programs
Impact Evaluation
Final Report**

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March 2019

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Executive Summary

Philadelphia Gas Works has developed Universal Service Programs to help low-income customers maintain natural gas service as required under 52 Pa. Code. The programs include the Customer Responsibility Program that provides an affordable bill based on energy burden, the Home Comfort program that provides no-cost energy efficiency services, the CARES program that provides case management assistance to customers with special needs, and the Hardship Fund that provides grants to customers who have had their service terminated or who are in danger of service termination. PGW contracted with APPRISE to conduct a third party evaluation of this program. This report provides the findings from the independent evaluation.

Universal Service Programs

Philadelphia Gas Works has a high rate of poverty in its Philadelphia service territory and approximately one third of their customers are eligible for Universal Services. This section provides a description of each program.

Customer Responsibility Program

The objective of the Customer Responsibility Program (CRP) is to help low-income residential customers meet their energy needs by providing an affordable bill. The goals are to prevent loss of service for vulnerable households, improve payment behavior, and assist low-income customers to conserve energy. PGW also aims to reduce collection costs and minimize the burden placed on other ratepayers.

CRP provides a reduced bill based on the lower of a targeted energy burden or an average bill, and arrearage forgiveness over a three-year period to customers who make their monthly CRP payments.

PGW has made a number of changes to the CRP in recent years.

- **One-Year Stay-Out Period:** PGW implemented a one-year stay-out period for customers who ask to be removed from the CRP, who have two or more incidents of unauthorized use of utility service, or who submit fraudulent enrollment information.
- **Modified Arrearage Forgiveness:** CRP customers receive arrearage forgiveness whenever they pay their monthly CRP amount regardless of their existing CRP arrearage.
- **Overpayment Application:** LIHEAP payments in excess of the CRP asked to pay amount are applied to any missed monthly CRP charges and then to future CRP bills.
- **Modified Re-certification Process:** PGW increased the path from 30 days to 45 days and will provide a two-year re-certification waiver (instead of a one-year waiver) to customers who receive a LIHEAP grant and assign it to PGW annually (customers are only required to re-certify every third year).

- **Enhanced Employee Training:** PGW expanded its training curriculum to focus on re-certification to reduce the number of CRP customers placed on suspended status due to a failure to re-certify.
- **Targeted Outreach Activities:** PGW continued to expand outreach efforts to increase participation.
- **Pilot Consumption Limits:** PGW began a pilot of consumption limits for CRP participants who have higher than normal usage.
- **Pilot Conservation Incentive:** PGW is piloting a conservation incentive payment for CRP customers who reduce their weather-normalized usage.
- **Average Bill Option:** Customers whose energy burden is below the percent of income payment level can obtain an average bill payment plan and receive arrearage forgiveness.
- **CRP Cure Amount:** PGW now charges a cure amount due based on updated income.
- **Retroactive Arrearage Forgiveness:** PGW provides customers re-enrolling with retroactive forgiveness for months cured.
- **Make-Up Arrearage Forgiveness:** PGW provides currently enrolled customers with “missed” CRP arrearage forgiveness once the missed CRP bills are paid in full.
- **CRP Application/Re-certification Process:** Customers can now apply and re-certify online.

Home Comfort Program

The Home Comfort Program, PGW’s Low-Income Usage Reduction Program (LIURP), previously called the Enhanced Low-Income Retrofit Program (ELIRP) and the CRP Home Comfort Program, provides no-cost, in-home weatherization and energy conservation education services for eligible low-income customers. The program aims to make the homes more energy efficient, improve comfort, and, with respect to CRP customers, reduce the CRP subsidy cost. In PGW’s last Universal Service and Energy Conservation Plan the Program was expanded to non-CRP customers. For these non-CRP customers, services will not impact the CRP subsidy cost. The program objective is to provide cost-effective energy savings to low-income customers. The pilot Low-Income Multi-family Efficiency Program (Pilot LIME) will provide services for multi-family properties through December 2020.

The goals of Home Comfort are as follows.

- Reduce the gas usage of low-income households in a cost-effective manner by seeking a balance between greatest MMBtu savings and highest cost-effectiveness.
- Lower gas bills and improve the payment practices of participant customers.

PGW has also made several changes to Home Comfort in recent years.

- **Eligibility:** PGW expanded LIURP eligibility to include all known low-income customers.
- **Program Name:** The name of PGW's LIURP was changed from the CRP Home Comfort program to the Home Comfort Program to reflect this change in eligibility.
- **Multi-Family Pilot:** The pilot Low-Income Multi-family Efficiency Program (Pilot LIME) will provide services for multi-family properties through December 2020.
- **Outreach:** PGW developed and implemented marketing, outreach, and internal procedures to promote, identify and screen all the newly eligible non-CRP and other low-income customers for Home Comfort.
- **Advisory Panel:** PGW established a regulatory LIURP Advisory Panel.
- **Pilot Health and Safety Policy:** Contractors can spend up to \$2,000 per project on the installation of health and safety measures without the cost impacting the project's TRC cost-effectiveness.
- **Coordination:** PGW will investigate whether PGW could develop coordination with the local electric utility where their CSPs could coordinate weatherization efforts. If so, PGW will work to establish that coordination.

Customer Assistance Referral and Evaluation Service Program

PGW's Customer Assistance Referral and Evaluation Service Program (CARES) assists customers with special needs. This includes customers who have recently experienced a family emergency, unemployment, or age-related issues. The objectives of CARES is to help customers resolve issues related to and beyond bill payment and energy affordability and to provide follow-up and case management services as needed.

PGW enhanced its CARES program to track CARES case management cases.

Hardship Fund

PGW matches grants paid by the Utility Emergency Service Fund (UESF) to customers whose service is terminated or in danger of being terminated. These funds are provided in the form of a matching bill credit up to \$750. The combination of UESF grant dollars and the PGW matching credit are intended to provide the customer with a fresh start (\$0 debt) on the gas bill. However, as required under Order from PGW's most recent Universal Service and Energy Conservation Plan, CRP customers do not have to zero out their bill, only the CRP asked to pay bill.

Needs Assessment

PGW customers are income-eligible for the Customer Responsibility Program (CRP) and Home Comfort if they have income at or below 150 percent of the federal poverty level. The evaluation provided a profile of income-eligible households in Philadelphia county using data from the American Community Survey (ACS). Key findings from the analysis are provided below.

- There are approximately 580,000 households in Philadelphia County and about 445,000 have direct PGW bill payment (as opposed to costs included in rent).
- 30 percent of all households with PGW residential service are income-eligible for the CRP and Home Comfort.
- The number of income-eligible households declined from 142,610 in the 2012-2014 analysis to 138,099 in the 2013-2015 analysis, to 135,158 in the 2014-2016 analysis. The percent of households who were income-eligible declined from 32 percent to 31 percent to 30 percent.
- An estimated 43 percent of the income-eligible population participated in the CRP as of December 2015. This is greater than all but one of the natural gas utilities as reported in the 2017 Report on Universal Service Programs and Collection Performance of the Pennsylvania Electric Distribution Companies and Natural Gas Distribution Companies. While PGW's participation rate is lower than PECO's, PGW's average annual 2017 Universal Service spending per residential customer was \$81, compared to \$10 for PECO-Gas.
- Customers must meet additional criteria to be program-eligible for the CRP. Therefore, the percent of program-eligible customers (those who are income-eligible and meet other eligibility criteria are a subset of income-eligible customers) who participate in the CRP is greater than the percent of income-eligible customers who participate in the CRP.
- We estimate that 25,109 PGW customers are eligible to be served by Home Comfort.

Customer Feedback

APPRISE conducted telephone interviews with 27 Customer Responsibility Program (CRP) participants. The goals of these interviews were to understand any barriers to enrollment and re-certification, review participants' knowledge of CRP benefits and their views on the impact of the CRP, and assess CRP satisfaction.

Findings from the interviews conducted with participants in the Customer Responsibility Program are summarized below.

- Status Confirmation
 - Participation: All respondents were aware that they participated in the CRP.

- **Enrollment and Re-certification**
 - **Awareness:** Fifteen participants said they found out about the CRP from a PGW representative, whether in collections or customer service. Four participants said that they found out about the program from friends and relatives.
 - **Reasons for Enrolling:** The main reason that participants enrolled in the CRP was to lower their energy or gas bills. Other participants enrolled in the CRP because they needed help and felt that the CRP could provide help, or because they had low or fixed income or finances.
 - **Difficulty of Enrollment:** All but three participants reported that it was not at all difficult to enroll in the CRP. Only one participant indicated that they found it somewhat difficult to enroll, and no participants indicated that they found it very difficult to enroll. The process appears to be working well for participants.
 - **Most Difficult Parts of Enrollment:** A majority of participants reported that they found no part of CRP enrollment difficult. However, six participants reported difficulty with several parts of the CRP enrollment process, including going to the office to apply; mailing the CRP application and documentation; and providing social security numbers, proof of income, and proof of meeting one's income.
 - **Re-certification:** While seven participants said they had never re-certified for the CRP, 20 participants had previously re-certified. Of these participants, two said that it was not too difficult to re-certify, and all others said that it was not at all difficult to re-certify.
 - **Most Difficult Parts of Re-certification:** As with enrolling in the CRP, a majority of participants reported that they found no part of CRP re-certification difficult. However, a small number of participants reported difficulty with going to the office to apply, mailing the application and documentation, and providing proof of income and social security numbers.
- **CRP Understanding and Impact**
 - **Understanding of Benefits:** Twenty-five of 27 participants said they had a good understanding of the benefits provided by the CRP.
 - **Program Benefits:** The CRP benefit most commonly mentioned by participants was lower energy/gas bills. Participants also identified the following other benefits: reduced money or arrearages owed to PGW, ability to keep gas service on, and help for low income families, including participants' own families.
 - **Other Program Benefits:** When asked whether they viewed lower gas bills as a benefit of the CRP, 26 of 27 participants affirmed that they did. When asked whether they

viewed arrearage forgiveness as a benefit of the CRP, 25 of 27 participants affirmed that they did.

- **Single Most Important Program Benefit:** While four participants each identified reduced arrearages and the ability to keep their gas service turned on as the most important benefit of the CRP, 13 of 27 participants identified lower energy/gas bills as the most important benefit.
- **Bill Payment:** While 18 participants stated it was very difficult to pay their PGW bills prior to enrolling in the program, only two stated that it was very difficult to do so while participating in the CRP. Only one customer said it was not at all difficult to pay the monthly PGW bill before participating in the CRP and 17 said it was not at all difficult while participating in the CRP. The CRP appears to have a very important impact on energy affordability.
- **Importance of Program in Making Ends Meet:** Twenty-three participants said that the CRP was very important in helping them make ends meet, and an additional two participants described the CRP as somewhat important in helping them make ends meet.
- **Other Benefit Receipt or Program Participation:** While 14 participants stated that they had not received other benefits or participated in other programs as a result of participating in the CRP, 13 participants stated that they had. Programs and benefits mentioned by these participants included LIHEAP, PECO Universal Services Programs, and payment plans with other utility companies. Participants perceive that the CRP is important in connecting them with additional benefits.
- **Satisfaction and Recommendations**
 - **Satisfaction:** Though some participants indicated sources of frustration with the Customer Responsibility Program at prior moments in their interviews, all but three participants reported that they were very satisfied with the program overall.
 - **Reasons for Dissatisfaction:** Three participants who either reported being somewhat satisfied or not too satisfied with the CRP were asked to provide explanations for their responses. These participants either indicated dissatisfaction with the size of the benefits provided by the CRP or the fixed nature of CRP bills year-round. Two participants specifically mentioned that they were dissatisfied with the size of their PGW bills in the summer.
 - **Participant Recommendations:** Participants offered the following ideas for program improvement: offer seasonal variation in the size of CRP benefits; restructure the benefit formula to account for energy usage; conduct greater outreach; and develop an online CRP application (which was implemented in summer 2018).

CRP Program Analysis

APPRISE conducted in-depth analysis of PGW Customer Responsibility Program (CRP) customer data; CRP data; and billing, payment, and collections data to assess the impact of the CRP on energy affordability, bill payment, and collections actions. This section provides a summary of key findings from the analysis.

Participant Characteristics

A high percentage of CRP participants have vulnerable household members and a minority have employment income. Many participate in the CRP for several years.

- **Vulnerable Households:** Seven percent of all 2017 CRP participants had an elderly household member (62 or older)¹, 37 percent had a child (18 or younger), and 43 percent had at least one vulnerable household member (elderly or child). PGW provides the Senior Citizen Discount to elderly customers who have been grandfathered into the program; however this program is not a Universal Service Program, as it is not income-based. Some potentially eligible elderly CRP participants choose to participate in the Senior Citizen Discount instead of the CRP.
- **Income Source:** Twenty-one percent of all 2017 CRP participants had employment income, 27 percent had SSI, 29 percent received social security or pensions, eight percent received public assistance, and two percent received unemployment.
- **Household Income:** Over half of all 2017 participants had an annual income less than \$10,000 and only four percent had an annual income above \$20,000. Mean annual income was just over \$10,000 for all 2017 participants.
- **Poverty Level:** Eighty-seven percent of the 2017 CRP participants had income below 100 percent of the poverty level, and all (except a few customers who had their income re-evaluated at a later date and were then removed from the CRP) had income below 150 percent of the poverty level.
- **Amount Due:** While 21 percent of all 2017 participants did not have an amount due at the time the data were downloaded in July 2018, 22 percent owed more than \$1,000 and eleven percent owed more than \$2,000 (not including frozen arrearages except for customers who have come off the CRP).
- **CRP Status:** At the time the data were downloaded in July 2018, 57 percent of all 2017 participants (customers who participated in the CRP at any time in 2017) and 45 percent of 2017 enrollees (customers who enrolled in the CRP between January and June 2017 and did not participate in the CRP in the year prior to enrollment) were active in the CRP.
- **CRP Type:** The majority of customers pay nine percent of their income, and most of the remaining customers were in the eight or ten percent group. While seven percent of all 2017 CRP participants had the \$25 minimum payment, three percent had the average bill

¹ Year of birth for CRP participants indicates that 31 percent of customers who participate are elderly.

(these are customers who were transitioned to the average bill at a later date but their most recent CRP status was analyzed). However, nine percent of the later participants had the average bill, and this recently introduced plan (summer 2018) is expected to have an increased enrollment.

- **CRP Participation Length:** A majority of participants (56 percent) were active in the program for less than two years. However, 21 percent had been participating for more than five years.

Affordability

The CRP provides a large average subsidy and has a large impact on energy affordability.

- **CRP Bill Impact:** The CRP provides a large discount for many customers. Only 27 percent of CRP participants had an average full monthly bill of \$100 or less. However, 78 percent had a monthly CRP bill that was \$100 or less.
- **CRP Discount:** The 2017 CRP participants received an average annual discount of \$703. Eighteen percent received an annual discount over \$1,200.
- **CAP Target Maximum Discount:** The Commission's maximum target discount is \$840. One third of all 2017 CRP participants received a discount over \$840. Customers in the minimum payment and eight percent of income groups were more likely than the other groups to receive an annual discount greater than \$840.
- **Targeted Energy Burden:** The CAP participants' calculated CAP payments are in line with the PUC energy burden targets. The minimum payment group has their payment set at \$25 per month which is generally above the calculated burden level, so the majority of these customers have a payment above the targeted burden. However, only seven percent of 2017 participants were in the minimum payment group.
- **CRP Energy Burden Impact:** There was a large decline in energy burden for all CRP tiers as a result of the CRP discount. The energy burden declined by an average of ten percentage points across all tiers from the year before CRP enrollment, when customers paid the full bill, to the year after enrollment, when the customers received the CRP discount.

Bill Payment

CRP participants improved their bill payment practices after enrolling in the program.

- **Bill Amount:** Prior to receiving the CRP discount, the average bills for the 2017 CRP participants were much higher than those for the low-income nonparticipants. Many of the low-income nonparticipants were likely not eligible to participate in the CRP (before the introduction of the average bill component) because their energy burden was already below the targeted eight, nine, or ten percent of income. After receiving the CRP discount, the average bills for the 2017 CRP participants were just about the same as for the low-income nonparticipants.

- **Customer Payments:** The 2017 CRP enrollees made an average of 6.4 payments in the year prior to CRP enrollment and 6.9 payments in the year following CRP enrollment, an increase of 0.5 payments. Both the later and earlier participant comparison groups reduced the number of payments made (from 7.5 to 6.8 payments for the later participant comparison group and from 7.1 to 6.8 payments for the earlier participant comparison group).
- **Late Payment Charges:** There was a large decline in the number of late payment charges for the 2017 CRP enrollees following enrollment in the program. While they averaged 6.3 late payment charges in the year prior to enrollment, they averaged only 0.3 late payment charges in the year following enrollment. (CRP participants do not receive late payment charges, but some of the customers were not on the CRP for the full year.) However, the comparison groups experienced an increase in the number of late payment charges, resulting in a net decline of 6.6 late payment charges and a net reduction of \$71 in costs for these charges.
- **Bill Coverage Rate:** The cash coverage rate is defined as the total amount of customer payments divided by the annual charges and the total coverage rate is defined as the total amount of payments and credits (including grants) divided by the annual charges. Thirty-one percent of 2017 CRP participants had at least a 90 percent cash coverage rate and sixty-one percent of 2017 CRP participants had at least a 90 percent total coverage rate. While 30 percent of 2017 enrollees paid at least 90 percent of their full bill in the year prior to enrollment, 56 percent paid at least 90 percent of charges in the year following CRP enrollment. Both the later and the earlier participants saw a decline in the proportion of customers paying at least 90 percent of their bill, from 52 percent to 31 percent for the later participants and from 73 percent to 62 percent for the earlier participants.

LIHEAP Assistance

CRP participants were more likely to receive LIHEAP following CRP enrollment compared to the year prior to enrollment. They are required to apply for LIHEAP as a condition of CRP participation.

- **LIHEAP Receipt:** About half of 2017 CRP participants received either LIHEAP or Crisis grants in 2017, compared to 62 percent of the low-income comparison group. The mean LIHEAP and Crisis grant total for the 2017 CRP participants was \$178 and the mean for the low-income comparison group was \$197.
- **LIHEAP Receipt after CRP Enrollment:** The 2017 CRP enrollees were more likely to receive LIHEAP in the year following enrollment compared to the year prior to enrollment. While 41 percent of the 2017 enrollees received LIHEAP in the year prior to enrollment, 48 percent received LIHEAP in the year following enrollment, for a gross change of seven percentage points. The net change was an increase of 17 percentage points (compared to the change for the comparison groups) an average increase of \$30 in LIHEAP grants across all 2017 CRP enrollees.

Arrearage Forgiveness

CRP participants with arrearages did not receive forgiveness on a regular basis because they did not pay their monthly bills on time.² The change to the program that grants arrearage forgiveness whenever the monthly CRP amount is paid in full regardless of the CRP arrearage should increase the amount of forgiveness received.

- **Arrearage Reduction:** CRP participants had large reductions in their arrearages from the time they enrolled in the CRP to the data download in July 2018. For all 2017 CRP participants, mean pre-program arrearages declined from \$950 to \$282 and 68 percent had no remaining pre-program arrearages at the time of data download. Although 2017 CRP enrollees likely participated in the program for a shorter period of time on average, 57 percent of this group had no remaining pre-program arrearages at the time of download.
- **Arrearage Forgiveness Received:** The analysis found that 89 percent of customers who had a remaining balance at the time of data download received at least one credit in 2017. The mean number of forgiveness payments was 5.3 for those with a balance remaining at the time of data download.
- **Arrearage Forgiveness Period:** With the current 36-month forgiveness period, customers receive an average of \$21 per month in forgiveness. PGW requested that APPRISE examine the impact of moving to a shorter time period for arrearage forgiveness. If the forgiveness was done over 12 months, they would receive an average of \$72 in forgiveness per month. Given that the average 2017 participant (not only those with arrearages) received 5.6 months of credits, they would receive a total of \$403 in arrearage forgiveness in the first year instead of \$118, an increase of \$285 per CRP participant for an initial total cost of \$15 million.

Collections Actions

CRP participants experienced a reduction in collections actions and service terminations following enrollment in the CRP.

- **Collections Actions:** The 2017 CRP enrollees experienced gross and net declines in notices and shutoffs. The total number of collections actions declined by an average of 1.7 actions following enrollment for the 2017 enrollees, and the net change was a decline of 2.9 actions. This is due to a combination of factors including freezing of pre-program arrearages, the collection path that is specified in the Universal Service Plan, and the improved payment coverage for the CRP participants.
- **Service Terminations:** While 15 percent of the 2017 CRP enrollees were shut off in the year prior to enrollment, four percent were shut off in the year following enrollment, a

² Beginning at the end of 2017, CRP participants received make-up arrearage forgiveness for payments made after the bill due date. Beginning in July 2018, CRP participants received make-up arrearage forgiveness for all past due bills that they paid.

decline of 11 percentage points. The comparison groups experienced an increase in terminations, so the net change was a decline of 15 percentage points.

Evaluation Questions

The Pennsylvania Public Utility Commission has posed the following questions to be addressed in the six-year Universal Service Program Evaluations. Below we summarize the findings from the report that address these specific questions.

1. *Is the appropriate population being served? Appropriate population is defined as meeting the specific eligibility criteria as defined by the Universal Service Plan for the program in which the household is enrolled. Does the size of Universal Service Programs meet the need in PGW's service territory? Are the customers enrolled in Universal Service Programs eligible for these programs? Is re-certification completed pursuant to PGW's Commission-approved Universal Service Plan?*

Table ES-1 shows that the appropriate population is being served and that the participants are eligible. Of all 2017 CRP participants, 32 percent have income below 50 percent of the poverty level, 55 percent have income between 51 and 100 percent of the poverty level, and 12 percent have income between 101 and 150 percent of the poverty level.³ These customers are eligible for the program.

**Table ES-1
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
Poverty Level**

| | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| ≤50% | 32% | 31% | 37% | 36% | 30% | 38% |
| 51%-100% | 55% | 56% | 52% | 50% | 50% | 51% |
| 101%-150% | 12% | 13% | 12% | 15% | 20% | 11% |
| >150% | <1% | <1% | <1% | <1% | <1% | <1% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |
| Mean Poverty Level | 65% | 65% | 63% | 65% | 71% | 61% |

PGW enrolls all eligible customers in the CRP and actively promotes the program to make eligible customers aware of the CRP. As such, the size of the program meets the needs of the eligible population.

³ Less than one percent of the participants have income above 150 percent of the federal poverty level because they re-certified and were removed from the program. The poverty level represents the most recent report for that account.

Re-certification is required for CRP participants. PGW recently changed the re-certification process to increase the path from 30 days to 45 days and to provide a two-year re-certification waiver (instead of a one-year waiver) to customers who receive a LIHEAP grant and assign it to PGW annually.

Customers are suspended from the CRP if they fail to re-certify. Table ES-2 shows that 15 percent of all 2017 CRP participants, 25 percent of the 2017 CRP enrollees, and 34 percent of the earlier participant comparison group (who enrolled between January and June 2016) had been suspended as of June 2018. Customers are not removed from the CRP for payment defaults.

Table ES-2
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
CRP Status

| | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| Active | 57% | 62% | 45% | 45% | 94% | 46% |
| Defaulted | 10% | 10% | 8% | 10% | 2% | 9% |
| Suspended | 15% | 15% | 25% | 30% | <1% | 34% |
| Inactive | 14% | 10% | 15% | 9% | 3% | 8% |
| Broken/Removed | 5% | 3% | 7% | 5% | <1% | 4% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

2. *What is the customer distribution by CAP payment plan? Generally, do participants' energy burdens comply with the CAP Policy Statement? Determine the number and percentage of customers that are billed a minimum payment?*

Table ES-3 shows the customer distribution by CAP payment plan for all 2017 CRP participants, the 2017 CRP Enrollees, and the later and earlier participant comparison groups. The table shows that the majority of customers are enrolled in the nine percent payment plan. The next most common plans are the eight percent plan and the ten percent plan. Seven percent of the 2017 CRP participants have the \$25 minimum bill.

The average bill, where customers are charged their average bill because it is lower than their percentage payment, was introduced in June 2018 and PGW converted eligible customers to the average bill at that time. Because the table shows the most recent CRP type at the time of download in July 2018, some of the CRP participants had been converted to the average bill. It may become a more common plan as more customers who newly apply or re-certify are now informed of this option. Nine percent of the later

participant comparison group, customers who enrolled in January to June 2018, participated in this plan. Going forward, these customers will have an energy burden below the CAP Policy Statement target, and they are not generally expected to receive a subsidy unless their usage increases.

**Table ES-3
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
CRP Agreement Type**

| | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| Average Bill | 3% | 3% | <1% | <1% | 9% | <1% |
| \$25 Minimum | 7% | 7% | 8% | 8% | 7% | 8% |
| 8% | 24% | 23% | 27% | 27% | 22% | 29% |
| 9% | 54% | 54% | 52% | 50% | 46% | 52% |
| 10% | 12% | 12% | 13% | 15% | 15% | 11% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table ES-4 displays PGW's CRP Payment and the target energy burden, as stated in the PUC Guidelines for each poverty level group. PGW's CRP payment structure was designed to meet these affordability guidelines.

**Table ES-4
CRP Percentage Payment and PUC Target Energy Burden**

| Poverty Group | CRP Payment | PUC Target |
|---------------|-------------|------------|
| <50% | 8% | 5%-8% |
| 51% - 100% | 9% | 7%-10% |
| 101% - 150% | 10% | 9%-10% |

Table ES-5 compares the CRP payment to the PUC standards by CRP tier. The table shows that the customers' calculated payment is in line with the PUC targets. The minimum payment group has their payment set at \$25 per month which is generally above the calculated burden level, so the majority of these customers have a payment above the targeted burden.

Table ES-5
All 2017 CRP Participants
Energy Burden Relative to PUC Target by CRP Tier
Based on Monthly CRP Payment Amount

| Tier | Poverty Level | All 2017 CRP Participants | | |
|---------------------------|---------------|---------------------------|---------------------|-----------------|
| | | Below Target | Within Target Range | Above Target |
| Observations | | 53,572 | | |
| Average | | 41% | 59% | <1% |
| Minimum Payment | | <1% | 22% | 78% |
| 8% | ≤50% | <1% | 100% | <1% |
| 9% | 51% -100% | <1% | 100% | <1% |
| 10% | 101% - 150% | <1% | 98% | 2% ⁴ |
| All Poverty Levels | | 1% | 93% | 5% |

3. *What are the CAP retention rates? Why do customers leave CAP?*

Table ES-6 displays whether there was a bill for the participant each month and CRP participation by month for 2017 CRP participants based on PGW's indication of whether the customer was on the CRP. The table shows that 76 to 79 percent of all CRP customers analyzed participated each month and 81 to 86 percent of the analysis group participated each month.

Table ES-6
All 2017 CRP Participants
CRP Participation

| | Obs. | Calendar Year 2017 | | | | | | | | | | | |
|--------------|--------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| | | All 2017 CRP Participants | | | | | | | | | | | |
| Has Bill | 62,200 | 96% | 96% | 96% | 96% | 96% | 95% | 95% | 93% | 93% | 92% | 92% | 92% |
| Has CRP Bill | | 78% | 78% | 76% | 77% | 78% | 76% | 77% | 78% | 78% | 78% | 78% | 79% |
| | | All 2017 CRP Participants Analysis Group | | | | | | | | | | | |
| Has Bill | 53,572 | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% |
| Has CRP Bill | | 81% | 81% | 80% | 82% | 83% | 82% | 84% | 85% | 86% | 86% | 86% | 86% |

Table ES-2 displayed the CRP status. This table showed the following participation data.

- Active: 57 percent of all 2017 CRP participants were active.
- Suspended: 15 percent had been suspended for a failure to re-certify.

⁴ These customers had a change in income at a later point in time.

- Inactive: 14 percent asked to come off the program or no longer qualified.
- Defaulted: 10 percent were greater than one full CRP payment behind, but still on the CRP.

4. *Is there an effective link between participation in CAP and participation in energy assistance programs (LIHEAP, hardship funds, and other grants)? If CAP customers do not apply for LIHEAP, why not?*

Table ES-7 displays the percentage of CRP enrollees and comparison groups that received LIHEAP in the pre-enrollment and post-enrollment periods. The table shows that 2017 enrollees were more likely to receive LIHEAP in the year following enrollment and the earlier participant comparison group was less likely to receive LIHEAP in their second year of CRP participation than in their first year of participation. These earlier participants may have felt less of a need to apply for LIHEAP because of their lower bills; however, it is a requirement of CRP that customers apply for LIHEAP. The net change was an increase of 17 percentage points and an increase of \$30 in grants. This shows that there is an effective link with LIHEAP for new CRP enrollees.

Additionally, 13 of the 27 CRP participants who were interviewed stated that they received other benefits or programs as a result of participating in the CRP, and ten stated that they received LIHEAP as a result of participating in the CRP.

Table ES-7
2017 CRP Enrollee Treatment Group and Comparison Groups
LIHEAP Assistance

| LIHEAP and Crisis | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|---|-----------------------------------|-------|--------|------------------------------------|-------|--------|--------------------------------------|-------|--------|-------------------------|------------|
| | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Percent Received LIHEAP | 41% | 48% | 7% | 36% | 38% | 2% | 69% | 48% | -21% | -10% | 17% |
| Mean LIHEAP Grant – Received in Pre or Post | \$215 | \$245 | \$30 | \$230 | \$230 | \$0 | \$300 | \$174 | -\$126 | -\$63 | \$93 |
| Mean LIHEAP Grant – All | \$130 | \$148 | \$18 | \$115 | \$115 | \$0 | \$228 | \$132 | -\$96 | -\$48 | \$30 |
| Mean LIHEAP Grant – Received in Both Pre & Post | \$318 | \$265 | -\$53 | \$338 | \$279 | -\$59 | \$337 | \$269 | -\$68 | -\$64 | \$11 |

5. *How effective are the CAP control features at limiting program costs? What are the number and percent of customers with minimum payments? What are the number and percent of customers who exceed the maximum CAP credits at \$840?*

PGW does not currently utilize a maximum CAP Credit. PGW has the following procedures to limit CRP costs.

- **Minimum \$25 monthly payment:** Customers who report zero income and no other means of financial support are asked to complete an assessment to describe how they meet basic expenses for food, housing, and utilities. These customers are required to update their income information every six months. If their documentation is approved, these customers have a minimum monthly payment of \$25.
- **Monthly \$5 arrearage co-pay:** An additional \$5 participant co-pay is applied towards pre-program arrearages if the customer owes a balance at the time of enrollment. This helps to offset the costs of arrearage forgiveness.
- **Home Comfort Services:** PGW coordinates the CRP with their Home Comfort program to provide free energy conservation to active high-usage CRP participants. CRP participants are required to participate in Home Comfort.

Table ES-3 showed that seven percent of the 2017 CRP participants have the \$25 minimum bill.

Table ES-8 displays the annual net discount received by CRP payment type. Overall, one third of all 2017 CRP participants received a net discount over \$840. Customers in the minimum payment and eight percent of income groups were more likely than the other groups to receive an annual discount greater than \$840.

Table ES-8
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
CRP Net Discount in Relation to Target Maximum Credit

| Net Discount Received | | All 2017 CRP Participants | | | 2017 CRP Enrollee Treatment Group | | |
|-----------------------|---------------|---------------------------|--------|---------|-----------------------------------|--------|---------|
| Tier | Poverty Level | Obs | ≤\$840 | >\$840 | Obs | ≤\$840 | >\$840 |
| Average Bill | | 1,735 | 92% | 8% | 0 | -- | -- |
| Minimum Payment | | 3,536 | 48% | 52% | 210 | 35% | 65% |
| 8% | ≤50% | 12,555 | 58% | 42% | 696 | 49% | 51% |
| 9% | 51% - 100% | 29,153 | 69% | 31% | 1,287 | 72% | 28% |
| 10% | 101% - 150% | 6,593 | 77% | 23% | 395 | 81% | 19% |
| All Poverty Levels | | 53,572 | 67% | 33% | 2,588 | 64% | 36% |
| Mean Net Discount | | | \$305 | \$1,410 | | \$319 | \$1,349 |

6. *How effective is the CAP and LIURP link? Is the company's procedure for dealing with excessively high usage effective? If not, how can it be improved?*

PGW has always linked their LIURP to CAP. Until this year (2018), LIURP was only provided to CAP participants. PGW also requires CAP participants to accept LIURP services, or be subject to removal from CRP for failure to accept services. They have

recently introduced (fall, 2018) a health and safety pilot which allows greater expenditures on health and safety remediation work that is necessary for LIURP services to proceed. This should allow PGW to provide more comprehensive treatments to high energy users. PGW should continue to work to increase coordination of LIURP with other programs in Philadelphia that can help remediate health and safety issues that prevent comprehensive weatherization treatments.

7. *Has collection on missed CAP payments been timely? Has the company followed its own default procedures in its Commission approved Universal Service Plan for CAP customers?*

For the most recent 12-month period, provide findings for the following data requests.

- *Number of CAP accounts that missed 3 or fewer payments.*
- *Number of CAP accounts that missed 4-6 payments*
- *Number of CAP accounts that missed 7-12 payments*
- *Number of CAP accounts that missed more than 12 payments*

CRP participants who fail to make required payments are subject to collections procedures. Table ES-9 shows that the 2017 CRP enrollees experienced gross and net declines in notices and shutoffs following enrollment in the program⁵. However, they still experienced an average of 1.6 collections actions while participating in the CRP.

Table ES-9
2017 CRP Enrollee Treatment Group and Comparison Groups
Number of Collections Actions

| Number of Collections Actions | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|-------------------------------|-----------------------------------|------------|-------------|------------------------------------|------------|------------|--------------------------------------|------------|------------|-------------------------|-------------|
| | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | | |
| Obs. | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Mail 10-Day Notice | 1.3 | 0.8 | -0.5 | 0.9 | 1.5 | 0.6 | 0.9 | 1.0 | 0.1 | 0.4 | -0.9 |
| Phone 3-Day Notice | 1.6 | 0.7 | -0.9 | 1.0 | 1.9 | 0.9 | 0.4 | 0.8 | 0.4 | 0.7 | -1.6 |
| Field 3-Day Notice | 0.1 | <0.1 | -0.1 | <0.1 | 0.1 | 0.1 | <0.1 | 0.1 | 0.1 | 0.1 | -0.2 |
| Post Term Notice | <0.1 | <0.1 | 0 | <0.1 | 0 | 0 | 0 | <0.1 | 0 | 0.0 | 0.0 |
| Other Notice | <0.1 | <0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| Shutoff | 0.2 | <0.1 | -0.2 | 0.1 | 0.2 | 0.1 | 0 | <0.1 | 0 | 0.1 | -0.3 |
| Total Number | 3.3 | 1.6 | -1.7 | 2.0 | 3.7 | 1.7 | 1.2 | 1.9 | 0.7 | 1.2 | -2.9 |

Table ES-10 shows that the 2017 CRP enrollees were less likely to have their service terminated following enrollment in the program. However, four percent of the participants still experienced a shutoff while participating in the CRP. As noted

⁵ Pre-enrollment collections are done under a risk-based collections process.

previously, the later participants' data represent the two years and one year just prior to enrolling in the CRP. Therefore their higher rate of shutoffs in the quasi-post period is not unexpected, and is likely the impetus for their CRP enrollment.

Table ES-10
2017 CRP Enrollee Treatment Group and Comparison Groups
Percent Received One or More Shutoff

| Received 1+ Shutoffs | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|----------------------|-----------------------------------|------|--------|------------------------------------|------|--------|--------------------------------------|------|--------|-------------------------|------------|
| | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | | |
| Obs. | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Total | 15% | 4% | -11% | 8% | 13% | 5% | <1% | 2% | 2% | 4% | -15% |

Table ES-11A displays the number of payments missed by the 2017 CRP participants and the low-income comparison group in 2017, defined as the difference between the number of bills and the number of customer payments. The table shows that CRP participants missed an average of 4.9 payments and the low-income comparison group missed an average of 3.6 payments.

Table ES-11A
2017 CRP Participants and Low-Income Nonparticipants
Number of Missed Payments

| Missed Payments | All 2017 CRP Participants | Low-Income Nonparticipants |
|-------------------------------|---------------------------|----------------------------|
| Obs. | 53,572 | 3,412 |
| ≤3 Payments | 40% | 61% |
| 4-6 Payments | 27% | 18% |
| 7-12 Payments | 33% | 22% |
| >12 Payments | <1% | <1% |
| Total | 100% | 100% |
| Mean # Missed Payments | 4.9 | 3.6 |

Table ES-11B displays the number of payments missed by the 2017 CRP enrollees and the comparison groups in the pre and post years. The table shows that CRP participants missed an average of 5.6 payments in the year prior to enrollment and 5.1 payments in the year following enrollment. The comparison groups had an increase in the number of missed payments.

Table ES-11B
2017 CRP Enrollee Treatment Group and Comparison Group
Number of Missed Payments

| Missed Payments | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|-------------------------------|-----------------------------------|-------------|-------------|------------------------------------|-------------|------------|--------------------------------------|-------------|------------|-------------------------|-------------|
| | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| ≤3 Payments | 34% | 40% | 6% | 44% | 38% | -6% | 40% | 39% | -1% | -4% | 10% |
| 4-6 Payments | 21% | 23% | 2% | 25% | 24% | -1% | 27% | 22% | -5% | -3% | 5% |
| 7-12 Payments | 45% | 37% | -8% | 31% | 38% | 7% | 33% | 38% | 5% | 6% | -14% |
| >12 Payments | <1% | <1% | 0% | <1% | <1% | 0% | <1% | <1% | 0% | 0% | 0% |
| Total | 100% | 100% | -- | 100% | 100% | -- | 100% | 100% | -- | -- | -- |
| Mean # Missed Payments | 5.6 | 5.1 | -0.5 | 4.5 | 5.2 | 0.7 | 4.9 | 5.3 | 0.4 | 0.6 | -1.1 |

8. *Does participation in Universal Service Programs decrease service terminations?*

Table ES-10 showed that the 2017 CRP enrollees were less likely to have their service terminated following enrollment in the program. While 15 percent of the 2017 CRP enrollees were shut off in the year prior to enrollment, four percent were shut off in the year following enrollment, for a decline of 11 percentage points. The comparison groups experienced an increase in terminations, so the net change was a decline of 15 percentage points.

9. *Does participation in Universal Service Programs decrease collections costs?*

Table ES-9 showed that participation in the CRP led to a reduction in collections actions and Table ES-10 showed that participation in the CRP led to a reduction in service terminations. This has led to a reduction in collections costs.

10. *Is the CAP program cost-effective?*

No. The CRP provides large subsidies to participants, averaging several hundred dollars each year, to improve the affordability of their energy bills. Given the size of these subsidies, it is not possible for the program to be cost-effective, if this is defined as a subsidy cost that is less than the amount saved on collections costs and termination costs. However, the program can provide important benefits to participants to improve their health and well-being, many of which cannot be quantified.

11. *How can Universal Service Programs be more cost-effective and efficient?*

PGW has recently made many changes to improve the effectiveness of their Universal Service Programs, although a number of the changes increase the cost of the programs.

Given that not enough time has elapsed to evaluate the impacts of these changes, we do not recommend that additional changes be made at this time. PGW should first evaluate the impact of the many recently implemented modifications, assess what additional opportunities remain, and make additional changes at that time.

The key area for improvement based on the evaluation findings is increasing the amount of arrearage forgiveness received by CRP participants. PGW has made changes to achieve this result, and those changes should be evaluated before making additional modifications to the program.

We estimated that reducing the arrearage forgiveness period from three years to one year would increase CRP costs by \$15 million in the first year. The Report on 2017 Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies & Natural Gas Distribution Companies shows that PGW's average annual Universal Service Spending per Residential Customer was \$81. The next closest natural gas company was Columbia Gas with costs of \$62 and others were much lower (PECO's was \$10 and NFG's was \$11.) The costs to PGW ratepayers should be considered when considering changes to their Universal Service Programs.

12. Is the program sufficiently funded?

Yes. PGW enrolls all eligible customers in the CRP with no cap on participation and actively promotes the program to make eligible customers aware of the CRP. As such, the program is sufficiently funded to meet the needs of the low-income population.

Table ES-12 displays the projected budget and enrollment for the CRP from 2017 through 2020. The table shows that projected average monthly CRP participation for 2017 was 61,292 and our analysis found that there was a total of 62,200 CRP participants in 2017⁶. Table ES-12 shows that the average CRP discount for 2017 was projected to be \$626 and the average arrearage forgiveness was projected to be \$179. Our analysis found that the average annual discount for those with close to a full year of data for analysis was \$672 and the average arrearage forgiveness was \$118. The comparison shows that PGW is budgeting correctly for program costs.

⁶ PGW reports the average monthly participation. The analysis reports the unique number of customers who participated in 2017, so the numbers do not match.

Table ES-12
Projected Budget and Enrollment

| | 2017 | 2018 | 2019 | 2020 |
|--|--------------|--------------|--------------|--------------|
| Administrative Costs | \$1,365,373 | \$1,384,518 | \$1,404,142 | \$1,424,256 |
| CRP Discount | \$38,369,715 | \$42,364,454 | \$44,368,327 | \$45,279,978 |
| Arrearage Forgiveness | \$10,238,325 | \$12,322,411 | \$12,656,496 | \$12,990,582 |
| Total Cost | \$49,973,413 | \$56,071,383 | \$58,428,965 | \$59,694,816 |
| Average Monthly Participation ⁷ | 61,292 | 77,292 | 79,292 | 81,292 |

Findings and Recommendations

This section provides key findings from the research and recommendations for the program.

Customer Responsibility Program

The evaluation confirmed that the CRP provides many benefits for participants, including improved energy affordability, improved bill payment practices, increased LIHEAP receipt, a reduction in arrearages, and a reduction in collections actions and service terminations. Participants reported that they were satisfied with the program and that it was very important in helping them to make ends meet.

PGW has recently made many modifications to the CRP that should increase access to the program and enhance the assistance for low-income customers. Given the substantive changes that have been made and the expected benefits, we do not recommend that PGW make additional modifications before evaluating the impacts of these many changes that were recently implemented. Some of the refinements that are expected to have benefits for the program include the following.

- **Modified Arrearage Forgiveness:** CRP participants receive arrearage forgiveness whenever they pay a monthly CRP amount regardless of their existing CRP arrearage.
- **Retroactive Arrearage Forgiveness:** CRP participants receive arrearage forgiveness for every unpaid CRP amount that they “cure” when all CRP debt is paid up.

Based on the evaluation findings, these appear to be among the more important changes made, as customers do not receive the majority of their potential arrearage reduction credits. This modification is expected to increase the amount of arrearage forgiveness received. Because this modification has only recently been made, we do not recommend any additional changes at this time to increase receipt of arrearage forgiveness before assessing the impact of this change.

⁷ PGW reports the average monthly participation. The analysis reports the unique number of customers who participated in 2017, so the numbers do not match.

- Adding the Average Bill option to CRP: This will allow customers with lower energy burdens to benefit from arrearage reduction.
- Modified Re-certification Process: PGW increased the path from 30 days to 45 days and will provide a two-year re-certification waiver (instead of a one-year waiver) to customers who receive a LIHEAP grant and assign it to PGW annually.

AND

- Enhanced Employee Training: PGW expanded its training curriculum to focus on re-certification to reduce the number of CRP customers placed on suspended status due to a failure to re-certify.

These changes should reduce CRP suspensions by making it easier for customers to re-certify within the required window, increasing the incentive to apply for LIHEAP, and reducing the need to re-certify on a bi-annual basis when LIHEAP is received.

- One-Year Stay-Out Period: PGW implemented a one-year stay-out period for customers who ask to be removed from the CRP, who have two or more incidents of unauthorized use of utility service, or who submitted fraudulent enrollment information. Customers who refuse weatherization must stay out until they accept services or provide a valid reason for the refusal. Customers who refuse access to the meter must stay out until access is granted.

Previous evaluations found that program managers and staff were concerned about the number of customers who left the CRP when their discount was negative in the summer, and then rejoined to obtain the program benefit following the summer months. This program change is expected to reduce such churning.

- Automation of the CRP application/re-certification process: The online application will provide another option for customers to enroll and re-certify and to receive electronic updates on enrollment status, improving access to the program. This change should also reduce CRP suspensions due to a failure to re-certify.

Home Comfort Program

The Home Comfort Program achieves significant energy savings for program participants and improves the health and safety in the home. PGW has continued to achieve good savings from the program, although savings can vary significantly from one CSP to another. The one change that is recommended to bring the lower-performing CSPs in line with the higher performing one is to conduct more quality control, training, and supervision of the lower-performing CSPs, and this change has recently been made by PGW with the procurement of services from a new quality control and training contractor.

PGW has also made several other modifications that are expected to further improve the performance and increase access to the Home Comfort Program, and such changes should be evaluated before making other large-scale changes to the program. The changes that are expected to have the greatest impact on Home Comfort results are as follows.

- **Pilot Health and Safety Policy:** Contractors can spend up to \$2,000 per project on the installation of health and safety measures without the cost impacting the project's TRC cost-effectiveness.

Many mature low-income energy efficiency programs are facing increased challenges serving potential participants due to health and safety barriers in the home. Implementing this new pilot is an important step to provide access to comprehensive energy efficiency for more low-income households. PGW should track and analyze comprehensive data on health and safety spending needed to implement efficiency measures and the energy reductions that are accomplished as a result of those investments to determine whether the pilot should be continued beyond 2020.

- **Coordination:** PGW will investigate whether PGW can develop coordination with the local electric utility where their CSPs coordinate weatherization efforts. If so, PGW will work to establish that coordination.

Such coordination could increase program efficiencies and reduce participation burdens for low-income households.

- PGW developed and implemented marketing, outreach, and internal procedures to promote, identify and screen all the newly eligible non-CRP and other low-income customers for Home Comfort.

These actions will help ensure that the Home Comfort program is provided to high-usage customers who are most in need of service delivery. Serving the highest-usage customers will also result in the greatest energy savings for the program.

CARES

CARES provides important assistance to customers with special needs. PGW has begun tracking the number and types of referrals made to assess whether they can increase this assistance.

Hardship Fund

PGW has a beneficial partnership with UESF to provide grants to customers who have had their service terminated or are in danger of a service termination. The program is effectively distributing benefits to customers in need with the funds that are available.

I. Introduction

Philadelphia Gas Works has developed Universal Service Programs to help low-income customers maintain natural gas service as required under 52 Pa. Code. The programs include the Customer Responsibility Program that provides an affordable bill based on energy burden or average bill, the Home Comfort program that provides no-cost energy efficiency services, the CARES program that provides case management assistance to customers with special needs, and the Hardship Fund that provides grants to customers who have had their service terminated or who are in danger of service termination. PGW contracted with APPRISE to conduct a third party evaluation of this program. This report provides the findings from the independent evaluation.

A. Research Activities

The following research activities were undertaken as part of this evaluation.

1. *Background Research* – We collected and reviewed documents related to the Universal Service Programs, including PGW’s three-year Universal Service Plan, Universal Service program budgets, Commission orders, the CRP application, customer notifications, the CRP brochure, the CRP bill, Home Comfort training materials, and Home Comfort contractor work scopes.
2. *Manager and Staff Interviews* – We conducted in-depth telephone interviews with CRP managers and staff. These interviews provided an understanding of the details of the program and implementation, as well as potential changes to improve program performance.
3. *Support Center Interviews* – We conducted in-depth telephone interviews with the District Office manager, Home Comfort Conservation Service Providers, and UESF intake managers.
4. *Needs Assessment* – We analyzed data from the American Community Survey for PGW’s service territory to determine the number and characteristics of low-income households who are eligible for PGW’s CRP and Home Comfort Programs. We also estimated the percentage of eligible customers who participate in the CRP and the number of customers remaining to be served by Home Comfort.
5. *In-Depth CRP Participant Interviews* – We conducted in-depth telephone interviews with current CRP participants to understand any barriers to enrollment and re-certification, review participants’ knowledge of CRP benefits and their views on the impact of the CRP, and assess CRP satisfaction.
6. *CRP Data Analysis* – We analyzed data on CRP participants to develop statistics on program participation, participant demographics, and program benefits.

7. *Billing, Payments, and Collections Analysis* – We analyzed CRP program data, transactions data, and collections data to characterize the population that participates in the CRP, program retention, program benefits, affordability impacts, bill payment impacts, and collection impacts.

B. Organization of the Report

Five sections follow this introduction.

- **Section II – Universal Service Programs:** This section provides a description of the CRP, the Home Comfort Program, the CARES program, the Hardship Fund, program integration, and outreach and community partners. The Senior Citizen Discount program is discussed, as it serves a number of low-income customers, but it is not a Universal Service Program.
- **Section III – Needs Assessment:** This section describes the analysis methodology, provides an estimate of the number of eligible customers, estimates the CRP participation rate, and estimates the number of customers remaining to be served by Home Comfort.
- **Section IV – Customer Feedback:** This section describes the methodology and findings from the participant in-depth interviews.
- **Section V –** This section describes the research goals and methodology, the characteristics of CRP participants, and the impact of the CRP on affordability, bill payment, LIHEAP assistance, arrearage forgiveness, and collections actions.
- **Section VI – Findings and Recommendations:** This section provides a summary of the findings presented in this report and recommendations for modifications to PGW's Universal Service Programs.

APPRISE prepared this report for Philadelphia Gas Works. Philadelphia Gas Works facilitated this research by furnishing 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 Philadelphia Gas Works.

II. Universal Service Programs

Philadelphia Gas Works has a high rate of poverty in its Philadelphia service territory and approximately one third of their customers are eligible for Universal Services. This section provides a description of each program.

A. Customer Responsibility Program

The Customer Responsibility Program (CRP) was introduced prior to PUC jurisdiction over PGW. The objective of the CRP is to help low-income residential customers meet their energy needs by providing an affordable bill. The goals are to prevent loss of service for vulnerable households, improve payment behavior, and assist low-income customers to conserve energy. PGW also aims to reduce collection costs and minimize the burden placed on other ratepayers.

There is no limit on the number of customers that can enroll in CRP. There were 56,006 participants enrolled in the CRP in February 2016.

Resources

Table II-1 displays the projected budget and enrollment for the CRP from PGW's most recent Universal Service and Energy Conservation Plan. Under that plan, the total cost was expected to increase from \$49.9 million in 2017 to \$59.7 million in 2020 as the average monthly number of participants grows from 61,292 to 81,292.

**Table II-1
Projected Budget and Enrollment**

| | 2017 | 2018 | 2019 | 2020 |
|-------------------------------|--------------|--------------|--------------|--------------|
| Administrative Costs | \$1,365,373 | \$1,384,518 | \$1,404,142 | \$1,424,256 |
| CRP Discount | \$38,369,715 | \$42,364,454 | \$44,368,327 | \$45,279,978 |
| Arrearage Forgiveness | \$10,238,325 | \$12,322,411 | \$12,656,496 | \$12,990,582 |
| Total Cost | \$49,973,413 | \$56,071,383 | \$58,428,965 | \$59,694,816 |
| Average Monthly Participation | 61,292 | 77,292 | 79,292 | 81,292 |

Eligibility and Benefits

Customers must meet the following criteria to be eligible for the CRP.

- Residential customer.
- Primary residence.
- PGW as the natural gas supplier.
- Annual household income at or below 150 percent of the Federal Poverty Level (FPL).
- May need to make up-front cure payment if previous CRP agreement was broken, suspended, or inactivated.

Participants are not required to demonstrate that they are payment-troubled to qualify for the CRP. Customers who participate in the senior discount program or who are enrolled in choice are not eligible for the CRP.

The CRP provides the following benefits.

- **Payment Benefits**
 - A fixed monthly bill based on household size and income or average bill. The CRP discount is the difference between the CRP monthly bill amount and the actual bill based on natural gas usage.
 - The CRP monthly amount is compared to the average bill to determine the lowest monthly payment option.
 - If the customer is current on the CRP agreement and pays more than the CRP balance (including LIHEAP/Crisis payments), the overage is applied to future CRP bills.
 - If the customer is not required to re-certify because the customer receives and assigns the LIHEAP grant to PGW, PGW will still review the account annually to determine whether the CRP or the budget bill provides the most affordable monthly amount.
- **Arrearage Reduction Benefits**
 - An additional \$5 participant co-pay is applied towards any remaining pre-program arrearages if the customer owes a balance at the time of enrollment.
 - Arrearage forgiveness of past due bills at the time of CRP enrollment equal to 1/36 of pre-program balance each month the CRP is paid in full.
 - Customers who bring their agreement to active status receive retroactive arrearage forgiveness for any months missed once they pay the asked to pay amount in full.
 - For returning CRP participants, PGW will provide retroactive forgiveness for months spent outside the program once the customer satisfies the CRP cure amount in full upon reentry to the program.

Table II-2 displays the CRP percentage of income payment as a function of the household's poverty level.

Table II-2
CRP Monthly Payment as a Percentage of Household Income

| Poverty Level | Percentage of Income Payment |
|---------------|------------------------------|
| 0-50% | 8% |
| 51-100% | 9% |
| 101-150% | 10% |

PGW added the Average Bill component to the CRP in June 2018 for customers who cannot benefit from the CRP discount because their non-CRP bill energy burden is already below the targeted level. PGW expects the program will benefit the increasing number of customers whose burden falls below the target due to declining gas costs. These customers can have their arrearages forgiven.

CRP Requirements

- Make payments in full and on time each month. (PGW customers who do not do so can be subject to termination after one missed bill).
- Apply for LIHEAP each year and assign the grant to PGW.
- Report any changes in household size or income.
- Re-certify household size and income each year (every three years if they receive LIHEAP and assign grant to PGW each year).
- Accept Home Comfort services if offered by PGW.
- Authorize PGW to use external sources (including government records, credit reporting bureaus, and third party income verification sources) to verify household composition and income.
- Make an effort to conserve energy.
- Do not commit any form of gas theft or fraud.
- Provide PGW access to the meter if requested.

Application

Customers can apply by mail or in person for the CRP at one of PGW's six customer service centers. PGW developed the capability (implementation occurred in August 2018) to accept customer applications online with the customers uploading their supporting documentation. Customers are also able to check the status of their application online and receive electronic correspondence.

The customer must provide the following information.

- Proof of income for the prior 30 days for all household members.
- Annual federal or state tax returns filed within the last 12 months for self-employed customers.
- Customers who report zero income and no other means of financial support are asked to complete an assessment to describe how they meet basic expenses for food, housing, and utilities. These customers are required to update their income information every six months.
- Copy of the social security card for each household member listed on the application.
 - For adults, this can be substituted with another form of identification such as a state issued driver's license number or an Individual Tax Identification Number.
 - For non-adults, a government/school issued form of identification showing residency, such as a school roster or public assistance benefits letter.

PGW then will determine eligibility and completeness of the application.

- Customers who are ineligible are provided/sent a letter explaining why they are ineligible.
- Customers who are eligible are provided/sent a letter describing the monthly CRP payment and their responsibilities for staying in the program.

Customers are not permitted to re-enroll in the CRP for a one-year period (unless otherwise specified) if they have the following conditions.

- Customer removed him/herself from the CRP even though the household was still eligible based on household size and income.
- Customer refused access to the meter (CRP stay-out is required until access is granted to the meter).
- Customer had two or more incidents of unauthorized usage.
- Customer submitted fraudulent enrollment or re-certification information/documentation.
- Customer refused Home Comfort Weatherization from PGW (stay-out until services are accepted) after multiple communications reminding them of their CRP obligations. Customers whose homes have conditions that prevent weatherization, who have serious illness, whose landlord refuses, or have other circumstances outside of the customer's control are exempt.

Re-Enrollment

When the CRP customer is terminated for nonpayment, the balance in frozen arrears immediately becomes due. The customer must pay the past due CRP bills in full and the reconnection fee (and a dig fee if applicable) to restore service and re-enroll in the CRP. Once the customer satisfies all requirements, the balance is placed back in frozen arrears and PGW will provide retroactive arrearage forgiveness for months outside the program.

LIHEAP Grant Payments

If the customer receives LIHEAP cash grants, that amount is applied to the customer's asked-to-pay amount. If the grant is greater than the current CRP asked to pay amount, the balance is left as a credit and applied to future bills.

Cost Containment

- The minimum monthly payment is \$25 (not including \$5 arrearage co-pay).
- The CRP is coordinated with the Home Comfort Program to provide free energy conservation services to active CRP participants.
- PGW monitors CAP accounts to ensure compliance with the terms of the program.

Outreach

PGW aims to inform all income-eligible customers about the CRP. Their approach includes the following outreach methods.

- Referrals from customer service representatives.
- Direct mail.
- Targeted outreach to Spanish-speaking customers, customers on a low-income payment agreement, and customers who receive a LIHEAP grant.
- Outreach to customers based on their budget bill amount.
- Community presentations.
- Bill messages.
- Partnerships with community organizations and social service agencies.

Program Changes

PGW has made the following changes to the CRP.

- **Adding the Average Bill option to CRP.** PGW has chosen to provide the customer with a constant monthly payment for the full year. The constant monthly payment is a benefit to the customer who has certainty about the monthly bill obligation, and several APPRISE surveys has shown that program participants have great appreciation for the constant monthly payment.
- **One-Year Stay-Out Period:** PGW implemented a one-year stay-out period for customers who ask to be removed from the CRP, who have two or more incidents of unauthorized use of utility service, or who submitted fraudulent enrollment information.
- **Modified Arrearage Forgiveness:** CRP customers receive arrearage forgiveness whenever they pay their monthly CRP amount in full regardless of their existing CRP arrearage.
- **Retroactive Arrearage Forgiveness:** Customers receive arrearage forgiveness for CRP bill amounts paid in full, regardless of whether they are paid timely or whether there are CRP bill arrears.
- **Modifying the CRP Cure in the following manner.** (within nine months after 2017-2020 Universal Service Plan approval)
 - Charge a cure amount due based on updated income.
 - Provide customers re-enrolling with retroactive forgiveness for months cured.
- **Modified Re-certification Process:** PGW increased the path from 30 days to 45 days and will provide a two-year re-certification waiver (instead of a one-year waiver) to customers who receive a LIHEAP grant and assign it to PGW annually.
- **Enhanced Employee Training:** PGW expanded its training curriculum to focus on re-certification to reduce the number of CRP customers placed on suspended status due to a failure to re-certify.
- **Targeted Outreach Activities:** PGW continued to expand outreach efforts to increase participation. This included outreach to customers who received LIHEAP but who were not on CRP and low-income customers on a low-income payment agreement. PGW also increased outreach to Spanish-speaking customers which included modification of PGW's Spanish outreach materials and training designed for bilingual customer service representatives. PGW also enhanced outreach campaigns to include all identified low-income customers that may qualify for CRP based on their payment agreement income.
- **Consumption Limits:** PGW began imposing consumption limits on CRP participants who have higher than normal usage. Accounts flagged to have exceeded the predetermined limit are provided an education letter and referred to LIURP for a determination as to whether the property is eligible to receive weatherization services

through the Home Comfort Program. CRP participants with usage that reaches 50 percent, 80 percent and 100 percent of a new consumption limit (expressed as a maximum CAP credit amount) will be contacted by letter when their consumption reaches the threshold amounts. The letter will provide conservation tips, information about the Home Comfort Program, and possible exemptions set forth in the Commission's CAP Policy Statement. These exemption conditions include the following.

- Addition of a family member to the household.
- Serious illness experienced by a member of the household.
- Energy consumption beyond the household's ability to control.
- Household located in condemned housing or housing with code violations that negatively affect energy consumption.

The maximum CAP credit amount was determined by examining CRP participants with 12 consecutive months of prior usage and two years of consumption history and CRP discount amounts. It was determined that the limit should be the 95th percentile of the usage distribution curve, or 2,125 ccf, which is expressed to customers in dollars. These customers will be considered for conservation education and LIURP.

During the pilot phase, customers will not face any penalty for exceeding the maximum. PGW will assess the reasons for excess usage and develop a consumption limit policy in its next Universal Service Plan.

- Pilot Conservation Incentive (first incentives paid in August 2016). CRP customers who did not receive PGW weatherization in the prior two years but reduced their weather-normalized usage by ten percent or more during the current November through April period receive a \$100 incentive credit on their bill. CRP customers who received PGW weatherization in the prior two years and reduced their weather-normalized usage by 20 percent or more receive a \$100 incentive credit on their bill. Customers must be on CRP from the entire November to April time period to be potentially eligible for the incentive.

PGW has issued communications to encourage participation in the pilot.

Potential Changes

Currently, PGW is considering the following changes to the CRP.

- For the next Universal Service Plan, PGW is considering whether to waive the need for CRP re-application for customers who pay their CRP cure amount and restore service after a shutoff, if done within a certain amount of time following the shutoff.

B. Home Comfort Program

The Home Comfort Program, previously the Enhanced Low-Income Retrofit Program (ELIRP) and CRP Home Comfort was introduced in 2011. Home Comfort provides no-cost, in-home weatherization and energy conservation education services for eligible low-

income customers. The pilot Low-Income Multi-family Efficiency Program (Pilot LIME) will provide services for multi-family properties through December 2020. The program aims to make the homes more energy efficient, improve comfort, and, with respect to CRP customers, reduce the CRP subsidy cost. The goals of the program are as follows.

- Reduce the gas usage of low-income households in a cost-effective manner by seeking a balance between greatest MMBtu savings and highest cost-effectiveness.
- Lower gas bills and improve the payment practices of participant customers.

Three independent Conservation Service Providers (CSPs) provide the energy efficiency services. Their work is inspected and audited by an independent party for completeness and quality assurance. Each CSP is evaluated semi-annually based on natural gas savings, cost-effectiveness, work quality, and customer service metrics.

Resources

The budget for LIURP is displayed in Table II-3. The budget was set by the PUC based on an average cost-per-job of \$2,426 and production rate of 3,293.

A portion of PGW's LIURP budget will be allocated to the Pilot LIME program. The annual budget for the program is \$120,048 for each year from FY 2017 through 2020.

**Table II-3
Home Comfort Budget and Projected Enrollment**

| | 9/2016 – 12/2017 | CY 2018 | CY 2019 | CY 2020 |
|---------------|------------------|-------------|-------------|-------------|
| Budget | \$8,736,926 | \$7,988,818 | \$7,988,818 | \$7,988,818 |
| Single Family | 3,550 | 3,291 | 3,291 | 3,291 |
| Multi-Family | 3 | 2 | 2 | 2 |

Table II-4 displays Home Comfort expenditures for 2015 through 2017.

**Table II-4
Home Comfort Expenditures**

| | 2015 | 2016 | 2017 |
|------------------|-------------|-------------|-------------|
| Total | \$7,913,908 | \$7,638,390 | \$5,239,743 |
| Average Job Cost | | | |
| Method 1 | \$1,657 | \$1,573 | \$1,651 |
| Method 2 | \$2,126 | \$2,002 | \$2,474 |
| Completed Jobs | 3,772 | 3,815 | 2,118 |

Eligibility and Benefits

CSPs are provided a list of customers who meet the following criteria.

1. Identified as low-income through participation in CRP over the prior 24 months; received a LIHEAP, CRISIS, or UESF grant over the past 24 months; or was on a Level 1 payment arrangement over the past 24 months.
2. Has weather-normalized usage within the top 50 percent of all eligible customers, and at least 12 months of continuous service at the current property.
3. Has not received LIURP within the previous seven years.
4. Resides in a single-family home. If a renter, the landlord must authorize PGW to perform the weatherization.

CRP customers in the top 50 percent of usage who had health and safety treatments performed by the Philadelphia department of Public Health's Healthy Homes or Habitat for Humanity but were not assigned to Home Comfort through the automatic assignment process may be manually assigned to CSPs. PGW is notified of these homes by the two agencies.

Multifamily buildings are eligible for the Pilot LIME Program if the property is 75 percent confirmed low-income residency. PGW will confirm eligibility by targeting buildings with residents that receive Section 8 housing vouchers or have Low Income Housing Tax Credits. The program is open to master metered and individually metered properties.

The Home Comfort initial assessment determines the cost-effectiveness and feasibility of various weatherization measures. Customers are educated on how to reduce energy usage, provided with basic health and safety information, and low-cost energy-saving measures such as low-flow devices, programmable thermostats, and water heater tank turndowns. If health and safety barriers such as mold, asbestos, roof leaks or pests are present and cannot be corrected cost-effectively or under the Health and Safety Pilot, the treatments end with these low-cost measures.

Weatherization measures such as air sealing, insulation, heating system replacement, equipment repair and replacement, hot water reduction measures, and energy conservation education are provided.

Participation

CRP participants are required to accept Home Comfort services. If a customer refuses services, PGW will send letter(s) reminding the customer about the requirement to accept conservation services. Following two letters to the customer and a final attempt to contact the customer by the CSP, PGW will remove the customer from CRP and send the customer a letter if the customer has not scheduled an assessment or received an exception. Non-CRP customers are not required to accept Home Comfort services.

Customers are deferred for Home Comfort in the following situations.

- **Landlord Cooperation:** The landlord does not respond or the landlord refuses services.
- **Health and Safety:** A health and safety issues is confirmed by the CSP.
- **Apartment:** The CSP confirmed that the building does not meet the Home Comfort eligibility requirement of a single-family home.
- **CRP Review:** The CSP notified PGW that the CRP customer's account should be reviewed.
- **Move:** The customer tells the CSP that they have moved or are in the process of moving.
- **Medical:** The customer cannot allow weatherization due to the serious illness of a household member.
- **Hardship:** In cases where the customer indicates that weatherization would be a hardship, the CSP and the customer shall negotiate a period of time to defer services.
- **Communication Barrier:** Communication barriers (including those that cannot be resolved by the use of a Language Line) prevent the CSP from properly explaining the program to the customer. Includes missing contact information and wrong/disconnected phone numbers.
- **Prior Weatherization:** No opportunities are available due to previous weatherization.
- **Work not Cost-Effective:** No cost-effective opportunities exist.

Conservation Service Providers (CSPs)

The three CSPs that provide work in PGW's Home Comfort Program conduct internal staff training and also receive training from PGW's quality control and training contractor. The quality control contractor holds about three training sessions annually to outline changes to program requirements and guidelines and provide a refresher course on program procedures. The CSPs reported high satisfaction with this training and reported that they did not need additional support except one that requested customer service training. They stated that they received feedback from the quality control contractor on best practices to increase energy savings, how to facilitate positive customer interactions, and how to identify and take advantage of all energy saving opportunities in a home.

Service Delivery

During the audit, the CSPs identify energy-saving measures for installation based on PGW's Contractor Tool and the site conditions. Their work includes diagnostic testing guided by Building Performance Institute (BPI) policies.

CSPs are also instructed to educate customers about measures to be installed and behavior changes to enhance energy efficiency performance. They also educate customers about steps to reduce gas usage and any health, safety, or structural issues identified through the assessment.

Core natural gas measures can be performed at the time of the assessment. These may include pipe wrapping, thermostat replacement, water heating system turndowns, and faucet aerators.

Measures installed at follow-up visit(s) may include air sealing, insulation, heating system replacement, duct sealing, water heating system replacement, hot water heater pipe insulation, and hot water leak repair. The CSP may also recommend custom measures that are cost-effective if they are approved by PGW. Basic health and safety measures and incidental repairs are expected if they are necessary to permit proper installation of the program measures. This work is incorporated into the assessment of the overall cost-effectiveness of the work in the home.

Data Collection

PGW developed a data collection tool to collect data needed for program reporting, assessment, and evaluation. CSPs are required to use the tool in the field on a tablet device and provide a copy to the inspector prior to the inspections. The tool requires CSPs to document property information, health and safety issues, testing results, and efficiency measures in a manner that is compatible with PGW's program database. There is a Savings Calculator tab that determines the cost-effectiveness of individual measures and the full set of measures.

Coordination

PGW coordinates Home Comfort with the following organizations.

- **Habitat for Humanity:** PGW coordinates Home Comfort with Habitat for Humanity's Home Repair and Weatherization Program. Habitat's program provides weatherization and structural repairs to support housing revitalization. PGW and Habitat share data and identify customers who are enrolled or eligible for both programs. Habitat and PGW contractors identify pre-treatment and structural issues for Habitat to address and PGW contractors focus on weatherization. Ten projects have been coordinated to date and several additional homes are under review.
- **National Nursing Center Consortium (NNCC):** NNCC provides home visits, consultations, and home hazard remediation services for homes that have children under seven with asthma conditions, or have lead paint, pests, or other environmental hazards. PGW will share data to identify homes in both programs, provide referrals, and coordinate treatment when possible.
- **Pennsylvania CareerLink Philadelphia:** PGW has collaborated with the Philadelphia Workforce Investment Board and the Philadelphia Workforce Development Corporation to connect local unemployed workers with weatherization training programs and then

into employment with Home Comfort CSPs. PGW CSPs have hired 32 local, unemployed, entry-level workers through this collaboration.

- Philadelphia Department of Public Health (PDPH) Green & Healthy Homes and Lead Poison Prevention Programs: PGW and Healthy Homes share data on customers assigned in both programs. Healthy Homes treats many health, safety, and structural issues which allows Home Comfort to comprehensively treat homes that would not otherwise be feasible. Five projects have been coordinated.

PDPH has also offered to provide free trainings and certifications for identifying relevant health and safety issues to PGW's Home Comfort CSPs.

Changes Made

PGW has made the following changes to the Home Comfort Program.

- Beginning in 2018, PGW expanded LIURP eligibility to include all known low-income customers. Customers are known to be low-income if they were on CRP over the prior 24 months, received a LIHEAP, CRISIS, or UESF grant over the past 24 months, or were on a Level 1 Payment Arrangement over the prior 24 months.
- The name of PGW's LIURP was changed from the CRP Home Comfort program to the Home Comfort Program to reflect this change in eligibility.
- PGW developed and implemented marketing, outreach, and internal procedures to promote, identify and screen all the newly eligible non-CRP and other low-income customers for Home Comfort.
- PGW established a LIURP Advisory Panel.
- Pilot Health and Safety Policy: Contractors can spend up to \$2,000 per project on the installation of health and safety measures without the cost impacting the project's TRC cost-effectiveness. The work scope must be projected to achieve at least 15 percent savings. The cost of the pilot will not exceed \$100,000 per year. Health and safety costs will be tracked separately from other project costs. The pilot will terminate in December 2020.
- PGW will investigate whether PGW could develop coordination with the local electric utility where their CSPs could coordinate weatherization efforts. If so, PGW will work to establish that coordination.

C. Customer Assistance Referral and Evaluation Service Program

PGW's Customer Assistance Referral and Evaluation Service Program (CARES) assists customers with special needs. This includes customers who have recently experienced a family emergency, unemployment, or age-related issues. The objectives of CARES is to help customers resolve issues related to and beyond bill payment and energy affordability and to provide follow-up and case management services as needed.

Resources

Table II-5 displays the CARES budget and projected enrollment. PGW handled 812 CARES cases through ongoing case management in FY 2013 through FY 2015. Many more cases are resolved by customer service representatives through “quick fix” referrals given to customers. Historically, these were not tracked.

**Table II-5
CARES Budget and Projected Enrollment**

| | 2017 | 2018 | 2019 | 2020 |
|--|-----------|-----------|-----------|-----------|
| LIHEAP Administration & Outreach | \$880,800 | \$880,800 | \$880,800 | \$880,800 |
| Average monthly participation ⁸ | 22.6 | 22.6 | 22.6 | 22.6 |
| Annual participation | 271 | 271 | 271 | 271 |

Eligibility and Benefits

CARES services are provided to customers who are at or below 150 percent of the poverty level and who are having difficulty paying their bills; those who anticipate difficulty due to a personal crisis that is likely to result in a financial hardship, and those who have a valid Protection From Abuse (PFA) order. Customers may be eligible for CARES regardless of income. This includes customers with a PFA or an impending life event that may lead to financial hardship. Therefore, any PGW residential customer is potentially eligible for CARES, depending on life circumstances.

CARES provides referral information to internal and external organizations and assistance programs. Each customer service representative has a resource guide which provides a list of external organizations that offer social services and assistance programs. Referrals are tailored to the customers’ specific needs. There is no limit to the number of times PGW will make a referral for any customer.

In some cases, follow-up and on-going services are provided through the CARES case management component. These cases are handled by PGW’s Universal Services department. The case referral may come from customer service representatives, other internal PGW sources, or external sources.

CARES also provides outreach activities related to LIHEAP and CRISIS grants.

Information about CARES is distributed through outreach initiatives and contact with PGW customer service representatives.

⁸ This number does not include customers assisted through LIHEAP administration and outreach.

Changes to CARES

PGW made the following change to CARES.

- PGW enhanced its CARES program to track customers who are provided with referrals to allow them to quantify the number and types of referrals made and possibly increase the number of customers referred for case management.

D. Hardship Fund

PGW matches grants paid by the Utility Emergency Service Fund (UESF) to customers whose service is terminated or in danger of being terminated. These funds are provided in the form of a matching bill credit, generally up to \$750. The objective is to provide financial assistance to eligible customers whose service is terminated or in danger of termination. The combination of UESF grant dollars and the PGW matching credit are intended to provide the customer with a fresh start on the gas bill.

Resources

Table II-6 displays the funding and number of customers served for 2013 through 2015. In 2015, PGW made available up to \$795,500 to match UESF grants, but UESF only provided \$594,860 in grants to PGW customers.⁹

**Table II-6
Hardship Fund Customers Served**

| | 2013 | 2014 | 2015 |
|----------------------|-----------|-----------|-----------|
| UESF Funds | \$620,846 | \$674,712 | \$594,860 |
| PGW Matching Credits | \$620,846 | \$674,712 | \$594,860 |
| Client Contributions | \$32,307 | \$38,246 | \$34,216 |
| Clients Served | 1,184 | 1,324 | 992 |

Table II-7 displays the budget and projected annual Hardship participation for 2017 through 2020. Approximately 1,000 customers are expected to be served each year.

**Table II-7
Hardship Fund Budget and Projected Enrollment**

| | 2017 | 2018 | 2019 | 2020 |
|-----------------------------------|--------------------|--------------------|--------------------|--------------------|
| Operating Support (PGW) | \$260,149 | \$260,149 | \$260,149 | \$260,149 |
| UESF Grants | \$795,500 | \$795,500 | \$795,500 | \$795,500 |
| PGW Contribution | \$795,500 | \$795,500 | \$795,500 | \$795,500 |
| Customer & Employee Contributions | \$2,000 | \$3,000 | \$4,000 | \$5,000 |
| Total Costs | \$1,853,149 | \$1,854,149 | \$1,855,149 | \$1,846,149 |
| Average Annual Participation | 1,000 | 1,000 | 1,000 | 1,000 |

⁹ This is on a calendar year basis, as opposed to a UESF fiscal year.

PGW receives customer contributions to UESF, and PGW ratepayers pay the PGW contribution. Contributions are forwarded to UESF so that they can provide additional grants. PGW ratepayers pay the entire cost of the Hardship Fund budget.

Eligibility and Benefits

Customers are eligible for the Hardship Fund if they meet the following criteria.

- Gross household income at or below 175 percent of the FPL.
- Service must be shut off or threatened to be shut off.
- The customer must not have received assistance from UESF in the past 24 months.
- The customer must have applied for LIHEAP Cash and CRISIS grants if open and grants are available.
- The grant must eliminate the total amount due (excluding frozen arrears if the customer is enrolled in the CRP) and any written off debt required for restoration.
- If the total needed is greater than \$1,500, the customer must pay the difference out of pocket or through other utility grants, such as LIHEAP.

The combination of the UESF grant and the PGW matching credit generally does not exceed \$1,500.

Change Considered

The PUC has asked that UESF consider the following change to the UESF Program.

- Removal of the two-year stay-out after a UESF grant has been awarded.

E. Senior Citizen Discount

The Senior Citizen Discount provides a 20 percent discount off the PGW monthly bill to eligible senior citizen participants. The program was grandfathered by the PUC as of August 31, 2003. No new households are accepted into the program.

Resources

As of February 29, 2016, there were 17,202 customers enrolled in the Senior Citizen Discount.

Eligibility and Benefits

The customer must have been 65 or older and enrolled in the Senior Citizen Discount before September 1, 2003 to participate. Individuals who were 65 or older before September 1, 2003 and who lived in a household that was receiving the discount on that date can continue receiving the discount upon the death of the customer of record, provided that they agree to take over responsibility for the bill. The program does not have income limits, asset tests, or usage caps. Customers cannot be enrolled in the Senior Citizen Discount and the CRP.

F. Program Integration

PGW aims to integrate all Universal Services Programs so customers receive information and access to all programs for which they may be eligible.

- CRP customers who have trouble paying their bills or a personal crisis are referred to LIHEAP, the Hardship Fund, and CARES.
- Customers who have high natural gas bills are referred to Home Comfort.
- Customers who receive Home Comfort are provided with information about other assistance programs including CARES, LIHEAP, and CRISIS.
- The Neighborhood Energy Centers and UESF intake sites are two networks in which PGW coordinates UESF grants and provides information to caseworkers who help PGW customers to obtain an affordable bill. PGW refers customers to these organizations when providing CARES assistance. The organizations provide budget counseling, housing counseling, job placement services, senior services, after-school programs, homelessness prevention, and other health and human services.
- PGW contributes to funding of the Energy Directory, produced by the Energy Coordinating Agency (ECA).

G. Outreach and Community Partners

PGW engages in outreach to provide information and referrals to PGW customers who may benefit from Universal Services. The following practices are utilized.

- **Inbound Calls:** PGW trains customer service representatives and provides updated information about their Universal Services programs. Representatives provide assistance and can mail a CRP and LIHEAP application to customers.
- **District Offices:** PGW's district offices provide a physical location for customers to address issues related to customer service and utilization of Universal Services. Customers can apply in person for CRP and LIHEAP and can obtain referrals that provide other forms of assistance.
- **Mailings:** PGW sends multiple annual mailings to customers who are identified as low-income to provide information about CRP, LIHEAP and CRISIS grants.
- **Outbound Message Calls:** PGW undertakes periodic outbound calls to provide information about customer assistance programs.
- **Community Presentations:** PGW attends and presents at more than 100 gatherings of community groups each year.
- **Advertisements:** PGW advertises its assistance program on radio, television, mass transit, and in community newspapers.

- **Bill Inserts:** PGW uses its monthly newsletter, *The Good Gas*, to provide information about PGW's assistance programs.

PGW partners with the following organizations.

- **Utility Emergency Services Fund (UESF):** PGW partners with UESF to implement and administer the Hardship Fund. UESF's network of intake sites perform primary outreach for the Hardship Fund and complete grant applications; and UESF partially funds the program.
- **Neighborhood Energy Centers (NECs):** NECs provide a coordinated and comprehensive approach to energy and related problems for low- and moderate-income households. They provide budget counseling, energy counseling, energy conservation education, and grant application assistance. They also provide outreach for PGW's assistance programs. They are a resource for PGW's CARES program.
- **Philadelphia County Assistance Office (LIHEAP District):** PGW maintains a partnership with the LIHEAP District of the Philadelphia County Assistance Office. The LIHEAP grants serve as an important source for outreach and referrals.

III. Needs Assessment

PGW customers are income-eligible for the Customer Responsibility Program (CRP) if they have income at or below 150 percent of the poverty level. This section provides an assessment of the number of PGW customers who are income-eligible for CRP and Home Comfort, as well as program participation rates.

A. Methodology

This section provides a profile of low-income households in Philadelphia county using data from the American Community Survey (ACS). The ACS data provide information on household characteristics, including income level and demographic characteristics. We use data on household size and income to construct the poverty ratio for each household and identify those households that were income-eligible for the CRP and Home Comfort.

Most of the analyses are conducted using the 2014, 2015, and 2016 ACS data files. An average of the three years of files is used to provide a larger sample for analysis than would be available in the one-year file. Table III-3 also provides an analysis of the 2013-2015 files and the 2012-2014 files to assess whether there have been changes in the income-eligible population.

B. Natural Gas Customers

There are approximately 580,000 residential households in Philadelphia County (excluding vacant units and group quarters). About 445,000 of these households are categorized as having active PGW Service because they provided a numeric value for their most recent month's gas bill. Households are not included if their gas bill is included in their rent or condo fee, their gas bill is included in their electric bill payment (may be incorrect reports or customers whose electric and gas is included in the rent), there was no charge for gas, or if gas was not used. Just under 90 percent of the PGW customers are estimated to have PGW heating service.

The PGW estimate of residential customers reported in the 2015 Public Utility Commission (PUC) Universal Service Programs & Collections Performance Report shows a count of 470,788 PGW residential natural gas customers. This may be higher than the ACS count because the ACS estimate excludes customers who had no gas bill for the month examined.

**Table III-1
Distribution of Service Status for Households in PGW Service Territory**

| Service Status | Number | Percent |
|------------------------------|----------------|----------------|
| PGW Service | 444,589 | 77% |
| PGW Heating | 394,771 | 68% |
| PGW Non-Heating | 49,818 | 9% |
| No Gas Service | 135,302 | 23% |
| Included in Rent | 41,841 | 7% |
| Included in Electric Payment | 8,166 | 1% |
| No Charge or Gas Not Used | 85,295 | 15% |
| All Households | 579,891 | 100% |

C. PGW CRP and Home Comfort Income-Eligible Customers

Table III-2 presents data on income-eligible households by service type and heating service. We estimate in the most recent 3-year combined files that 30 percent of all households with PGW residential service are income-eligible for the CRP and Home Comfort. Of the 444,589 households with residential utility service from PGW, approximately 135,158 have income at or below 150 percent of the federal poverty guidelines.

The analysis shows that there has been a decline in the number of households in Philadelphia, the number of income-eligible households, and the percent of households that are income-eligible in Philadelphia. The number of income-eligible households declined from 142,610 in the 2012-2014 analysis to 138,099 in the 2013-2015 analysis, to 135,158 in the 2014-2016 analysis. The percent of households who were income-eligible declined from 32 percent to 31 percent to 30 percent.

**Table III-2
CRP and Home Comfort Income Eligibility Rate
By PGW Service Status**

| Service Status | 2014-2016 ACS | | | 2013-2015 ACS | | | 2012-2014 ACS | | |
|------------------------------|------------------|----------------------------|------------|------------------|----------------------------|------------|------------------|----------------------------|------------|
| | Total Households | Income-Eligible Households | | Total Households | Income-Eligible Households | | Total Households | Income-Eligible Households | |
| | | # | % | | # | % | | # | % |
| PGW Service | 444,589 | 135,158 | 30% | 445,752 | 138,099 | 31% | 446,744 | 142,610 | 32% |
| PGW Heating | 394,771 | 120,197 | 30% | 397,722 | 123,681 | 31% | 399,632 | 126,788 | 32% |
| PGW Non-Heating | 49,818 | 14,961 | 30% | 48,030 | 14,418 | 30% | 47,113 | 15,822 | 34% |
| No Gas Service | 135,302 | 52,556 | 39% | 134,914 | 53,973 | 40% | 133,344 | 56,653 | 42% |
| Included in Rent | 41,841 | 17,705 | 42% | 42,137 | 18,923 | 45% | 44,909 | 21,076 | 47% |
| Included in Electric Payment | 8,166 | 2,433 | 30% | 7,640 | 2,297 | 30% | 6,146 | 1,835 | 30% |
| No Charge or Gas Not Used | 85,295 | 32,418 | 38% | 85,137 | 32,753 | 38% | 82,289 | 33,742 | 41% |
| All Households | 579,891 | 187,714 | 32% | 580,666 | 192,072 | 33% | 580,089 | 199,263 | 34% |

The 2015 PUC Universal Service Programs & Collections Performance Report shows that PGW had a count of 161,961 confirmed low-income customers, defined as household income at or below 150 percent of the poverty level.

Table III-3 provides a breakdown of the income-eligible population by poverty level. The table shows that between ten and 20 percent of the income eligible population fall into each of the intervals examined. While 28 percent are below 50 percent of the poverty level, 37 percent are between 51 and 100 percent, and 34 percent are between 101 and 150 percent.

**Table III-3
Distribution of Households
By Service Type and Poverty Group**

| Poverty Group | PGW Service | | PGW Heating Service | | PGW Non-Heating Service | |
|---|----------------|-------------|---------------------|-------------|-------------------------|-------------|
| | Number | Percent | Number | Percent | Number | Percent |
| 0% -25% | 24,870 | 18% | 21,823 | 18% | 3,047 | 20% |
| 26% -50% | 13,891 | 10% | 12,225 | 10% | 1,666 | 11% |
| 51% -75% | 23,393 | 17% | 20,673 | 17% | 2,721 | 18% |
| 76%-100% | 27,419 | 20% | 24,371 | 20% | 3,048 | 20% |
| 101%-125% | 24,351 | 18% | 22,127 | 18% | 2,225 | 15% |
| 126% - 150% | 21,234 | 16% | 18,979 | 16% | 2,255 | 15% |
| Total Income-Eligible Households | 135,158 | 100% | 120,197 | 100% | 14,961 | 100% |

Payment troubled customers are defined as those who failed to maintain one or more payment arrangements in a one-year period. The 2015 PUC Universal Service Programs & Collections Performance Report shows that PGW had 33,896 payment-troubled customers, and that 25,442 of those customers were confirmed low-income. We estimate the number of payment-troubled CRP participants by multiplying the number of CRP participants enrolled as of December 31, 2015 by the percent who paid less than 90 percent of their bills in the year prior to CRP participation (70%) or by the percent who had an arrearage at the time of CRP enrollment (92%), as estimated in the impact analysis.

**Table III-4
Estimate of PGW Payment-Troubled Customers**

| | 2015 Estimate |
|-----------------------------------|---------------|
| PUC Report Estimate – Non CRP | 25,442 |
| Payment-Troubled CRP Participants | 40,797-53,619 |
| 2015 CRP Participants | 58,282 |
| Paid Less than 90% of Bills | 70% |
| Arrearage at CRP Enrollment | 92% |

D. CRP Participation

Table III-5 displays the participation rate as of December 31, 2015. The table shows that an estimated 43 percent of the income-eligible population participated in the CRP. This is greater than all but one of the natural gas utilities as reported in the 2016 Report on Universal Service Programs and Collection Performance of the Pennsylvania Electric Distribution Companies and Natural Gas Distribution Companies.

**Table III-5
CRP Participation Rate (Participants Enrolled as of 12/31/15)**

| Participants | Eligible PGW Residential Households | Participation Rate |
|---------------------|--|---------------------------|
| 58,282 | 135,158 | 43% |

Table III-6 displays an estimate of the number of Senior Citizen Discount Participants who are eligible for the CRP. These customers have chosen to participate in the Senior Citizen Discount program instead of the CRP. Because income data are not available for these customers, we provide a broad estimate that between 50 and 75 percent of these households are eligible for the CRP.

**Table III-7
Senior Citizen Discount Adjustment (Participants Enrolled as of 12/31/15)**

| | 2015 Estimate |
|---|----------------------|
| CRP Participants | 58,282 |
| Senior Citizen Discount (estimated low-income) | 9,849-14,773 |
| Senior Citizen Discount Participants 2015 | 19,697 |
| Total CRP or Senior Citizen Discount Participants | 68,131-73,055 |

The Philadelphia Housing Authority provides rental assistance to low-income families in the private rental market through the Housing Choice Voucher Program, which is funded by the U.S. Department of Housing and Urban Development (HUD). Philadelphia Housing Authority manages 18,491 active Housing Choice Vouchers.¹⁰ These customers are eligible for the CRP. The subsidy allowance does not always cover the utility bill and these customers are responsible for the difference. However, under an alternative calculation of CRP eligibility, these Philadelphia households would not be eligible for the CRP because they receive a subsidy utility allowance.

Table III-8 displays the CRP participation rate adjusted for an estimate of low-income Senior Citizen Discount participants. The adjusted participation rate estimate is between 50 percent 54 percent.¹¹

¹⁰ <https://affordablehousingonline.com/housing-authority/Pennsylvania/Philadelphia-Housing-Authority/PA002>

¹¹ If the Housing Choice Voucher participants were removed from the eligible number of households, the estimated participation rate would range from 58 to 63 percent.

**Table III-8
Adjusted CRP Participation Rate**

| Participants | Eligible PGW Residential Households | Participation Rate |
|---|--|---------------------------|
| 58,282 | 135,158 | 43% |
| Participants – Including Estimate of Low-Income Senior Citizen Discount Participants | Eligible PGW Residential Households | Participation Rate |
| 68,131-73,055 | 135,158 | 50% - 54% |

While the table above displays the number of income-eligible households, customers must also meet the following criteria to be program-eligible for CRP.

1. Residential customer.
2. Primary residence.
3. PGW is the natural gas supplier.
4. May need to make up-front cure payment (CRP missed payments minus any payments made during that time) if previous CRP agreement was broken, suspended, or inactivated.

Therefore, the percent of program-eligible customers who participate in the CRP is greater than the percent of income-eligible customers.

In addition to the income-eligibility, customers must meet the following criteria to be eligible for Home Comfort.

1. Has weather-normalized usage within the top 50 percent of all known low-income customers, and at least 12 months of continuous service at the current property, while removing outliers and anomalies based on the statistical significance of the weather-normalized usage.
2. Has not received LIURP within the previous seven years.
3. Resides in a single-family home. If a renter, the landlord must authorize PGW to perform the weatherization.

E. Home Comfort Participation

We provided an assessment of other potential usage criteria for Home Comfort Eligibility, based on an analysis of 2016 LIURP research and the CRP evaluation research. The 2016 LIURP evaluation found the following.

1. The lowest pre-treatment weather normalized for the 2016 LIURP participants was 776 ccf. While 84 percent of the 2017 CRP participants had usage of this level or greater, 36 percent of low-income nonparticipants had usage of this level or greater. Low-income nonparticipants are less likely to be good targets for LIURP.
2. Higher energy savings are found with higher-usage households. There is a very good opportunity for energy usage reduction in homes with annual natural gas usage of at least 1,200 ccf. While 47 percent of the 2017 CRP participants had usage of this level or greater, only seven percent of low-income nonparticipants had usage of this level or greater. The most effective energy efficiency programs target services to these high users. The program can increase energy savings by providing all cost-effective measures to these households, and remediating health and safety issues if necessary to do so.

Table III-9 displays the number of CRP participants and low-income nonparticipants who fall into each of these categories.

Table III-9
Home Comfort Usage Assessment¹²

| Qualification for Energy Usage | CRP Participants | Low-Income Nonparticipants | Total |
|---|------------------|----------------------------|---------|
| | 58,282 | 61,915 | 120,197 |
| Top 50% of Energy Users | 29,141 | 30,958 | 60,099 |
| At Least Min 2016 LIURP Usage (776 ccf) | 48,957 | 22,289 | 71,246 |
| Good Opportunity for Efficiency (1,200 ccf) | 27,393 | 4,334 | 31,727 |

Table III-10 displays an estimate of the number of households remaining and able to be served by Home Comfort after the following removals.

- **Bottom 50% of Energy Users:** Households with lower energy usage will not have cost-effective opportunities for usage reduction. This is a conservative removal, as the program would be more cost-effective in terms of usage reduction if a higher threshold for usage was set.
- **In Home for Less Than One Year:** We estimate that approximately ten percent of the top half of energy users will fall into this category, given the high mobility of these low-income customers.
- **Inadequate Usage Data for Determination:** We include these customers in the bottom 50 percent of less than one year in the home, so we do not provide a separate estimate of this group.

¹² Numbers were derived from the 2017 CRP evaluation data.

- **Participated in LIURP within Past Seven Years:** For the most part, these customers would be in the lower usage category following LIURP services. However, some may still be in the higher half of the usage distribution because they could not be comprehensively served due to health and safety issues. Approximately 40 percent do not receive comprehensive treatments, and we estimate that 20 percent (half of those who are not comprehensively treated) still have high usage.
- **No Opportunities, Refusals, and Health and Safety Issues:** We estimate ten percent of the remaining customers in this category. While health and safety issues are more prevalent than this, PGW should be able to treat some of these households with their new health and safety pilot.
- **Renters with Landlord Refusals:** We estimate five percent of the remaining customers with this issue.
- **Other Weatherization Program Participant:** We estimate .5% of the remaining customers with this issue.

The table shows that approximately 46,015 households are potentially eligible for these services based on the removals listed above. However, reducing the eligible households with a more stringent usage requirement, would further reduce the eligible population to be treated by LIURP.

Table III-10
Low-Income Households Eligible to be Served by Home Comfort

| | 2015 Estimate |
|--|---------------|
| Eligible PGW Residential Gas-Heating Households | 120,197 |
| Top 50% of Energy Users | 60,099 |
| Household in Home for Less than One Year (10%) | 6,010 |
| Twenty Percent of Previously Treated (2,733 * 7 *.20) | 3,826 |
| No Opportunities, Refusals, Health & Safety Issues (10%) | 5,026 |
| Renters with Landlord Refusals (5%) | 2,262 |
| Other Weatherization Program Participant (.5%) | 215 |
| Remaining to be Served | 42,760 |

F. Summary

This section provided a profile of income-eligible households in Philadelphia county using data from the American Community Survey (ACS). Key findings from the analysis are provided below.

- There are approximately 580,000 households in Philadelphia County and about 445,000 have direct PGW bill payment.

- 30 percent of all households with PGW residential service are income-eligible for the CRP and Home Comfort.
- The number of income-eligible households declined from 142,610 in the 2012-2014 analysis to 138,099 in the 2013-2015 analysis, to 135,158 in the 2014-2016 analysis. The percent of households who were income-eligible declined from 32 percent to 31 percent to 30 percent.
- An estimated 43 percent of the income-eligible population participated in the CRP as of December 2015. This is greater than all but one of the natural gas utilities as reported in the 2016 Report on Universal Service Programs and Collection Performance of the Pennsylvania Electric Distribution Companies and Natural Gas Distribution Companies.
- Customers must meet additional criteria to be program-eligible for the CRP, so the number of program-eligible customers is lower than the number of income-eligible customers. Therefore, the percent of program-eligible customers who participate in the CRP is greater than the percent of income-eligible customers.
- We estimate that 25,109 PGW customers are eligible to be served by Home Comfort.

IV. Customer Feedback

This section provides a summary of the methodology and findings from the in-depth CRP participant interviews.

A. Methodology

APPRISE conducted telephone interviews with 27 Customer Responsibility Program (CRP) participants. The goals of these interviews were to understand any barriers to enrollment and re-certification, review participants' knowledge of CRP benefits and their views on the impact of the CRP, and assess CRP satisfaction.

A sample of 80 current CRP participants were selected for the interviews. Active CRP participants who either enrolled or re-certified for the program in 2017 and 2018 were included in the survey.

Interviews were conducted between July 30, 2018 and August 14, 2018. Advance letters were sent by mail to all potential respondents and a toll-free number was provided for respondents to call in to complete the interview. Most respondents were interviewed through outbound telephone calls. In response to several respondents' requests to complete their interviews in Spanish, APPRISE prepared a Spanish language translation of the survey instrument, which was utilized with one Spanish-speaking respondent.

B. Findings

This section provides a summary of the findings from the interviews in the following areas.

- Status Confirmation
- Enrollment and Re-certification
- CRP Understanding and Impact
- Satisfaction and Recommendations

Status Confirmation

CRP participants were asked if they participated in PGW's CRP. They were reminded that the program provides a reduced gas bill and forgiveness of bills that were past due. Table IV-1 shows that all participants interviewed confirmed their knowledge of participation in the CRP.

**Table IV-1
Participation in Customer Responsibility Program**

| Are you currently participating in the CRP? | |
|---|-----------|
| Yes | 27 |
| No | 0 |
| Total | 27 |

Enrollment and Re-certification

Participants were asked how they found out about the CRP. Table IV-2 shows that 15 participants reported that they found out about the program from a PGW representative. Other participants reported that they found out from friends or relatives or from other sources, including neighbors and representatives from the Federal Low-Income Home Energy Assistance Program (LIHEAP).

**Table IV-2
Awareness of Customer Responsibility Program**

| How did you find out about the CRP? | |
|--|-----------|
| PGW Representative (Collections or Customer Service) | 15 |
| Friend or Relative | 4 |
| Other | 3 |
| Don't know | 5 |
| Total | 27 |

Participants were asked why they decided to enroll in the CRP. Table IV-3 shows that 16 participants reported that they decided to enroll to lower their energy/gas bills. Other participants expressed that that they enrolled because they needed help or had low or fixed income or finances. Participants offered the following comments.

- I have small children, and my gas bill was too high and getting higher, so I signed up.
- I was having trouble paying my bills. [The CRP] offered me a better way of paying my bill and staying up-to-date.
- I needed help with budgeting.

**Table IV-3
Reasons for Enrolling in the Customer Responsibility Program**

| Why did you decide to enroll in the CRP? | |
|--|----|
| Lower Energy/Gas Bills | 16 |
| Needed Help/Sounded Like It Could Help | 9 |
| Low/Fixed Income or Finances | 5 |

*Some participants provided more than one response.

Participants were asked how difficult it was to enroll in the CRP. Table IV-4 shows that 24 participants reported that it was not at all difficult to enroll in the program. Two participants reported that it was not too difficult to enroll, and one participant reported that it was somewhat difficult to enroll.

Table IV-4
Difficulty of Enrollment in the Customer Responsibility Program

| How difficult was it to enroll in the CRP? | |
|--|-----------|
| Somewhat Difficult | 1 |
| Not Too Difficult | 2 |
| Not At All Difficult | 24 |
| Total | 27 |

Participants were also asked which parts of enrollment in the CRP they found most difficult. Table IV-5 shows that 21 participants reported that they found no part of enrollment difficult. Other participants reported difficulty with going to the office to apply; mailing the application and documentation; and providing social security numbers, proof of income, and proof of how they met their income. Participants offered the following comments.

- I get the application through the mail, fill out the form, and send it in the mail. It's easy.
- It wasn't hard [to enroll] because I had a [PGW] agent that helped me.
- Getting all my information together and sending it to the gas company [was challenging].

Table IV-5
Most Difficult Parts of Enrollment in the Customer Responsibility Program

| What parts of enrollment in the CRP were most difficult? | |
|--|----|
| Going to the Office to Apply | 3 |
| Mailing Application and Documentation | 3 |
| Providing Proof of Income | 2 |
| Providing Social Security Numbers | 2 |
| Providing Proof of How They Met Their Income | 2 |
| Completing the Application | 1 |
| None | 21 |

*Some participants provided more than one response.

Participants were asked if they had ever re-certified for the CRP. If necessary, they were reminded that re-certifying is providing an update to PGW on income and other household information. Table IV-6 shows that 20 participants reported that they had re-certified for the program, while 7 participants reported that they had never re-certified for the program.

Table IV-6
Re-certification in the Customer Responsibility Program

| Have you ever re-certified for the CRP? | |
|---|-----------|
| Yes | 20 |
| No | 7 |
| Total | 27 |

Participants who reported that they re-certified for the CRP were asked how difficult this was. Table IV-7 shows that 18 participants reported that it was not at all difficult to re-certify in the program, and another two participants reported that it was not too difficult to re-certify in the program.

Table IV-7
Difficulty of Re-certifying in the Customer Responsibility Program

| How difficult was it to re-certify in the CRP? | |
|--|-----------|
| Not Too Difficult | 2 |
| Not At All Difficult | 18 |
| Total | 20 |

Relevant participants were also asked which parts of re-certification in the CRP they found most difficult. Table IV-8 shows that 17 participants said that no part of re-certification was difficult, though a small number of participants reported difficulty with going to the office to apply, mailing the application and documentation, providing proof of income, and providing social security numbers.

Table IV-8
Most Difficult Parts of Re-certifying for the Customer Responsibility Program

| What parts of re-certification in the CRP were most difficult? | |
|--|----|
| None | 17 |
| Going to the Office to Apply | 2 |
| Mailing Application and Documentation | 1 |
| Providing Proof of Income | 1 |
| Providing Social Security Numbers | 1 |

*Some participants provided more than one response.

CRP Understanding and Impact

Participants were asked if they felt that they had a good understanding of the benefits provided by the CRP. Table IV-9 shows that all but two participants reported that they had a good understanding of these benefits.

Table IV-9
Understanding of Customer Responsibility Program Benefits

| Do you feel that you have a good understanding of the benefits provided by the CRP? | |
|--|-----------|
| Yes | 25 |
| No | 1 |
| Don't Know | 1 |
| Total | 27 |

Participants were next asked about what they perceived as the benefits of the CRP. Table IV-10 shows that 20 participants reported that lower energy/gas bills were a benefit of the program, five participants reported that reduced arrearages and money owed to PGW was a benefit, four participants reported that keeping gas service on was a benefit, and four participants reported that helping out low-income families or their families was a benefit. Other common responses were budget billing/even payments and the ability to afford other bills or expenses. Participants offered the following comments.

- [The CRP] saves me a lot of money, and it helps me focus on other bills and my children.
- As long as you pay on time and pay your full bill, you get a lot off your bill.
- [The CRP] lets me pay a steady amount every month that is manageable for me.

Table IV-10
Customer Responsibility Program Benefits

| What do you feel are the benefits of the CRP? | |
|---|----|
| Lower Energy/Gas Bills | 20 |
| Reduced Money Owed to PGW/Reduced Arrearages | 5 |
| Keeping Gas Service/Not Having Gas Service Turned Off | 4 |
| Helps Out Low Income Families/My Family | 4 |
| Budget Billing/Even Payments | 3 |
| Can Afford Other Bills or Expenses | 2 |
| Other | 2 |

*Some participants provided more than one response.

Participants were specifically asked whether they felt that lower gas bills are a benefit of the CRP. Table IV-11 shows that all but one participant reported that they did view lower gas bills as a program benefit.

Participants were also specifically asked whether they felt that a monthly reduction in their balance that was past due is a benefit of the CRP. Table IV-11 shows that all but two participants reported that they did view a reduction in their past due balance as a program benefit.

**Table IV-11
Prompted Customer Responsibility Program Benefits**

| Do you feel that lower gas bills is a benefit of the program? | | |
|--|------------------------|----------------------------|
| Do you feel that a monthly reduction in your balance that was past due is a benefit of the program? | | |
| | Lower Gas Bills | Arrearage Reduction |
| Yes | 26 | 25 |
| No | 0 | 0 |
| Don't Know | 1 | 2 |
| Total | 27 | 27 |

Participants were next asked what they viewed as the single most important benefit of the CRP. Table IV-12 shows that 13 participants viewed lower energy/gas bills as the most important benefit of the Program. Other participants viewed reduced arrearages and keeping gas service on/not having service turned off as the most important benefit.

**Table IV-12
Single Most Important Customer Responsibility Program Benefit**

| What do you feel is the single most important benefit of the CRP? | |
|--|-----------|
| Lower Energy/Gas Bills | 13 |
| Reduced Money to PGW/Reduced Arrearages | 4 |
| Keeping Gas Service/Not Having Gas Service Turned Off | 4 |
| Other | 4 |
| Budget Billing/Even Payments | 1 |
| Don't Know | 1 |
| Total | 27 |

Participants were asked how difficult it was to pay their monthly PGW bills before enrolling in the CRP and while they were enrolled. Table IV-13 shows that 18 participants reported that it was very difficult to pay their PGW bills prior to enrolling in the program, but only 2 stated that it was very difficult while participating in the CRP. Only one customer said it was not at all difficult to pay the monthly PGW bill before participating in the CRP and 17 said it was not at all difficult while participating in the CRP.

Table IV-13
Paying PGW Bill before Enrolling in the Customer Responsibility Program

| How difficult was it to pay your monthly PGW bill <u>before/while</u> participating in PGW's CRP? | | |
|---|----------------------|---------------------|
| | Before Participating | While Participating |
| Very Difficult | 18 | 2 |
| Somewhat Difficult | 7 | 3 |
| Not Too Difficult | 1 | 5 |
| Not At All Difficult | 1 | 17 |
| Total | 27 | 27 |

Participants were asked how important the CRP has been in helping them to make ends meet. Table IV-14 shows that 23 participants reported that the program has been very important in helping them make ends meet, and another two participants reported that the program has been somewhat important in helping them make ends meet. Only one participant reported that the program has been not at all important in helping them make ends meet. Participants offered the following comments.

- Even though the program doesn't help that much, every bit helps, and I don't have to worry now about [paying my bill].
- The program is excellent. I'd recommend the CRP program to everyone.
- The program is very helpful for me in the winter, but my bills are still high, and in the summer the program is not very helpful for me.
- [The CRP] has really helped me to improve the quality of my life.

Table IV-14
Importance of Customer Responsibility Program in Helping Make Ends Meet

| How important has the CRP been in helping you to make ends meet? | |
|--|-----------|
| Very Important/Has Made a Big Difference | 23 |
| Somewhat Important/Has Made a Difference | 2 |
| Not At All Important/Not Big Enough Benefit to Help | 1 |
| Don't Know | 1 |
| Total | 27 |

Participants were next asked if they had received other benefits or participated in other programs as a result of their participation in the CRP. Table IV-15 shows that while 13 participants reported they had received other benefits or participated in other programs due to enrolling in the CRP, 14 participants reported that they had not.

**Table IV-15
Other Benefit Receipt or Program Participation
Due to Customer Responsibility Program**

| Have you received any other benefits or participated in any other Programs a result of participating in the CRP? | |
|---|-----------|
| Yes | 13 |
| No | 14 |
| Total | 27 |

Relevant participants next detailed the other benefits they had received or programs they had participated in as a result of enrolling in the Customer Responsibility Program. Participants mentioned the following benefits and programs.

- LIHEAP (10 customers)
- Payment plans with other utility companies (3 customers)
- PECO Universal Service Programs (1 customer)

Satisfaction and Recommendations

Participants were finally asked about their overall satisfaction with the CRP. Table IV-16 shows that 24 participants reported that they were very satisfied with the program, and another two participants reported that they were somewhat satisfied with the program. Only one participant reported dissatisfaction with the program.

**Table IV-16
Satisfaction with Customer Responsibility Program**

| Overall, how satisfied have you been with PGW's CRP? | |
|---|-----------|
| Very Satisfied | 24 |
| Somewhat Satisfied | 2 |
| Not Too Satisfied | 1 |
| Total | 27 |

Participants who reported that they were not very satisfied with the CRP were asked about the reasons for their dissatisfaction. Participants offered the following comments.

- The CRP did not help me when I was in a bind. I am not planning to re-certify.
- My gas bill in the summer is higher than I would like it to be.
- I'm paying too much right now [in the summer]. I feel like I'm paying to be on the program.

Participants were finally asked about recommendations they had for the CRP. Participants offered the following ideas.

- Vary the amount charged based on the season; for example, charge a lower amount during the summer months.
- Base program benefits not on income, but on the amount of energy used.
- Provide more outreach to low-income populations about the program's availability.
- Offer an online CRP application to make the program more accessible.
- Base credits on net income, rather than gross income.

C. Summary

Findings from the interviews conducted with participants in the Customer Responsibility Program are summarized in this section.

- **Status Confirmation**
 - Participation: All respondents were aware that they participated in the CRP.
- **Enrollment and Re-certification**
 - Awareness: Fifteen participants said they found out about the CRP from a PGW representative, whether in collections or customer service. Four participants said they found out about the program from friends and relatives.
 - Reasons for Enrolling: The main reason that participants enrolled in the CRP was to lower their energy or gas bills. Other participants enrolled in the CRP because they needed help and felt that the CRP could provide help, or because they had low or fixed income or finances.
 - Difficulty of Enrollment: All but three participants reported that it was not at all difficult to enroll in the CRP. Only one participant indicated that they found it somewhat difficult to enroll, and no participants indicated that they found it very difficult to enroll. The process appears to be working well for participants.
 - Most Difficult Parts of Enrollment: A majority of participants reported that they found no part of CRP enrollment difficult. However, six participants reported difficulty with several parts of the CRP enrollment process, including going to the office to apply; mailing the CRP application and documentation; and providing social security numbers, proof of income, and proof of meeting one's income.
 - Re-certification: While seven participants had never before re-certified for the CRP, 20 participants had previously re-certified. Of these participants, two said that it was

not too difficult to re-certify, and all others said that it was not at all difficult to re-certify.

- **Most Difficult Parts of Re-certification:** As with enrolling in the CRP, a majority of participants reported that they found no part of CRP re-certification difficult. However, a small number of participants reported difficulty with going to the office to apply, mailing the application and documentation, and providing proof of income and social security numbers.
- **CRP Understanding and Impact**
 - **Understanding of Benefits:** Twenty-five of 27 participants said they had a good understanding of the benefits provided by the CRP.
 - **Program Benefits:** The CRP benefit most commonly mentioned by participants was lower energy/gas bills. Participants also identified the following other benefits: reduced money or arrearages owed to PGW, ability to keep gas service on, and help for low income families, including participants' own families.
 - **Other Program Benefits:** When asked whether they viewed lower gas bills as a benefit of the CRP, 26 of 27 participants affirmed that they did. When asked whether they viewed arrearage forgiveness as a benefit of the CRP, 25 of 27 participants affirmed that they did.
 - **Single Most Important Program Benefit:** While four participants each identified reduced arrearages and the ability to keep their gas service turned on as the most important benefit of the CRP, 13 of 27 participants identified lower energy/gas bills as the most important benefit.
 - **Bill Payment:** While 18 participants stated it was very difficult to pay their PGW bills prior to enrolling in the program, only two stated that it was very difficult to do so while participating in the CRP. Only one customer said it was not at all difficult to pay the monthly PGW bill before participating in the CRP and 17 said it was not at all difficult while participating in the CRP. The CRP appears to have a very important impact on energy affordability.
 - **Importance of Program in Making Ends Meet:** Twenty-three participants said that the CRP was very important in helping them make ends meet, and an additional two participants described the CRP as somewhat important in helping them make ends meet.
 - **Other Benefit Receipt or Program Participation:** While 14 participants stated that they had not received other benefits or participated in other programs as a result of participating in the CRP, 13 participants stated that they had. Programs and benefits mentioned by these participants included LIHEAP, PECO Universal Services

Programs, and payment plans with other utility companies. The CRP appears to be important in connecting customers with additional benefits.

- Satisfaction and Recommendations
 - Satisfaction: Though some participants indicated sources of frustration with the Customer Responsibility Program at prior moments in their interviews, all but three participants reported that they were very satisfied with the program overall.
 - Reasons for Dissatisfaction: Three participants who either reported being somewhat satisfied or not too satisfied with the CRP were asked to provide explanations for their responses. These participants either indicated dissatisfaction with the size of the benefits provided by the CRP or the fixed nature of CRP bills year-round. Two participants specifically mentioned that they were dissatisfied with the size of their PGW bills in the summer.
 - Participant Recommendations: Participants offered the following ideas for program improvement: offer seasonal variation in the size of CRP benefits; restructure the benefit formula to account for energy usage; conduct greater outreach; and develop an online CRP application (which will be implemented in fall 2018).

V. Customer Responsibility Program Analysis

APPRISE conducted in-depth analysis of PGW Customer Responsibility Program (CRP) customer data; CRP data; and billing, payment, and collections data to assess the impact of the CRP on energy affordability, bill payment, and collections actions. This section summarizes the methodology used and the results from the analysis.

A. *Research Goals and Methodology*

There were several goals for the analysis.

- Characterize the CRP participants.
- Analyze CRP retention rates.
- Assess the impact of the CRP on energy affordability.
- Determine whether the CRP improves participants' bill payment compliance.
- Ascertain the impact of CRP participation on LIHEAP receipt.
- Evaluate whether the CRP impacts collections actions.
- Assess whether the CRP impacts the amount of energy used by program participants.

PGW provided customer, CRP program, billing, payment, and collections data to APPRISE to allow for analysis of these issues.

Evaluation Treatment Group

Customers who enrolled in the CRP between January 1, 2017 and June 30, 2017, and did not participate in the CRP in the year prior to enrollment, were included as potential members of the treatment analysis group. This group was chosen for the analysis, as one full year of post-program data is required for an analysis of program impacts. We compared the characteristics and payment behavior of these customers in the year prior to CRP enrollment to that in the year following CRP enrollment.

In addition to analyzing characteristics and behavior for this select group of recent CRP enrollees, we analyzed data for all customers who participated in the CRP in 2017 with a full year of data or close to a full year of data for that calendar year.

Comparison Groups

For the CRP program impact analysis, we examined pre and post-treatment statistics, data for the year before CRP enrollment, and data for the year after CRP enrollment. Customers who participated in the CRP in the year prior to enrollment were excluded from this analysis, to allow for a comparison of data while not participating and while participating in the CRP. The difference between the pre and post-treatment statistics for the treatment group is considered the gross change. This is the actual change in behaviors and outcomes for those participants who were served by the program. Some of these changes may be due to the program, and some of these changes were due to other exogenous factors, but this is the customer's actual experience.

The net change is the difference between the change for the treatment group and the change for the comparison group, and represents the actual impact of the program, controlling for

other exogenous changes. We used the average of two different comparison groups for the January to June 2017 enrollees.

1. **Later CRP Participants (2018 Enrollees):** These are customers who enrolled in the CRP between January and June 2018 and did not participate in the CRP in the two years prior to enrollment. We compared their billing and payment characteristics in two years prior to enrollment and one year prior to enrollment. These customers did not participate in the CRP in either year, and they provide information on the changes that CRP enrollees may have experienced if they had not enrolled in the program. However, because the second year is just prior to their CRP enrollment, these customers may have experienced new difficulty in their PGW bill payment in the second year of analysis.
2. **Earlier CRP Participants (2016 Enrollees):** These are customers who enrolled in the CRP between January and June 2016 and participated in the CRP in two years following enrollment. We compared their billing and payment characteristics in the first and second year after enrollment. These customers participated in the CRP in both years, and provide information on the changes that CRP enrollees may have experienced if they had not enrolled in the program, as these customers had no change in CRP status. Because there is no change in CRP status, the change for these customers is based on factors that are outside of the program. However, because this was the second year of participation in the CRP for these customers, they may have been able to stabilize their circumstances, and have an improvement in PGW bill payment in the second year of analysis.

While the later CRP participant comparison group may have experienced a slight decline in circumstances that caused them to enroll in the CRP, the earlier participant comparison group may have experienced a greater improvement in circumstances due to the two years they had to recover from a setback that caused CRP enrollment. The average of these two groups, therefore, provides a better comparison for the new CRP enrollees than either of the two groups alone.

Table V-1 provides a description of the treatment and comparison groups for the CRP impact analysis.

Table V-1
2017 CRP Enrollee Treatment Group and Comparison Groups

| | 2017 CRP Enrollee Treatment Group | Comparison Groups | |
|--------------------------|--|---|---|
| | | Later Participant | Earlier Participant |
| Group | 2017 (January-June) CRP Enrollees | 2018 (January-June) CRP Enrollees | 2016 (January-June) CRP Enrollees |
| CRP Enrollment | Most recent enrollment date is in January-June 2017 | Most recent enrollment date is in January-June 2018 | Most recent enrollment date is in January-June 2016 |
| CRP Participation | Did not participate in the CRP in the year prior to enrollment | Did not participate in the CRP in the 2 years prior to enrollment | Participated in the CRP in each of the 2 years after enrollment |

| | 2017 CRP Enrollee Treatment Group | Comparison Groups | |
|--------|-----------------------------------|-----------------------------|-------------------------|
| | | Later Participant | Earlier Participant |
| Year 1 | 1 year prior to enrollment | 2 years prior to enrollment | 1 year after enrollment |
| Year 2 | 1 year after enrollment | 1 year prior to enrollment | 2 year after enrollment |

Table V-2A displays the reasons for attrition within the treatment and comparison groups. Customers were removed from the specified analysis group for the following reasons.

- They did not enroll in the CRP during the target period for the group.
- They did not have enough billing data in one or both of the analysis years.
- They did not meet the group's definition of having or not having CRP discounts and/or arrearage forgiveness during a specified time period.
- They were outliers with extremely high or low values for variables included in the analysis.

About half of the removals were because customers did not qualify for the group and about half were because they did not have enough billing data. While the table shows that between 16 and 39 percent of the customers who enrolled in the CRP during the target period were included in the analysis, between 29 and 56 percent of those eligible for inclusion in the group were included in the analysis.

Table V-2A
2017 CRP Enrollee Treatment Group and Comparison Group
Attrition Analysis

| Exclusion Reason | 2017 CRP Enrollee Treatment Group | Comparison Groups | |
|--|-----------------------------------|-------------------|---------------------|
| | | Later Participant | Earlier Participant |
| Enrolled in the CRP During Target Period | 11,304 | 12,843 | 8,442 |
| Has Enough Billing Data | 7,631 | 7,928 | 5,868 |
| CRP Discount or Arrearage Forgiveness per Group Participation Definition | 2,622 | 2,046 | 3,279 |
| Outliers Removed | 2,588 | 2,021 | 3,271 |
| Percent of Total | 23% | 16% | 39% |
| Percent of Eligible | 41% | 29% | 56% |

In addition to the CRP participants who enrolled in January to June 2017, we analyzed data for all customers who participated in the CRP in 2017 and had close to a full year of billing data. Table V-2B shows that 86 percent of customers who received a CRP discount or arrearage forgiveness credit in 2017 were included in the analysis.

Low-income nonparticipants are customers who received LIHEAP but did not participate in the CRP in 2015, 2016, 2017, or 2018. Table V-2B shows that 85 percent of these customers were included in the analysis.

Table V-2B
All 2017 CRP Participants and Low-Income Nonparticipants
Attrition Analysis

| Exclusion Reason | All 2017 CRP Participants | Low-Income Nonparticipants |
|--|---------------------------|----------------------------|
| 2017 CRP Participant or Nonparticipant | 62,200 | 3,999 |
| Had Enough Billing Data | 53,657 | 3,453 |
| Outliers Removed | 53,572 | 3,412 |
| Percent of Total | 86% | 85% |

B. Participant Characteristics

This section provides information on the characteristics of CRP participants and nonparticipants who were analyzed in this evaluation.

Table V-3 compares the number of household members across analysis groups. The table shows that 48 percent of all 2017 CRP participants lived in single-person households and 18 percent had four or more household members. The 2017 CRP analysis group was very similar in composition. The 2017 enrollee treatment group and the comparison groups had somewhat fewer single-person households.

Table V-3
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison
Groups
Number of Household Members

| Number of Household Members | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|-----------------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| 1 | 48% | 49% | 43% | 38% | 42% | 44% |
| 2 | 19% | 19% | 20% | 23% | 21% | 19% |
| 3 | 15% | 14% | 17% | 18% | 17% | 16% |
| 4 | 11% | 10% | 12% | 12% | 12% | 13% |
| 5+ | 7% | 7% | 9% | 8% | 8% | 8% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table V-4 displays information on vulnerable household members. The table shows that seven percent of all 2017 CRP participants had an elderly household member¹³, 37 percent had a child, and 43 percent had at least one vulnerable household member. The 2017 enrollee treatment group and the comparison groups were approximately the same.

¹³ Year of birth for CRP participants indicates that 31 percent of customers who participate are elderly.

PGW provides the Senior Citizen Discount to households with elderly members who have been grandfathered into the program. Because of this other program, some elderly, low-income households do not participate in the CRP.

Table V-4
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
Vulnerable Household Members

| Vulnerable Groups | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|-------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| Elderly (62+) | 7% | 7% | 5% | 3% | 3% | 6% |
| Child (<=18) | 37% | 36% | 41% | 43% | 40% | 40% |
| Elderly or Child | 43% | 43% | 46% | 46% | 43% | 45% |

Table V-5 displays the household's primary income source. The table shows that 21 percent of all 2017 CRP participants had employment income, 27 percent had SSI, 29 percent received social security or pensions, eight percent received public assistance, and two percent received unemployment. The 2017 enrollee analysis group and the later participant comparison group were more likely to have employment as their primary source of income, and less likely to have SSI.

Table V-5
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
Income Source

| Income Source | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|----------------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| Employment | 21% | 20% | 24% | 30% | 29% | 21% |
| SSI | 27% | 27% | 24% | 18% | 18% | 25% |
| Social Security or Pension | 29% | 30% | 25% | 24% | 29% | 28% |
| Public Assistance | 8% | 7% | 9% | 7% | 5% | 10% |
| Unemployment | 2% | 2% | 3% | 4% | 3% | 3% |
| Other | 13% | 12% | 15% | 18% | 16% | 13% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table V-6 displays annual household income. The table shows that over half of all 2017 participants had an annual income less than \$10,000 and only four percent had an annual income above \$20,000. Mean annual income was just over \$10,000 for all 2017 participants

and 2017 enrollees. The later participant comparison group had a somewhat higher mean income and the earlier participant comparison group had a lower mean income.

Table V-6
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
Annual Household Income

| Annual Household Income | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| ≤\$10,000 | 60% | 60% | 58% | 52% | 47% | 62% |
| \$10,001-\$20,000 | 36% | 37% | 37% | 42% | 45% | 35% |
| >\$20,000 | 4% | 3% | 5% | 6% | 8% | 3% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |
| Mean Annual Income | \$10,226 | \$10,255 | \$10,369 | \$10,860 | \$11,796 | \$9,910 |

Table V-7 displays the Federal Poverty Level (FPL). The table shows that on average, the 2017 participants were at 65 percent of the FPL. The other groups had similar average poverty levels. Eighty-seven percent of the 2017 CRP participants had income below 100 percent of the poverty level.

Table V-7
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
Poverty Level

| Poverty Level | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| ≤50% | 32% | 31% | 37% | 36% | 30% | 38% |
| 51%-100% | 55% | 56% | 52% | 50% | 50% | 51% |
| 101%-150% | 12% | 13% | 12% | 15% | 20% | 11% |
| >150% | <1% | <1% | <1% | <1% | <1% | <1% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |
| Mean Poverty Level | 65% | 65% | 63% | 65% | 71% | 61% |

Table V-8 displays the total amount due on the customers' accounts at the time that the data were downloaded in July 2018. The table shows that while 21 percent of all 2017 participants did not have an amount due, 22 percent owed more than \$1,000 and eleven

percent owed more than \$2,000. The 2017 enrollee treatment group and the later participant comparison group owed a higher amount on average than all 2017 CRP participants.

Table V-8
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
Total Amount Due

| Total Amount Due | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|------------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| ≤\$0 | 21% | 17% | 17% | 8% | 3% | 13% |
| \$1-\$250 | 34% | 38% | 22% | 17% | 8% | 32% |
| \$251-\$500 | 10% | 11% | 13% | 15% | 16% | 14% |
| \$501-\$750 | 7% | 8% | 9% | 13% | 16% | 10% |
| \$751-\$1,000 | 5% | 6% | 8% | 10% | 13% | 7% |
| \$1,001-\$2,000 | 11% | 11% | 15% | 21% | 27% | 13% |
| >\$2,000 | 11% | 10% | 15% | 17% | 16% | 10% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |
| Mean Amount Due | \$690 | \$665 | \$937 | \$1,077 | \$1,268 | \$737 |

Table V-9 displays the CRP status for the analysis groups. The table shows that 57 percent of all 2017 participants and 45 percent of 2017 enrollees were active at the time of data download in July 2018. While 94 percent of the later participant treatment group were active, 46 percent of the earlier participant comparison group were active at the time of download.

Table V-9
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
CRP Status

| | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| Active | 57% | 62% | 45% | 45% | 94% | 46% |
| Defaulted | 10% | 10% | 8% | 10% | 2% | 9% |
| Suspended | 15% | 15% | 25% | 30% | <1% | 34% |
| Inactive | 14% | 10% | 15% | 9% | 3% | 8% |
| Broken | 5% | 3% | 6% | 4% | <1% | 3% |

| | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|--------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Removed | <1% | <1% | 1% | 1% | <1% | 1% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table V-10 displays the CRP agreement type. The table shows that the majority of customers pay nine percent of their income. For all groups, most of the remaining customers were in the eight or ten percent group. The later participants were more likely to have an average bill agreement type than the other analysis groups, as this was an option that was more recently introduced.

Table V-10
All 2017 CRP Participants, 2017 CRP Enrollee Treatment Group, and Comparison Groups
CRP Agreement Type

| | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | | Comparison Groups | |
|---------------------|---------------------------|----------------|-----------------------------------|----------------|--------------------|----------------------|
| | All | Analysis Group | All | Analysis Group | Later Participants | Earlier Participants |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 | 2,021 | 3,271 |
| Average Bill | 3% | 3% | <1% | <1% | 9% | <1% |
| \$25 Minimum | 7% | 7% | 8% | 8% | 7% | 8% |
| 8% | 24% | 23% | 27% | 27% | 22% | 29% |
| 9% | 54% | 54% | 52% | 50% | 46% | 52% |
| 10% | 12% | 12% | 13% | 15% | 15% | 11% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table V-11 displays the length of CRP participation for all 2017 participants at the time of data download. The length of participation is defined as follows.

- Active Participants: June 30, 2018 – CRP Start Date
- Other Participants: CRP Status Date – CRP Start Date

The table shows that a majority of participants were active in the program for less than two years. However, 21 percent had been participating for more than five years. Customers who were Suspended, Defaulted, Broken, or Removed were more likely to have participated for one year or less.

Table V-11
All 2017 CRP Participants
CRP Length of Participation by CRP Agreement Status

| CRP Participation Length | All 2017 CRP Participants | CRP Agreement Status | | | | |
|--------------------------|---------------------------|----------------------|-------------|-------------|-------------|-------------------|
| | | Active | Suspended | Defaulted | Inactive | Broken or Removed |
| Observations | 53,572 | 33,194 | 7,836 | 5,251 | 5,290 | 2,001 |
| ≤ 1 Year | 26% | 22% | 30% | 39% | 24% | 40% |
| > 1 Year – 2 Years | 30% | 29% | 34% | 30% | 27% | 34% |
| > 2 Years – 3 Years | 12% | 11% | 18% | 9% | 11% | 9% |
| > 3 Years – 4 Years | 8% | 8% | 7% | 5% | 8% | 6% |
| > 4 Years – 5 Years | 4% | 5% | 3% | 3% | 5% | 3% |
| > 5 Years – 10 Years | 12% | 13% | 6% | 10% | 16% | 6% |
| > 10 Years | 9% | 12% | 3% | 4% | 10% | 2% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table V-12 displays CRP participation by month for 2017 CRP participants based on PGW's indication of whether the customer was on the CRP each month. The table shows that 76 to 79 percent of all CRP participants analyzed participated each month and 81 to 86 percent of the analysis group participated each month.

Table V-12
All 2017 CRP Participants
CRP Participation by Month

| | Obs. | Calendar Year 2017 | | | | | | | | | | | |
|--------------|--------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| | | All 2017 CRP Participants | | | | | | | | | | | |
| Has Bill | 62,200 | 96% | 96% | 96% | 96% | 96% | 95% | 95% | 93% | 93% | 92% | 92% | 92% |
| Has CRP Bill | | 78% | 78% | 76% | 77% | 78% | 76% | 77% | 78% | 78% | 78% | 78% | 78% |
| | | 2017 CRP Participants Analysis Group | | | | | | | | | | | |
| Has Bill | 53,572 | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% |
| Has CRP Bill | | 81% | 81% | 80% | 82% | 83% | 82% | 84% | 85% | 86% | 86% | 86% | 86% |

C. Affordability

The CRP limits participants' bills to eight, nine, or ten percent of income, and is therefore expected to increase the affordability of natural gas bills.

Table V-13 compares the average monthly full bill and the monthly CRP amount for all 2017 participants and the 2017 enrollee treatment group. The table shows that the CRP provides a large discount for many customers. While only two percent of the 2017 CRP participants had a full bill (without the CRP discount) that was at or below \$50 per month, 21 percent of the 2017 CRP participants had a discounted bill (with the CRP discount) that was at or below \$50 per month. The average annual full bill was \$1,620 for all 2017 CRP participants and the average CRP bill was \$912 for all 2017 CRP participants.

Table V-13
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
Full Bill Amount and CRP Monthly Payment

| Average Monthly Bill | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | |
|-----------------------|---------------------------|-------------|-----------------------------------|-------------|
| Observations | 53,572 | | 2,588 | |
| | Full Bill | CRP Bill | Full Bill | CRP Bill |
| ≤\$50 | 2% | 21% | 2% | 24% |
| \$51-\$100 | 25% | 57% | 20% | 47% |
| \$101-\$150 | 40% | 19% | 42% | 22% |
| \$151-\$200 | 22% | 3% | 25% | 5% |
| \$201-\$250 | 7% | <1% | 7% | 1% |
| >\$250 | 4% | <1% | 3% | <1% |
| Total | 100% | 100% | 100% | 100% |
| Monthly Amount | \$135 | \$76 | \$139 | \$82 |
| Annual Amount | \$1,620 | \$912 | \$1,668 | \$984 |

Table V-14 displays the annual difference between the full bill and the CRP bill for all 2017 CRP participants and 2017 enrollees. The table shows that the CRP reduced the bill by about \$700 on average. Nineteen percent of both groups had a reduction in their annual bill of over \$1,200.

Table V-14
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
Annual Difference between Full Bill and CRP Bill

| Annual Difference Full Bill – CRP Bill | All 2017 CRP Participants | 2017 CRP Enrollee Treatment Group |
|---|--------------------------------------|--|
| Observations | 53,572 | 2,588 |
| ≤\$0 | 10% | 11% |
| \$1 - \$400 | 26% | 24% |
| \$401-\$800 | 27% | 27% |
| \$801-\$1,200 | 18% | 20% |
| >\$1,200 | 19% | 19% |
| Total | 100% | 100% |
| Mean Difference | \$703 | \$683 |

Table V-15A displays the annual net discount received by all 2017 CRP participants and 2017 enrollees. The table shows that all 2017 participants received an average discount of \$672 and 2017 enrollees received an average discount of \$687 in the year following enrollment. Eighteen percent of both groups received an annual discount of over \$1,200.

Table V-15A
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
CRP Net Discount Received

| Annual Difference | All 2017 CRP Participants | 2017 CRP Enrollee Treatment Group |
|--------------------------|--------------------------------------|--|
| Observations | 53,572 | 2,588 |
| ≤\$0 | 11% | 11% |
| \$1 - \$400 | 28% | 24% |
| \$401-\$800 | 26% | 27% |
| \$801-\$1,200 | 18% | 20% |
| >\$1,200 | 18% | 18% |
| Total | 100% | 100% |
| Mean Net Discount | \$672 | \$687 |

Table V-15B displays the mean net discount by CRP Tier. The table shows that the average discount received was \$980 for customers in the minimum payment group, \$824 for customers in the eight percent tier, \$650 for customers in the nine percent tier, and \$493 for customers in the ten percent tier.

Table V-15B
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
CRP Net Discount Received by CRP Tier

| Tier | Poverty Level | All 2017 Participants | | 2017 Enrollees | |
|---------------------------|---------------|-----------------------|-------------------|----------------|-------------------|
| | | Obs. | Mean Net Discount | Obs. | Mean Net Discount |
| Minimum Payment | | 3,536 | \$980 | 210 | \$1,120 |
| Average Bill | | 1,735 | -\$6 | 0 | -- |
| 8% | ≤50% | 12,555 | \$824 | 696 | \$902 |
| 9% | 51% - 100% | 29,153 | \$650 | 1,287 | \$599 |
| 10% | 101% - 150% | 6,593 | \$493 | 395 | \$364 |
| All Poverty Levels | | 53,572 | \$672 | 2,588 | \$687 |

Table V-16 displays the annual net discount received by CRP payment type compared to the Commission's maximum target of \$840. Overall, one third of all 2017 CRP participants received a net discount over \$840. Customers in the minimum payment and eight percent of income groups were more likely than the other groups to receive an annual discount greater than \$840.

Table V-16
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
CRP Net Discount in Relation to Target Maximum Credit

| Net Discount Received | | All 2017 CRP Participants | | | 2017 CRP Enrollee Treatment Group | | |
|---------------------------|---------------|---------------------------|--------|---------|-----------------------------------|--------|---------|
| Tier | Poverty Level | Obs | ≤\$840 | >\$840 | Obs | ≤\$840 | >\$840 |
| Average Bill | | 1,735 | 92% | 8% | 0 | -- | -- |
| Minimum Payment | | 3,536 | 48% | 52% | 210 | 35% | 65% |
| 8% | ≤50% | 12,555 | 58% | 42% | 696 | 49% | 51% |
| 9% | 51% - 100% | 29,153 | 69% | 31% | 1,287 | 72% | 28% |
| 10% | 101% - 150% | 6,593 | 77% | 23% | 395 | 81% | 19% |
| All Poverty Levels | | 53,572 | 67% | 33% | 2,588 | 64% | 36% |
| Mean Net Discount | | | \$305 | \$1,410 | | \$319 | \$1,349 |

Table V-17 displays PGW's CRP payment percent and the target energy burden, as stated in the PUC Guidelines for each poverty level group. PGW's CRP payment was designed to meet these affordability guidelines.

Table V-17
CRP Program Design
CRP Percentage Payment and PUC Target Energy Burden

| Poverty Group | CRP Payment Percentage | PUC Target |
|---------------|------------------------|------------|
| <50% | 8% | 5%-8% |
| 51% - 100% | 9% | 7%-10% |
| 101% - 150% | 10% | 9%-10% |

Table V-18 compares the CRP payment to the standards set by the PUC by CRP tier. The table shows that the customers' calculated payment is in line with the PUC targets. The minimum payment group has their payment set at \$25 per month which is generally above the calculated burden level, so the majority of these customers have a payment above the targeted burden. The previous analysis showed that only seven percent of 2017 participants were in the minimum payment group. A small percent of the customers in the eight, nine, and ten percent tiers had a payment above the PUC energy burden target because their most recent income level is used and their income level was updated following the analysis time period.

Table V-18
All 2017 CRP Participants
Energy Burden Relative to PUC Target by CRP Tier
Based on Monthly CRP Payment Amount

| Tier | Poverty Level | All 2017 CRP Participants | | |
|---------------------------|---------------|---------------------------|---------------------|--------------|
| | | Below Target | Within Target Range | Above Target |
| Observations | | 53,572 | | |
| Average | | 41% | 59% | <1% |
| Minimum Payment | | <1% | 22% | 78% |
| 8% | ≤50% | <1% | 100% | <1% |
| 9% | 51% -100% | <1% | 100% | <1% |
| 10% | 101% - 150% | <1% | 98% | 2% |
| All Poverty Levels | | 1% | 93% | 5% |

Table V-19 displays average bills and discounts for the pre-enrollment year and the year following enrollment for the 2017 enrollee treatment group. The table also displays these statistics for the two years prior to enrollment for the later participants and the two years following enrollment for the earlier participants (for the same time period as for the treatment group). The net change is the differences-in-differences between the treatment group and the average of the two comparison groups. Unlike usage data analysis, billing data analysis is not weather-normalized, which is one of the reasons that it is important to use a comparison group's bills from the same time period.

The table shows that the treatment group's average total bill increased by \$242 and their net bill declined by \$448 because they received a discount of \$687.¹⁴ The later participant comparison group, who did not participate in the CRP in either period, experienced a similar bill increase of \$284. The earlier participant comparison group participated in the CRP in both periods. They experienced a somewhat smaller increase in the total bill of \$141, and with the CRP discount increase of \$118, only had a CRP bill increase of \$23. Taking the experience of the two comparison groups into account, the net impact of the CRP on the new enrollees was a net cost decline of \$602.

Table V-19
2017 CRP Enrollee Treatment Group and Comparison Groups
Affordability

| | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Average Comparison Group Change | Net Change |
|---------------------|-----------------------------------|---------|---------|------------------------------------|----------|--------|--------------------------------------|-----------|--------|---------------------------------|------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Customer Net Bill | \$1,512 | \$1,064 | -\$448* | \$1,316 | \$1,600 | \$284* | \$931 | \$954 | \$23* | \$154* | -\$602* |
| CRP Discount | \$0 | \$687 | \$687* | \$0 | \$0 | \$0 | \$845 | \$963 | \$118* | \$59* | \$628* |
| Total Bill | \$1,512 | \$1,754 | \$242* | \$1,316 | \$1,600 | \$284* | \$1,776 | \$1,917 | \$141* | \$213* | \$29* |

*Statistically significant at the 99% level.

Table V-20A compares energy burden in the year preceding enrollment to the year following enrollment for the 2017 enrollee treatment group. Pre-treatment burden is the bill for the year divided by annual income and post-treatment burden is the annual CRP payment amount divided by annual income.¹⁵ The table shows a considerable decline in energy burden for all CRP tiers, and that the average CRP payment burden matches the target for the eight, nine, and ten percent tiers. The burden declines by an average of ten percentage points for all participants. Energy burden cannot be calculated for the low-income, nonparticipant customers because a large percentage of those customers did not have income data available.

¹⁴ The bill likely increased due to a colder average winter.

¹⁵ Only the most recently reported income data are used in these calculations.

Table V-20A
2017 CRP Enrollee Treatment Group
Mean Energy Burden by Poverty Group

| Tier | Poverty Level | Obs. | 2017 CRP Enrollee Treatment Group | | |
|---------------------------|---------------|--------------|-----------------------------------|------------|-------------|
| | | | Pre | Post | Change |
| Minimum Payment | | 210 | 68% | 19% | -49% |
| 8% | ≤50% | 696 | 20% | 8% | -12% |
| 9% | 51% -100% | 1,287 | 13% | 9% | -4% |
| 10% | 101% - 150% | 395 | 11% | 10% | -1% |
| All Poverty Levels | | 2,588 | 20% | 10% | -10% |

Table V-20B shows the Zero Income group separately from the other Minimum Payment customers. There are only eight customers in this group, so showing these customers separately does not have a large impact on the results for the Minimum payment group.

Table V-20B
2017 CRP Enrollee Treatment Group
Mean Energy Burden by Poverty Group
Zero Income Group Shown Separately

| Tier | Poverty Level | Obs. | 2017 CRP Enrollee Treatment Group | | |
|---------------------------|---------------|--------------|-----------------------------------|------------|-------------|
| | | | Pre | Post | Change |
| Zero Income | | 8 | 100% | 100% | 0% |
| Minimum Payment | | 202 | 66% | 15% | -51% |
| 8% | ≤50% | 696 | 20% | 8% | -12% |
| 9% | 51% -100% | 1,287 | 13% | 9% | -4% |
| 10% | 101% - 150% | 395 | 11% | 10% | -1% |
| All Poverty Levels | | 2,588 | 20% | 10% | -10% |

Table V-21 displays the percentage of 2017 enrollees who were above the PUC energy burden target in the year preceding enrollment and in the year following enrollment. The table shows that the eight, nine, and ten percent payment groups were virtually all no longer above the PUC target burden after participating in the CRP.¹⁶ Only the minimum payment group had a substantial percentage that was above the target burden.

¹⁶ A very small percentage of these groups are above the target because they had their income information updated following the analysis period.

Table V-21
2017 CRP Enrollee Treatment Group
Percent above PUC Target by Poverty Group

| Tier | Poverty Level | Obs. | 2017 CRP Enrollee Treatment Group Percent Above PUC Target Burden | | |
|---------------------------|---------------|--------------|--|-----------|-------------|
| | | | Pre | Post | Change |
| Minimum Payment | | 210 | 100% | 78% | -12% |
| 8% | ≤50% | 696 | 96% | <1% | -96% |
| 9% | 51% -100% | 1,287 | 65% | <1% | -65% |
| 10% | 101% - 150% | 395 | 54% | <1% | -54% |
| All Poverty Levels | | 2,588 | 74% | 6% | -68% |

The previous two tables used the CRP payment amount to calculate bills and burden for the post-enrollment year. However, CRP participants may have bills up to \$60 higher than that payment amount over the year because they are also charged \$5 each month to contribute to arrearage reduction.

D. Bill Payment

Table V-22 displays the number of customer payments made by the 2017 participants and the low-income comparison group in 2017. While the 2017 CRP participants averaged 7.0 payments over the year, the low-income comparison group averaged 8.4 payments. Nineteen percent of the 2017 CRP participants made 11 or more payments and 34 percent of the low-income comparison group did so. Note that customers who receive LIHEAP will not need to make all 12 payments to cover their full bill, and even one LIHEAP payment may cover more than one month of CRP bills.

Table V-22
All 2017 CRP Participants and Low-Income Nonparticipants
Number of Customer Payments Made

| Payments Made | All 2017 CRP Participants | Low-Income Nonparticipants |
|------------------------|---------------------------|----------------------------|
| Observations | 53,572 | 3,412 |
| No Payments | 6% | 4% |
| 1-3 Payments | 14% | 9% |
| 4-6 Payments | 21% | 14% |
| 7-10 Payments | 40% | 39% |
| 11 Payments | 9% | 15% |
| 12 Payments | 8% | 15% |
| >12 Payments | 2% | 4% |
| Total | 100% | 100% |
| Mean # Payments | 7.0 | 8.4 |

Table V-23 displays the number of customer payments made by the 2017 CRP enrollees, the later participant comparison group, and the earlier participant comparison group. The table shows that the 2017 enrollees made an average of 6.4 payments in the year prior to enrollment and 6.9 payments in the year following enrollment, an increase of 0.5 payments. Both the later and earlier participant comparison groups reduced the number of payments made.

Table V-23
2017 CRP Enrollee Treatment Group and Comparison Groups
Number of Customer Payments Made

| Payments Made | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | |
|------------------------|-----------------------------------|-------------|--------|------------------------------------|-------------|--------|--------------------------------------|-------------|--------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | |
| No Payments | 6% | 4% | -2% | 4% | 6% | 2% | 4% | 8% | 4% |
| 1-3 Payments | 24% | 18% | -6% | 14% | 19% | 5% | 14% | 16% | 2% |
| 4-6 Payments | 20% | 22% | 2% | 18% | 22% | 4% | 21% | 21% | 0% |
| 7-10 Payments | 29% | 35% | 6% | 35% | 33% | -2% | 40% | 33% | -7% |
| 11 Payments | 7% | 10% | 3% | 9% | 8% | -1% | 10% | 9% | -1% |
| 12 Payments | 8% | 7% | -1% | 12% | 9% | -3% | 8% | 9% | 1% |
| >12 Payments | 4% | 3% | -1% | 6% | 4% | -2% | 2% | 3% | 1% |
| Total | 100% | 100% | | 100% | 100% | | 100% | 100% | |
| Mean # Payments | 6.4 | 6.9 | 0.5 | 7.5 | 6.8 | -0.7 | 7.1 | 6.8 | -0.3 |

Table V-24A displays the number of payments missed by the 2017 CRP participants and the low-income comparison group in 2017, defined as the difference between the number of bills and the number of customer payments. The table shows that CRP participants missed an average of 4.9 payments and the low-income comparison group missed an average of 3.6 payments.

Table V-24A
All 2017 CRP Participants and Low-Income Nonparticipants
Number of Missed Payments

| Missed Payments | All 2017 CRP Participants | Low-Income Nonparticipants |
|-------------------------------|---------------------------|----------------------------|
| Observations | 53,572 | 3,412 |
| ≤3 Payments | 40% | 61% |
| 4-6 Payments | 27% | 18% |
| 7-12 Payments | 33% | 22% |
| >12 Payments | <1% | <1% |
| Total | 100% | 100% |
| Mean # Missed Payments | 4.9 | 3.6 |

Table V-24B displays the number of payments missed by the 2017 CRP enrollees and the comparison groups in the pre and post years. The table shows that CRP participants missed an average of 5.6 payments in the year prior to enrollment and 5.1 payments in the year following enrollment. The comparison groups had an increase in the number of missed payments. (Note: This statistic is not very meaningful because customers who receive LIHEAP grants may not need to make payments for several months to remain current on their bills.)

Table V-24B
2017 CRP Enrollee Treatment Group and Comparison Group
Number of Missed Payments

| Missed Payments | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|-------------------------------|-----------------------------------|-------------|-------------|------------------------------------|-------------|------------|--------------------------------------|-------------|------------|-------------------------|-------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| ≤3 Payments | 34% | 40% | 6% | 44% | 38% | -6% | 40% | 39% | -1% | -4% | 10% |
| 4-6 Payments | 21% | 23% | 2% | 25% | 24% | -1% | 27% | 22% | -5% | -3% | 5% |
| 7-12 Payments | 45% | 37% | -8% | 31% | 38% | 7% | 33% | 38% | 5% | 6% | -14% |
| >12 Payments | <1% | <1% | 0% | <1% | <1% | 0% | <1% | <1% | 0% | 0% | 0% |
| Total | 100% | 100% | -- | 100% | 100% | -- | 100% | 100% | -- | -- | -- |
| Mean # Missed Payments | 5.6 | 5.1 | -0.5 | 4.5 | 5.2 | 0.7 | 4.9 | 5.3 | 0.4 | 0.6 | -1.1 |

Table V-25 displays the number and amount of late payment charges for the 2017 CRP enrollees, the later participant comparison group, and the earlier participant comparison group. There was a large decline in the number of late payment charges for the 2017 CRP enrollees following enrollment in the program. While they averaged 6.3 late payment

charges in the year prior to enrollment, they averaged only 0.3 late payment charges in the year following enrollment. (CRP participants do not receive late payment fees, but some customers did not remain on the program for the full year.) However, the comparison groups experienced an increase in the number of late payment charges, resulting in a net decline of 6.6 late payment charges and a net reduction of \$71 in costs for these charges.

The table also displays the net amount of all collections related charges and credits. Collections related charges and credits included turn on charges, dig charges, late payment charges and waivers or adjustments to those charges. CRP enrollees experienced a net reduction of \$85 in these charges.

Table V-25
2017 CRP Enrollee Treatment Group and Comparison Groups
Number and Amount of Late Payment Charges

| Late Payment Charges | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|---------------------------|-----------------------------------|------|--------|------------------------------------|----------|--------|--------------------------------------|-----------|--------|-------------------------|------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| # Late Payment Charges | 6.3 | 0.3 | -6.0* | 4.9 | 5.8 | 0.9* | <0.1 | 0.2 | 0.2* | 0.6* | -6.6* |
| \$ Late Payment Charges | \$65 | \$6 | -\$59* | \$44 | \$64 | \$20* | <\$1 | \$3 | \$3* | \$12* | -\$71* |
| All Collection-Related \$ | \$79 | \$9 | -\$70* | \$52 | \$77 | \$25* | <\$1 | \$5 | \$5* | \$15* | -\$85* |

*Statistically significant at the 99% level.

Table V-26 displays cash and total coverage rates for 2017 participants and low-income customers.

- The cash coverage rate is defined as the total amount of customer payments divided by the annual billed charges.
- The total coverage rate is defined as the total amount of payments and credits (including grants) divided by the annual billed charges.

The table shows that 61 percent of 2017 participants had at least a 90 percent total coverage rate, and 62 percent of their low-income counterparts had at least a 90 percent total coverage rate.

Table V-26
All 2017 CRP Participants and Low-Income Nonparticipants
CRP Bill Coverage Rates

| Coverage Rate | All 2017 CRP Participants | | Low-Income Nonparticipants | |
|---------------------|---------------------------|----------------|----------------------------|----------------|
| | Cash Coverage | Total Coverage | Cash Coverage | Total Coverage |
| Observations | 53,572 | | 3,412 | |
| ≥100% | 21% | 44% | 16% | 44% |
| 90%-99% | 10% | 17% | 10% | 18% |
| 80%-89% | 11% | 12% | 14% | 16% |
| <80% | 57% | 27% | 60% | 22% |
| Total | 100% | 100% | 100% | 100% |
| Mean Rate | 73% | 99% | 71% | 95% |

Table V-27 displays total coverage rates by CRP payment tier for all 2017 CRP participants. The table shows that customers in the nine percent and ten percent of income groups were less likely to have total coverage rates below 80 percent. The table also shows that the minimum payment group and the eight percent of income groups were most likely to pay their full bill.

Table IV-27
All 2017 CRP Participants
CRP Bill Coverage Rates
By Payment Tier

| All 2017 CRP Participants | | | | | |
|---------------------------|------------------|--------------|-------------|-------------|-------------|
| Total Coverage Rate | CRP Payment Tier | | | | |
| | Min Payment | Average Bill | 8% | 9% | 10% |
| Observations | 3,536 | 1,735 | 12,555 | 29,153 | 6,593 |
| ≥100% | 60% | 36% | 49% | 42% | 39% |
| 90% - 99% | 6% | 17% | 12% | 19% | 23% |
| 80% - 89% | 5% | 15% | 8% | 14% | 14% |
| <80% | 30% | 33% | 30% | 25% | 24% |
| Total | 100% | 100% | 100% | 100% | 100% |

Table V-28 displays total bill coverage rates for the 2017 CRP enrollees, the later participant comparison group, and the earlier participant comparison group. While 30 percent of 2017 enrollees paid at least 90 percent of their full bill in the year prior to enrollment, 56 percent paid at least 90 percent of charges in the year following CRP enrollment. Both the later and the earlier participants saw a decline in the proportion of customers paying at least 90 percent of their bill.

Table V-28
2017 CRP Enrollee Treatment Group and Comparison Groups
Total Bill Coverage Rates

| Total Coverage Rate | 2017 CRP Enrollee Treatment Group | | Later Participant Comparison Group | | Earlier Participant Comparison Group | |
|---------------------|-----------------------------------|-------------|------------------------------------|-------------|--------------------------------------|-------------|
| | Pre | Post | 2 Yr Pre | 1 Yr Pre | 1 Yr Post | 2 Yr Post |
| Observations | 2,588 | | 2,021 | | 3,271 | |
| ≥100% | 19% | 31% | 37% | 17% | 45% | 40% |
| 90% - 99% | 11% | 25% | 15% | 14% | 28% | 22% |
| 80% - 89% | 11% | 14% | 14% | 14% | 12% | 12% |
| <80% | 59% | 29% | 34% | 55% | 15% | 26% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Table V-29 displays the billing and payment statistics for the 2017 CRP enrollees and the comparison groups. The table shows the following.

- **Total Charges:** Total charges declined by \$519 for the treatment group compared to an increase for both comparison groups, resulting in a net decline of \$688.
- **Total Credits:** The total credits declined for all three groups, but by more for the treatment group given their large reduction in costs following CRP enrollment. The net decline in total credits for the treatment group was \$149.
- **Total Coverage Rate:** The CRP enrollees had a much larger reduction in total charges than the reduction in total payments, resulting in a 20 percentage-point increase in the total coverage rate and a 36 percent point increase in the total coverage rate when accounting for the change in the other groups.
- **Balance Change:** The treatment group had an average \$492 increase in their balance in the pre-enrollment year and an average \$151 increase in their balance while participating in the CRP. This compares to an increase in the balance change for the other two groups and a net reduction in the balance increase (also referred to as the shortfall) of \$539.

Table V-29
2017 CRP Enrollee Treatment Group and Comparison Groups
Bills and Payments

| | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|---------------------|-----------------------------------|--------|---------|------------------------------------|----------|--------|--------------------------------------|-----------|---------|-------------------------|------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Bill | \$1512 | \$1064 | -\$448* | \$1316 | \$1600 | \$284* | \$931 | \$954 | \$23* | \$154* | -\$602* |
| Other Charges | \$80 | \$9 | -\$71* | \$53 | \$77 | \$24* | <\$1 | \$6 | \$6* | \$15* | -\$86* |
| Total Charges | \$1592 | \$1073 | -\$519* | \$1369 | \$1677 | \$308* | \$931 | \$960 | \$29* | \$169* | -\$688* |
| Customer Payments | \$876 | \$730 | -\$146* | \$1025 | \$1006 | -\$19 | \$643 | \$710 | \$67* | \$24* | -\$170* |
| Assistance | \$210 | \$179 | -\$31* | \$170 | \$172 | \$2 | \$267 | \$159 | -\$108* | -\$53* | \$22* |
| Other Credits | \$14 | \$13 | -\$1 | \$10 | \$10 | \$0 | \$4 | \$3 | -\$1 | -\$1 | -\$1 |
| Total Credits | \$1100 | \$922 | -\$178* | \$1205 | \$1188 | -\$17 | \$914 | \$872 | -\$42* | -\$30* | -\$149* |
| Total Coverage Rate | 72% | 92% | 20%* | 91% | 73% | -18%* | 105% | 92% | -13%* | -16%* | 36%* |
| Balance Change | \$492 | \$151 | -\$341* | \$164 | \$489 | \$325* | \$17 | \$88 | \$71* | \$198 | -\$539* |

*Statistically significant at the 99% level.

Table V-30 displays the same statistics for all 2017 CRP participants and the low-income nonparticipants. The table shows that prior to receiving the CRP discount, the average bills for the 2017 CRP participants were much higher than those for the low-income nonparticipants. The low-income nonparticipants likely chose not to participate in the CRP because their energy burden was already below the targeted eight, nine, or ten percent of income. After receiving the CRP discount, the average bills for the 2017 CRP participants were just about the same as for the low-income nonparticipants, as were their other billing and payment statistics.

Table V-30
All 2017 CRP Participants and Low-Income Nonparticipants
Bills and Payments

| | All 2017 CRP Participants | Low-Income Nonparticipants |
|---------------------|---------------------------|----------------------------|
| Observations | 53,572 | 3,412 |
| Total Bill | \$1,621 | \$969 |
| CRP Net Discount | \$672 | \$0 |
| Bill | \$949 | \$969 |
| Other Charges | \$20 | \$11 |
| Total Charges | \$969 | \$979 |

| | All 2017 CRP Participants | Low-Income Nonparticipants |
|---------------------|---------------------------|----------------------------|
| Customer Payments | \$701 | \$725 |
| Assistance | \$186 | \$200 |
| Other Credits | \$9 | \$8 |
| Total Credits | \$896 | \$933 |
| Total Coverage Rate | 99% | 95% |
| Balance Change | \$73 | \$46 |

E. LIHEAP Assistance

This section examines LIHEAP assistance received by the CRP participants and the comparison groups. Table V-31 displays the percentage of 2017 CRP participants and low-income nonparticipants that received LIHEAP and LIHEAP Crisis grants and the mean grant amounts. The table shows that about half of 2017 CRP participants received either LIHEAP or Crisis grants in 2017, compared to 62 percent of the low-income comparison group. The mean LIHEAP and Crisis grant total for the 2017 CRP participants was \$178 and the mean for the low-income comparison group was \$197.

Table V-31
2017 CRP Participants and Low-Income Nonparticipants
LIHEAP and Crisis Receipt

| | All 2017 CRP Participants | Low-Income Nonparticipants |
|---|---------------------------|----------------------------|
| Observations | 53,572 | 3,412 |
| Percent Received LIHEAP | 51% | 62% |
| Mean LIHEAP Grant - Recipients | \$315 | \$297 |
| Mean LIHEAP Grant – All CRP | \$159 | \$184 |
| Percent Received LIHEAP Crisis | 6% | 5% |
| Mean LIHEAP Crisis - Recipients | \$316 | \$258 |
| Mean LIHEAP Crisis – All CRP | \$19 | \$12 |
| Percent Received LIHEAP or Crisis | 51% | 62% |
| Mean LIHEAP and Crisis Total - Recipients | \$351 | \$317 |
| Mean LIHEAP and Crisis Total – All CRP | \$178 | \$197 |

Table V-32 displays the percentage of CRP enrollees and comparison groups that received LIHEAP in the pre-enrollment and post-enrollment periods. The table shows that 2017 enrollees were more likely to receive LIHEAP in the year following enrollment and the earlier participant comparison group was less likely to receive LIHEAP in the second year following CRP enrollment. The earlier CRP participants may have had a lower need for LIHEAP after being on the CRP for more than a year, but the CRP does require participants

to apply for LIHEAP. The net change was an increase of 17 percentage points and an increase of \$30 in grants.

Table V-32
2017 CRP Enrollee Treatment Group and Comparison Groups
LIHEAP Assistance

| LIHEAP Receipt | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|---|-----------------------------------|-------|--------|------------------------------------|----------|--------|--------------------------------------|-----------|---------|-------------------------|------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Percent Received LIHEAP | 41% | 48% | 7%* | 36% | 38% | 2% | 69% | 48% | -21%* | -10%* | 17%* |
| Mean LIHEAP Grant – Received in Pre or Post | \$215 | \$245 | \$30* | \$230 | \$230 | \$0 | \$300 | \$174 | -\$126* | -\$63* | \$93* |
| Mean LIHEAP Grant – All | \$130 | \$148 | \$18* | \$115 | \$115 | \$0 | \$228 | \$132 | -\$96* | -\$48* | \$30* |
| Mean LIHEAP Grant – Received in Both Pre & Post | \$318 | \$265 | -\$53* | \$338 | \$279 | -\$59* | \$337 | \$269 | -\$68* | -\$64* | \$11* |

*Statistically significant at the 99% level.

F. Arrearage Forgiveness

Table V-33 displays pre-program arrearages at the time the customer most recently enrolled in the CRP (“Original”) and at the time of data download in July 2018 (“Current”). The table shows considerable reductions in pre-program arrearages. For all 2017 CRP participants, mean pre-program arrearages declined from \$950 to \$282 and 68 percent had no remaining pre-program arrearages at the time of data download. Although 2017 CRP enrollees likely participated in the program for a shorter period of time on average, 57 percent of this group had no remaining pre-program arrearages at the time of download.

Table V-33
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
Original and Current Pre-Program Arrears

| Arrearages | All 2017 CRP Participants | | | | 2017 CRP Enrollee Treatment Group | | | |
|-----------------|---------------------------|---------|----------------|---------|-----------------------------------|---------|----------------|---------|
| | All | | Analysis Group | | All | | Analysis Group | |
| Observations | 62,200 | | 53,572 | | 11,304 | | 2,588 | |
| | Original | Current | Original | Current | Original | Current | Original | Current |
| ≤\$0 | 15% | 68% | 15% | 67% | 9% | 57% | 2% | 50% |
| \$1-\$500 | 35% | 16% | 36% | 17% | 32% | 25% | 24% | 25% |
| \$501-\$1,000 | 20% | 7% | 20% | 7% | 24% | 9% | 31% | 13% |
| \$1,001-\$1,500 | 11% | 3% | 11% | 3% | 14% | 4% | 17% | 5% |
| \$1,501-\$2,000 | 6% | 2% | 6% | 2% | 8% | 2% | 10% | 3% |
| >\$2000 | 13% | 4% | 12% | 3% | 14% | 3% | 17% | 4% |

| Arrearages | All 2017 CRP Participants | | | | 2017 CRP Enrollee Treatment Group | | | |
|--------------------|---------------------------|-------------|----------------|-------------|-----------------------------------|-------------|----------------|-------------|
| | All | | Analysis Group | | All | | Analysis Group | |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Mean Amount | \$950 | \$282 | \$911 | \$284 | \$1,056 | \$302 | \$1,190 | \$367 |

Table V-34 displays the reduction in pre-program arrearages from the time of enrollment to the data download date in July 2018. The table shows that the 2017 CRP participants reduced their arrearages by \$668 on average and 20 percent reduced their arrearages by over \$1,000.

Table V-34
All 2017 CRP Participants and 2017 CRP Enrollee Treatment Group
Decline from Original to Current Pre-Program Arrears

| Arrearages | All 2017 CRP Participants | | 2017 CRP Enrollee Treatment Group | |
|---------------------|---------------------------|----------------|-----------------------------------|----------------|
| | All | Analysis Group | All | Analysis Group |
| Observations | 62,200 | 53,572 | 11,304 | 2,588 |
| ≤\$0 | 18% | 18% | 10% | 3% |
| \$1-\$250 | 28% | 29% | 30% | 27% |
| \$251-\$500 | 17% | 18% | 20% | 23% |
| \$501-\$750 | 10% | 10% | 11% | 13% |
| \$751-\$1,000 | 7% | 7% | 7% | 8% |
| >\$1,000 | 20% | 18% | 23% | 26% |
| Total | 100% | 100% | 100% | 100% |
| Mean Amount | \$668 | \$627 | \$754 | \$823 |

Table V-35 displays the percent of 2017 participants who received at least one arrearage forgiveness credit in 2017 and the mean number of credits received. The table shows that 65 percent of customers who had an arrearage balance at the time of enrollment received at least one credit in 2017, and 89 percent of customers who had a remaining balance at the time of data download received at least one credit in 2017. The table also shows that the mean number of forgiveness payments was 3.6 for those who had a balance at the time of enrollment and 5.3 for those with a balance remaining at the time of data download.

Table V-35
All 2017 CRP Participants
Arrearage Forgiveness Credits Received in 2017

| | Obs. | Percent Received One or More Credits In 2017 | | | Mean # of Arrearage Forgiveness Credits Received | | |
|---------------------------|--------|---|----------------|----------|---|----------------|----------|
| | | All | Had Arrearages | | All | Had Arrearages | |
| | | | Original | Download | | Original | Download |
| All 2017 CRP Participants | 62,200 | 57% | 65% | 89% | 3.1 | 3.6 | 5.3 |
| 2017 Analysis Group | 53,572 | 58% | 66% | 91% | 3.4 | 3.9 | 5.6 |
| 2017 With 12 Bills | 51,736 | 58% | 65% | 91% | 3.4 | 3.9 | 5.7 |

Table V-36 displays arrearage forgiveness received by 2017 CRP enrollees. The table shows that 92 percent of those who had arrearages at the time of enrollment received at least one credit and that the mean number of credits was 8.1 for this same population.

Table V-36
2017 CRP Enrollee Treatment Group
Arrearage Forgiveness Credits Received in the Year after Enrollment

| | Obs. | Percent Received One or More Credit In 2017 | | Mean # of Arrearage Forgiveness Credits Received | |
|----------------------------------|-------|--|----------------------------|--|-------------------------------|
| | | All | Had Original Arrearages | All | Had Original Arrearages |
| | | | | | |
| 2017 CRP Enrollee Analysis Group | 2,588 | 93% | 95% | 6.7 | 6.9 |
| 2017 With 12 Bills | 2,426 | 93% | 95% | 6.8 | 6.9 |

Table V-37 displays the distribution of arrearage statistics for the 2017 CRP participants and the 2017 CRP enrollee treatment group. For the purposes of this table, customers with more than 14 forgiveness payments were dropped (approximately four percent of the 2017 CRP participants and one percent of the 2017 CRP enrollees). Given the small number of customers that fall into this category, results are the same when these customers are included. The table displays the following information.

- **Original Arrearages:** The 2017 CRP participants had an average of \$923 in arrearages when they enrolled in the CRP. The 2017 CRP enrollees had an average of \$1,193 in arrearages when they enrolled in the CRP.
- **Estimated Monthly Arrearage Reduction:** The 2017 CRP participants had an estimated average monthly reduction of \$21 given the pre-program arrearage level, the \$5/month

co-payment, and the 36-month payback period. The 2017 CRP enrollees had an estimated average monthly reduction of \$28.

- **Arrearage Forgiveness Received:** The 2017 CRP participants received an average of \$118 in arrearage forgiveness in 2017. The 2017 CRP enrollees received an average of \$204 in arrearage forgiveness in the year following enrollment.
- **Calculated Months of Forgiveness:** Given the calculated monthly arrearage forgiveness amount and the total arrearage forgiveness received, we calculated that the 2017 CRP participants received an average of 5.6 months of arrearage forgiveness. Because customers receive retroactive arrearage forgiveness when they make up missed payments, the forgiveness could be grouped together in fewer individual arrearage forgiveness payments. The 2017 CRP enrollees received an average of 7.3 months of arrearage forgiveness.
- **Actual Number of Forgiveness Payments:** On average, the 2017 CRP participants received three separate arrearage forgiveness payments and the 2017 CRP enrollees received seven separate payments.
- **Average Arrearage Reduction Amount:** The average arrearage reduction for the 2017 CRP participants was \$22 and the average for the 2017 CRP enrollees was \$32. (This includes an accelerated forgiveness received.)
- **Arrearage Remaining at Download:** The 2017 CRP participants averaged \$281 in arrearages at the time of data download in June 2018, and the 2017 CRP enrollees averaged \$366.
- **Monthly Arrearage Reduction with One-Year Forgiveness:** If arrearage reduction was done over 12 months instead of 36, the average monthly arrearage reduction would be \$72 for all 2017 CRP participants and \$94 for the 2017 CRP enrollees.
- **Projected Arrearage Forgiveness with One-Year Forgiveness Period:** If arrearage reduction was done over 12 months instead of 36, the average annual reduction would be \$403 for the 2017 CRP participants and \$686 for the 2017 CRP enrollees.

Given that the average 2017 participant (not only those with arrearages) received 5.6 months of credits, they would receive a total of \$403 in arrearage forgiveness in the first year instead of \$118, an increase of \$285 per CRP participant for a total cost of \$15 million in the first year.

Table V-37
All 2017 CRP Participants
Arrearage Statistics

| Arrearage Statistics | All 2017 CRP Participants | 2017 CRP Enrollee Analysis Group |
|---|---------------------------|----------------------------------|
| Original Arrears | \$923 | \$1,193 |
| Predicted Reduction = (Original Arrears-\$180)/36 | \$21 | \$28 |
| 2017 Arrearage Forgiveness Received | \$118 | \$204 |
| Calculated Months of Forgiveness =Arrearage Forgiveness Received/ Estimated Monthly Arrearage Reduction | 5.6 | 7.3 |
| Actual Number of Forgiveness Credits | 3.2 | 6.7 |
| Average Actual Arrearage Reduction Credit | \$22 | \$32 |
| Arrears Remaining at Download | \$281 | \$366 |
| Monthly Arrearage Reduction Over 1 Year = (Original Arrears-\$60)/12 | \$72 | \$94 |
| Arrearage Forgiveness with Revised Amount =Calculated Months of Forgiveness*(Original Arrears-\$60)/12 | \$403 | \$686 |

G. Collections Actions

Table V-38 displays the average number of collections actions experienced by the 2017 CRP enrollees, the later participant comparison group, and the earlier participant comparison group. The previous sections showed that participants improved their bill payment behavior following enrollment, so they should be subject to fewer collections actions. The table shows that this is the case. The 2017 CRP enrollees experienced gross and net declines in notices and shutoffs. The total number of collections actions declined by an average of 1.7 actions following enrollment for the 2017 enrollees, and the net change was a decline of 2.9 actions.

Table V-38
2017 CRP Enrollee Treatment Group and Comparison Groups
Number of Collections Actions

| Number of Collections Actions | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|-------------------------------|-----------------------------------|------------|-------------|------------------------------------|------------|------------|--------------------------------------|------------|------------|-------------------------|-------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Mail 10-Day Notice | 1.3 | 0.8 | -0.5* | 0.9 | 1.5 | 0.6* | 0.9 | 1.0 | 0.1* | 0.4* | -0.9* |
| Phone 3-Day Notice | 1.6 | 0.7 | -0.9* | 1.0 | 1.9 | 0.9* | 0.4 | 0.8 | 0.4* | 0.7* | -1.6* |
| Field 3-Day Notice | 0.1 | <0.1 | -0.1* | <0.1 | 0.1 | 0.1* | <0.1 | 0.1 | 0.1* | 0.1* | -0.2* |
| Post Term Notice | <0.1 | <0.1 | 0 | <0.1 | 0 | 0 | 0 | <0.1 | 0 | 0.0 | 0.0 |
| Other Notice | <0.1 | <0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| Shutoff | 0.2 | <0.1 | -0.2* | 0.1 | 0.2 | 0.1* | 0 | <0.1 | 0 | 0.1* | -0.3* |
| Total Number | 3.3 | 1.6 | -1.7 | 2.0 | 3.7 | 1.7 | 1.2 | 1.9 | 0.7 | 1.2 | -2.9 |

*Statistically significant at the 99% level.

Table V-39 displays the percentage of customers that had their gas service shut off during the pre or post year. The table shows that while 15 percent of the 2017 CRP enrollees were shut off in the year prior to enrollment, four percent were shut off in the year following enrollment, a decline of 11 percentage points. The comparison groups experienced an increase in terminations, so the net change was a decline of 15 percentage points.

Table V-39
2017 CRP Enrollee Treatment Group and Comparison Groups
Percent Received One or More Shutoffs

| Received 1+ Shutoffs | 2017 CRP Enrollee Treatment Group | | | Later Participant Comparison Group | | | Earlier Participant Comparison Group | | | Avg. Comp. Group Change | Net Change |
|----------------------|-----------------------------------|------|--------|------------------------------------|----------|--------|--------------------------------------|-----------|--------|-------------------------|------------|
| | Pre | Post | Change | 2 Yr Pre | 1 Yr Pre | Change | 1 Yr Post | 2 Yr Post | Change | | |
| Observations | 2,588 | | | 2,021 | | | 3,271 | | | | |
| Shutoffs | 15% | 4% | -11%* | 8% | 13% | 5%* | <1% | 2% | 2%* | 4%* | -15%* |

*Statistically significant at the 99% level.

H. Summary

This section provides a summary of key findings from the billing, payment, and collections, data analysis.

Participant Characteristics

A high percentage of CRP participants have vulnerable household members and a minority have employment income. Many participate in the CRP for several years.

- **Vulnerable Households:** Seven percent of all 2017 CRP participants had an elderly household member¹⁷, 37 percent had a child, and 43 percent had at least one vulnerable household member. PGW provides the Senior Citizen Discount to households with elderly members who have been grandfathered into the program. Some potentially eligible elderly CRP participants choose to participate in the Senior Citizen Discount instead of the CRP.
- **Income Source:** Twenty-one percent of all 2017 CRP participants had employment income, 27 percent had SSI, 29 percent received social security or pensions, eight percent received public assistance, and two percent received unemployment.
- **Household Income:** Over half of all 2017 participants had an annual income less than \$10,000 and only four percent had an annual income above \$20,000. Mean annual income was just over \$10,000 for all 2017 participants.
- **Poverty Level:** Eighty-seven percent of the 2017 CRP participants had income below 100 percent of the poverty level.
- **Amount Due:** While 21 percent of all 2017 participants did not have an amount due at the time the data were downloaded (not including pre-program arrearages except for customers who have come off the CRP), 22 percent owed more than \$1,000 and eleven percent owed more than \$2,000.
- **CRP Status:** At the time the data were downloaded, 57 percent of all 2017 participants and 45 percent of 2017 enrollees were active in the CRP.
- **CRP Type:** The majority of customers pay nine percent of their income, and most of the remaining customers were in the eight or ten percent group. While seven percent of all 2017 CRP participants had the \$25 minimum payment, three percent had the average bill. However nine percent of the later participants had the average bill, and this recently introduced plan is expected to have an increased enrollment.
- **CRP Participation Length:** A majority of participants were active in the program for less than two years. However, 21 percent had been participating for more than five years.

¹⁷ Year of birth for CRP participants indicates that 31 percent of customers who participate are elderly.

Affordability

The CRP provides a large average subsidy and has a large impact on energy affordability.

- **CRP Bill Impact:** The CRP provides a large discount for many customers. While the average monthly full bill was less than \$100 for 27 percent of 2017 CRP participants, the monthly CRP payment was less than \$100 for 78 percent of this same group. The average full bill was \$1,620 for all 2017 CRP participants and the average CRP bill was \$912 for all CRP participants.
- **CRP Discount:** The 2017 CRP participants received an average discount of \$672. Eighteen percent received a discount over \$1,200.
- **CAP Target Maximum Discount:** The Commission's maximum target discount is \$840. One third of all 2017 CRP participants received a discount over \$840. Customers in the minimum payment and eight percent of income groups were more likely than the other groups to receive an annual discount greater than \$840.
- **Targeted Energy Burden:** The CAP participants' calculated CAP payments are in line with the PUC energy burden targets. The minimum payment group has their payment set at \$25 per month which is generally above the calculated burden level, so the majority of these customers have a payment above the targeted burden. However, only seven percent of 2017 participants were in the minimum payment group.
- **CRP Energy Burden Impact:** There was a large decline in energy burden for all CRP tiers as result of the CRP discount. The energy burden declined by an average of ten percentage points for all participants.

Bill Payment

CRP participants improved their bill payment practices after enrolling in the program.

- **Bill Amount:** Prior to receiving the CRP discount, the average bills for the 2017 CRP participants were much higher than those for the low-income nonparticipants. The low-income nonparticipants likely chose not to participate in the CRP because their energy burden was already below the targeted eight, nine, or ten percent of income. After receiving the CRP discount, the average bills for the 2017 CRP participants were just about the same as for the low-income nonparticipants.
- **Customer Payments:** The 2017 CRP enrollees made an average of 6.4 payments in the year prior to CRP enrollment and 6.9 payments in the year following CRP enrollment, an increase of 0.5 payments. Both the later and earlier participant comparison groups reduced the number of payments made.
- **Late Payment Charges:** There was a large decline in the number of late payment charges for the 2017 CRP enrollees following enrollment in the program. While they averaged 6.3 late payment charges in the year prior to enrollment, they averaged only 0.3 late payment charges in the year following enrollment. (CRP participants do not receive late

payment charges, but some customers did not participate for the full year.) However, the comparison groups experienced an increase in the number of late payment charges, resulting in a net decline of 6.6 late payment charges and a net reduction of \$71 in costs for these charges.

- **Bill Coverage Rate:** The total coverage rate is defined as the total amount of payments and credits (including grants) divided by the annual charges. Sixty-one percent of 2017 CRP participants had at least a 90 percent total coverage rate. While 30 percent of 2017 enrollees paid at least 90 percent of their full bill in the year prior to enrollment, 56 percent paid at least 90 percent of charges in the year following CRP enrollment. Both the later and the earlier participants saw a decline in the proportion of customers paying at least 90 percent of their bill.

LIHEAP Assistance

CRP participants were more likely to receive LIHEAP following CRP enrollment.

- **LIHEAP Receipt:** About half of 2017 CRP participants received either LIHEAP or Crisis grants in 2017, compared to 62 percent of the low-income comparison group. The mean LIHEAP and Crisis grant total for the 2017 CRP participants was \$178 and the mean for the low-income comparison group was \$197.
- **LIHEAP Receipt after CRP Enrollment:** The 2017 CRP enrollees were more likely to receive LIHEAP in the year following enrollment. The net change was an increase of 17 percentage points in those who received LIHEAP and an average increase of \$30 in LIHEAP grants across all CRP participants.

Arrearage Forgiveness

CRP participants with arrearages did not receive forgiveness on a regular basis due to the requirements for credit receipt. The change to the program that grants arrearage forgiveness whenever the monthly CRP amount is paid in full regardless of the CRP arrearage should increase the amount of forgiveness received.

- **Arrearage Reduction:** CRP participants had large reductions in their arrearages from the time they enrolled in the CRP to the data download in July 2018. For all 2017 CRP participants, mean pre-program arrearages declined from \$950 to \$282 and 68 percent had no remaining pre-program arrearages at the time of data download. Although 2017 CRP enrollees likely participated in the program for a shorter period of time on average, 57 percent of this group had no remaining pre-program arrearages at the time of download.
- **Arrearage Forgiveness Received:** The analysis found that 89 percent of customers who had a remaining balance at the time of data download received at least one credit in 2017. The mean number of forgiveness payments was 5.3 for those with a balance remaining at the time of data download.

- **Arrearage Forgiveness Period:** With the current 36-month forgiveness period, customers receive an average of \$21 per month in forgiveness. If the forgiveness was done over 12 months, they would receive an average of \$72 in forgiveness per month.

Collections

CRP participants experienced a reduction in collections actions and service terminations following enrollment in the CRP.

- **Collections Actions:** The 2017 CRP enrollees experienced gross and net declines in notices and shutoffs. The total number of collections actions declined by an average of 1.7 actions following enrollment for the 2017 enrollees, and the net change was a decline of 2.9 actions.
- **Service Terminations:** While 15 percent of the 2017 CRP enrollees were shut off in the year prior to enrollment, four percent were shut off in the year following enrollment, a decline of 11 percentage points. The comparison groups experienced an increase in terminations, so the net change was a decline of 15 percentage points.

VI. Findings and Recommendations

This section provides a summary of key findings and recommendations.

A. *Customer Responsibility Program*

The evaluation confirmed that the CRP provides many benefits for participants, including improved energy affordability, improved bill payment practices, increased LIHEAP receipt in the year following CRP enrollment, a reduction in arrearages, and a reduction in collections actions and service terminations in the year following CRP enrollment. Participants reported that they were satisfied with the program and that it was very important in helping them to make ends meet.

PGW has recently made many modifications to the CRP that should increase access to the program and enhance the assistance for low-income customers. Given the substantive changes that have been made and the expected benefits, we do not recommend that PGW make additional modifications before evaluating the impacts of these many changes that were recently implemented. Some of the refinements that are expected to have benefits for the program include the following.

- **Modified Arrearage Forgiveness:** CRP customers receive arrearage forgiveness whenever they pay their monthly CRP amount in full regardless of their existing CRP arrearage. They receive forgiveness for every month paid when curing the CRP amount due, and receive a cure that is based on income changes when re-enrolling if the amount was lower than when previously participating in the CRP.

Based on the evaluation findings, these appear to be the more important changes made, as customers do not receive the majority of their potential arrearage reduction credits. These modifications are expected to increase the amount of arrearage forgiveness received. Because these modifications have only recently been made, we do not recommend any additional changes at this time to increase receipt of arrearage forgiveness before assessing the impact of this change.

- **Adding the Average Bill option to CRP:** This will allow customers with lower energy burdens to benefit from arrearage reduction and a discount if their usage increases.
- **Modified Re-certification Process:** PGW increased the path from 30 days to 45 days and will provide a two-year re-certification waiver (instead of a one-year waiver) to customers who receive a LIHEAP grant and assign it to PGW annually.

AND

- **Enhanced Employee Training:** PGW expanded its training curriculum to focus on re-certification to reduce the number of CRP customers placed on suspended status due to a failure to re-certify.

These changes should reduce CRP suspensions by making it easier for customers to re-certify within the required window, increasing the incentive to apply for LIHEAP, and reducing the need to re-certify on a bi-annual basis when LIHEAP is received.

- **One-Year Stay-Out Period:** PGW implemented a one-year stay-out period for customers who ask to be removed from the CRP, who have two or more incidents of unauthorized use of utility service, or who submitted fraudulent enrollment information.

Previous evaluations found that program managers and staff were concerned about the number of customers who left the CRP when their discount was negative in the summer, and then rejoined to obtain the program benefit following the summer months. This program change is expected to reduce such churning.

- **Automation of the CRP application/re-certification process:** The online application will provide another option for customers to enroll and re-certify, improving access to the program.

B. Home Comfort Program

The Home Comfort Program achieves significant energy savings for program participants and improves the health and safety in the home. PGW has continued to achieve good savings from the program, although savings can vary significantly from one CSP to another.

PGW has also made several other modifications that are expected to further improve the performance and increase access to the Home Comfort Program, and such changes should be evaluated before making other large-scale changes to the program. The changes that are expected to have the greatest impact on Home Comfort results are as follows.

- **Pilot Health and Safety Policy:** Contractors can spend up to \$2,000 per project on the installation of health and safety measures without the cost impacting the project's TRC cost-effectiveness (up to a monetary cap on the pilot program).

Many mature low-income energy efficiency programs are facing increased challenges serving potential participants due to health and safety barriers in the home. While LIURP is not designed to remediate all low-income housing stock in Pennsylvania (including landlord-owned properties), implementing this new pilot is an important step to provide access to comprehensive energy efficiency for more low-income households. PGW should track and analyze comprehensive data on health and safety spending needed to implement efficiency measures and the energy reductions that are accomplished as a result of those investments to determine whether the pilot should be continued beyond 2020.

- **Coordination:** PGW will investigate whether PGW can develop coordination with the local electric utility where their CSPs coordinate weatherization efforts. If so, PGW will work to establish that coordination.

Such coordination could increase program efficiencies and reduce participation burdens for low-income households.

- PGW developed and implemented marketing, outreach, and internal procedures to promote, identify and screen all the newly eligible non-CRP and other low-income customers for Home Comfort.

These actions will help ensure that the Home Comfort program is provided to high-usage customers who are most in need of service delivery. Serving the highest-usage customers will also result in the greatest, cost-effective energy savings for the program.

C. CARES

CARES provides important assistance to customers with special needs. PGW has begun tracking CARES case management cases.

D. Hardship Fund

PGW has a beneficial partnership with UESF to provide grants to customers who have had their service terminated or are in danger of a service termination. The program is effectively distributing benefits to customers in need with the funds that are available.

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