PECO Energy
Universal Services Program

Final Evaluation Report

April 2006

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Executive Summary

This report presents the findings from the 2004-2005 Evaluation of PECO's Universal Service Programs, including CAP, LIURP, CARES, and MEAF. PECO's Universal Service Programs assist eligible low-income customers through payment assistance, usage reduction, referral to assistance programs, and additional energy grants in the case of hardship. This report examines the design and implementation of these programs, as well as the impact of these programs on bill affordability, usage, customer payment behavior, and collections actions.

Introduction

PECO Energy has implemented a set of Universal Services Programs to meet requirements set by Pennsylvania's electric and gas restructuring legislation and various Public Utility Commission orders and agreements. The Bureau of Consumer Services (BCS) of the Public Utility Commission (PUC) requires that PECO evaluate its Universal Service Programs, and has developed standard evaluation questions to guide Universal Services Programs evaluations. The evaluation questions are listed below with brief answers and referral to the relevant section of the report.

1. Is the appropriate population being served?
   The Customer Needs Assessment, Section II, shows that the appropriate population of low-income customers is served by PECO's CAP. The Customer Surveys, Section IV, shows that customers who participated in CAP, LIURP, CARES, and MEAF were likely to have vulnerable members, had low education attainment, and were likely to be unemployed.

2. What is the customer distribution for each program by poverty guidelines?
   The Customer Needs Assessment, Section II, shows that in 2005, nine percent of CAP participants had income below 25 percent of the FPL, 17 percent had income between 26 and 50 percent of the FPL, 50 percent had income between 51 and 100 percent of the FPL, and 24 percent had income between 101 and 150 percent of the FPL.

   The MEAF Program Operations and Impact Analysis, Section VI, shows that in 2004, 35 percent of MEAF recipients had income below 50 percent of the FPL, 40 percent had income between 51 and 100 percent of the FPL, 19 percent had income between 101 and 150 percent of the FPL, and 3 percent had income between 151 and 200 percent of the FPL.

   The LIURP Program Operations Analysis, Section VII, shows that in 2004, 22 percent of LIURP recipients had income below 50 percent of the FPL, 34 percent had income between 51 and 100 percent of the FPL, 29 percent had income between 101 and 150 percent of the FPL, and 14 percent had income between 151 and 200 percent of the FPL.

   Poverty statistics are not available for CARES.

3. What are the barriers to program participation?
   The Customer Surveys, Section IV, shows that most customers said that CAP enrollment was not difficult. Only two percent said that CAP enrollment was "very difficult" and nine percent said that CAP enrollment was "somewhat difficult". These respondents reported that providing proof of income, making the payments required to enroll in the Program, completing the application, and waiting for the benefits were the most difficult parts of enrollment.

   This section also shows that of those who knew about the CAP but did not enroll, only 6 percent said that they had not enrolled because they did not know how to enroll. Most of those who did not enroll said it was because they did not believe they were eligible.

4. What is the distribution of customers by payment plan?
   The Customer Needs Assessment, Section II, shows that in December 2005 there were 68 CAP A participants, 6,461 CAP B participants, 14,630 CAP C participants, 56,150 CAP D participants, and 25,442 CAP E participants.

5. What are the barriers to program re-certification?
   The Customer Surveys, Section IV, shows that only three percent of current participants said that CAP re-certification was very difficult and five percent said that CAP re-certification was somewhat difficult. Nine percent of past participants said that CAP re-certification was very difficult and nine percent said that CAP re-certification was somewhat difficult. These respondents reported that providing proof of income, completing the application, and providing Social Security numbers were the most difficult parts of re-certification.

6. What are the CAP retention rates and why?
   The CAP Program Operations and Impact Analysis, Section V, shows that CAP retention rates are high. Ninety-six percent remain on the CAP for 12 months or more, and 88 percent remain on the CAP for 18 months or more.

7. Is there an effective link between participation in CAP and participation in energy assistance programs?
   The CAP Program Operations and Impact Analysis, Section V, shows that 17 percent of CAP participants received LIHEAP cash assistance in the year prior to enrollment, and 19 percent received LIHEAP cash assistance in the year following enrollment. However, most of these customers are not heating customers, and would not be expected to award a LIHEAP grant to PECO. Of the combination customers, 26 percent received LIHEAP cash assistance in the year prior to enrollment and 38 percent received LIHEAP cash assistance in the year following enrollment.

8. How effective are CAP control features at limiting program costs?
   PECO's Universal Service Programs, Section III, describes PECO's CAP design. Because the CAP is structured as a rate discount rather than as a percentage of income plan, PECO and its customers share in the cost of increased usage and increased prices.

9. How effective is the CAP and LIURP link?
   The LIURP Program Operations Analysis, Section VII, shows that 69 percent of 2003 LIURP recipients and 59 percent of 2004 LIURP recipients participate in CAP.

10. Does CAP participation improve payment behaviors?
    The CAP Program Operations and Impacts Analysis, Section V, shows that participants reduce the amount of payments made when they enroll in the CAP. However, due to the reduction in the asked to pay amount, their total bill coverage rate increases from 85 percent in the year prior to enrollment to 89 percent in the year following enrollment.

11. Does participation in Universal Service Programs reduce arrearages?
    The CAP Program Operations and Impacts Analysis, Section V, shows that CAP participants reduce their arrearages from $573 in the year prior to enrollment to $326 in the year following enrollment.

    The MEAF Program Operations and Impacts Analysis, Section VI, shows that MEAF recipients reduce their arrearages from $745 prior to the time of grant receipt, to $535 after grant receipt, to $409 one year after grant receipt.

12. Does participation in Universal Service Programs decrease service terminations?
    The CAP Program Operations and Impacts Analysis, Section V, shows that while 4 percent of CAP participants were shut off in the year prior to enrollment, only 1.5 percent were shut off in the year following enrollment.

13. Does participation in Universal Service Programs lower collections costs?
    The CAP Program Operations and Impacts Analysis, Section V, shows that collection costs decline by between six and ten dollars per customer after customers enroll in the CAP. This is due to a reduction in the number of collections actions for CAP customers and a reduction in the number of shutoffs experienced by CAP customers.

14. How can Universal Service Programs be more cost-effective and efficient?
    The Summary of Findings and Recommendations, Section VII, provides recommendations to improve PECO's Universal Service Programs. Some of the key recommendations include developing a database for CARES, reducing the number of updates made to CAP procedures, and continuing to provide the intensive education efforts that are part of LIURP.

The PUC also directed PECO to separately address how their CAP served customers with income below 50 percent of the FPL. To better meet the needs of this population, PECO implemented three new CAP rates in February 2004. CAP Rate A provides a $12 or $30 (depending on whether the customer uses electric heat) monthly bill to special needs customers with income less than or equal to 25 percent of the FPL. CAP Rate B provides an 85 percent discount to customers with income less than or equal to 25 percent of the FPL. CAP Rate C provides a 75 percent discount to customers with income between 26 and 50 percent of the FPL.

By March 2005, one year after program implementation, PECO had enrolled 3,433 customers in CAP Rate B and 10,207 in CAP Rate C. A full year of program implementation is necessary to conduct a proper evaluation of these new rates, so that the analysis does not only examine the first enrollees, and so that there are enough participants to evaluate. A full year of post-enrollment billing and payment data is necessary to properly evaluate the impact of the CAP on affordability and payment behavior due to the cyclical nature of earnings and energy assistance. Therefore, billing and payment data through March 2006 are necessary to conduct the evaluation of those below 50 percent of poverty served by PECO's new CAP tiers.

APPRISE has submitted a data request and analysis schedule to PECO for the Below 50 Percent Evaluation. This schedule requires that PECO deliver additional billing and payment data to APPRISE by May 2006. Given this schedule, a report with additional analysis of CAP customers with income below 50 percent of the FPL should be delivered in September 2006. PECO has stated that they are committed to this additional evaluation research.

To answer the 14 questions listed above, we conducted the following evaluation activities.

1. *Program Administration Research*: We conducted interviews with PECO managers and staff to confirm the scope of the evaluation, obtain relevant program documentation, identify key program informants, and target critical data sources. We reviewed all documents to develop an in-depth understanding of detailed program design elements, program procedures, and program requirements.

2. *Program Operations Research*: We conducted interviews with PECO program operations staff and call center and contractor staff to assess whether program procedures are operating as intended. We observed service delivery procedures to assess whether specific goals are being met during intake, service delivery, and follow-up. We developed statistics on program operations.

3. *Customer Needs Assessment*: We used data from the 2000 Census and PECO's customer database to develop information on the number of customers who are eligible for each of the Universal Services Programs and to assess the needs of customers for each program.

4. *Customer Interviews*: We contacted participants of each program to assess the efficiency and effectiveness of program operations. We contacted recent participants of the CAP program to assess the reasons for current nonparticipation. We contacted CAP non-participants who are eligible for program services to identify potential program barriers.

5. *Data Retrieval*: We developed systems to obtain payment, usage, arrearage, and collections information for participant and non-participant customers.

6. *Data Analysis*: We used available data to develop gross and net performance statistics for the CAP and MEAF programs.

This report presents the findings and recommendations from these evaluation activities.

Customer Needs Assessment

In this section of the report, we assess the penetration of PECO's Customer Assistance Program. We present information on the size of the population eligible for CAP benefits and the number of PECO customers who participate in CAP. These data are used to evaluate how effective the program has been in enrolling customers who are at or below 150 percent of the federal poverty guidelines and eligible to participate in PECO's CAP.

CAP Eligible Population

Seventeen percent of all households with PECO residential service are income-eligible for CAP. Of the 1.38 million households with residential utility service from PECO, approximately 234,000 are under 150 percent of the federal poverty guidelines. Of all CAP-eligible households with electric service, 28 percent have income below 50 percent of the federal poverty level (FPL), 33 percent between 50 and 100 percent of the FPL, and 39 percent between 100 and 150 percent of the FPL.

Analysis of CAP-eligible populations in the counties in PECO's service territory indicates that Bucks, Chester, Delaware, and Montgomery counties have similar portions of households that are income-eligible for benefits. In these counties, approximately 10 percent of households with electric service are income-eligible for CAP benefits. In Philadelphia county, nearly 30 percent of households with electric service are income-eligible for CAP.

We examined energy burden for CAP-eligible households by poverty level and type of PECO service. Households in the lower poverty groups are much more likely to have energy burdens that exceed the energy burden thresholds set by the PUC. While 25 percent of households with income between 100 and 150 percent of the FPL have burdens that exceed the PUC target, 85 percent of households with income between 25 percent and 50 percent of the FPL have burdens that exceed the PUC target.

CAP Recipient Characteristics

The CAP was serving nearly 105,000 PECO households by January 2006. Twenty-one percent, or approximately 22,000 households, had annual household income below 50 percent of the federal poverty guidelines and received CAP benefits corresponding to rate tiers A, B, and C. The majority of CAP participants had income between 50 and 100 percent of the federal poverty guidelines and receive CAP Rate Tier D benefits; 54 percent of participants enrolled in December 2005 had annual household income between 50 and 100 percent of federal guidelines.

Since implementation of CAP rate tiers A, B, and C, the number of households who receive these benefits expanded from 600 in February 2004 to over 22,000 in January 2006. However, over this time, only a small number of households received CAP Rate Tier A benefits. In January 2006, the program disbursed benefits corresponding to CAP Rate Tier A to 78 households.

The monthly volume of participant enrollment has increased substantially from 2004 to 2005. In 2004, an average of 1,789 eligible customers were enrolled each month. In 2005, an average of 2,428 eligible customers were enrolled and approximately 2,100 successful re-certifications were completed each month.

CAP Participation Rates

Overall, forty-five percent of eligible households participated in PECO's CAP in 2005. Approximately 105,000 PECO customers participated in the CAP, while over 234,000 PECO customers are eligible for some level of CAP benefit. Sixteen percent of eligible households with annual income below 25 percent of the FPL participated in the CAP; however, 64 percent of households between 25 percent and 50 percent of the FPL participated in the CAP, and 73 percent of households between 50 and 100 percent of the FPL participated in CAP.

PECO has higher CAP participation than other electric utilities in Pennsylvania. Using Census data estimates on the number of households in Pennsylvania with income at or below 150 percent of the FPL and data reported to the PUC on the number of households served by electric utilities in December 2004, we estimated that 43 percent of PECO households who are income-eligible receive CAP benefits, while only 14 percent of income-eligible households in other electric utilities' service territories participate in CAP.

CAP Needs Assessment Summary

While this analysis indicates that 45 percent of PECO's eligible customers participate in the CAP, it also indicates that the program has been unable to enroll a significant portion of households in the lowest income group. More in-depth analysis of this group is required to develop a better understanding of the energy assistance needs of these households and to determine why participation rates are so low. This analysis will be included in the Below 50 Percent of Poverty report. Once that analysis is complete, it may be possible to develop a strategy that will allow PECO to enroll a greater percentage of this group in the CAP.

PECO's Universal Service Programs

This section provides an overview of PECO's CAP, LIURP, CARES, and MEAF programs.

Customer Assistance Program

The Customer Assistance Program, referred to as CAP or CAP Rate, is a discounted residential tariff for low-income, payment-troubled residential customers. Customers with total gross household income less than or equal to 150 percent of the federal poverty level are eligible for the CAP. Additionally, the customer must be considered payment-troubled to be eligible for the program.

The number of customers enrolled in the CAP was 99,187 on December 31, 2003, 99,387 on December 31, 2004, and 102,762 on December 31, 2005. PECO reports that they are committed to enrolling all qualifying customers into CAP Rate and has set CAP enrollment goals for 2006 through 2008 as follows: 110,000 for 2006, 115,000 for 2007, and 120,000 for 2008.

Effective February 2004, PECO has five CAP Rate tiers, which can be summarized as followed:

- CAP Rate A: Customers with household income less than or equal to 25 percent of the FPL with extenuating circumstances are eligible. Electric non-heating customers receive a minimum $12 per month bill and electric heating customers receive a minimum $30 per month bill.

- CAP Rate B: Customers with household income less than or equal to 25 percent of the FPL without extenuating circumstances are eligible. They receive an 85 percent discount on their first 500 kWh monthly.

- CAP Rate C: Customers with household income between 26 and 50 percent of the FPL are eligible. They receive a 75 percent discount on their first 500 kWh monthly.

- CAP Rate D: Customers with household income between 51 and 100 percent of the FPL are eligible. They receive a 50 percent discount on their first 500 kWh monthly.

- CAP Rate E: Customers with household income between 101 and 150 percent of the FPL are eligible. They receive a 25 percent discount on their first 500 kWh monthly.

CAP Rate customers with gas service also receive a discount on their gas variable distribution charge. The gas CAP Rate discount results in a discount up to 28 cents per cubic foot (ccf) of monthly gas usage. The gas variable distribution charge is 28 cents per ccf. Customers with household income at or below 100 percent (i.e., gas CAP D) are not charged for variable distribution costs. Customers with household income between 101 and 150 percent (i.e., gas CAP Rate E) are charged 13 cents per ccf.[1]

CARES

Customer Assistance and Referral Evaluation Services (CARES) is a referral and information service designed to assist customers who have a temporary personal or financial hardship that prevents the payment of their utility bill. The purpose of this program is to help address health and safety concerns related to utility service. Eligible customers may receive temporary protection from termination of service and specific education and referral information for energy and non-energy related assistance. Customers with total gross household income less than or equal to 200 percent of the FPL, senior citizens, and

[1] PECO's public CAP Rate information literature reports that the gas discount is restricted to the first 100 cubic feet (ccf) of a gas monthly bill. However, according to PECO Universal Services, the gas discount is applied to all ccf.

customers who receive government-based income (e.g., SSI, SSD) are eligible for CARES. There were 2,627 customers referred to CARES in 2004.[2]

The CARES program works in conjunction with PECO's other Universal Services programs. The goal of the CARES consultant is to make personal contact with the CARES customer and process the customer's paperwork for enrollment into relevant PECO Universal Services programs. In addition, the CARES consultant is expected to educate and inform PECO customers of available resources such as, energy assistance, budget counseling, housing assistance, and other social services. This effort is designed to maximize the ability of payment-troubled customers to pay their energy bills. PECO attempts to reach this goal by maintaining an extensive referral network, consisting of community organizations, government agencies, and social service agencies.

LIURP

The Low Income Usage Reduction Program (LIURP) provides education, conservation, and weatherization measures to reduce electric and gas usage. Customers must meet the following usage and income eligibility criteria for program participation.

- Household usage levels that exceed 600 kWh per month for electric baseload, 1,400 kWh per month for electric heat, or 100 ccf per month for gas heat.

- Residential customers with household income at or below 150 percent of the federal poverty level (FPL), or special needs residential customers with an arrearage and household income between 150 percent and 200 percent of the FPL.

The number of customers who receive LIURP services each year is largely determined by the annual program budget established in the settlement agreement of PECO's electric restructuring case (PUC Docket Numbers R-00973953 and P-00971265). The annual budget for 2004 and 2005 is $5.6 million for the LIURP electric customers and $875,000 for the LIURP gas customers. PECO served 8,373 customers in 2003 and 8,041 customers in 2004. There were 516 customers who were assigned to the program in 2004 that are still pending an audit or work.

PECO contracts with CMC Energy Services to administer LIURP. PECO provides CMC with a list of eligible customers and their energy usage data. CMC pursues these households in descending order based on highest usage and largest arrearages. CMC conducts an energy audit to determine the behavioral changes and program measures required for usage reduction. Following the audit, the auditor makes arrangements for a future visit to install measures. Robert Fantuzzo conducts an annual evaluation of the LIURP, which is reported separately from this evaluation.

[2] Information provided per data received from PECO's Universal Services and IT Department.

MEAF

The Matching Energy Assistance Fund (MEAF) is a hardship fund that provides grants to customers who have had their service terminated or who are in danger of termination. Customers are eligible for MEAF grants of no greater than $500 if their income is at or below 175 percent of the federal poverty level (FPL), they have been shut off or received a shut off notice, the grant received will bring their balance down to zero, and they applied for LIHEAP. In 2004, 2,161 customers received MEAF grants.[3]

Funding for MEAF comes from PECO customers and PECO fundraising efforts. Ratepayers are asked in promotional bill inserts to pledge an amount that PECO will add to their monthly bill. The contributions collected are matched dollar for dollar by PECO shareholders.[4] All monies collected and matched are distributed to the fuel fund agencies based on the percentage factor of poverty level customers in each county.

The role of each county-designated community agency is to provide education and outreach related to MEAF, determine MEAF eligibility, and distribute the MEAF grants. Each agency chooses its own method of managing outreach, determining eligibility, and processing intakes based on the individual needs of the community.

Customer Surveys

APPRISE designed a customer survey for each of four PECO Programs as part of a Universal Service Program evaluation. The customer surveys were designed to assess the following:

- Household demographics
- Reasons for program participation
- Understanding of the program
- Measures and services received from the program
- Actions taken as a result of the program
- Financial obligations and bill payment difficulties
- Impact of the program on energy usage and bills
- Impact of the program on safety and comfort
- Satisfaction with the program

CAP Survey

Key findings from the CAP survey are highlighted below.

- *Demographic Characteristics:* The CAP participants and non-participants were likely to have at least one vulnerable member, an individual over the age of 65 or under the age

[3] Information provided per data received from PECO's Universal Services and IT Department.
[4] There is language in previous documents that the maximum level of PECO matching MEAF dollars is $1,000,000. However, the PECO legal & regulatory team has been researching the previous settlements and Commission filings for additional information.

of 18, a disabled individual, or someone who required the use of electricity or gas for medical reasons in their household. Non-participants were less likely than current and past CAP participants to have at least one disabled member. Current participants were more likely than past CAP participants and non-participants to have at least one elderly member.

Also, 19 percent of current participants reported that no member of their household had the equivalent of a high school education, compared to four percent of non-participants and three percent of past participants. Non-participants were more likely than current or past participants to report that they had some college or a Bachelor's Degree.

Close to 30 percent of each participant group reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey. The majority of respondents in each group reported an annual income under $30,000. Current participants were most likely to report incomes in the lowest bracket, below $10,000 a year, while non-participants were the most likely to report an annual income above $30,000. Only 28 percent of current participants reported that they earned wages from employment, compared to over half of past and non-participants. Close to one-fourth of each group reported that they received retirement income in the year prior to the survey.

Forty-one percent of current participants reported that they received public assistance in the year prior to the survey, compared to 31 percent of past participants and 15 percent of non-participants. Similarly, 48 percent of current participants reported that they received in-kind benefits such as food stamps or subsidized housing in the year prior to the survey, compared to 35 percent of past participants and 13 percent of non-participants.

- *Customer Assistance Program Outreach:* Current participants, past participants and non-participants who indicated that they were aware of the CAP, reported that they most commonly heard about the Program from a PECO representative. Over 20 percent of respondents in each group reported that they heard about the Program from a friend or relative. Other respondents heard about the Program from a PECO bill, or in a PECO flyer or newsletter.

- *Factors Affecting Enrollment Decisions:* Seventy percent of current participants and 66 percent of past participants reported that they enrolled in the Program to reduce their energy bills. Over 20 percent in each group said that they had a low or fixed income or were unemployed. Non-participants who were aware of the CAP were asked why they had not enrolled in the program. Thirty percent of non-participants reported that they had not enrolled in the Program because their income was too high and 25 percent reported that they believed they were not eligible for the Program for another reason.

- *Ease of Program Enrollment and Recertification:* The majority of current and past participants reported that Program enrollment and recertification were not too difficult.

- *Knowledge of Program Benefits and Requirements:* When asked to report what their responsibility was as a CAP participant, the majority of current and past participants said that they were required to keep up with their monthly PECO payments.

  About 80 percent of both current and past participants said they had a good understanding of the benefits provided by the CAP. When asked to describe CAP benefits, respondents were most likely to refer to lower energy bills, even monthly payments, and maintenance of utility service. Over 40 percent of current and past participants identified lower energy bills as the most important benefit of the CAP, and 30 percent identified not having the utility service turned off as the most important benefit.

- *Program Impact on Bill Payment and Arrearages:* The majority of current and past participants, over 80 percent, did not know what percentage discount they receive on their monthly PECO bills. Additionally, over 40 percent of current and past participants said they did not know how much money CAP saved them on a typical monthly bill in the winter.

  Current and past participants reported a decline in arrearages since participating in the Program. Over 40 percent of current and past participants reported that they had no arrearages at the time of the survey. Forty-one percent of non-participants reported that they had arrearages over $100, indicating a need for the CAP. Of those who reported arrearages, over 60 percent said that arrearage forgiveness makes them more likely to pay their monthly bill on time.

  Over 50 percent of current participants and 40 percent of past participants said that it was very difficult to pay their utility bills prior to participating in the CAP, compared to nine percent of current participants and seven percent of past participants who said it was very difficult to pay their gas bills while enrolled in the Program. These data demonstrate that customers perceive that the CAP increased the affordability of their PECO bills.

- *Bill Payment Difficulty:* Customers were asked how difficult it was for them to pay their bills prior to participating in the CAP and while participating in the CAP. Fifty-six percent of current participants said that it was very difficult to pay their bills prior to CAP enrollment and only nine percent of current CAP participants said that it was very difficult to pay their bills while enrolled in the Program. Sixty-four percent of current participants and 57 percent of past participants said that their PECO bills were lower than before participating in the Program.

  Current and past participants were asked whether they had foregone or delayed spending on non-energy bills such as food, medicine, medical or dental service, mortgage or rent, telephone or cable, loan or credit card, and car payments, before participating in the CAP and while participating in the CAP. Respondents were less likely to report that they had forgone or delayed these other bills while they were enrolled in the CAP than they were prior to participating in the Program. Non-participants reported that they had to forego or delay most of these necessities at higher rates than current and past participants did while participating in the CAP, and at rates similar to those that current and past participants reported prior to enrolling in the CAP.

About one quarter of current and past participants said that their energy use was lower than what it was before participating in the CAP. Ten to fifteen percent of each group reported higher energy usage since participating in the Program, and 47 percent of current participants and 62 percent of past participants said that their energy usage had not changed.

Current and past participants were more likely to report that they did not have heat due to a broken heating system, or because their electricity or gas had been disconnected, in the year prior to Program enrollment compared to the Program participation period.

- *Additional Sources of Energy Assistance:* Fifty-one percent of current participants, 38 percent of past participants, and 13 percent of non-participants reported that they had received LIHEAP in the year prior to the survey. Fourteen percent of current participants, 16 percent of past participants and six percent of non-participants reported that they received LIURP services in the past. Sixty percent of current participants, 62 percent of past participants, and 79 percent of non-participants reported a need for additional assistance to pay their energy bills.
- *Participants' Expectations for Future Participation:* Over three-fourths of past participants said that they would be interested in re-enrolling in the CAP if they were eligible. Eighty-six percent of current participants said that they were very likely to continue to participate in the CAP, and sixty-six percent said that they would continue to participate as long as they were eligible.

- *General Evaluation of Program Benefits:* Ninety-three percent of both current and past participants reported that the CAP had been somewhat or very important in helping to meet their needs. Ninety-six percent of current participants and 91 percent of past participants said that they were somewhat or very satisfied with the Program.

CARES Survey

Key findings from the CARES Survey are highlighted below.

- *Demographic Characteristics:* Households that received CARES services were likely to have vulnerable members. Sixty-four percent of households surveyed had at least one disabled member, 47 percent had at least one child under the age of 18, and 40 percent had at least one elderly member. These households were also unlikely to have any member with more than a high school diploma, and more than one-third of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

Respondents were asked for the range of their annual household income. Forty-five percent of respondents reported an annual income of $10,000 or less, 33 percent reported an annual income between $10,001 and $20,000, six percent reported an income between $20,001 and $30,000, and six percent reported an income over $30,000. Only one-quarter of respondents reported that they earned any wages from employment, and one quarter of respondents reported that they received retirement income in the year preceding the survey. Conversely, 49 percent of respondents reported that they received public assistance, and 49 percent reported that they received in-kind benefits such as food stamps or subsidized housing in the year prior to the survey.

- *CARES Outreach and Communication:* Most respondents were first contacted by a CARES worker by telephone, or by both mail and telephone. Seventy-eight percent of respondents said that they received no follow-up phone calls to inquire about their circumstances after the initial call.

  Customers were asked about the type of problem that was faced that lead to the need for CARES. Almost three-fourths of respondents were in need of CARES services due to financial problems. Over one-fifth had experienced health or medical problems and six percent had high bills that led to the need for CARES services.

- *Knowledge of Program Benefits:* Thirty-six percent of respondents identified lower energy bills as the most important benefit of CARES. Twenty-two percent said that general help with finances and bills was the most important benefit, and seven percent said that maintaining the utility service on was the most important benefit.

- *Impact of CARES:* The survey showed that CARES helps customers to get the services that the need. Close to one-third of respondents said they received a health usage discount on their PECO bills as a result of CARES. Additionally, 39 percent of respondents received CAP as a result of CARES, 20 percent received LIHEAP, and five percent received LIURP services.

  Three-fourths of respondents reported that CARES facilitated the payment of their PECO bills and the payment of their non-PECO bills. However, over 70 percent of respondents reported that their PECO bills were still very or somewhat difficult to pay.

- *Financial Difficulties and Use of Alternative Heating:* Twenty-two percent of respondents reported that they had been unable to use their main source of heat in the year prior to the survey, 15 percent reported an electricity service termination and 16 percent reported a gas service termination. Over three-fourths of those who experienced gas service terminations used more electricity to heat their homes.

- *Additional Sources of Energy Assistance:* Sixty-nine percent of respondents reported that they received LIHEAP in the year preceding the survey. Seventy-five percent of respondents reported that they needed additional help to pay their energy bills.

- *General Evaluation of Program Benefits:* Sixty-six percent of respondents reported that CARES had been very important in helping them to meet their needs, and an additional 15 percent reported that it had been somewhat helpful in meeting their needs. Thirteen percent of respondents felt that CARES was of little importance or not at all important.

LIURP Survey

Key findings from the LIURP Survey are highlighted below.

- *Demographic Characteristics:* Households that received LIURP services were likely to have vulnerable members. About 58 percent of households surveyed had at least one child under the age of 18, 41 percent had at least disabled member, and 38 percent had one elderly member. These households were also unlikely to have any member with more than some college education, and almost one-third of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

  Respondents were asked for the range of their annual household income. Twenty-two percent of respondents reported an annual income of $10,000 or less, 26 percent reported an annual income between $10,001 and $20,000, 21 percent reported an income between $20,001 and $30,000, and 20 percent reported an income over $30,000. Half of the respondents reported that they earned wages from employment in the year preceding the survey, and one-third of respondents reported that they received retirement income.

  Twenty-seven percent of respondents reported that they received public assistance in the year prior to the survey, and 21 percent reported that they received in-kind benefits such as food stamps or subsidized housing.

- *LIURP Outreach and Enrollment:* Over half of respondents learned about LIURP from a PECO representative. The majority of respondents enrolled in LIURP to reduce their energy bills, or to reduce their energy use.

- *LIURP Provider and Participant Actions:* The respondents were asked whether the provider explained energy use, recommended actions to save energy, informed respondents how much money recommended actions could save, and left materials about how to reduce energy use. Over three-fourths of respondents reported that the provider did each of these. This is a very positive finding for the Program.

  Respondents were asked what energy saving actions they had taken as a result of the Program. The actions most commonly reported included using compact fluorescent light bulbs (CFL's), reducing the use of lighting, changing the thermostat settings, and reducing the use of appliances.

The survey asked respondents about reducing the use of specific appliances. Of the respondents who have each appliance 70 percent said that they reduced the use of heat and the use of the dishwasher, 67 percent reduced the use of lights, 61 percent reduced the use of hot water, 59 percent reduced the use of air conditioning, 54 percent reduced the use of the dryer and space heaters, and 33 percent reduced the use of a dehumidifier.

- *Knowledge of Program Benefits and Requirements:* Seventy-nine percent of respondents said that they had a good understanding of LIURP benefits. Forty-one percent said that energy education was a benefit of the Program, 31 percent said that lower energy bills was a benefit, and 30 percent said lower energy use was a benefit. More than one-third of respondents said that energy education was the most important benefit of the Program.

- *Program Measures:* Respondents were asked about the measures they received through LIURP. As a result of the Program, about 30 percent of respondents received air sealing or insulation, 18 percent received a new refrigerator, six percent received a water heater timer, and two percent received a new air conditioner.

- *Impact of LIURP Services:* The majority of respondents, 63 percent, reported that it was very or somewhat difficult to pay their monthly energy bills despite the LIURP services. Half of the customers who received heating services said that the winter temperature of their home had improved and 40 percent of the customers who received heating services said that the summer temperature of their home had improved.
- *Bill Payment Difficulty:* Customers where asked whether their bill had increased or decreased since the receipt of LIURP. Forty-four percent of customers who received LIURP said that their bill was lower since the receipt of services. Combination customers were more likely to say that their bill had increased since the receipt of LIURP services, probably due to increases in gas prices. Three-fourths of respondents said that they had reduced their overall energy use since receiving LIURP services.

  Seventeen percent of respondents reported that they were unable to use their main source of heat in the year prior to the survey, four percent reported that they experienced an electricity service termination and seven percent reported a gas service termination. These kinds of service interruptions often increase the use of alternative heat sources. Fourteen percent of respondents reported that they used their kitchen stove or oven to provide heat in the year prior to the survey, and over half of those who experienced gas service terminations used more electricity to heat their homes as a result.

- *Additional Sources of Energy Assistance:* More than one-third of respondents reported that they received LIHEAP in the year prior to the survey. Over half of respondents reported that they needed additional assistance to pay their energy bills.

- *General Evaluation of Program Benefits:* More than half of respondents said that LIURP had been very important in helping them to meet their needs. One-quarter said that it had been somewhat important. Close to 60 percent of respondents reported that the energy education had been very helpful to them. A majority of respondents said that the LIURP auditor was very knowledgeable about energy use, and over half of respondents said the work done to their homes was done very soon after it was promised to them. Overall, 89 percent of respondents said that they were very or somewhat satisfied with the Program.

MEAF Survey

Key findings from the MEAF Survey are highlighted below.

- *Demographic Characteristics:* Households that received MEAF grants were likely to have vulnerable members. Over 60 percent of households surveyed had at least one child under the age of 18, over half had at least one disabled member, and about one-quarter of households had at least one elderly member. These households were also unlikely to have any member with more than a high school diploma, and 30 percent of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

  Respondents were asked for the range of their annual household income. Sixty percent of respondents reported an annual income of $10,000 or less, 19 percent reported an annual income between $10,001 and $20,000, and 14 percent reported an income between $20,001 and $30,000. Fifty-eight percent of respondents reported that they had received public assistance in the year prior to the survey, and 56 percent reported that they received in-kind benefits such as food stamps or subsidized housing.

- *MEAF Outreach and Application:* Thirty percent of respondents reported that they applied for the MEAF grant due to high bills. Twenty-three percent needed the grant due to a loss of income or job, 21 percent because of health or medical problems, and 9 percent due to personal reasons.

- *Impact of MEAF Grant on Bill Payment:* Over 70 percent of respondents reported that they have been able to make all their PECO bill payments since receiving the MEAF grant.

- *Financial Difficulties and Use of Alternative Heating:* Twenty-one percent of respondents reported that they had been unable to use their main source of heat in the year prior to the survey, sixteen percent reported an electricity service termination, and twenty-three percent reported a gas service termination. Over half of those who experienced gas service terminations used more electricity to heat their homes as a result.

- *Additional Sources of Energy Assistance:* Sixty-five percent of respondents reported that they received LIHEAP in the year preceding the survey. Sixty-three percent reported that they were participating in CAP at the time of the survey. One-quarter of respondents reported that they received LIURP services, and 14 percent received CARES. Sixty-five percent of respondents reported that they needed additional help to pay their energy bills.

- *General Evaluation of* Program Benefits: Eighty-four percent of respondents reported that the MEAF grant they received helped to restore or maintain their utility service. Eighty-six percent identified the MEAF grant as very important in helping them to meet their needs, and 97 percent of respondents said they were very or somewhat satisfied with MEAF.

CAP Analysis

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, account balance data, usage data, and collections data for 2003 and 2004 CAP participants.[5] APPRISE used the data to analyze CAP operations and impacts of the CPA on affordability, bill payment, account balances, collections actions, and usage.

The main purpose of the program operations data analysis was to develop quantifiable measures of CAP participant household demographic and account status information. The main purpose of the program impact data analysis was to assess whether CAP participation improves bill affordability and payment behavior, and reduces arrearages and collection costs.

Methodology

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, account balance data, usage data, and collections data for 2003 CAP participants, 2004 CAP participants, and low-income customers who never participated in the CAP. Customers who enrolled in the CAP between January 1, 2003 and December 31, 2003 were included as potential members of the study group.

Comparison groups were constructed for the CAP data analysis to control for exogenous factors. The comparison groups were designed to be as similar as possible to the treatment group, those who received services and who we are evaluating, so that the exogenous changes for the comparison groups are as similar as possible to those of the treatment group.

When measuring the impact of an intervention, it is necessary to recognize other exogenous factors that can impact changes in outcomes. Changes in a client's payment behavior and bill coverage rate, between the year preceding CAP enrollment and the year following enrollment, may be affected by many factors other than program services received. Some of these factors include changes in household composition or health of family members, changes in utility prices, changes in weather, and changes in the economy.

[5] PECO reported that due to the redesign and development of automated support for CARES, CARES data was unavailable prior to October 2004. Consequently, there was not enough data history for useful data analysis. MEAF program operations and impacts analysis is reported separately in Section VI. LIURP program operations analysis is reported separately in Section VIII.

In the evaluation of the CAP, we were able to obtain two good comparison groups.

- *2004 CAP Enrollee Comparison Group (CG1):* We use customers who last enrolled in the CAP in 2004 and who did not receive CAP discounts in the two years preceding enrollment as a comparison group. We require that they have no discounted bills in the two years preceding enrollment to ensure that they are non-participants in both periods. These participants serve as a good comparison because they are lower income households who were eligible for the program and chose to participate. We use data for these participants for the two years preceding CAP enrollment, to compare their change in payment behavior in the years prior to enrolling to the treatment group's change in payment behavior after enrolling. Because these customers did not participate in the CAP in both analysis years, changes in bills and behavior should be related to factors that are exogenous to the program.

- *Low-Income Non-participant Comparison Group (CG2):* We obtained a sample of customers who PECO identified as low-income and had never enrolled in the CAP, to utilize as a comparison group. The group of customers was replicated to represent customers who enrolled in the program in each quarter of 2003. A quasi intervention date of the middle of the quarter was chosen for each group to compare to the participating customers who enrolled in that quarter.

The actual impact of the CAP on customer affordability and payment is estimated as the average of the estimates using the two comparison groups. The 2004 enrollees (CG1) are probably worse off because these customers' behavior is examined in the year prior to program enrollment, when they need more assistance in paying their bills. The low-income non-participants (CG2) are probably somewhat better off than the 2003 enrollees, because they have not needed to enroll in the program.

For the CAP program impact analysis, we examine pre and post-treatment statistics. 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 are 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.

CAP Analysis Findings

This section summarizes findings from the data analysis of CAP participants.

- *Household Demographics:* The 2003 CAP enrollee treatment group is very similar on all household demographic characteristics to the 2004 CAP enrollee comparison group (CG1). The non-participant comparison group (CG2) was somewhat more likely to have larger households with more children and less elderly members, higher incomes, and incomes at or above 150 percent of the FPL.

- *Account Characteristics:* The 2003 CAP enrollee treatment group is very similar to the 2004 CAP enrollee comparison group with regard to service type and arrears at the start of the post-treatment analysis period. However, customers in the 2004 CAP enrollee comparison group were more likely than customers in the 2003 CAP enrollee treatment group to receive CAP Rate B or C, because most customers in 2004 CAP enrollee comparison group were enrolled into the CAP after the February 2004 implementation of the new CAP Rate tiers. In addition, customers in the non-participant comparison group were more likely than customers in the other study groups to receive only electric service from PECO.

- *Retention Rates:* Ninety-nine percent of the original 2003 treatment group received a discount in each of the first three months after enrollment, 98 percent remained in the CAP for the first six months, 96 percent remained on for the first twelve months, and 88 percent remained on for the first eighteen months. The final treatment group had a slightly greater full year retention rate. Ninety-one percent of these customers remained in the CAP for eighteen months after enrollment.

- *Arrearage Forgiveness:* PECO provides arrearage forgiveness to CAP customers who pay their bills on time and in full, and who are current with their CAP payment obligations for six consecutive months. Sixty-eight percent of the final treatment group received arrearage forgiveness in the twelve months after CAP enrollment. Among the final treatment group, 13 percent received between $1 and $100, 33 percent received between $101 and $500, and 22 percent received greater than $500 in arrearage forgiveness.

  Households with no elderly members, households with children, large households, and higher income households received greater forgiveness. Customers with household income at or below 50 percent of the FPL received greater arrearage forgiveness than those with household incomes above 50 percent of the FPL. Combination customers received greater arrearage forgiveness than electric only customers. However, combination customers were no more likely to receive arrearage forgiveness than electric only customers. Customers with greater arrears at the time of enrollment received more arrearage forgiveness. Customers in CAP Rate D at the time of data download were more likely to receive forgiveness and received more forgiveness than customers in CAP Rate E.

- *Affordability Impacts:* The CAP had a positive impact on affordability for program participants. The 2003 CAP enrollees had a gross reduction in bills of $312. Taking the average of the non-participant and 2004 enrollee comparison groups, the net impact of the CAP on the asked to pay amount was a decrease of $354. The 2003 CAP enrollees experienced a gross decrease in energy burden, from 12.0 percent in the year prior to participating in the program, to 8.6 percent in the first year of program, for a gross reduction of 3.4 percentage points and an average net decrease of 3.4 percentage points.

CAP customers are eligible for both electric and gas CAP Rate discounts. Positive net impacts were greater for CAP customers who received both electric and gas service. Combination customers who were not in the CAP experienced a rise in the gas portion of their bill. CAP combination customers did not experience the same rise due to the CAP Rate discount on the gas variable distribution charge on their monthly gas bill. The average net impact of the CAP on energy burden for CAP combination customers was a decrease of 4.7 percentage points. The average net impact of the CAP on energy burden for CAP electric only customers was 3.5 percentage points.

- *Payment Impacts:* CAP customers experienced large reductions in their asked to pay amounts and their cash and total payments. Customers paid less in the year following enrollment because they were asked to pay less than they paid in the pre-enrollment year. However, due to their lower bills they had increased bill coverage rates. Due to their lower bills and arrearage forgiveness, they reduced their balances.

  The asked to pay amount decreased by $312 for the CAP participants. The average net impact of the CAP on the asked to pay amount was a decrease of $354. CAP participants had an average total coverage rate of 85 percent in the year preceding enrollment and an average total coverage rate of 89 percent in the year following CAP enrollment, an increase of four percentage points. The average net impact of the CAP on total coverage was 4.5 percentage points.

  CAP participants had an average shortfall of $215 in the year preceding enrollment and an average shortfall of $129 on the discounted bill in the year following enrollment. The gross change in shortfall was a decrease of $86. The net change in shortfall was a decline of $113.

  By paying their pay their CAP bills and staying current with their CAP payment obligations for six consecutive months, CAP Customers received $392 in arrearage forgiveness in the year following enrollment for a gross and net increase of $392.

  Balances decreased from $573 at the end of the year preceding enrollment to $326 at the end of the year following enrollment, for a gross decrease of $248. Balances for CG1 customers increased by $239. Balances for CG2 customers were unchanged. The average net impact of the CAP on balances was a decrease of $374.

- *Assistance Impacts:* Approximately 18 percent of customers received a LIHEAP cash grant in the pre and post treatment periods. Only a small percent of customers received LIHEAP crisis and MEAF grants. There was a significant increase in the percentage of combination customers who received LIHEAP cash grants.

- *Usage impacts:* The net change in gas and electric non-heating usage was not statistically significant for the 2003 CAP participants as compared to the 2004 enrollee comparison group. There was a statistically significant net change of 555 kWh for the

2003 electric heating participants as compared to the comparison group, an increase of approximately four percent of pre enrollment usage.

- *Collections actions:* CAP participation was associated with a significant reduction in all collection actions, including service terminations. Seventy-one percent of CAP participants received a collection action in the year preceding enrollment, compared to 31 percent in the year following enrollment, for a gross decrease of 40 percentage points. The average net impact of the CAP on any collection action was a decrease of 42 percentage points. Four percent of CAP participants had their service terminated in the year preceding enrollment, compared to 1.5 percent in the year following enrollment, for a gross decrease of 2.5 percentage points. The average net impact of the CAP on service terminations was a decrease of 2.1 percentage points.

- *Cost-Benefit Analysis:* Collections costs decreased by approximately $8 per customer, and shortfall increased by $373, resulting in an average net cost to PECO of $365 per CAP customer enrolled.

MEAF Analysis

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, and account balance data for 2003 and 2004 MEAF recipients. For the program operations and program impact analysis, APPRISE used the data to analyze MEAF recipient customer characteristics and the impact of MEAF on bill payment and account balances.

Methodology

Later MEAF recipients were used as a comparison group in this analysis. Customers who received a MEAF grant in 2004 serve as a good comparison because they are lower income households who were eligible for MEAF and chose to apply for MEAF. We use data for these customers for the year preceding receipt of a MEAF grant, to compare their payment behavior in the year prior to grant receipt to the treatment group's payment behavior after grant receipt.

MEAF Analysis Findings

This section summarizes findings from the data analysis of MEAF recipients.

- *Household Demographics*: Customers in the final treatment group were somewhat more likely than customers in the final comparison group to have children, and somewhat less likely to have an elderly household member, live in a single-person household, or have annual household income at or below $10,000. The final treatment and comparison groups were similar with respect to the presence of elderly household members and household poverty level.

- *Account Characteristics*: Customers in the MTG and the MCG were very similar with respect to service type. Customers in the final MTG were less likely to have arrears at the start of the post-treatment analysis period than customers in the final MCG. Most customers in the MTG and the MCG were CAP participants.

- *Payment Impacts:* In the year following grant receipt, customers in the MTG had been billed $1,114, which was similar to the amount billed to the customers in the MCG. Customers in the MTG made an average of eight cash payments during the analysis year, compared to customers in the MCG, who made an average of six cash payments. Customers in the MTG, on average, made a total of $900 in cash payments, compared to customers in the MCG, who made a total of $628 in cash payments. Average total payments in the year following MEAF grant receipt for customers in the MTG was $1,009, compared to $747 for customers in the MCG. Higher payments for the customers in the MTG resulted in increased bill coverage and decreased account balances.

- *Balance:* There was no significant difference between the average balance for the MTG before MEAF grant receipt and the MCG one year prior to grant receipt. The average MEAF grant award for customers in the MTG was $210. After customers in the MTG received the MEAF grant, their average balance decreased from $745 to $535. This statistically significant difference in balance between the MTG and the MCG increased over the 12-month period, as the MTG kept their balance at approximately the same level, and the MCG significantly increased their balance. The average balance for customers in the MTG was $409 at 12 months after grant receipt, compared to a balance of $951 for the MCG. While the MTG decreased their balance by $6 as compared to their balance right after grant receipt, the MCG increased their balance by $303 as compared to one year earlier.

- *Success:* Customers were segmented based on their balance one year after MEAF grant receipt. Forty-one percent of customers in the MTG were classified as very successful with an ending balance less than $100. Twenty-five percent were classified as somewhat successful with an ending balance greater than or equal to $100, but less than the balance after MEAF grant receipt. Thirty-four percent were classified as unsuccessful with an ending balance greater than the balance immediately following MEAF grant receipt.

LIURP Analysis

This section provides statistical analysis of the demographic, account, and LIURP service characteristics of 2003 and 2004 LIURP recipients.

- *Demographics:* LIURP recipients in 2003 and 2004 were very similar with respect to number of household members, annual income, and poverty level. More than half of LIURP recipients in both years were likely to have three or more household members, annual income under $20,000, and income at or below 100 percent of the FPL.

- *CAP Participation:* Most LIURP recipients were participating in the CAP at the time of the LIURP data download. Moreover, most of these CAP participants were enrolled in CAP Rate D or E.

- *LIURP Service:* Three fourths of 2003 and 2004 LIURP recipients received baseload audits, while one-fourth of recipients received heating audits. The mean cost of installed measures was $561 for 2004 recipients and $481 for 2003 recipients. About 14 percent of LIURP recipients received new refrigerators, and only a few percent received window air conditioners and water heater timers.

Recommendations

This section summarizes the recommendations that are made in the report. Additional information on the recommendations can be found in the body of the report or in Section VIII, Summary of Findings and Recommendations.

Customer Needs Assessment

1. The evaluation should undertake additional analyses to develop a better understanding of the energy assistance needs of households with income below 25 percent of the FPL and why these households have low CAP participation rates. Depending on the results of this analysis, we may develop recommendations for increasing the CAP participation rate of this group. This analysis will be included in the Below 50 Percent of Poverty Report.

Program Administration and Procedures

1. Update computer system so that all eligible customers can be referred for CARES.

2. Develop manuals to document all potential CARES referral services.

3. Develop a computer system to manage CARES data and indicate CARES status in the customer information system.

4. Provide less frequent updates to the CAP payment processes, and provide NCO with consolidated update information as they do for OSI.

5. Direct NCO staff to follow-up with customers who call in about their CAP status if they have been requested to send in income verification.

6. Inform all NCO staff that the CARES program has been reinitiated.

Customer Perspectives

1. The use of supplemental electric heat due to gas service terminations is a dangerous and inefficient practice. It is a problem that could be faced by most low-income customers

in Pennsylvania who have separate gas and electric fuel suppliers. In light of limits on the number of customers who may receive LIHEAP grants in each county, and the tension between PECO and PGW over the award of LIHEAP grants, the BCS should work with the utilities to develop a coordinated approach to better serve the needs of their low-income customers.

2. Require a follow-up call for CARES recipients to ensure that they have been able to obtain the needed assistance.

3. Continue to provide intensive education efforts as part of LIURP, as education appears to be an important and effective component of the program.

Impact Analysis

1. Most CAP participants are asked to pay less with the CAP discount than they paid in the year prior to enrolling in CAP. As a result, customers are likely to reduce the amount that they pay to PECO after enrolling in the CAP. PECO should re-examine the CAP payment structure and consider other options. One potential method is to develop two tiers of CAP discounts, higher discounts for customers who are severely payment-troubled with arrears over $500, and lower discounts for customers with less severe payment problems.

2. PECO should attempt to increase the percentage of combination customers who receive LIHEAP grants.

Information Technology

1. PECO should enhance their data systems so that it is easier to obtain data needed to conduct the impact analyses included in this report.

2. PECO should continue to maintain their data warehouse.

3. PECO should expand and enhance their CARES database to better track CARES participants and referral options.

4. PECO should create an indicator for CARES participants in their customer database.

I. Introduction

This report presents the findings from the 2004-2005 Evaluation of PECO's Universal Service Programs, including CAP, LIURP, CARES, and MEAF. PECO's Universal Service Programs assist eligible low-income customers through payment assistance, usage reduction, referral to assistance programs, and additional energy grants in the case of hardship. This report examines the design and implementation of these programs, as well as the impact of these programs on bill affordability, usage, customer payment behavior, and collections actions.

A. Background

PECO Energy has implemented a set of Universal Services Programs to meet requirements set by Pennsylvania's electric and gas restructuring legislation and various Public Utility Commission orders and agreements. The Universal Service goals are:

- To protect consumers' health and safety by helping low-income customers maintain affordable utility service.
- To provide for affordable utility service by making available payment assistance to low-income customers.
- To help low-income customers conserve energy and reduce residential utility bills.
- To ensure utilities operate universal service and energy conservation programs in a cost-effective and efficient manner.

The Universal Services Programs include:

- A CAP payment assistance program that is designed to make energy bills more affordable by furnishing payment subsidies.
- A LIURP program that is designed to make energy bills more affordable by helping to reduce usage.
- A CARES program that is designed to assist households in developing appropriate strategies for maintaining energy service.
- A MEAF hardship fund program that is designed to furnish emergency payments to households that cannot pay their energy bills.

B. *Objectives of the Evaluation*

The Bureau of Consumer Services (BCS) of the Public Utility Commission (PUC) has developed standard evaluation questions to guide Universal Services Programs evaluations.

1. Is the appropriate population being served?
2. What is the customer distribution for each program by poverty guidelines?
3. What are the barriers to program participation?
4. What is the distribution of customers by payment plan?
5. What are the barriers to program re-certification?
6. What are the CAP retention rates and why?
7. Is there an effective link between participation in CAP and participation in energy assistance programs?
8. How effective are CAP control features at limiting program costs?
9. How effective is the CAP and LIURP link?
10. Does CAP participation improve payment behaviors?
11. Does participation in Universal Service Programs reduce arrearages?
12. Does participation in Universal Service Programs decrease service terminations?
13. Does participation in Universal Service Programs lower collections costs?
14. How can Universal Service Programs be more cost-effective and efficient?

To answer these questions, we conducted the following evaluation activities.

1. *Program Administration Research*: We conducted interviews with PECO managers and staff to confirm the scope of the evaluation, obtain relevant program documentation, identify key program informants, and target critical data sources. We reviewed all documents to develop an in-depth understanding of detailed program design elements, program procedures, and program requirements.

2. *Program Operations Research*: We conducted interviews with PECO program operations staff and call center and contractor staff to assess whether program procedures are operating as intended. We observed service delivery procedures to assess whether specific goals are being met during intake, service delivery, and follow-up. We developed statistics on program operations.

3. *Customer Needs Assessment*: We used data from the 2000 Census and PECO's customer database to develop information on the number of customers who are eligible for each of the Universal Services Programs and to assess the needs of customers for each program.

4. *Customer Interviews*: We contacted participants of each program to assess the efficiency and effectiveness of program operations. We contacted recent participants of the CAP program to assess the reasons for current nonparticipation. We contacted CAP non-participants who are eligible for program services to identify potential program barriers.

5. *Data Retrieval*: We developed systems to obtain payment, usage, arrearage, and collections information for participant and non-participant customers.

6. *Data Analysis*: We used available data to develop gross and net performance statistics for the CAP and MEAF programs.

C. Organization of the Report

Seven sections follow this introduction.

- Section II – Customer Needs Assessment: This section provides data and statistics from the 2000 Census and from PECO's customer and program databases. We provide an analysis of the number of customers who are eligible for the Universal Service programs and the number of customers who participate in the programs.
- Section III – PECO's Universal Service Programs: This section provides a detailed review of the design and implementation of PECO's Universal Service Programs.
- Section IV – Customer Surveys: This section provides a summary of the CAP, LIURP, CARES, and MEAF customer surveys.
- Section V – CAP Program Operations and Impacts Analysis: This section provides data and statistics from our analysis of CAP participant and comparison group data. We provide analysis of CAP customer characteristics, CAP retention rates, and arrearage forgiveness. We analyze the impact of the CAP on affordability, bill coverage, energy assistance, energy usage, and collections actions.
- Section VI – MEAF Program Operations and Impacts Analysis: This section provides data and statistics from our analysis of MEAF participant and comparison group data. We provide analysis of MEAF customer characteristics and the impact of MEAF on bill payment in the year following grant receipt.
- Section VII – LIURP Program Operations Analysis: This section provides an analysis of LIURP participant characteristics and service delivery statistics.
- Section VIII – Summary of Findings and Recommendations: This section provides a summary of the key findings and provides recommendations for PECO's Universal Service programs based on the analyses in this report.

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

II. Customer Needs Assessment

In this section of the report, we assess the penetration of PECO's Customer Assistance Program (CAP). We present CAP program penetration statistics for PECO customers, including the number income eligible for CAP, the number with energy burdens above the affordability targets set by the PA PUC guidelines, and the number of CAP program participants. In addition, we compare penetration rates for PECO's CAP program to the rates for other Pennsylvania electric and gas utility companies.

A. Methodology for Estimating the Population Eligible for CAP Benefits

To better serve low-income customers, PECO needs information on the population of customers that is eligible for CAP benefits.[6] We developed information on the number and characteristics of PECO's low-income population by extracting data from the 2000 Census and updating the information to 2005 using microsimulation techniques. The following procedures were implemented.

- *Data* – We used the 5-Percent Public Use Microdata Sample (PUMS) from the 2000 Census. These data include information on household size, income, and energy bills for a sample of 5 percent of all households in the U.S completing the Census long form.

- *Geography* – We extracted households from five counties – Philadelphia, Montgomery, Delaware, Chester, and Bucks – to represent the PECO customer base.[7]

- *Electric and Gas Service* – We used the Census data to identify those households that paid an electric or gas bill to a utility company.[8]

- *Income Eligible Customers* – We used Census data on household size and income, in conjunction with federal poverty guideline data, to construct the poverty ratio for each household and identify those households that were income eligible for CAP benefits.

- *Energy Bills* – For non-PECO customers, we updated Census data on electric and gas bills with information on energy prices in Pennsylvania. Between 1999 and 2005, electric prices increased by about 15 percent and gas prices increased by about 71

[6] The number of estimated low-income customers is the number of customers with household income at or below 150% of the federal poverty guidelines. In compliance with PUC guidelines, PECO currently tracks "confirmed low-income customers' – customers whose household income has been verified through the receipt of a LIHEAP grant or determined in the course of making a payment arrangement. The population of "confirmed low-income customers" is a subset of all PECO low-income customers.
[7] PECO serves a small portion of York County. This county was excluded from the analysis.
[8] We excluded those households that reported that they did not pay an electric or gas bill.

percent. For PECO customers, we increased gas prices by 71 percent; however, we used data provided by PECO to increase electric prices by 7.5 percent.

- *Energy Burden* – We estimated the energy burden for each household by comparing the updated energy bill to an updated estimate of income.

- *Targeted Customers* – We compared energy burdens for income-eligible households with the PUC targeted energy burden thresholds to identify households that should be targeted by the CAP program.[9]

These procedures furnished a dataset that allows us to examine the population of PECO customers that are income eligible for CAP and that should be targeted for the CAP program according to PUC guidelines. In addition to the PECO population, we also prepared similar data for the remaining low-income households in Pennsylvania so that the CAP penetration rates for PECO could be compared to CAP penetration rates for the rest of Pennsylvania's low-income customers.

B. *Estimating the Population Eligible for CAP Benefits*

There are approximately 1,459,000 households in the Bucks, Chester, Delaware, Montgomery, and Philadelphia counties. About 1,377,000 of these households have electric accounts with PECO, and the remaining 82,000 households receive electric service but do not have direct utility accounts (i.e., have the cost of their utilities included in their rent). Approximately 429,000 households receive gas service from PECO. PECO does not provide gas service in Philadelphia county, as Philadelphia Gas Works (PGW) services these customers.

Most households in these counties receive their electric service from PECO and approximately 30 percent of households receive gas service from PECO. Only a small portion of all households (less than 1 percent) have PECO gas service only. PECO provides the main source of heat for 36 percent of the households it serves. Table II-1 presents these results.

Table II-1
Distribution of Service Status for Households in Five-County Area

Service Status	Number	Percent
PECO Residential Service	1,377,225	94%
PECO Electric Service[10]	1,374,727	94%

[9] The energy burden targets vary by poverty level and fuel type. For electric nonheating customers, we used burden targets of 3.5% for households at 0-50 percent of poverty, 5.0% for households at 51-100 percent of poverty, and 6.5% for households at 101 to 150 percent of poverty.
[10] In the Report on 2004 Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies & Natural Gas Distribution Companies, PECO was reported to have 1,381,514 residential electric customers compared to the estimate used for this analysis of 1,374,727 residential electric customers.

Service Status	Number	Percent
PECO Gas Service[11]	428,647	29%
PECO Electric-Only Service	948,578	65%
PECO Combination Gas and Electric Service	426,149	29%
PECO Gas-Only Service	2,498	<1%
PECO Heating Service	527,148	36%
PECO Non-Heating Service	850,077	58%
All Households	1,459,091	100%

Table II-2 describes the distribution of residential, electric, and gas service in the households in PECO's service territory. Most households in the five counties have PECO electric service. The portion of households with gas service is variable and ranges from zero to 66 percent. PECO does not provide gas service to households in Philadelphia County.

Table II-2
Distribution of Service Type for Households in PECO Service Territory
By County

County	All Households	PECO Residential Service		PECO Electric Service		PECO Gas Service	
	N	N	%	N	%	N	%
Bucks	217,724	211,623	97%	211,067	97%	79,521	37%
Chester	158,485	153,999	97%	153,513	97%	64,927	41%
Delaware	206,105	196,590	95%	195,857	95%	135,383	66%
Montgomery	286,439	274,501	96%	273,778	96%	148,816	52%
Philadelphia	590,338	540,512	92%	540,012	92%	0	0%
Total Service Territory	1,459,091	1,377,225	94%	1,374,727	94%	428,647	29%

PECO provides heating service for approximately half of all households in Bucks and Chester counties and over 60 percent of households in Delaware and Montgomery counties. In Philadelphia county, PECO provides heating service for only 7 percent of households. PECO provides heating service for approximately 527,000 households in its territory. Table II-3 describes this distribution.

[11] In the Report on 2004 Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies & Natural Gas Distribution Companies, PECO was reported to have 421,377 residential natural gas customers compared to the estimate used for this analysis of 428,647 residential natural gas customers.

Table II-3
Distribution of Heating Service for Households in PECO Service Territory by County

County	PECO Residential Service	PECO Heating Service		PECO Non-Heating Service	
	Number	Number	Percent	Number	Percent
Bucks	211,623	108,903	50%	102,720	47%
Chester	153,999	76,008	48%	77,991	49%
Delaware	196,590	128,407	62%	68,183	33%
Montgomery	274,501	175,346	61%	99,155	35%
Philadelphia	540,512	38,484	7%	502,028	85%
Total Service Territory	1,377,225	527,148	36%	850,077	58%

C. *Analysis of Customers Income Eligible for CAP*

Table II-4 presents a description of income-eligible households by service type and heating service. We estimate that 17 percent of all households with PECO residential service are income-eligible for the CAP program. Of the 1.38 million households with residential utility service from PECO, approximately 234,000 have income at or below 150 percent of the federal poverty guidelines. PECO electric-only customers have the highest eligibility rate for CAP; 21 percent are income-eligible for CAP. Only 9 percent of PECO combination customers are CAP income-eligible.

Table II-4
CAP Income Eligibility Rate By PECO Service Status

Service Status	Total Households	Income-Eligible Households	
		Number	Percent
PECO Residential Service	1,377,225	234,056	17%
PECO Electric Service	1,374,727	233,542	17%
PECO Gas Service	428,647	37,259	9%
PECO Electric-Only Service	948,578	196,797	21%
PECO Combination Gas and Electric Service	426,149	36,805	9%
PECO Gas-Only Service	2,498	454	18%
PECO Heating Service	527,148	54,698	10%
PECO Non-Heating Service	850,077	179,298	21%
All Households	1,459,091	267,356	18%

Table II-5 shows the CAP income eligibility rate by county. Almost 30 percent of Philadelphia county customers are CAP income-eligible, while only about 10 percent of customers in the other four counties in PECO's service territory are income-eligible for CAP.

Table II-5
CAP Income Eligibility Rate By County

County	PECO Residential Service	Income-Eligible Households	
	Number	Number	Percent
Bucks	211,623	17,880	8%
Chester	153,999	13,501	9%
Delaware	196,590	24,594	13%
Montgomery	274,501	21,384	8%
Philadelphia	540,512	156,637	29%
Total Service Territory	1,377,225	234,056	17%

Of the 197,000 electric-only and gas-only households that are income-eligible for CAP, 30 percent have income that places them below 50 percent of federal poverty guidelines. Twenty percent of the 37,000 combination customers that are income-eligible for CAP have income below 50 percent of federal poverty guidelines.

Table II-6
Distribution of Households By Service Type and Poverty Group

Poverty Group (Cap Tier)	Electric-Only		Combination		Gas-Only	
	Number	Percent	Number	Percent	Number	Percent
0% -< 25% (A,B)	37,111	19%	4,967	13%	127	28%
25% -< 50% (C)	21,360	11%	2,704	7%	7	2%
50% -< 100% (D)	65,919	33%	10,589	29%	179	29%
100% - ≤ 150% (E)	72,407	37%	18,545	50%	141	31%
Total Income Eligible	196,797	100%	36,805	100%	454	100%

Of all CAP income-eligible households, 28 percent have income below 50 percent of the federal poverty level (FPL), 33 percent between 50 and 100 percent of the FPL, and 39 percent between 100 and 150 percent of the FPL. These results are presented in Table II-7.

Table II-7
Distribution of Households with Electric Service By Poverty Group

Poverty Group (Cap Tier)	Households With Electric Service	
	Number	Percent
0% -< 25% (A,B)	42,078	18%
25% -< 50% (C)	24,064	10%
50% -< 100% (D)	76,354	33%
100% - ≤ 150% (E)	91,046	39%
Total Income Eligible	233,542	100%

Analysis of CAP-eligible populations in the counties in PECO's service territory indicates that Bucks, Chester, Delaware, and Montgomery counties have similar portions of households that are income-eligible for benefits. In these counties, approximately 10 percent of households with electric service are income-eligible for CAP benefits, and approximately 20 percent of income-eligible households have income that is less than 50 percent of federal poverty guidelines. In Philadelphia county, nearly 30 percent of households with electric service are income-eligible for CAP, and 31 percent of income-eligible households have income that is below 50 percent of federal poverty guidelines.

Table II-8
Distribution of Households with Electric Service By Poverty Group and County

Poverty Group (Cap Tier)	County									
	Bucks		Chester		Delaware		Montgomery		Philadelphia	
	N	%	N	%	N	%	N	%	N	%
0% -< 25% (A,B)	2,050	12%	1,864	14%	3,508	14%	3,155	15%	31,501	20%
25% -< 50% (C)	1,495	8%	890	7%	2,292	9%	1,605	8%	17,782	11%
50% -< 100% (D)	5,681	32%	4,258	32%	7,239	30%	5,540	26%	53,636	34%
100% - ≤ 150% (E)	8,560	48%	6,347	48%	11,391	47%	11,030	52%	53,718	34%
TOTAL Income Eligible	17,786	100%	13,359	100%	24,430	100%	21,330	100%	156,637	100%

Eleven percent of gas households have annual income below 150 percent of the FPL and, therefore, are eligible for CAP benefits. Approximately 21 percent of PECO households with gas service had income below 50 percent of federal poverty guidelines and are eligible for Tier A, B, or C CAP benefits. Table II-9 describes the percentage of households with gas service within five key poverty threshold groups.

Table II-9
Distribution of Households with Gas Service By Poverty Group

Poverty Group (Cap Tier)	Households With Gas Service	
	Number	Percent
0% -< 25% (A,B)	5,094	14%
25% -< 50% (C)	2,711	7%
50% -< 100% (D)	10,768	29%
100% - ≤ 150% (E)	18,686	50%
TOTAL Income Eligible	37,259	100%

In Bucks, Chester, Delaware, and Montgomery counties, households with PECO gas service have similar income distributions of CAP income-eligible customers. In these counties, between 17 and 23 percent of CAP income-eligible households have income below 50 percent of the FPL.

Table II-10
Distribution of Households with Gas Service By Poverty Group and County

Poverty Group (Cap Tier)	County									
	Bucks		Chester		Delaware		Montgomery		Philadelphia	
	N	%	N	%	N	%	N	%	N	%
0% -< 25% (A,B)	737	13%	726	14%	2,317	14%	1,314	13%	0	0%
25% -< 50% (C)	518	9%	160	3%	1,531	9%	502	5%	0	0%
50% -< 100% (D)	1,728	30%	1,396	28%	5,038	30%	2,606	27%	0	0%
100% - ≤ 150% (E)	2,826	49%	2,745	55%	7,734	47%	5,381	55%	0	0%
TOTAL Income Eligible	5,809	100%	5,027	100%	16,620	100%	9,803	100%	0	0%

D. Analysis of Customers Targeted for CAP

A household's energy burden is the ratio of total home energy costs to total income; it is an indicator of the affordability of a household's energy costs. This section presents data on the energy expenditures and burden for households served by PECO who are income-eligible for CAP. The energy costs and burden described in the following tables is the ratio of the cost of electric and/or gas service from PECO to a household's income.

Regulations for CAP programs in Pennsylvania, state that "CAP payments for total electric and natural gas home energy should not exceed 17 percent of the CAP participant's annual income."[12] Standards established for appropriate energy burdens for CAP participants include:

- "Maximum payments for electric nonheating service should be within the following ranges: household income between 0 and 50% of poverty at 2%-5% of income, household income between 51 and 100% of poverty at 4%-6% of income, household income between 101 and 150% of poverty at 6%-7% of income."

- "Maximum payments for gas heating service should be within the following ranges: household income between 0 and 50% of poverty at 5%-8% of income, household income between 51 and 100% of poverty at 7%-10% of income, household income between 101 and 150% of poverty at 9%-10% of income."

- "Maximum payments for electric heating or gas heating and electric nonheating combined should not exceed the following guidelines: household income between 0 and 50% of poverty at 7%-13% of income, household income between 51 and 100% of poverty at 11%-16% of income, household income between 101 and 150% of poverty at 15%-17% of income."[13]

This section uses the midpoint of these standards in presenting the number and percentage of CAP income-eligible households exceeding the "target energy burden." For households with electric-only baseload service, the number and percentage presented includes those above 3.5 percent, 5.0 percent, and 6.5 percent, for the three groups (0-50%, 51-100%, and 101-150% of the federal poverty guidelines), respectively. For households with electric heating or combination electric and gas service from PECO, the targets are 10.0 percent, 13.5 percent, and 16.0 percent, respectively. For households with only gas service from PECO, the targets are 6.5 percent, 8.5 percent, and 9.5 percent, respectively. In presenting both aggregate data for all income-eligible households, as well as for four key income groups, Table II-12, Table II-14, Table II-16, Table II-18, and Table II-20 provide an indication of the size of the income-eligible population who have expenditures which exceed the standards set forth by the BCS.

Table II-11 shows the median energy costs and burden for all households with PECO residential service who are income-eligible for CAP. Households with electric heat have substantially lower energy expenditures and burdens than those with combination gas and electric service. CAP income-eligible households with gas and electric service have annual energy costs of $2,089, while those with electric heat reported spending $968. The median energy burden for CAP income-eligible households with gas and electric service is almost twice as large as those with electric heat; the median PECO energy burdens are 18 percent and 10 percent, respectively.

[12] 052 Pa. Code § 69.265 – CAP Design Elements, accessed at http://www.pacode.com/secure/data/052/chapter69/s69.265.html provides a full description of these guidelines.
[13] Accessed at http://www.pacode.com/secure/data/052/chapter69/s69.265.html on March 24, 2006.

The median expenditures for the 170,000 CAP income-eligible households with electric-only baseload service (this includes households in any of the five counties with neither gas nor electric heat from PECO) are $645. Annual costs for these households create a burden which exceeds the highest BCS target for electric-only service for over half of CAP income-eligible households.

Table II-11
Distribution of Energy Bills and Expenditures for
CAP Income-Eligible PECO Households By Service Status

Service Status	Number of Income-Eligible Households	PECO Energy Expenditures		Median PECO Energy Burden
		Mean	Median	
Electric-Only Baseload	169,856	$866	$645	7%
Electric-Only Heating	26,941	$1117	$968	10%
Combination Gas and Electric	36,805	$2472	$2089	18%
Gas Only	454	$1988	$1026	13%
All Households	234,056	$1150	$774	8%

Of all households that are income eligible for CAP, approximately 128,000, or 55 percent, have energy burdens which exceed the target set by the BCS for their income group and service type. Thirty-nine percent of households with electric heating exceed the BCS target, while 58 percent of households with combination electric and gas service have annual expenditures and income resulting in a burden greater than the BCS target.

Table II-12
CAP Income-Eligible PECO Households Exceeding Target Energy Burden
By Service Status

Service Status	Number of Income-Eligible Households	Number Exceeding Target	Percent Exceeding Target
Electric-Only Baseload	169,856	96,461	57%
Electric-Only Heating	26,941	10,502	39%
Combination Gas and Electric	36,805	21,212	58%
Gas Only	454	301	66%
All Households	234,056	128,476	55%

In the following eight tables, energy costs and burdens for PECO households that are income-eligible for CAP are presented for households within four key poverty thresholds: 0

to 25 percent, 25 to 50 percent, 50 to 100 percent, and 100 to 150 percent of the federal poverty guidelines. Table II-13 through Table II-20 provide a description of these findings. There are three important findings within these sets of tables:

- *Expenditures* – The median annual expenditures for PECO service do not reveal any clear trends across the four groups of households examined in this analysis.

- *Energy Burden Target by Income Group* – A significantly smaller portion of households between 100 and 150 percent of federal poverty guidelines have PECO energy burdens that exceeds the BCS target than those in the 0-25 percent, 25-50 percent, and 50-100 percent groups. For example, 25 percent of households between 100 and 150 percent of federal poverty guidelines have burdens exceeding the BCS target, while 85 percent of households with income between 25 and 50 percent of federal poverty guidelines have energy burdens in excess of the BCS target.

- *Energy Burden Target by Service Type* – For each of the income groups, larger shares of households with combination gas and electric service from PECO have energy burdens in excess of the BCS targets than households with electric heat or electric-only baseload service. For example, for households between 50 and 100 percent of federal poverty guidelines, the percentages exceeding the BCS guidelines are 71 percent, 26 percent, and 61 percent for combination gas and electric service, electric heating service, and electric-only baseload service, respectively.

For households under 25 percent of the federal poverty guidelines, the median PECO energy burden for each of the service types is 100 percent. Ninety-six percent of all households in this group have annual energy costs that exceed the BCS target. Table II-13 and Table II-14 present these results.

Table II-13
Distribution of Energy Bills and Expenditures for
PECO Households Under 25 Percent of Federal Poverty Guidelines
By Service Status

Service Status	Number of Income-Eligible Households	PECO Energy Expenditures		Median PECO Energy Burden
		Mean	Median	
Electric-Only Baseload	31,601	$834	$645	100%
Electric-Only Heating	5,510	$962	$860	100%
Combination Gas and Electric	4,967	$2257	$2010	100%
Gas Only	127	$1112	$342	100%
All Households	42,205	$1019	$753	100%

Table II-14
PECO Households Under 25 Percent of Federal Poverty Guidelines
Exceeding Target Energy Burden
By Service Status

Service Status	Number of Income-Eligible Households	Number Exceeding Target	Percent Exceeding Target
Electric-Only Baseload	31,601	30,400	96%
Electric-Only Heating	5,510	5,177	94%
Combination Gas and Electric	4,967	4,895	99%
Gas Only	127	95	75%
All Households	42,205	40,567	96%

Table II-15 and Table II-16 describe energy costs and burdens for households with income between 25 and 50 percent of federal poverty guidelines. Eighty-five percent of these households have energy burdens that exceed the BCS target for their service type. The median energy burden for the 18,000 households within this range that have electric heating is 18 percent, while the median energy burden is 35 percent for households with combination gas and electric service.

Table II-15
Distribution of Energy Bills and Expenditures for
PECO Households Between 25 and 50 Percent of Federal Poverty Guidelines
By Service Status

Service Status	Number of Income-Eligible Households	PECO Energy Expenditures		Median PECO Energy Burden
		Mean	Median	
Electric-Only Baseload	18,519	$896	$656	11%
Electric-Only Heating	2,841	$1145	$1075	18%
Combination Gas and Electric	2,704	$2588	$1902	35%
Gas Only	7	$2052	$2052	37%
All Households	24,071	$1115	$774	13%

Table II-16
PECO Households Between 25 and 50 Percent of Federal Poverty Guidelines
Exceeding Target Energy Burden
By Service Status

Service Status	Number of Income-Eligible Households	Number Exceeding Target	Percent Exceeding Target
Electric-Only Baseload	18,519	16,077	87%
Electric-Only Heating	2,841	2,014	71%
Combination Gas and Electric	2,704	2,435	90%
Gas Only	7	7	100%
All Households	24,071	20,533	85%

Table II-17 and Table II-18 describe the energy costs and burdens for households with income between 50 and 100 percent of federal poverty guidelines. Fifty-eight percent of these households have PECO energy burdens that exceed BCS targets. The percentages exceeding the BCS guidelines are 71 percent, 26 percent, and 61 percent for combination gas and electric service, electric heating service, and electric-only baseload service, respectively.

Table II-17
Distribution of Energy Bills and Expenditures for
PECO Households Between 50 and 100 Percent of Federal Poverty Guidelines
By Service Status

Service Status	Number of Income-Eligible Households	PECO Energy Expenditures		Median PECO Energy Burden
		Mean	Median	
Electric-Only Baseload	56,655	$838	$645	6%
Electric-Only Heating	9,264	$996	$860	9%
Combination Gas and Electric	10,589	$2486	$2126	20%
Gas Only	179	$2331	$1539	25%
All Households	76,687	$1088	$753	7%

Table II-18
PECO Households Between 50 and 100 Percent of Federal Poverty Guidelines
Exceeding Target Energy Burden
By Service Status

Service Status	Number of Income-Eligible Households	Number Exceeding Target	Percent Exceeding Target
Electric-Only Baseload	56,655	34,736	61%
Electric-Only Heating	9,264	2,390	26%
Combination Gas and Electric	10,589	7,487	71%
Gas Only	179	126	70%
All Households	76,687	44,739	58%

Twenty-five percent of households with income between 100 and 150 percent of federal poverty guidelines have PECO energy burdens that exceed BCS targets. As shown in Table II-19 and Table II-20, the median PECO energy burden and the percent of eligible households in this income range that exceeds the BCS targets for each service type is substantially smaller than it is for the three other groups of income-eligible households examined in this section.

Table II-19
Distribution of Energy Bills and Expenditures for
PECO Households Between 100 and 150 Percent of Federal Poverty Guidelines
By Service Status

Service Status	Number of Income-Eligible Households	PECO Energy Expenditures		Median PECO Energy Burden
		Mean	Median	
Electric-Only Baseload	63,081	$899	$699	4%
Electric-Only Heating	9,326	$1321	$1183	7%
Combination Gas and Electric	18,545	$2504	$2113	12%
Gas Only	141	$2340	$1368	10%
All Households	91,093	$1271	$860	5%

Table II-20
PECO Households Between 100 and 150 Percent of Federal Poverty Guidelines
Exceeding Target Energy Burden
By Service Status

Service Status	Number of Income-Eligible Households	Number Exceeding Target	Percent Exceeding Target
Electric-Only Baseload	63,081	15,248	24%
Electric-Only Heating	9,326	921	10%
Combination Gas and Electric	18,545	6,395	35%
Gas Only	141	73	52%
All Households	91,093	22,637	25%

E. Characteristics of CAP Recipients

The CAP program was serving nearly 105,000 PECO households by January 2006. Twenty-one percent, or approximately 22,000 households, had annual household income below 50 of the federal poverty guidelines and received CAP benefits corresponding to rate tiers A, B, and C. The majority of CAP program participants have income between 50 and 100 percent of the federal poverty guidelines and receive CAP Rate Tier D benefits; 54 percent of participants enrolled in January 2006 had annual household income between 50 and 100 percent of federal guidelines and received a 25 percent discount on their utility bill.

Since implementation of CAP rate tiers A, B, and C, the number of households who receive these benefits expanded from 600 in February 2004 to over 22,000 in January 2006. However, over this time, only a small number of households received CAP Rate Tier A benefits. In January 2006, the program disbursed benefits corresponding to CAP Rate Tier A to 78 households.

Table II-21
Beginning-of-Year CAP Participants By CAP Rate Tier[14]

	January 2004	January 2005	January 2006
CAP Rate Tier			
A	NA	9	78

[14] CAP participant data for January 2004, 2005, and 2006 were used for this analysis due to data availability issues, in order to adequately demonstrate the increase in customer receiving CAP benefits in Rate Tiers A, B, and C since the introduction of these rates in February 2004.

	January 2004	January 2005	January 2006
CAP Rate Tier			
B	NA	3,126	6,885
C	NA	9,100	15,438
D	79,809[1]	63,821	56,045
E	19,849[2]	22,666	26,153
TOTAL	99,658	98,722	104,599

[1] These customers were in CAP Rate Tier J prior to February 2004.
[2] These customers were in CAP Rate Tiers H (Gas and Combo) and K (Electric Only) prior to February 2004

Table II-22 shows that the number of year-end CAP participants increased slightly from year-end 2003 to year-end 2005 for both electric and gas customers. The number of electric customers participating in CAP increased from 99,000 in December 2003 to 101,000 in December 2005, while the number of gas customers participating in CAP increased from 15,000 in December 2003 to 16,000 in December 2005.

Table II-22
End-of-Year CAP Participation By PECO Service Type

	December 2003	December 2004	December 2005
Electric	99,187	98,387	101,064
Gas	14,585	15,757	16,163

The monthly volume of participant enrollment has increased substantially from 2004 to 2005. In 2004, an average of 1,789 eligible customers were enrolled and approximately 1,947 were successfully re-certified each month. In 2005, an average of 2,428 eligible customers were enrolled and approximately 2,100 successful re-certifications were completed each month.

Table II-23
Monthly CAP Enrollment and Successful Re-Certification, 2004 and 2005

	CAP Enrollment		Successful CAP Re-Certifications	
	2004	**2005**	**2004**	**2005**
January	N/A	1,707	0	3,109
February	1,179	1,438	1,419	3,561
March	2,098	2,071	927	2,413
April	1,971	1,794	1,288	1,770

	CAP Enrollment		Successful CAP Re-Certifications	
	2004	2005	2004	2005
May	1,523	1,724	903	1,547
June	1,836	2,150	2,573	1,615
July	1,695	1,880	3,016	1,236
August	1,445	2,535	2,166	1,583
September	1,878	2,417	3,289	1,584
October	1,955	3,030	2,224	1,835
November	2,027	3,260	2,253	2,160
December	2,068	5,134	3,305	2,810
Annual Total	19,675	29,140	23,363	25,223

F. CAP Participation Rates

Overall, forty-five percent of eligible households participated in PECO's CAP in 2005. Approximately 105,000 PECO customers participated in the CAP program, while 234,000 PECO customers are eligible for some level of CAP benefit.

Table II-24 describes the participation rates for each CAP rate tier. CAP program participation is lowest amongst households with income below 25 percent of federal poverty guidelines. Sixteen percent of eligible households with annual income below 25 percent of the federal poverty guidelines participated in the CAP; however, 64 percent of households between 25 percent and 50 percent of the federal poverty guidelines, and 73 percent of households between 50 percent and 100 percent of the federal poverty guidelines participated in the CAP.

Table II-24
Participation Rate By Poverty Level

Poverty Level (Cap Tier)	2005 CAP Participants	CAP Eligible PECO Residential Households	Participation Rates
0% -< 25% (A,B)	6,963	42,205	16%
25% -< 50% (C)	15,438	24,071	64%
50% -< 100% (D)	56,045	76,687	73%
100% -< 150% (E)	26,153	91,093	29%
Total	104,599	234,056	45%

Participation rates for both electric and gas customers are quite similar. Of the 37,000 gas households served by PECO, 16,000 receive CAP benefits and 101,000 of the 234,000 households with electric service participated in CAP.

Table II-25
Participation Rate By Service Type

Service Type	2005 CAP Participants	CAP Eligible PECO Residential Households	Participation Rates
Electric	101,064	233,542	43%
Gas	16,163	37,259	43%

Table II-26 describes the participation rates for CAP eligible households that have been identified as having energy burdens greater than targets set forth by the BCS. CAP program participation for targeted households is lowest amongst households with income below 25 percent of federal poverty guidelines. Seventeen percent of eligible households with annual income below 25 percent of the federal poverty guidelines participated in the CAP, while three-quarters of targeted households between 25 percent and 50 percent of the federal poverty guidelines participated in the CAP.

Table II-26 also shows that more than 100 percent of targeted households between 50 percent and 150 percent of the federal poverty guidelines participated in the CAP. This may result from the structure of PECO's CAP program, which does not target customers by energy burden. Consequently, many CAP participants, especially those in higher poverty groups, may participate in CAP despite having energy burdens that fall below the targets. Moreover, some CAP participants may have had a change in income since they were last re-certified for the CAP and have changed poverty groups.

Table II-26
Participation Rate for Targeted Households By Poverty Level

Poverty Level (Cap Tier)	2005 CAP Participants	CAP Eligible PECO Targeted Residential Households	Participation Rates
0% -< 25% (A,B)	6,963	40,567	17%
25% -< 50% (C)	15,438	20,533	75%
50% -< 100% (D)	56,045	44,739	125%
100% -< 150% (E)	26,153	22,637	116%
Total	104,599	128,476	81%

Participation rates for both electric and gas customers who have energy burdens that exceed the BCS targets are quite similar. Of the 22,000 targeted gas households served by PECO, 16,000 receive CAP benefits and 101,000 of the 128,000 targeted households with electric service participated in CAP.

Table II-27
Participation Rate for Targeted Households By Service Type

Service Type	2005 CAP Participants	CAP Eligible PECO Targeted Residential Households	Participation Rates
Electric	101,064	128,175	79%
Gas	16,163	21,513	75%

PECO has higher CAP participation than other electric utilities in Pennsylvania. Using Census data estimates on the number of households in Pennsylvania with income at or below 150 percent of the FPL and data reported to the PUC on the number of households served by electric utilities in December 2004, we estimated that 43 percent of PECO households who are income-eligible receive CAP benefits, while only 14 percent of income-eligible households in other utilities service territories participate in CAP.

Table II-28
Participation Rates for Pennsylvania Electric Utilities[15]

Service Type	CAP Electric Service Households	CAP Income Eligible Households	Participation Rates
PECO	101,064	233,542	43%
Other Electric Utilities	76,207	543,740	14%
Total	174,594	777,282	22%

CAP participation is also higher for households receiving gas service from PECO than for those served by other gas utilities in Pennsylvania. The participation rate for households with gas service is seven percentage points higher in the PECO service territory than in other Pennsylvania utilities. Overall, thirty-seven percent of income-eligible households in Pennsylvania participate in CAP.

[15] Data on the number of electric service households receiving CAP were obtained from the Report on 2004 Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies and Natural Gas Distribution Companies accessed at www.puc.state.pa.us/general/publications_reports/pdf/EDC_NGDC_UniServ_Rpt2004.pdf. The participation rate in Table II-14 for PECO households with electric service who receive CAP benefits does not match the participation rate in Table II-13 because these different sources were used.

Table II-29
Participation Rates for Pennsylvania Gas Utilities[16]

Service Type	CAP Gas Service Households	CAP Income Eligible Households	Participation Rates
PECO	16,163	37,259	43%
Other Gas Utilities	114,952	315,910	36%
Total	130,709	353,169	37%

G. *Summary of Customer Needs Assessment*

PECO provides utility service to a significant portion of the Pennsylvania's low-income population. Approximately 234,000 households served by PECO have income at or below 150 percent of the federal poverty guidelines.

While this analysis indicates that 45 percent of PECO's eligible customers participate in the CAP, it also indicates that the program has been unable to enroll a significant portion of households in the lowest income group. More in-depth analysis of this group is required to develop a better understanding of the energy assistance needs of these households and to determine why participation rates are so low. Once that analysis is complete, it may be possible to develop a strategy that will allow PECO to enroll a greater percentage of this group in the CAP.

[16] Data on the number of gas service households receiving CAP were obtained from the Report on 2004 Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies and Natural Gas Distribution Companies accessed at www.puc.state.pa.us/general/publications_reports/pdf/EDC_NGDC_UniServ_Rpt2004.pdf. The participation rate in Table II-14 for PECO households with gas service who receive CAP benefits does not match the participation rate in Table II-13 because these different sources were used.

III. PECO's Universal Service Programs

PECO has implemented a set of Universal Service Programs to comply with Public Utility Commission Regulations. The programs are designed for low-income, residential customers who demonstrate or express difficulty paying for their monthly energy bill. These programs include the Customer Assistance Program (CAP), the Customer Assistance and Referral Evaluation Services (CARES) Program, the Low Income Usage Reduction Program (LIURP), and the Matching Energy Assistance Fund (MEAF).

A. Program Overview

This section provides an overview of the CAP, CARES, LIURP, and MEAF programs.

CAP

The Customer Assistance Program, referred to as CAP or CAP Rate, is a discounted residential tariff for low-income, payment-troubled residential customers. Customers with total gross household income less than or equal to 150 percent of the federal poverty level are eligible for the CAP. Additionally, the customer must be considered payment-troubled to be eligible for the program. A customer is considered payment-troubled when one of the following circumstances exists:

- Late payments
- Consistent arrearages
- Multiple broken payment agreements
- Non-payment of energy bill
- Insufficient payments.

A customer without arrears may be considered payment-troubled.

The number of customers enrolled in the CAP was 99,187 on December 31, 2003, 99,387 on December 31, 2004, and 102,762 on December 31, 2005. PECO reports that they are committed to enrolling all qualifying customers into CAP Rate and has set CAP enrollment goals for 2006 through 2008 as follows: 110,000 for 2006, 115,000 for 2007, and 120,000 for 2008.

During the evaluation period, significant changes were made to the CAP and in particular to the CAP Rate tiers. Prior to February 2004, PECO had two CAP Rate tiers.

- CAP Rate I: Customers with total gross household income at or below 100 percent of the federal poverty level (FPL) were eligible for the CAP Rate I. CAP Rate I customers received a 50 percent discount on electric usage up to 500 kWh.

- CAP Rate II: Customers with total gross household income between 101 percent and 150 percent of the FPL were eligible for the CAP Rate II. CAP Rate II customers received a 25 percent discount on electric usage up to 500 kWh.

In response to the "Customers with Incomes to 50 Percent of the federal poverty level in PECO's Customer Assistance Program"[17] report, PECO was asked by the Public Utility Commission (PUC) to submit a plan to address those customers as part of the PECO-Exelon merger settlement. On April 8, 2003, the PUC entered an order[18] that approved a plan to add three new discounted electric rates for payment-troubled residential customers whose incomes were at or below 50 percent of the FPL. Effective February 2004, PECO has five CAP Rate tiers, which can be summarized as followed:

- CAP Rate A: Customers with household income less than or equal to 25 percent of the FPL with extenuating circumstances are eligible. Electric non-heating customers receive a minimum $12 per month bill and electric heating customers receive a minimum $30 per month bill.

- CAP Rate B: Customers with household income less than or equal to 25 percent of the FPL without extenuating circumstances are eligible. They receive an 85 percent discount on their first 500 kWh monthly.

- CAP Rate C: Customers with household income between 26 and 50 percent of the FPL are eligible. They receive a 75 percent discount on their first 500 kWh monthly.

- CAP Rate D: Customers with household income between 51 and 100 percent of the FPL are eligible. They receive a 50 percent discount on their first 500 kWh monthly.

- CAP Rate E: Customers with household income between 101 and 150 percent of the FPL are eligible. They receive a 25 percent discount on their first 500 kWh monthly.

CAP Rate customers with gas service also receive a discount on their gas variable distribution charge. The gas CAP Rate discount results in a discount up to 28 cents per cubic foot (ccf) of monthly gas usage. The gas variable distribution charge is 28 cents per ccf. Customers with household income at or below 100 percent (i.e., gas CAP D) are not charged for variable distribution costs. Customers with household income between 101 and 150 percent (i.e., gas CAP Rate E) are charged 13 cents per ccf.[19]

More detailed eligibility and benefit details for each electric CAP Rate tier are shown in Table III-1 below.

[17] Authored by H. Gil Peach and Associates/Scan America. Dated June 10, 2002.
[18] Docket Numbers: R-00027870 and M-00001418
[19] PECO's public CAP Rate information literature reports that the gas discount is restricted to the first 100 cubic feet (ccf) of a gas monthly bill. However, according to PECO Universal Services, the gas discount is applied to all ccf.

Table III-1
CAP Rate Program Discounts and Requirements

CAP Rate	Income Requirements	PECO Rate	Months	KWh Level	Charge	Budget	Supplier
A	Annual Income: **0%-25%** of the FPL with extenuating circumstances present. Income verification is required annually.	R	All	0 - 1000	$12 per month	A budget is **mandatory** for this rate (with the exception of customers with delinquent supplier dollars).	The customer **cannot** have an alternate supplier.
				1001 -1500	50% discount (CAP Rate D)		
				Over 1500	Rate R		
		RH	Oct-Jun	0 - 2000	$30 per month total		
				Over 2000	CAP Rate D		
			Jul-Sep	0 - 1000	$30 per month		
				Over 1000	CAP Rate D		
B	Annual Income: **0%-25%** of the FPL without extenuating circumstances present. Income verification is required every two years.	R	Oct-Jun	0 - 500	85% discount	A budget is **mandatory** for this rate (with the exception of customers with delinquent supplier dollars).	The customer **cannot** have an alternate supplier.
				Next 100	30% discount		
				Over 600	Rate R		
			Jul-Sep	0 - 500	85% discount		
				Over 500	Rate R		
		RH	Oct-Jun	0-500	85% discount		
				Next 100	30% discount		
				Over 600	Rate RH		
			Jul-Sep	0 - 500	85% discount		
				Over 500	Rate RH		
C	Annual Income: **26%-50%** of the FPL. Income verification is required every two years.	R	Oct-Jun	0 - 500	75% discount	A budget is **mandatory** for this rate (with the exception of customers with delinquent supplier dollars).	The customer **cannot** have an alternate supplier.
				Next 100	30% discount		
				Over 600	Rate R		
			Jul-Sep	0 - 500	75% discount		
				Over 500	Rate R		

CAP Rate	Income Requirements	PECO Rate	Months	KWh Level	Charge	Budget	Supplier
		RH	Oct-Jun	0-500	75% discount		
				Next 100	30% discount		
				Over 600	Rate RH		
			Jul-Sep	0 - 500	75% discount		
				Over 500	Rate RH		
D Old CAP Rate I	Annual Income: **51%-100%** of the FPL. Income verification is required <u>every two years</u>.	R Old RJ	All	0 - 500	50% discount	A budget is not mandatory for this rate (with the exception of customers with delinquent supplier dollars).	The customer can have an alternate supplier.
				Over 500	Rate R		
		RH Old RHJ	Oct-Jun	All	50% discount		
			Jul-Sep	0 - 500	50% discount		
				Over 500	Rate RH		
E Old CAP Rate II	Annual Income: **101%-150%** of the FPL. Income verification is required <u>every two years</u>.	R Old RK	All	0 - 500	25% discount	A budget is not mandatory for this rate (with the exception of customers with delinquent supplier dollars).	The customer can have an alternate supplier.
				Over 500	Rate R		
		RH Old RHK	All	0-500	25% discount		
				Over 500	Rate RH		

There were two other significant modifications made to the CAP effective February 2004.

- PECO will forgive a customer's delinquency prior to CAP Rate enrollment (i.e., pre-program arrearage) if the customer pays his or her CAP Rate bill in full for each of six consecutive months. Prior to February 2004, instead of forgiving the full pre-program arrearage, the program forgave only the customer's delinquency that was greater than $500.

- PECO implemented a series of system changes to capture and maintain PUC requested data on Universal Service customers. Some of the new information recorded and retained includes number of household members, age of household members, current and historical income and calculated FPL, current and historical CAP status, and pre-program arrearages.

CARES

Customer Assistance and Referral Evaluation Services (CARES) is a referral and information service designed to assist customers who have a temporary personal or financial hardship that prevents the payment of their utility bill. The purpose of this program is to help address health and safety concerns relating to utility service. Eligible customers may receive temporary protection from termination of service and specific education and referral information for energy and non-energy related assistance. Customers with special needs including senior citizens and customers who receive government-based income (e.g., SSI, SSD) are eligible for CARES. There were 2,627 customers referred to CARES in 2004.[20]

Customer Assistance and Referral Evaluation Services (CARES) is a referral and information service designed to assist customers who have a temporary personal or financial hardship that prevents the payment of their utility bill. CARES also aims to address health and safety concerns related to utility service by providing eligible customers with temporary protection from termination of service and specific education and referral information for energy and non-energy related assistance.

The CARES program works in conjunction with PECO's other Universal Services programs. The goal of the CARES consultant is to make personal contact with the CARES customer and process the customer's paperwork for enrollment into relevant PECO Universal Services programs. In addition, the CARES consultant is expected to educate and inform PECO customers of available resources such as, energy assistance, budget counseling, housing assistance, and other social services. This effort is designed to maximize the ability of payment-troubled customers to pay their energy bills. PECO attempts to reach this goal by maintaining an extensive referral network, consisting of community organizations, government agencies, and social service agencies.

CARES Eligibility

According to internal and external PECO documents (e.g., "Three Year Plan 2004-2006"), a customer is eligible for CARES if the household has income at or below 200 percent of the federal poverty level (FPL), has special needs (i.e., hardship affecting household income), is payment troubled[21], and has an extenuating circumstance[22]. The CARES and Fuel Grant

[20] Information provided per data received from PECO's Universal Services and IT Department.

[21] A customer is considered payment troubled when the following circumstances exist: late payments, consistent arrearages, multiple broken payment agreements, non-payment of energy bill, or insufficient payments. A customer may be payment-troubled by definition without being currently delinquent.

[22] An extenuating circumstance is determined, as but is not limited to, the following: health-related (e.g., injury, illness, disability, high medical bills, medically related usage, death in the family, etc.), high-risk households members (e.g., children under the age of eight with an injury or illness, disabled individuals, infirmed elderly, etc.), sudden loss of employment or household income, high non-discretionary electric usage related to shelter conditions not susceptible to mitigation through LIURP measures.

Agencies Job Aide reports broader eligibility for senior citizens[23] (regardless of income) and government income recipients (i.e., SSI, and SSD).

The CARES and Fuel Grant Agencies Job Aide states that customers who meet the following criteria are not eligible for CARES:

- Have an active dispute including legal disputes, PUC case, or Presidential case
- Were previously referred for CARES within in the last twelve months
- Were recently dismissed from CAP Rate within the last six months for non-compliance of program rules, or
- Have not made a payment within the last three months.

CARES History

The history of CARES at PECO, as provided to the Public Utility Commission (PUC) in Docket Number M-00001418, began in November 1990. At the time, there were ten full-time CARES consultants targeting services exclusively towards seniors. PECO eliminated the CARES program in 1993.

In 1997, PECO reinstated CARES with a network of referral resources that included community, government, and social service agencies. The PUC reviewed the program and determined that it met the PUC guidelines for a CARES program.

In 2000, PECO Universal Services revised their "Universal Service Three Year Plan 2001-2003" to target customers who are payment-troubled, recently dismissed from Universal Services programs, and special needs (including medical problems, personal crisis, or loss of income) for CARES. The Universal Services staff worked with several area community based organizations (CBOs). PECO customers could be referred to a CBO for referral assistance or referral services to other agencies. These efforts were made to bolster effectiveness of the customer service consultant referrals. In September 2000, Docket Number M-00001418, the PUC found that the revised Universal Service plan complied with their guidelines.

In a June 2002 "0 to 50%" report[24], the previous evaluator suggested an increase in experienced social consultants, in-house management of the referrals, and a more thorough arrangement with CBOs and government agencies. PECO responded with the Consensus Modifications (Docket Number R-00027870), approved by the PUC in March 2003. The Consensus Modifications included a plan for a revised in-house CARES program with at least three CARES consultants. The Commission reported in a April 15, 2004 Compliance Order (Docket Number M-00041788) that PECO had until May 15, 2004 to provide written verification to the PUC that the three CARES staff have been hired and have start dates or

[23] PECO does not have a minimum age for "senior citizen". A PECO Universal Services analyst noted that PECO categories a customer as a senior citizen if the customer reports that he or she is a senior citizen when asked.
[24] "Customers with Incomes to 50% of the federal poverty level in PECO Energy's Customer Assistance Program". H. Gil Peach and Associates/Scan America, June 10, 2002.

the case would be handed over to the PUC. Two new in-house CARES consultants started in June 2004 and a third started in July. Prior to June 2004, PECO Universal Service analysts and support staff processed CARES customers.

LIURP

The Low Income Usage Reduction Program (LIURP) provides education, conservation, and weatherization measures to reduce electric and gas usage. Customers must meet the following usage and income eligibility criteria for program participation.

- Household usage levels that exceed 600 kWh per month for electric baseload, 1,400 kWh per month for electric heat, or 100 ccf per month for gas heat.

- Residential customers with household income at or below 150 percent of the federal poverty level (FPL), or special needs residential customers with an arrearage and household income between 150 percent and 200 percent of the FPL.

The number of customers who receive LIURP services each year is largely determined by the annual program budget established in the settlement agreement of PECO's electric restructuring case (PUC Docket Numbers R-00973953 and P-00971265). The annual budget for 2004 and 2005 is $5.6 million for the LIURP electric customers and $875,000 for the LIURP gas customers. PECO served 8,373 customers in 2003 and 8,041 customers in 2004. There were 516 customers who were assigned to the program in 2004 that are still pending an audit or work.

PECO contracts with CMC Energy Services to administer LIURP. PECO provides CMC with a list of eligible customers and their energy usage data. CMC pursues these households in descending order based on highest usage and largest arrearages. CMC conducts an energy audit to determine the behavioral changes and program measures required for usage reduction. Following the audit, the auditor makes arrangements for a future visit to install measures. Robert Fantuzzo conducts an annual evaluation of the LIURP, which is reported separately from this evaluation.

MEAF

The Matching Energy Assistance Fund (MEAF) is a hardship fund that provides grants to customers who have had their service terminated or who are in danger of termination. Customers are eligible for MEAF grants of no greater than $500 if their income is at or below 175 percent of the federal poverty level (FPL), they have been shut off or received a shut off notice, the grant received will bring their balance down to zero, and they applied for LIHEAP. In 2004, 2,161 customers received MEAF grants.[25]

Funding for MEAF comes from PECO customers and PECO fundraising efforts. Ratepayers are asked in promotional bill inserts to pledge an amount that PECO will add to their

[25] Information provided per data received from PECO's Universal Services and IT Department.

monthly bill. Pledges can also be returned on MEAF forms that are available from Universal Services and are included in promotional packages such as the bi-annually "Energy News". The contributions collected are matched dollar for dollar by PECO shareholders.[26] All monies collected and matched are distributed to the fuel fund agencies based on the percentage factor of poverty level customers in each county.

MEAF is distributed to the counties (based on a formula derived from the State Block Grant allocation) as follows: Philadelphia 74.4% (Utility Emergency Services Fund), Bucks 6.49% (Bucks County Opportunity Council), Chester 4.29% (Community Service Council of Chester), Delaware 8.78% (Community Action Agency of Delaware County), Montgomery 5.89% (Montgomery County Action Development Corporation), and York 0.14% (Mason Dixon Cares).

The role of each county-designated community agency is to provide education and outreach related to MEAF, determine MEAF eligibility, and distribute the MEAF grants. Each agency chooses its own method of managing outreach, determining eligibility, and processing intakes based on the individual needs of the community.

B. *Customer Assistance Program (CAP)*

APPRISE conducted in-depth administrative interviews with relevant personnel and reviewed all pertinent program documents and data systems to develop a comprehensive understanding of PECO's CAP. This section describes the policies and procedures of PECO's CAP.

Recruitment and Outreach

Two Universal Service analysts work together to conduct a total of approximately 36 workshops for local community groups and eight energy fairs each year. These workshops and fairs consist of managing booths that provide information or providing short lectures on PECO's Universal Services Programs. During these events PECO staff will distribute the brochure entitled, "Does your money run out… before the month does?" that describes the programs available to PECO's low-income residential customers. This brochure is also provided to community groups and interested parties that request it.

PECO does not use direct mailing, media advertising, or customer service calls to recruit or identify CAP customers. PECO Universal Services staff helped design an Internet page for PECO Universal Services, but the page is not currently displayed on PECO's web site. PECO Universal Service analysts report that requests to attach CAP information to outgoing mailings and advertising related to LIHEAP and LIURP have been met with disapproval by PECO management.

[26] There is language in previous documents that the maximum level of PECO matching MEAF dollars is $1,000,000. However, the PECO legal & regulatory team has been researching the previous settlements and Commission filings for additional information.

No member of PECO’s Universal Services staff is specifically charged with the responsibility of outreach for Universal Services programs.

CAP Intake and Customer Service

PECO’s only systematic means for referring customers to CAP is through contact with delinquent or payment-troubled customers. Customer communication typically flows though one of PECO's three call centers, described below.

- The PECO customer service call center is operated by PECO and located in Philadelphia, PA. The primary function of the customer service call center is to handle initial account activation and outage issues.

- The PECO credit call center is operated by NCO and located in three offices: Upper Darby, PA; Jackson, MI; and Sarnia, Canada. The primary function of the credit call center is to address payment issues for customers who face termination or who have difficulty paying their bill. This includes referral of low-income customers to the CAP.

- The PECO Universal Services call center is operated by Outsourcing Solutions Incorporated (OSI) and located in Pittsburgh, PA. The primary functions of the Universal Services call center are to provide customer service for the CAP customers, process CAP applications, and verify income for new enrollees and re-certifying CAP customers.

The PECO credit and Universal Services call centers serve as PECO’s primary contact to the company’s low-income customers. Call center representatives are expected to identify low-income customers and assist them with CAP enrollment and other Universal Services programs. Call center processes categorize customers into two dichotomous categories:

- Delinquent / Nondelinquent - A delinquent customer is one who has an unpaid balance older than 20 days and greater than $25

- CAP / Non-CAP

If a delinquent non-CAP customer calls any of the call centers, the customer must be processed for a payment arrangement to address the delinquent balance prior to being processed for the CAP. For the most part, customers do not refuse an agreement because their delinquent balance will be placed into a pre-program arrearage forgiveness field and their CAP Rate would begin with a zero balance past due. Customers that refused the payment arrangement would be referred for various types of fuel grant assistance to reduce their past due balance to zero. All customers enrolled into the CAP have a zero past due balance.

From February 2004 through August 2004, if any delinquent customer (including CAP customers) called the customer service line or the Universal Services call center, the call was immediately transferred to the credit call center to address the delinquent balance. Prior to

February 2004 and after August 2004, the Universal Services call center managed all CAP customers (delinquent and non-delinquent) for payment arrangements and CAP processing.

Prior to February 2004, all customers had the credit call center phone number on their bills. Since February 2004, all CAP customers have the Universal Services call center phone number on their bills. It is rare that a non-CAP customer calls the Universal Services call center. In those rare cases, the customer typically has a question about the CAP Rate. If the caller is not delinquent, then the Universal Services call center can process the customer for the CAP Rate.

Between February and August 2004, a delinquent caller (CAP or non-CAP) who called the Universal Services call center had to be transferred to the credit call center for payment arrangement processing. Since August 2004, the Universal Services call center has been allowed to process the payment arrangements for delinquent CAP customers. Moreover, the Universal Services call center has also been allowed to process payment arrangements for delinquent non-CAP customers since October 2004.

CAP Intake Process

If a customer has gross household income less than or equal to 150 percent of the FPL, the customer will be informed about the CAP and sent a CAP application by the call center representative. The CAP Rate Script guidelines require the call representative to inform the customer of the following information:

- CAP Rate is a discounted residential rate for low-income customers.
- To be considered for the CAP Rate the customer must:
    - Complete an application.
    - Provide proof of the total gross household income.
    - Provide the Social Security number(s) for each household member.
    - Return these items within 10 days.
- If the customer receives the CAP Rate discount, then he or she must:
    - Pay the CAP Rate bills on time and in full each month.
    - Be on the budget.[27]
    - Verify the total household income every two years.[28]
    - Apply for LIHEAP grants when available and give one grant to PECO.[29]
    - Take part in LIURP if offered.[30]

[27] The budget is mandatory for the CAP Rates A, B, and C. The budget is optional for the CAP Rates D and E. However, customers are strongly encouraged to be on budget billing even for rates D and E.

[28] Verification will take place every year for the CAP Rate A customers, and can occur sooner as desired by Universal Services. Mr. Nock, PECO Universal Services manager, reported that he is in the process of designing a notification system whereby the PECO Universal Services call center can flag customers who are having a temporary hardship (e.g., temporary disability such as a broken limb that may be preventing the customer from temporarily earning income) that might warrant a review of the account sooner than the usual one or two years later.

[29] Currently, there is no effort to enforce this statement and there is no penalty to the customer for not applying or for providing the grant to another utility.

  - Report any changes in household income right away.[31]
  - Have PECO as the supplier to receive a CAP Rate A, B, or C discount. If the customer eligible for the CAP Rate A, B, or C chooses to retain a different supplier, then the customer will revert to CAP Rate D. If the customer receives a CAP Rate D or E and has a different supplier, then the discounted rates only apply to the PECO charges.
- If the customer pays the bill on time each month for at least six months, then PECO will forgive the customer's balance at the time of enrollment.
- If the customer pays the bill late, a late fee will be charged.
- If the customer falls behind on the bill, then the customer may receive a payment agreement.
- If the customer does not pay the bill, service may be shut off. Moreover, the customer must continue to pay the bill during the approval process. If the customer does not, then service may be shut-off.

In addition to providing the information noted in the script, the call center representatives use a social service agency referral list to provide referrals to customers based on their needs or situation as assessed during the call. A referral involves providing the name, description of the service or agency, and phone number to the customer. Call center representatives from the Universal Services call center, but not those from the credit call center, record each referral made to a particular agency or Universal Services program.

There are two different processes for sending out CAP applications, depending on the call center from which they originate.

- The credit call center representative manually writes the name and address of the customer on an envelope that contains a business-reply envelope and a CAP application. CAP application envelopes are gathered by a floor coordinator and mailed at the end of the day.

- The Universal Services call center representative records in the computer system that the customer has been processed for a CAP intake, which initiates a CAP application mailing to the customer sent by an off-site vendor, Northshore.

To enroll in the CAP, the customer must complete, sign and return the CAP Rate application along with "proof of income". Proof of income verification includes:

- SSI
- Social Security, and retirement letters
- Pay stubs (last four stubs)

[30] There is no evidence in the CAP manuals that customers are told anything more about the program or that their receipt of this service is based on usage level.

[31] There is currently no enforcement of this statement and there is no penalty to the customer for not reporting income changes. However, customers are required to re-certify, that is, verify their income and demographic information at least once every two years.

- Social Security disability statement
- Child support court order
- Unemployment letter and last two pay stubs
- Previous year W-2 or 1040 SE form
- Employer verification letter
- DPW statement
- Workman's Compensation award letter
- Social Security survivor's benefit letter
- Veteran's benefits award letter.

Montage is the web based interface to the Customer Information System used by call center representatives to review accounts, set up payment arrangements or extensions, enroll customers into the CAP, and perform several other customer service functions.

In the Montage system, a customer's CAP status has four general stages: holding, pending, completed, and enrolled. They are defined as follows:

- Holding – an enrollment shell is created but information needed to continue the process is incomplete or not fully entered into the system.
- Pending – the system is awaiting a customer response in the form of the signed CAP application, information verification form, etc.
- Completed – all necessary customer materials have been received and verified. The customer is ready to be enrolled in the CAP.
- Enrolled – customer is enrolled in the CAP and receives a CAP Rate discount.

If a customer is posted as complete prior to 3 PM, the system will enroll the customer in the CAP on the next day. If a customer is posted as complete after 3 PM, then the system will enroll the customer in the CAP in two calendar days. The CAP Rate discount becomes effective on all usage for the billing cycle in which the customer is enrolled. On the rare occasion that a customer's status is verified and posted as completed after 3 PM on the billing date, then the CAP Rate discount becomes effective in the following billing cycle.

Besides income verification being unverifiable or over the limit, customers may be denied enrollment into the CAP if theft of service had ever been found at the property or fraudulent activity is found in the account history or information supplied during the application process.

Eligibility Verification Via Other Agencies

In September 2003, PECO submitted the PECO Universal Services Three Year Plan 2004 to 2006 to the PUC in accordance with 52 Pa. Code §54.74. The plan described the components of the PECO Universal Services program and modifications to previous program policies and procedures. The plan noted that if a customer receives fuel assistance from LIHEAP, MEAF, or any other type of low-income assistance program, then the customer would be enrolled or re-certified in the CAP. From February 2004 to December

2005, PECO ceased the use of fuel assistance lists for enrollment or recertification, as these lists do not provide the detailed income information that is necessary to assign customers in the appropriate CAP Rate tier.

On December 6, 2005 PECO implemented a new proactive LIHEAP and Department of Public Welfare (DPW) enrollment process to streamline the enrollment and re-certification process. The goal of the enrollment process enhancements is to enroll customers into the CAP who have had their income verified by another agency and would be eligible for the CAP.

When a customer receives a LIHEAP grant, the information for customers not currently in the CAP is forwarded to the PECO Universal Services Call Center (OSI). OSI attempts to contact the customer to complete the application process. If OSI is unsuccessful, then the customer is automatically enrolled into CAP Rate D. In December 2005, 1,614 customers that received LIHEAP grants were proactively enrolled into the CAP.

If a customer's financial statement reflects receipt of DPW benefits and the customer did not provide detailed household and income information, then OSI contacts DPW to confirm receipt of DPW benefits and amount. Using the DPW benefits to poverty level table, OSI will use the DPW benefit amount to enroll the customer into the appropriate CAP Rate tier. In December 2005, 1,769 customers that received DPW benefits were proactively enrolled into the CAP.

Payment Arrangements

A call center representative processes a customer for a payment arrangement by "taking a financial statement" and then issuing payment terms. "Taking a financial statement" involves recording the name, Social Security number, birth date, gender, gross income, and income source for each resident in the ratepayer's household. The total household income and household size is used by PECO's computer system[32] to generate the federal poverty level percentage. The payment terms (i.e., minimum payback installment amounts) are dependent upon a combination of factors that include the customer's income level, past due balance, "previous agreement history", CAP Rate tier/status, and financial statement status. For example, customers with no previous agreements and income at or below 50 percent of the federal poverty level are issued current balance plus $15 of the past due balance as the terms.

The financial statement information collected for the payment arrangement terms is the same as that collected for CAP enrollment. If the customer's percentage of federal poverty level is at or below 150 percent of poverty, then the customer can be processed for the CAP. After the credit call center obtains the customer's household demographic and income information and issues payment terms, the credit or the Universal Services call center can use that information to process a CAP intake.

[32] Montage and CIS are the computer database and customer information systems used by PECO.

A customer can refuse payment agreement terms offered by the call center representative and still be processed and enrolled in the CAP. The customer would be required to pay the past due balance before the shut-off date or face termination. A non-delinquent payment-troubled[33] customer can also be processed for the CAP.

Health Usage and Extenuating Circumstances

PECO credit and Universal Services call center representatives have been trained to listen for any descriptive terminology or "buzz words" that could potentially be considered an extenuating circumstance or health usage, a situation where the customer has increased energy usage as a result of a medical condition. In these cases, the call center representative is expected to record the "type of extenuating circumstance" or health usage in the computer system. This entry will initiate a referral to the PECO Universal Services CARES consultants.

PECO defines the following situations as types of extenuating circumstances:

- Health-related issues (e.g., injury, illness, disability, high medical bills, medically related usage, death in the family, etc.)
- High-risk households members (e.g., children under the age of eight with an injury or illness, disabled individuals, infirmed elderly, etc.)
- Sudden loss of employment or household income
- High non-discretionary electric usage related to shelter conditions not susceptible to mitigation through LIURP measures.

PECO defines health usage as a condition where a household has increased energy usage as a result of a medical condition. To ensure that customers who require medically related usage are not penalized for their conditions, all medically necessary usage is charged at the discounted CAP Rate, even if the usage exceeds the kWh discount threshold associated with the CAP Rate. To qualify for the health usage discount, the following requirements must be met.

- Customer must be in the CAP.
- Customer must utilize life sustaining medical appliance.
- A doctor must complete the health usage form to verify the serious illness or injury that requires the use of life sustaining medical equipment.
- Monthly usage must be over 600 kWh.

Customers who make reference to an extenuating circumstance and have total gross household income less than or equal to 25 percent of the FPL are referred to a Universal

[33] Any history of late payments, consistent arrearages, multiple broken payment agreements, non-payment of energy bills, or insufficient payments qualifies a customer as payment-troubled. A current delinquency is not a requirement.

Services CARES consultant for further processing into CAP Rate A. All CAP eligible customers who report health usage are also referred to a Universal Services CARES consultant for further processing. The call representative can refer the customer to CARES via the Montage system by noting health usage or selecting the appropriate extenuating circumstance category and documenting the details in the CAP Program Detail Window.

CARES consultants are responsible for verifying extenuating circumstances or health usage. The CARES consultant distributes the "Extenuating Circumstances Verification Letter" to the customer (or a third-party representative for the customer) and/or the "Health Usage Verification Form" to the customer's physician. The completed forms are returned to the PECO Universal Services CARES department for review. After the CARES consultant has verified the information on the completed form, the CARES consultant is responsible for supporting and directing the customer's efforts to pay his or her PECO bills. The services provided are most typically referrals to social service agencies.

Customers who have no extenuating circumstances, or who have extenuating circumstances and household income greater than 25 percent of the FPL will be enrolled into the appropriate CAP Rate after the Universal Services call center has verified proof of income. Customers who have extenuating circumstances and household income less than or equal to 25 percent of the FPL will enrolled into CAP Rate A. Only CARES consultants who have verified a completed "Extenuating Circumstances Verification Letter" can enroll a customer into CAP Rate A. In addition, CAP Rate A customers are provided ongoing case management services by the Universal Services CARES consultants. The Credit and Universal Services call centers are required to transfer all calls from a CAP Rate A customer to a Universal Services CARES representative.

CAP Recertification

All CAP Rate customers are required to recertify their eligibility. Customers are informed of this requirement during the initial intake process. Customers in CAP Rate A must recertify annually and customers in the CAP Rates B-E are required to recertify every two years.

The recertification process begins when PECO sends the customer a letter requesting an updated CAP application form and proof of income. If the customer fails to respond to the first letter, a second letter is sent seven days after the initial letter. If the customer fails to respond to the second letter, then a third and final letter is sent 13 days later notifying the customer that he or she will be removed from the CAP Rate in 10 business days due to a failure to provide requested income information.

Proof of income is sent to the Universal Services call center for processing. An increase or decrease in income based on new financial and demographic information obtained from a CAP Rate customer may result in new discounted rates or CAP Rate removal.

CAP customers are informed at the time of enrollment that they must contact PECO if their financial or household information changes, however, PECO has no way to enforce this policy. If a customer calls for any reason that warrants taking a new financial statement (e.g., the customer requests a payment arrangement) and the new financial statement reveals a change in the CAP Rate tier, then the call center will initiate an immediate recertification process.

PECO Universal Services management set a goal to recertify every customer between February 2004 and February 2005. The recertifications were deemed essential for setting customers into the new CAP Rate tiers as well as populating the database with appropriate demographic and income information that had previously not been recorded or maintained. The recertifications are taking place on a rolling basis with all customers recertified in the year following their enrollment or last recertification, even if the customer was not due for recertification for two years. For example, a customer scheduled for recertification in November 2005 would have been recertified in November 2004.

PECO identified gaps in the recertification process, which prolonged CAP Rate removals for customers that did not complete their re-certification within the required timeframe. This delay pushed back the delivery of the initial recertification letters into March 2005, thereby extending the completion of recertification for some customers into the second quarter of 2005. In July 2005, a special report was run which identified approximately 30,000 accounts that had still not been successfully re-certified as of June 2005.

In addition to having income over the income guidelines or failing to recertify, customers may also be removed from the CAP if theft of service is found at the property or fraudulent activity is found in the account history or information supplied during the application process. Customers may also be removed for failing to abide by the program rule of enrolling into LIURP when requested by the company.

Arrearage Forgiveness

CAP pre-program arrearages (the delinquent balance at time of CAP Rate enrollment) are forgiven when CAP Rate customers make six monthly payments in full. This is an automated system review process that occurs at the end of each billing cycle. The system does not require that the payments be made in six consecutive months.

PECO’s arrearage forgiveness removes the weight of a potentially large obligation for a financially challenged customer, while providing the basis of a sound payment history. The requirement to pay the bill monthly is intended to establish a positive payment history for the customer enabling them to remain current or out of the collection process. However, to adjust for fixed income and temporarily financially troubled customers, the process was enhanced to allow late payments to count towards meeting the forgiveness goal on a six month rolling basis. The customer’s past due balance must be zero at the time the review is made during that cycle. For example, if a customer misses payments in two of the six months during a cycle but makes up each payment the following month, the customer would be eligible for forgiveness if the delinquent account balance equaled zero at the time of the review.[34]

Prior to June 2004 a different arrearage forgiveness process was in place, where a systems operator manually initiated a query to forgive the arrearages of any customer who made six consecutive on-time monthly payments. This previous procedure matches the policy as it is told to the customer in the CAP Rate script ("If you pay your bill on time each month for at least six months, we will forgive your previous balance"). The current procedure (based on balance over a six-month period) does not match the policy as it is told to the customer, however it is more generous for the customer and simpler for the system to process automatically.

PECO does not have a procedure to alert customers who do not meet the requirements for arrearage forgiveness or to congratulate customers who do meet the requirements. These communications were considered, but due to budget restraints have not been implemented. Customers who successfully keep their balance current over a six-month period will simply have the pre-program arrearage balance removed from the bill.

C. *Customer Assistance Referral and Evaluation Services (CARES)*

The goal of the CARES representative is to make personal contact with the CARES customer, process the customer's paperwork, and enroll the customer into relevant PECO Universal Services programs. In addition, the CARES representative is expected to educate and inform PECO customers of available resources including energy assistance, budget counseling, housing assistance, and other social services. This effort is designed to maximize the ability of payment-troubled customers to pay their energy bills. PECO attempts to reach this goal by maintaining an extensive referral network, consisting of community organizations, government agencies, and social service agencies.

Identifying Customers

The most common means of identifying CARES customers since February 2004 has been via referrals from the PECO credit and Universal Services call centers. Call center representatives do not specifically ask questions related to extenuating circumstances or health usage (medical condition requiring utility use). A referral to a CARES consultant is based on information that the customer volunteers and the ability of the call center representative to discern and report this information. The call center representative refers the customer using the Montage system. Once the referral transaction is complete, the system automatically refers the account to a Universal Services CARES consultant via the Cognos data-reporting system.

There are two system-generated reports that contain daily updates of CARES referrals from the call centers. The "CARES Consultant - Potential Health Usage" report identifies

[34] Arrearage forgiveness is based on complete payments relative to billing dollars over a six-month period. A customer's change in usage is not relevant.

accounts referred to CARES due to health usage. The "CARES Consultant – Potential CAP A" report identifies accounts referred to CARES due to extenuating circumstances and income at or below 25 percent of the FPL. These daily reports are used to establish additions to the CARES consultants' caseload. CARES customers are sorted among the three CARES consultants based on location. The PECO service territory is split into 12 districts and each CARES consultant is responsible for customers in four districts.

Customers identified by call center representatives as having health usage or income at or below 25 percent of the federal poverty level (FPL) with extenuating circumstances comprise nearly all of the CARES customers. The reports generated note the customer account number and name, potential health usage condition or extenuating circumstance, date enrolled, CAP Rate tier or FPL percentage, and comments. For additional information, the CARES consultant can access the customer information system to obtain contact information, as well as the customer's usage and payment history.

Before February 2004, customers were referred manually (i.e., via phone calls or delivered messages as opposed to system generated reports) from the call centers (NCO, OSI, Customer Service), other Universal Services staff, government and military officials, or community agencies. Customers can still be referred to CARES manually, but the system-generated reports are currently the most common mode of referral.

The call center representative can only initiate a CARES referral through the Montage system if the customer is also being processed for a CAP intake. The system will only process CAP intake procedures for customers with income below 150 percent of the FPL. However, CARES is intended to extend to customers up to 200 percent of the FPL. If a customer is between 150 percent and 200 percent of the FPL, then the call center representative must manually refer that customer to CARES. During call center site visits conducted in November, APPRISE investigators noted that the Universal Services Call Center (OSI) representatives made manual referrals to CARES for customers with incomes greater than 150 percent of the FPL. There was no evidence that credit call center (NCO) representatives provided referrals for non-CAP eligible clients.

PECO Universal Services analysts and social service agency consultants can also refer customers to CARES consultants. CARES consultants reported that most of the non-system generated referrals come from other Universal Service analysts. These analysts have relationships with community based, government, and social service agencies wherein an agency consultant may call them directly regarding a PECO client. In these cases, the analyst may deem the client eligible for CARES and will refer the client to the CARES consultants. One CARES consultant reported that she prioritizes these manual referrals ahead of the referrals obtained from the system generated reports.

CARES consultants reported that they provide some level of assistance (in the form of referral services) to all customers referred to them. CARES consultants do not assess CARES eligibility, but leave that responsibility to those who referred the customers. The Universal Services CAP/CARES analyst reported that CARES consultants should make the final determination as to whether or not an account will become a CARES account. She noted that the CARES consultant should validate the information provided at the time of the referral. She reported that when an account does not meet the initial screening criteria it is not "removed" from CARES, instead the referral is not validated and the account never becomes a CARES account.

Customers are "removed" from CARES if they are unable to substantiate the need for further or continuous CARES assistance. Accounts are removed from CARES when customers no longer have an extenuating circumstances that qualifies them for CAP Rate A, or CARES consultants have completed all the steps to assist the customer and no further actions or follow-ups are required.

Program Implementation

CARES consultants must contact referred customers to determine the type of assistance needed. Two of the three CARES consultants noted that they initially and typically communicate with the customer via telephone. Another CARES consultant reported that she contacts customers most often by mail (i.e., sending health usage verification forms). She added that she initiates first contact via telephone when the customer's records reveal a "danger sign" (e.g., customer is jeopardy of losing service). The Universal Services CAP/CARES analyst reported that the consultants should always make the initial contact via telephone to gather additional information to complete the initial analysis and determine the customer's needs.

CARES consultants noted no problems reaching customers by phone. Two of the three CARES consultants stated that they make calls in the morning, afternoon, and early evening to reach customers. They each cited that the hard to reach customers are contacted via mail. CARES consultants have online access to phone directories and reverse phone lookup services for contacting hard-to-reach customers.

CARES consultants report two primary tasks that they currently perform. One task is to verify health usage forms signed by a physician. This verification may include a call to the physician. If the CARES consultant verifies the accuracy of the health usage condition, then the consultant can grant the customer a health usage discount whereby all medically necessary usage is charged at the discounted CAP Rate, even if the usage exceeds the kWh discount threshold associated with the CAP Rate. The second task is to compile detailed financial information from customers as a way to assess the customer's needs and then provide the most appropriate referrals.

Education and Referral Services

All CARES consultants reported that they make referrals to services and agencies by providing the customer with contact information or, less frequently, by calling the agency on the customer's behalf. CARES consultants did not report that they ever fill out program application forms on a customer's behalf.

CARES consultants provided widely varying reports regarding the daily count and nature of referrals (e.g., internal to PECO such as, MEAF or LIURP or external to outside agencies such as, LIHEAP or food stamps.)

Case Management

CARES consultants reported that their current caseload ranges from 30 to 45 customers, and that they work on approximately six cases each day. Working on a case involves extracting customer information from the system (e.g., usage and payment history), contacting and discussing financial details and options with the customer, as well as reporting information obtained onto a CARES intake sheet.

CARES consultants reported that no one reviews their "unresolved" or "resolved" cases. However, they each considered both the Universal Services manager and the Universal Services CAP/CARES analyst as their supervisors and the analyst as the primary person to consult with questions. There is no systematic effort made to measure the effectiveness of referrals. Two of the three consultants noted that they could only ascertain whether a customer has taken advantage of a referral by asking the customer during a follow-up conversation.

CARES consultants did not have a consistent strategy for closing a case. The CARES consultants verify information, enroll the customer in other PECO services, provide referrals, and follow-up at an unspecified later time with customers. The follow-up consists of contacting the client to ascertain whether he or she has any other needs, has sought and obtained the assistance from the referrals, or has had a change in household income or circumstances. CARES consultants reported that that the timing of the follow-up varies by customer. CARES consultants did not report a specific outcome, number of follow-ups, or period after which a case was considered closed or "resolved."

Challenges

Each CARES consultant expressed that the greatest challenge is the learning curve and the unfamiliarity in the referral options. They noted that they continue to learn about new programs everyday, sometimes from the customers they are serving. The Universal Services CAP/CARES analyst noted that challenges in managing CARES include developing a successful referral system for customers and making certain the call centers (particularly the PECO credit call center) are properly referring customers to CARES.

Personnel and Supervisory Roles

There are three CARES consultants who interact directly with CARES customers.

Each of the Universal Services analysts has varied expertise that would be useful in supporting the CARES unit. One analyst's background in social affairs led her to be selected as the trainer of the CARES consultants. In her 20 years with PECO, a second analyst served in many roles that most closely resemble the kinds of tasks that CARES consultants perform. Because nearly all CARES customers come from referrals through the CAP intake process and the third analyst is responsible for overseeing the CAP Rate program, the third analyst also has responsibility of overseeing CARES. As of September 2004, there is no Universal Services staff member assigned the task of reviewing or following-up on cases to ensure that CARES is meeting its objective.

The current manager of Universal Services began in this position in October 2003. This manager is in the process of devising a supervisory and advisory structure for managing the CARES consultants that includes himself along with each of the Universal Services analysts. While each analyst provides a different level of support for CARES, the manager is the official supervisor.

The manager and the CARES analyst hold twice-weekly meetings with the three full-time CARES consultants to review case workload, address concerns, and develop responses to issues that are unusual or lacking a standard solution. Because this iteration of CARES began in earnest in June 2004, the policies and procedures are often updated based on information gleaned from the field and decisions made during the meetings.

LIHEAP Outreach

LIHEAP activity is considered a component of the CARES program. In addition to referrals from the PECO Universal Services and PECO Credit call centers, PECO has a LIHEAP call center operated by CMC Energy Services (CMC). This call center solicits every customer, twice each winter, that PECO identifies as being eligible or potentially eligible for LIHEAP.

PECO's LIHEAP outreach strategies also include distribution of posters and applications at PECO payment locations; providing applications to customers who are without service, as part of the winter survey of customers who are without service; and partnerships with media outlets, government agencies, senior citizen groups, and the Philadelphia school district. In addition, PECO works with LIHEAP county offices to expedite LIHEAP crisis processing.

CARES Customer Data

The only system-generated reports related to CARES are the daily reports used to establish additions to the caseload. Case management information is recorded on the CARES Intake Sheet. The CARES Intake Sheet includes the following sections to be completed by the CARES consultant:

- Customer Name, Account Number, Ratepayer Social Security Number
- Customer Telephone Numbers
- CARES Consultant (handling the case)
- Date Referred and Date Closed
- Type and Source of Referral
- Service Status
- Medical Condition Description
- Potential Health Usage Description

- Background Information (on participation in other Universal Services programs)
- Customer Initial Contact Information
- Detailed Financial Information (monthly expense record by category of expenses)
- List of programs to refer customer and check off for currently receiving or needs referral
- Customer Follow-Up Contact Information.

The CARES consultants manually record all customer information on paper intake sheets that become part of the case file. Customer case files are stored at the PECO Market Street offices. No information from the intake sheets is entered into a computer for electronic storage or analysis. Therefore, CARES intake information is not available in the customer information system (CIS or Montage). There is also no indicator in the customer information system to identify whether a customer is or has been served by CARES. CAP Rate A customers are automatically referred to CARES consultants for CAP enrollment processing. There is an indicator in Montage to identify whether the customer is CAP Rate A (0-25 percent with extenuating circumstances). There were 68 CAP Rate A customers as of December 31, 2005.

Very little data or analyses currently exists on CARES participation, CARES retention rates, cases opened, cases closed, referrals made by CARES consultants, refusals, etc. All of this information is manually gathered and physically counted from the CARES intake sheets. PECO reported the other following CARES performance statistics for 2005:

- 13,000 LIHEAP and CAP applications were hand delivered by field agents during the annual winter survey of PECO customers who were without service.

- 32 cases were referred directly from the PUC.

- Over 1,100 extenuating circumstances and CARES referrals were processed.

<u>Military CARES</u>

CARES – Activated Military Personnel Program (CARES AMPP or Military CARES) began in January 2002 to assist U.S. military personnel called to active duty. Deployed or recently activated military personnel often experience a temporary financial hardship as field pay can be significantly delayed due to processing. In addition, National Guard service members may have military pay compensation that is lower than their usual salaries. In these cases, the customer may not be low-income and payment-troubled at the time of deployment, but could be in the 30-90 days that follow. A PECO Universal Services analyst receives deployment information from local bases (e.g., Willow Grove) or regional military ombudsmen and notifies PECO military residential customers about the availability of assistance from PECO Universal Services.

A PECO Universal Services analyst is responsible for determining whether the military household is CARES eligible. A customer is eligible for CARES if the household is low-income (at or below 200 percent of the FPL), has special needs (i.e., hardship affecting household income), is payment troubled, and has an extenuating circumstance.

Similar to CARES, the analyst attempts to make personal contact with an adult in the Military CARES customer household to evaluate the household and enroll the household into relevant PECO Universal Services programs. In addition, she educates and informs the household of available resources including energy assistance, budget counseling, housing assistance, and other social services.

Military customers who are at or below 150 percent of FPL are enrolled into the CAP. Moreover, military customers whose income is between 150 percent and 200 percent of the FPL may be considered for CAP Rate. That decision is based on the needs of the individual household, evaluated on a case-by-case basis. In general, Military CARES assistance consists of payment arrangements, extended due dates, waiver of late charges, monthly monitoring, and updating of accounts (to ensure the status remains active) for those who would be out of communication.

PECO estimated that that at any one time, 500 military personnel are eligible for the program. Approximately 305 service personnel had received Universal Service assistance through Military CARES since the program began in January 2002 through the end of 2004.

D. Low Income Usage Reduction Program (LIURP)

The Pennsylvania Public Utility Commission (PUC) requires that all electric and gas utilities in the state offer a low-income usage reduction program (LIURP) to their customers. PECO has contracted with CMC Energy Services (CMC) to administer LIURP since the implementation of the Program in 1991. PECO and CMC worked together to create program procedures that complied with Chapter 58 guidelines, and continue to work together to design and implement Program changes when necessary. CMC sub-contracts with five agencies to install major Program measures.

The annual LIURP budget for 2005 and 2006, determined by the settlement agreement of PECO's electric restructuring case, is $6,475,000, with $875,000 earmarked for the LIURP Gas Program. Based on this budget, CMC and their subcontractors are projected to complete 6,000 baseload jobs, and between 1,800 and 2,000 heating jobs (540 of which will be gas).

Program Management and Administration

LIURP managers and staff have many years of experience with LIURP.

The LIURP analyst is a PECO employee who has overseen and managed the program program for seven years. This analyst is responsible for overseeing overall LIURP production, quality assurance, and the annual Program evaluation. She is also responsible for managing the LIURP budget, re-designing the Program, and analyzing CMC reports.

CMC has the following staff responsible for PECO's LIURP:

- LIURP Program Manager: The LIURP Program Manager has 14 years of PECO LIURP experience. She is responsible for monitoring program performance, including training, sub-contractor performance and customer satisfaction. She is also responsible for coordinating program activities, making recommendations for and implementing program improvements, analyzing program data, and reporting to PECO.

- LIURP Office Manager: The LIURP Office Manager has 13 years of PECO LIURP experience. She is responsible for supervising daily LIURP work activities. She is also responsible for ensuring accurate and timely data input, evaluating training and performance, managing customer service calls, and following up on referrals.

- LIURP Quality Control Manager: The LIURP Quality Control Manager has eight years of PECO LIURP experience. He is responsible for providing training and technical support to field staff and sub-contractors. He is also responsible for completing pre and post work inspections and resolving job issues.

CMC meets with PECO monthly for performance reviews and bi-monthly for Program review meetings. PECO conducts monthly site visits and inspections and has regular telephone and/or e-mail contact with CMC.

Five subcontracted agencies assist in the implementation of LIURP.

- Premier Contractors completes weatherization work, air sealing, insulation, and air conditioner replacements.
- Davis Modern Heating completes house heating and water heating repair and replacement work.
- McCann Company completes house heating and water heating repair and replacement work.
- Colonial Electrical installs water heater timers and line voltage thermostats.
- Whirlpool delivers new refrigerators.

LIURP Eligibility and Benefits

PECO customers must meet the following criteria to participate in the program.

- Residential customer
- Income requirement
  - Income below 150 percent of the Federal Poverty Level (FPL), or
  - Special needs customer with income between 150 and 200 percent of the FPL[35]
- Usage requirements
  - At least 600 kWh monthly for baseload customers
  - At least 1,400 kWh monthly for electric heating customers
  - At least 100 ccf for gas heating customers

[35] Since 1998, LIURP regulations have permitted companies to spend up to 20 percent of their annual Program budgets on customers with income between 150 and 200 percent of the FPL.

LIURP provides weatherization and conservation measures to promote usage reduction. Energy education tailored to the individual household's energy use is also provided to facilitate usage reduction.

The following minor measures may be provided:

- Water heater and pipe wraps
- Faucet aerators
- Showerheads
- Smoke detectors
- CFL bulbs

The following major measures may be provided:

- Insulation
- Weatherization
- Heating system repair or replacement
- Air conditioner replacement
- Refrigerator replacement
- Water heater timer installation

Qualification of Leads

PECO sends a quarterly download of high usage, low-income customers to CMC. The majority of LIURP recipients are recruited from this list. Customers are also referred to LIURP through the following mechanisms:

- PECO Universal Services staff
- CAP call center
- Community Based Organizations (CBOs)
- Prior program recipients
- Health usage customers

The electronic file downloaded from PECO contains high energy users who are also LIHEAP recipients, Customer Assistance Program (CAP) participants, payment troubled customers, or customers with multiple payment agreements. CMC reviews the lists and eliminates customers who have previously received Program services, refused Program services, or moved within the past six months. Typically, after these removals, the remaining customers on the downloaded file are eligible for and receive services from LIURP.

CMC screens all referrals from other sources to determine Program eligibility. If income and usage history are available and the customer is determined to be eligible, CMC enrolls the customer immediately. If income eligibility cannot be determined from PECO's system, CMC mails income documentation forms to the customer. Typically, 25 to 30 percent of customers referred through other sources are determined to be eligible for and receive services from LIURP.

Referred customers may not receive LIURP services because the customer:

- Already received LIURP services.
- Refused LIURP services.
- Has insufficient usage history.
- Is inactive.
- Has income over the eligibility limit.
- Is non-responsive to contacts by CMC.
- Has recently, or is planning, to move.
- Has usage below the required level.
- Is a tenant and has a landlord who will not provide consent.

CMC is required to obtain consent from the landlord to provide services to a tenant. A landlord may not give approval because he or she wants to choose Program measures, wants ownership of the new appliances, or is evicting the tenant. Some landlords never respond to CMC inquiries. CMC estimates that they are unable to obtain landlord consent for about seven percent of renters.[36]

Approximately 90 percent of customers who receive LIURP services are identified through the downloaded list, and about 10 percent through other referrals.

Customer Outreach

CMC's customer service representatives contact potential Program participants by telephone to explain Program services, obtain customer information, and confirm or determine eligibility. If the customer is eligible, an appointment is scheduled for the energy audit. CMC will attempt to make this contact three times by telephone and one time by mail over a 30-day period. Information collected during this contact includes the following:

- Name of person responsible for bill payment
- Age of each household member
- Income sources for each household member
- Income amounts for each household member
- Property status and, if applicable, landlord contact information
- Monthly amount of mortgage or rent
- Housing type
- Occupation
- Employment status, marital status and level of education

[36] Landlords are not required to contribute to the cost of LIURP services.

Job Types

There are two different LIURP job types: Baseload and Heating. Baseload jobs focus on a household's lighting and appliances. Heating jobs include services such as weatherization, insulation, and heating system repair or replacement. Both heating and baseload issues in a household are addressed when necessary.

Service Delivery

CMC prioritizes CAP participants for LIURP service delivery. Those with the lowest income and the greatest CAP benefits receive the highest priority. CMC prioritizes remaining LIURP participants by energy use and income.

The first step in service delivery is the program audit, performed by CMC staff. The auditor verifies the previously reported household characteristics, including number of household occupants, age of home, and years of occupancy. He or she also calculates the average household energy use per day, the energy use for each household appliance, temperature settings, and water temperature. Based on this information, the auditor may wrap the water heater and pipes, and install aerators, smoke detectors, showerheads, and CFLs during this initial audit visit.

The auditor schedules the appropriate sub-contractors to complete any necessary major measures, such as insulation, heating system repair or replacement, or new appliances. CMC requires that major measures be installed within 30 days of the initial audit.

PECO and the PUC have pre-approved all of the minor and major LIURP measures. They have placed no cap on the amount of money spent per home. The minor measures, particularly smoke detectors and CFLs, are much more commonly provided than the major measures.

Energy Education

PECO and CMC designed the energy education portion of LIURP to facilitate customers' clear understanding of the reasons for high energy use, and to communicate how their behaviors contribute to energy use and energy bills. The auditor provides the primary LIURP energy education session during the initial audit visit. This session lasts at least 30 minutes. Further education is often provided by subcontractors when major measures are installed, and by other CMC staff during quality control inspections, and follow-up telephone calls.

During the initial education session, the educator reviews the customer's audit results and identifies ways that the customer can modify the behaviors of household members to save energy and money. The educator also provides the customer with an education package, which includes the following materials:

- Tips for saving energy

- An energy calculator
- 'Hazards of Space Heating' pamphlet
- Energy Savers calendar
- Energy cost estimate form
- Energy saving recommendations list based on the household's energy use
- 'Does Your Money Run Out' booklet

The educator reviews these educational materials with the customer, and compares the household's energy cost estimate form to the household's actual energy bill. Additionally, the educator refers the customer to programs and agencies that might help him or her meet household needs, and answers any questions the customer may have about the Program or the education session. Finally, the educator reviews the measures that the customer has and will receive through LIURP, and reviews the LIURP follow-up procedures that the customer can expect.

For one year after LIURP services have been provided, PECO and CMC monitor the customer's energy usage monthly. CMC mails monthly progress letters to customers to highlight any changes in monthly usage. Each quarter CMC revises the letters to emphasize energy saving tips that are specific to the current season. CMC provides an additional telephone energy education session to customers who do not reduce energy usage after they receive LIURP services.

Quality Control

Three methods primarily used for LIURP quality control are:

- An annual evaluation by an independent program evaluator.
- Customer satisfaction surveys administered by CMC.
- Inspections by the CMC Quality Control Manager and PECO's LIURP Program Manager.

Additionally, PECO holds regular performance evaluation meetings and is in the process of implementing a scorecard system that will help to measure CMC's program administration performance.

CMC conducts customer satisfaction surveys during site inspections, by telephone, and by mail. CMC reported that the surveys show customers increased their knowledge of energy conservation through program participation. Customers reported that they were satisfied with LIURP and with the new appliances that the Program provided.

CMC's Quality Control Manager inspects approximately 30 percent of LIURP jobs. The inspector works from an inspection checklist, and has the customer satisfaction survey, the home's audit results, and the completed work order to assist in the inspection. The inspector also conducts blower door, heating, and carbon monoxide testing, and confirms the presence of all invoiced measures. In addition to post-completion inspections, the inspector sometimes accompanies CMC staff on audits, and sub-contractor staff on installations.

When the inspector finds missed opportunities or small mistakes, he fixes the problem and provides feedback to the individual who performed the work. For larger mistakes, or discrepancies in quantities invoiced and quantities received, the inspector fails the job and allows CMC or subcontractor staff 10 business days to fix the problems and send written confirmation of resolution to the inspector. Depending on the nature of the problem, the inspector may return to the site to re-inspect.

The LIURP inspection process helps to ensure high quality work, and highlights areas for potential improvement. Inspection findings led to the addition of LIURP measures including central AC maintenance and an anti-spill switch for heating systems.

Data and Reporting

LIURP databases contain the following information:

- Personal and household demographics
- Landlord contact information
- Audit results
- Quantity and costs of installed measures
- Referrals made to other programs
- Post treatment follow-up outreach results
- Completion dates and usage history

CMC conducts data entry every week, and CMC and PECO check the database for completeness and accuracy. These data are used to generate regular reports, including:

- Completed jobs compared to projected jobs
- Program costs by category
- Average cost per job
- Completed jobs by type
- Outreach call volume
- Customer demographics

CMC, PECO, and the LIURP independent evaluator monitor Program data monthly and annually. CMC and PECO produce an annual report to the PUC and the evaluator produces an annual evaluation report.

LIURP Training

PECO states in their contract with CMC that they require LIURP staff members to be adequately trained. CMC's Quality Control Manager assesses the training needs of the CMC field and sub-contractor staff. The CMC Office Manager assesses the training needs of the CMC administrative staff. CMC provides full training to each LIURP staff member at the time of hire, and additional training as needed.

CMC provides LIURP staff with diagnostic training through the Pennsylvania College of Technology, state certification, and auditor certification. CMC also sends staff members to the Affordable Comfort conferences. PECO provides LIURP staff with training on mainframe connection and procedures, the Universal Services Programs, customer service procedures, and safety hazards. PECO also provides LIURP staff with the opportunity to attend conferences.

Subcontractors only attend trainings that are relevant to the program measures that they install. CMC provides subcontractors with in-field training as needed.

Program Coordination

CMC maintains a LIURP referral list consisting of other Universal Services Programs and county agencies that provide assistance to low-income customers. CMC staff make referrals during the initial energy audit, as well as during inspection and post treatment follow-up calls. During the follow-up call, CMC staff members ask customers whether they were able to obtain any benefits from the referrals they were given. Additionally, the CMC auditor provides CAP and LIHEAP applications to customers at the time of the LIURP audit.

Participation in LIURP is a requirement of PECO's CAP. Historically, PECO and CMC have not enforced this requirement. However, beginning in Fall 2005, CMC sends a list of CAP customers who refused LIURP services to PECO, and PECO sends a reminder letter that restates CAP requirements. PECO reported that they will begin to remove customers from CAP if they still refuse LIURP services after receiving the reminder letter. The first list that CMC sent to PECO contained 1,005 customers who were in the CAP and had refused LIURP services.

While LIURP and weatherization services are not coordinated, PECO and CMC reported that program staff refer customers to weatherization. When a customer requires a measure that is not provided by LIURP, local weatherization agencies may be able to provide the service. However, there are insufficient weatherization funds during the heating season for furnace replacement and other services that LIURP customers need.

LIURP staff report that coordination with other utilities' LIURP programs in the service territory is difficult. Furthermore, they are concerned that customers who have inefficient or nonfunctional gas heat will use inefficient electric space heaters and then require additional assistance from PECO.

E. Universal Service Program Management

PECO personnel both inside and outside the Universal Services department are responsible for the Universal Service programs. The responsibilities are divided as follows.

- One Universal Services analyst oversees LIURP and manages the external affairs of Universal Services.

- A second Universal Services analyst oversees MEAF and manages reporting requirements for Universal Services.

- A third Universal Services analyst is responsible for monitoring the progress of the CAP through monthly report reviews, providing support and training to the call centers, preparing documentation and job aides (manuals), and serving as the contact person when customer calls escalate beyond the call center supervisors. She also shares responsibility for overseeing the CARES program.

- The CARES consultants are responsible for both support and verification of information for the CAP Rate A customers, as well as CAP customers who have extenuating circumstances or receive health usage discounts. Universal Services analysts and the call centers are responsible for referring those customers to the CARES consultants.

- The PECO Universal Services manager is responsible for budgetary oversight of Universal Services and direct support and management related to Universal Services programs and Universal Services' analysts and staff.

- Exelon management views low-income customers as a key factor influencing PECO's uncollectible accounts and therefore PECO credit (or Exelon Credit/East), the credit and collections arm of PECO, performs thorough reviews of low-income customer receivables, and has input on matters that affect low-income customers.

- The Universal Services manager and the PECO credit manager report to the director of Revenue Management, a department within Customer and Marketing Services.

PECO Universal Services Data System

PECO Universal Services Data is gathered from multiple systems including:

- CIS (Customer Information System)
- Montage (web based interface to CIS)
- RMS (Recovery Management System which serves as the system that manages data for residential collections)
- Uncollectible accounts database (retains information for accounts that have been sold to outside vendors for collection)
- Other off-line data sources.

These data are refreshed daily into a data warehouse. The data warehouse is then segmented into a Financial Data Mart and the Financial Data Mart is segmented into the Universal Services Data Mart (USDM).

PECO has a policy that all systems retain a minimum of three years of information. At the present time, the USDM extends back to 2001. Accounts that have been closed remain in the USDM for three years, and are classified as either inactive (final bill paid) or uncollectible (unpaid bill written off and sent to collectibles vendor).

PECO developed new processes to capture and maintain certain data on Universal Services' customers beginning in February 2004, in response to a PUC order. Demographic information, CAP Rate status, and CAP certification history are only consistently and reliably available after February 2004. **Table III-2** lists the data elements, the earliest date for which reliable data can be obtained, and the PECO database where the data are maintained.

Table III-2
Availability of CAP Customer Application and Program Participation Data

Data Element	Customer(s) Type	Reliable Data Date	Data Location
• Customer Account Number[37]	All	January 2001	Data Mart, CIS/Montage, RMS
• Number of Household Members • Age of Household Members • Current and Historical CAP Status • Current and Historical Income and Calculated FPL • Re-certification Date (for re-carried customers) • Pre-Program Arrearages	CAP, Confirmed Low Income	February 2004	Data Mart, CIS/Montage
• Current and Historical CAP Rate	CAP	February 2004 CAP Rates January 2001 Tariff Rates	Data Mart, CIS/Montage
• Record of Extenuating Circumstances	CAP, Confirmed Low Income	February 2004	CIS/Montage
• Usage History • Billing History • Payment History • Grants History • Account Balance History • Monthly Statements • Service Turn On Dates • Service Shut Off Dates	All	January 2001	Data Mart, CIS
• Collection Costs	All	January 2001	General Ledger

The customer information system records LIHEAP and MEAF payments that are processed by Universal Services staff as assistance credits, and all other payments are processed as cash. Payments recorded as cash include:

[37] There are no customer identification numbers only account numbers. Account numbers do not follow customers. If a customer moves or changes names, then the customer receives a new account number. Creating a continuous account for customers who move or change names requires manual matching.

- MEAF payments processed directly by the payment processing department (as opposed to Universal Services)
- FEMA
- UESF (Utility Emergency Service Fund)
- Suburban Fuel Funds (e.g., Chester County, Project Reach, and DELCO)
- Public assistance grants
- Charitable organizations (e.g., churches, etc.).

Assistance credits recorded as cash are indistinguishable from each other or other cash payments. The only distinguishable assistance payments are LIHEAP and MEAF processed by Universal Services staff.

Collection costs are recorded at the aggregate level, rather than separately for non-CAP, CAP and low-income customers. PECO has estimated collection costs for these different groups of customers based on uncollectible account charge-offs.

Reports

PECO Universal Services is continuing to develop new audit and review procedures to address the processes that were implemented in February 2004. The Universal Services analysts currently review the operations and progress of the program using the following series of reports generated by the Cognos reporting system.[38]

Table III-3
Cognos CAP Participation Reports

Cognos Report Number and Name	Description	Purpose	Timing
1. FPL Over 150 – Still in the CAP Rate[39]	Identifies accounts in the CAP Rate that have an FPL% greater than the income guideline (150%).	Used to track accounts that need to be removed from CAP Rate.	Monthly
2. "Month" "Year" CAP Rate Enrollments	Identifies accounts enrolled in the CAP Rate by tier for each month.	Used to track and monitor CAP Rate monthly enrollment.	Monthly
5. CAP Plus Enrollment Report Health Usage	Identifies accounts enrolled on health usage discount.	Used to track and monitor CAP Rate monthly health usage enrollments.	Monthly
6. CAP Plus Movement	Identifies accounts that had a movement in the CAP Rate tier as	Used to track and monitor movements in the CAP Rate	Monthly

[38] Some PECO Universal Services analysts reported challenges with the accuracy of some of these reports. APPRISE will review these reports and assess whether this footnote needs to be removed or whether further elaboration needs to be expressed in this document regarding the usefulness of reviewing the reports from the system.

[39] When the new CAP Rates and February system upgrade was implemented, existing customers could be enrolled in the CAP based on receipt of government benefits or LIHEAP. Some of these customers had a financial statement (required for payment arrangements) that noted an income above 150% of the federal poverty level. These customers needed to be manually removed from the CAP. This report is designed to track those above income accounts that were not automatically removed by the system.

Cognos Report Number and Name	Description	Purpose	Timing
Downward in Tiers[40]	a result of a change of financial information.	tiers and ensure customers receive a new payment arrangement if warranted.	
7. Form to Customer List – Re-Certification	Identifies accounts still pending re-certification after the initial re-certification letter was issued	Used to track and monitor CAP Rate re-certifications.	Weekly
8. Form to Customer List – Income Verification Required	Identifies pending income verification for the CAP Rate enrollment. Captures accounts with recent financial statement (within 15 days) and CAP applications were sent.	Used to track pending income verification for the CAP Rate enrollment.	Weekly
9. CAP Rate Removal/Refusal Report	Identifies accounts refused or removed from CAP Rate each month.[41]	Used to track and monitor CAP Rate removal and refusals.	Monthly
10. CAP Rate Accounts by Poverty Level	Identifies the number of CAP Rate accounts by federal poverty level and utility service type.	Used for PUC reporting requirements.	Monthly
11. CAP Rate Accounts Household Demographics	Identifies the number of CAP Rate accounts based on utility service type, age, and family size.	Used for PUC reporting requirements.	Monthly
12. CAP Rate Accounts Income Demographics	Identifies the number of CAP Rate accounts by service type and income source.	Used for PUC reporting requirements.	Monthly
13. CAP Shortfall Summary	Identifies the shortfall (difference between non-CAP Billed Amount and CAP Billed Amount) by rate rider and posting date.	Used for auditing purposes and PUC reporting requirements.	Monthly
14. CAP Participation Summary	Provides a summary of all active CAP Rate accounts.	Used for auditing purposes and PUC reporting requirements.	Monthly
15. CAP Participation Summary by Service Type	Provides a summary of all active CAP Rate accounts by service type.	Used for auditing purposes and PUC reporting requirements.	Monthly
16. CAP Participation Detail	Provides a detailed list of all active CAP Rate account numbers along with rate rider code.	Used for auditing purposes and PUC reporting requirements.	Monthly

In addition to the Cognos reports, there is the "CAP Report – AC4470DA", which is a monthly report that presents the following data by rate tier and service type:

[40] The report is entitled "Downward", however, any movement in the CAP Rate tier is recorded (as noted in the description).

[41] Per discussion with the Universal Services CAP/CARES analyst, the report currently includes removals only (no refusals). Refusals include customers who did not return income verification or application within 30 days for re-certification or enrollment. As of October 20, 2004, PECO is unable to provide an analysis of what proportion of CAP-eligible clients were enrolled, rejected due to not providing information, and rejected due to not meeting guidelines based on information received.

- Accounts billed and not billed
- Total Revenue of billed accounts
- Accounts with budget
- Accounts with SA (payment agreement)
- Accounts making cash payments
- Sum of cash payments
- Accounts paid to date
- Sum of payments of current accounts
- Accounts that received LIHEAP grants and percentage that received LIHEAP grant
- Sum of those LIHEAP grants and Average LHEAP grant
- Accounts that received LIHEAP crisis and sum of those crisis awards
- Accounts with 0 or credit balance
- Accounts with 30 day, 60 day, or 90+day arrearages
- Accounts with usage of 0, <500kwh, 500-800kwh, and over 800 kWh
- Accounts under dispute
- Detailed list of delinquency criteria (e.g., two months past due, past due amount > $ 200)
- Accounts, Dollars Billed, Charge-offs, Arrearages, and Pre-program arrearages by poverty level.

<u>Customer Complaints</u>

Each week, the PECO regulatory department forwards customer complaints received from the PUC to PECO Universal Services. A PECO Universal Services analyst reviews the complaints before forwarding them to the Universal Services call center for investigation. In general, the complaints relate to a customer who is not enrolled (or was removed from) the CAP despite the customer's belief that he or she was eligible.

Any PUC complaint for a confirmed low-income customer, regardless of CAP status, goes to the Universal Services call center for processing. For each of these complaints, the Universal Services call center is expected to compile and report the following:

- Unabbreviated notes from the Remarks screen related to every PECO and customer communication for the past year
- Billing and payment statements for the past two years
- A final position statement that notes the amount the customer is expected to pay, the payment due date, and whether the customer's CAP status should be adjusted.

PECO Universal Services call center representatives reported a decline in the number of complaints after the new CAP Rate tiers and Montage system upgrades were implemented in February 2004. New processes related to the new CAP Rate tiers included mandatory financial statement verification, as opposed to the previous program where representatives could enroll customers into CAP based on confirmation of low-income status via receipt of LIHEAP or public assistance benefits. In addition, the system upgrades have generated better collection and maintenance of detailed housing financial and demographic information to ensure program eligibility. From the perspective of the Universal Service call center, the decrease in PUC cases has largely been attributable to an increase in the ability to satisfactorily resolve customer issues, as a result of the new CAP Rate tiers, the Montage system upgrade, and the increased responsibility for handling payment arrangements.

Each day, a Universal Services analyst monitors the number of justified cases as well as off-in-error accounts. A justified case is defined as a case where after the Universal Services call center researches the matter, the call center finds that the customer was not handled in accordance with PECO policies or statutory regulations. Off-in-error accounts are cases where a customer's service has been shut off due to an error in handling. Both of these situations are rare (occurring between four and five times each month) and commonly attributable to human error. The PECO Universal Services analyst reviews justified and off-in-error cases to determine if there is a systematic system error or the need to review and revise existing procedures.

Complaints Related to CAP Processes

PECO Universal Services analysts and call center representatives reported that direct customer complaints to the call center about the time lag to enroll in the CAP have increased in 2004. Prior to February 2004 and the new CAP Rate tiers, call representatives could previously verify income automatically for customers who received government assistance (e.g., LIFELINE, LIHEAP, DPW), but that process was discontinued until December 2005, as PECO did not have a system to obtain the level of income detail required for sorting into the proper CAP Rate.

Between February 2004 and December 2005, the Universal Services call center has needed to verify a greater number of applications. In addition, customer paperwork processing has doubled due to efforts to recertify all CAP customers and place them in the new CAP Rate Tiers. The Universal Services call center sets a goal to process applications received within 10 days. According to Universal Services call center reports, the application process time was 12 business days in December 2004 and less than seven business days by December 2005.

PECO reported that increased familiarity with the system and enhancements to the enrollment process, particularly those occurring in December 2005, has reduced the application process time to less than seven days by the end of 2005.[42]

[42] On December 6, 2005 PECO implemented a new proactive LIHEAP and Department of Public Welfare (DPW) enrollment process to streamline the enrollment and re-certification process. The goal of the enrollment process enhancements is to enroll customers into the CAP who have had their income verified by another agency and would be eligible for the CAP.

F. *Call Centers: Functions, Procedures, and Monitoring*

PECO has two outsourced call centers that provide services particular to low-income customers: NCO and Outsourcing Solutions Incorporated (OSI). NCO operates the PECO credit call center and OSI operates the PECO Universal Services call center. The evaluation team visited NCO's Upper Darby, Pennsylvania office and OSI's Pittsburgh, PA office to interview call center associates and monitor the handling of inbound calls. Our objective was to understand how the call centers executed call center functions, understood and implemented PECO policies, and interacted with low-income customers.[43]

Call Center Activity

The PECO credit (i.e., Exelon Credit East) department manages the budget and sets the policies and objectives for the PECO credit call center. The PECO credit call center is operated by NCO and located in three offices: Upper Darby, PA; Jackson, MI; and Sarnia, Canada. The primary function of the credit call center is to address payment issues for customers facing termination or having difficulty paying their bill. This includes referral of low-income customers to the CAP.[44] The 800-phone system initially directs calls to Upper Darby with overflow directed to Jackson or Sarnia based on call volume at those two locations. According to NCO Forecast and Staffing Reports, the call volume ranges from 4,000 to 7,000 calls each weekday and 800 to 1,000 calls on Saturdays. NCO has 120 call center representatives who handle between 40 and 70 calls per day.

The PECO Universal Services department manages the budget and sets the policies and objectives for the PECO Universal Services call center. The PECO Universal Services call center is operated by OSI and located in Pittsburgh, PA. The primary functions of the PECO Universal Services call center are to provide customer service for the Customer Assistance Program (CAP) customers, process CAP applications, and verify income for new enrollees and re-certifying CAP customers.[45] According to OSI Call Reports, the call volume ranges from 800 to 2,100 calls on weekdays and from 100 to 300 calls on Saturdays. OSI has 18 call center representatives who handle between 50 and 100 calls per day.

The credit and Universal Service call centers serve as PECO's primary contact to its low-income customers. Call center representatives are expected to identify low-income customers and assist them in enrolling into the CAP and other Universal Services programs. The call centers receive inbound calls from customers directly or via transfer from another call center. Call center representatives from both centers can request financial information, determine CAP eligibility based on income level and household size, and send the customer a CAP Rate application. The customer is expected to complete, sign, and send the CAP Rate

[43] The evaluation team conducted seven interviews with OSI associates during a two-day site visit (November 1, 2004 – November 2, 2004) and 11 interviews with NCO associates during a separate two-day site visit (November 3, 2004 – November 4, 2004).
[44] The credit call center operates from 7 AM to 7 PM ET on Monday through Friday and 9 AM to 1 PM on Saturday.
[45] The PECO Universal Services call center operates from 7 AM to 6 PM Monday through Friday and 9 AM to 1 PM on Saturdays.

application along with proof of income to OSI. In addition, both call centers are expected to refer low-income customers to PECO Universal Services or other social service agencies as appropriate for the customer's needs expressed during the call.

Call Center Functions

Both call centers are expected to assist low-income customers by providing information for CAP enrollment or referrals to social and payment assistance services. NCO generally handles credit and collection functions. OSI generally handles CAP functions. Overlap of certain functions can and do occur. The most significant overlapping function is offering payment arrangements to customers with delinquent balances. From February 2004 through August 2004, if any delinquent customer (including CAP customers) called the PECO customer service line or the Universal Services call center, then the call was immediately transferred to the credit call center to address the delinquent balance, often through a payment arrangement. Prior to February 2004 and after August 2004, the Universal Services call center managed all CAP customers (delinquent and non-delinquent) for payment arrangement and CAP processing. **Table III-4** outlines a summary of the call center functions and which call center currently performs the function.

Table III-4
Call Center Functions

Function	Call Center
Credit Functions	
Make outbound collection call	NCO
Handle inbound customer calls	NCO and OSI
Obtain financial and demographic information	NCO and OSI
Grant payment arrangement	NCO and OSI
Verify payment arrangement proof of income	NCO and OSI
Issue utility report	NCO and OSI
Send Medical Certificate Form	NCO and OSI
Verify Medical Certification	NCO and OSI
Provide referrals to low-income customer	NCO and OSI
Waive deposits charged to low-income customers	NCO and OSI
Initiate service restoration to customers SONP[46]	NCO
Investigate PUC complaints and President cases	OSI
Grant payment extension	NCO and OSI
Enroll customer into budget billing	NCO and OSI
Send duplicate copy of bill	NCO
CAP Functions	

[46] Shut Off For Nonpayment

Function	Call Center
Send CAP application	NCO and OSI
Verify CAP proof of income	OSI
Enroll Customer into the CAP	OSI
Recertify existing CAP customer	OSI

Outbound collection calls

Outbound collection calls performed on behalf of the PECO credit department are handled by specific locations based on staffing and call volume forecasting. Throughout most of 2004, NCO managed proactive outbound calls from the Jackson and Upper Darby offices, portfolio outbound calls from only the Jackson office, and 72-hour notice outbound calls from only the Jackson office.[47]

The proactive outbound call is made to a PECO customer with a good credit history who has an unpaid balance 25 days after billing (i.e., past due balance) of less than $75. The representative calls the customer using a "soft" reminder script designed to provide information regarding the amount past due and payment options.

The portfolio outbound call is made to a customer who has a past due balance of near $75 and a poor credit history. The representative calls the customer using a "hard" reminder script designed to provide information regarding the amount past due and payment options. The call representative is also expected to take action on the account by offering a payment arrangement to the customer and issuing a utility report if the customer is ineligible for a payment arrangement. More details on payment arrangements and utility reports are presented in their respective subsections later in this section.

The 72-hour notice outbound call is made to a customer who has an unpaid balance 25 days after billing of more than $75. The PUC requires PECO to make successful phone contact or provide a hand-delivered notice to the customer's address at least 72 hours before the termination date. If the customer or responsible party is reached by phone, then the NCO representative uses a PUC approved script to inform the customer that PECO will be terminating service at the customer's address. The representative can also leave a message asking the customer to call PECO regarding the account. Either of these outcomes is considered a successful contact. If the customer is not reached by phone, then PECO must send a field agent to the home to hand deliver the notice.

Inbound customer calls

The primary call representative function is to provide each customer with options that will prevent his or her service from being shutoff for nonpayment. The call representative begins with a standard greeting, followed by a request and confirmation of the customer's account number, name and address. The call representative informs the customer of the past due

[47] The Sarnia office, located across the Canadian border from Detroit, began operations began in October 2004 and only handles overflow inbound calls.

balance and the current balance and begins a dialogue with the customer to ascertain why the customer is calling.

The call representative documents the customer's reason for calling and any action that the representative takes to service the account in the Remarks section of Montage or CIS.[48] If the customer has a past due balance but is not calling for that reason, the representative is still required to perform some action to address the customer's past due balance. The action might include offering a payment arrangement or issuing a utility report.

Payment Arrangements

PECO requires proof of eligibility and income to establish payment arrangements, CAP enrollments, or CAP re-certifications. The ratepayer (or third-party designee) must provide the names, birthdates, Social Security numbers, sources of income, and gross income for each member of the ratepayer's household. A payment arrangement is an agreement between the customer and PECO whereby the customer can pay back his or her past due balance in installments without penalty (i.e., late fee or interest) over an extended payback period.

A call representative processes a payment arrangement by recording information on demographics and income for each household member in the Montage system. The Montage system determines one of four income level types to be used in handling payment arrangements. According to a PECO Universal Services Analyst and the PECO credit Manager, the customer's income level is based on the customer's gross household income as a percentage of the federal poverty level:

- Level 1 = 0 to 110 percent of the FPL
- Level 2 = 111 to 150 percent of the FPL
- Level 3 = 151 to 300 percent of the FPL
- Level 4 = 301 percent or more of the FPL.

Level 3 and 4 customers do not require "proof of income" for call center representatives to process a payment arrangement. If the system determines that the customer's new financial statement places the customer (or moves the customer down an income level) into level 1 or level 2, then the representative issues an "Income Verification Required" utility report and tells the customer to send proof of income to the address on the utility report within 15 days. Proof of income includes:

- SSI, Social Security and retirement letters
- Pay stubs (last 4 stubs)
- Social Security disability statement
- Child support court order
- Unemployment letter and last two pay stubs
- Previous year W-2 or 1040 SE form

[48] Montage and CIS are the computer database and customer information systems used by PECO.

- Employer verification letter
- DPW statement, Workman's Compensation award letter
- Social Security survivor's benefit letter
- Veteran's benefits award letter.

Representatives have internal policy guidelines that they can refer to when processing payment arrangements. The PECO Credit department created these guidelines, known as the "If And Then Do" guidelines, for the representatives to use in negotiating, explaining, and processing payment arrangements. The "If And Then Do" guidelines describe the payment arrangement handling procedures and the customer's minimum monthly payback installment amount, which the customer must pay in addition to his or her monthly current balance. The procedures and minimum payback installment amounts are dependent upon a combination of factors that include the customer's income level, past due balance, "previous agreement history", CAP Rate tier/status, and financial statement status. Table III-5 shows the most common scenarios and minimum payback installment amounts.

Table III-5
Payment Arrangement Minimum Installment Terms

Income Level / CAP Status	Minimum Terms
Non-CAP Level 1	$15 / per month + Current Bill (or Budget Bill)
Non-CAP Level 2	$40 + CB
Non-CAP Level 3	$100 + CB
Non-CAP Level 4	$150 + CB
CAP	$15+ CB

The representative and the customer can negotiate to pay any installment amount of the past due balance no less than the minimum stated in the "If And Then Do" guidelines. The customer can request paying an amount higher than the minimum in order to pay back his or her debt sooner. The Montage system has error checks in the Agreements Processing screens that prevent NCO associates from offering installment amounts less than those set by the guidelines.[49] The call representative can grant a payment arrangement to any PECO customer with a past due balance who has never had an un-kept payment arrangement. All customers currently on an arrangement plan cannot have a renegotiated arrangement unless there has been a change in their income that would qualify as an income level or CAP Rate tier change. Payment arrangements (i.e., past due amounts allocated into installments) take effect with the next billing cycle after processing. According to the "If And Then Do" guidelines, the customer's current monthly bill is still to be paid by the due date and is not to be added to the payment arrangement.

[49] Under special circumstances, there are a small number of unspecified PECO employees who have override authority to allow agreements to be entered that are against system driven rules.

PECO has programmed the IT system to require income verification prior to the implementation of a payment arrangement for low-income (income level 1 or level 2) customers. After a call representative negotiates the arrangement, the system automatically generates and sends a letter to low-income customers requesting that "proof of income" be returned to the address noted in the letter. Non-CAP customers are directed to send "proof of income" to NCO. CAP customers are directed to send "proof of income" to OSI. The call representative reminds the customer that the payment arrangement will not go into effect until "proof of income" has been received and verified. If the customer does not provide "proof of income", then the customer does not receive a payment arrangement and must pay the entire past due balance.

Income verification by OSI

OSI has a back office staff with responsibilities that include verifying income for payment arrangements, CAP enrollments, and CAP re-certifications. OSI receives 500 to 1,000 pieces of mail daily. On average, there is a one-business-day delay in opening and logging the mail and a two-business-day delay in having the mail bundled and filed for future processing. The delay for processing and mailing income verification was approximately 12 days in December 2004 and less than seven days by December 2005.

If the "proof of income" documents are verifiable (i.e., contain everything required and match the financial statement in Montage), then the OSI back office representative enters the Financial Statement History Detail screen in the Montage System and notes that the income has been verified. The payment arrangement is then established on the customer's account.

If the customer does not provide sufficient proof of income, the OSI back office representative manually mails a "CAP Rate Enrollment and Re-certification — Incomplete Information" letter that describes the information needed. The back office representative concludes the processing by documenting the information received, what is needed to complete the enrollment, and that an incomplete information letter was sent to the customer.

NCO Procedures

A support staff clerk at NCO is responsible for verifying income received for payment arrangements. The NCO support staff clerk reported NCO sometimes receives "proof of income" and CAP application forms that should have been sent to OSI. In these cases, NCO staff record the documents received into the Remarks section of the customer's account and fax the documents to OSI.

The NCO support staff clerk reported that NCO receives approximately 30 "proof of income" documents per day. The clerk noted that 75 percent of the "proof of income" documents are verifiable (i.e., contain everything required and match the financial statement in Montage). When the documents are verified, the NCO support staff clerk enters the Financial Statement History Detail screen in the Montage System and notes that the income has been verified. The payment arrangement is then established on the customer's account.

When the customer does not provide sufficient proof of income, the clerk records in the Remarks section of the customer's account why income could not be verified, and then generates a "Verification Unsupported" utility report. The "Verification Unsupported" utility report simply informs the customer that the income documentation provided does not support the reported income provided by the customer. It also informs the customer of the past due balance and provides 15 days from the date of the utility report for the customer to pay the past due balance. If the balance is not paid within this time period, the customer is eligible for termination. Unlike OSI, there is no letter sent to the customer describing and requesting the missing information.

Utility Reports

A customer may not warrant a payment arrangement or might require verification of income prior to being granted the payment arrangement. In these cases, PECO issues the customer a utility report (UR) that documents the customer's or company's position on the matter.

For delinquent accounts, the UR usually provides an additional grace period before action is taken to collect on the account. At the beginning of the evaluation period (January 2003), there were as many as twenty types of utility reports. Beginning in February 2005 there are only six types. In general, each utility report informs the customer of his or her right to call the PUC, the amount past due, and the date on which or after termination can occur if the past due amount is not paid. The three most common utility reports are described below.

- "PECO Refused" UR is primarily used when a customer has too many un-kept payment arrangements. A similar UR of this type is also used when a customer that is on an agreement requests a lower installment amount and his or her income level is unchanged or higher than previously reported. Other similar utility reports of this type are issued when the customer is unable to provide total household income or refuses to provide financial information. This UR gives the customer 15 days from the date of the UR to pay the past due balance or termination may occur.

- "Income Verification Required" UR informs the customer that the account is past due and the customer may be eligible for a payment arrangement (or CAP enrollment) but proof of total household income (and a completed application for the CAP enrollment or re-certification) must be returned within 15 days from the date of the UR. If the information is not received in this time period, the arrangement will not take effect and termination may occur.

- "Customer Refused" UR, which informs the customer that the account is past due and the customer has chosen not to accept the terms of the payment arrangement offered. This UR gives the customer 15 days from the date of the Utility Report to pay the past due balance or termination may occur.

Until February 18, 2005, when a call representative issued a UR via the CIS or Montage screens, the system automatically generated and sent a letter using the same automated system designed to mail invoices and notices to customers. On February 18, 2005, PECO credit implemented a policy and systems redesign that reduced the number of utility reports to six. In addition, utility reports are now verbal unless a customer requests a written copy.

Medical Certificate Forms

PECO issues 30-day medical certificate extensions for customers with existing medical conditions that would be worsened by utility service termination. Near the end of an inbound credit call, the call representative will ask the customer "is there a medical condition at the property" (some PECO credit call center representatives more specifically stated "is there a medical condition at the property that requires the use of electricity or gas").[50]

Prior to February 2005, if the customer affirmed a medical condition, then the call representative wrote the name and address of the customer on an envelope that contained a business-reply envelope (directed to the PECO credit call center) and a blank medical certificate form. The addressed envelopes were collected and mailed at the end of the day. The PECO Universal Services call center kept count of medical certificate forms mailed; the PECO credit call center did not. After February 2005, the manual addressing and mailing practice ended and call representatives could initiate the system to generate and mail a medical certificate form to the customer.

Medical certificate forms require the signature of a doctor to confirm the condition. PECO will fax a medical certificate form directly to the ratepayer's physician at the customer's request. Customers (or their physicians) are expected to return completed medical certificates forms to the PECO credit call center (NCO) via fax or mail. The four NCO back office representatives process and verify medical certifications.

The NCO back office reviews all medical certificate forms. The medical certification can be oral or written. If an NCO back office representative receives an oral certification, then the doctor must provide his or her medical license number and the name of the doctor's hospital affiliation. The NCO back office receives 100 to 150 medical certificates daily via mail, fax, or phone. NCO back office representatives report that 75 percent of the medical certificates have medical reasons that require use of energy and signature and contact information of a physician that does not appear to be forged or fraudulent. The NCO back office representative processes the accepted medical certifications by granting a medical extension for the length of the illness (no more than 30 days) in the PECO customer service information system. The NCO back office representatives use their best judgment or contact physicians to determine whether the medical reason requires energy use or whether the physician's signature was legitimate.

Back office representatives noted that PECO did not provide NCO with a list of legitimate medical conditions. PECO instructed the representatives to accept any condition that requires the use of electric service. Back office representatives noted the following examples as legitimate conditions: diabetes when insulin needs to be refrigerated, asthma when a nebulizer is in use, and sleep apnea when a CPAP machine is in use.

[50] The PECO Payment Terms Module suggests that the ratepayer be asked, "if anyone is seriously ill at the property". The phrase used by NCO is similar to that used by OSI. The language, "seriously ill", used in the "Payment Terms Module" may have been overridden by a written or verbal update that has not been provided to APPRISE.

NCO Referrals

Beyond offering payment arrangements, OSI and NCO call center representatives are expected to assist low-income customers who experience difficulty paying their energy bill by referring them to other PECO Universal Services programs or outside social service and payment assistance agencies.

NCO associates reported that they provide two types of referrals:

- Referrals to OSI for the Customer Assistance Program (CAP). NCO associates reported that they provide the OSI phone number to customers who have a question about the CAP. In a small number of cases, NCO associates will make a "warm" transfer to OSI. This occurs when a customer is put on hold while the NCO associate calls OSI, connects with an OSI representative, and then transfers the call. The NCO project manager reported that OSI's phone number is on the speed dial of the call representative's phones. In addition, when customers have a question about the CAP, the call representatives are expected to provide the OSI number (in case the customer is disconnected during transfer) and then transfer the customer to OSI. During our interviews, most associates reported that they have never transferred a customer to OSI and some were unaware that OSI's number was a speed dial option. OSI tracks the number of calls received from NCO. According to OSI's PECO Call Log Tracking 2004 Report, there were 467 calls transferred from NCO in 2004.

- Referrals to social service agencies. NCO sends a county-specific list of social service agencies (i.e., agency list) to all level 1 and 2 customers who report problems paying their bill. The agency list is typically sent with the CAP application. If a CAP application is not sent, then the representative will often only provide the phone number of specific agencies based on the perceived needs of the customer. NCO associates reported that they provide customers with the phone number to LIHEAP intake agencies during the winter, UESF (Utility Emergency Services Fund) and LIHEAP-crisis agencies during the summer, and the United Way all year around.

The project manager reported that NCO previously sent the PECO brochure "Does your money run out… before the month does?" to customers instead of the agency list, but PECO stopped providing the brochure to NCO over three years ago. OSI continues to send this brochure to low-income customers.

During the interviews, NCO associates were asked to describe their experiences with Universal Services programs. Aside from the CAP, nearly all associates had to be prompted with names and details of specific programs before recalling any experiences. Some NCO call representatives could not recall receiving any training related to any Universal Services program other than the CAP. Several NCO call representatives reported that they had been told sometime in early 2004 to temporarily stop referring customers to Customer Assistance and Referral Evaluation Services (CARES), because the program was being changed and was not in operation. However, the representatives reported that they were never told to begin referring customers to CARES again. Few NCO call representatives were able to recall or describe the Low Income Usage Reduction Program and those who did recall the program only could after significant prompting.

<u>OSI Referrals</u>

OSI call center representatives are expected to use an agency referral list to provide referrals to customers based on the their needs or situation as assessed during the call. The representatives are also expected to record each referral made to a particular agency. A referral involves providing the name, description of the service or agency, and phone number to the customer. In addition to the referrals, call representatives also record whether they have mailed the PECO brochure "Does your money run out… before the month does?" to the customer. Sending the brochure is a manual process. The call representative writes the name and address of the customer on an envelope that is delivered to the back office. The back office staff fills the envelope with the brochure and mails it out.

According to the August agency referral log, OSI representatives reported 4,303 referrals made during the month (including 311 copies of "Does your money run out… before the month does?" sent to customers). In August, OSI associates made more than 1,000 referrals of customers to both UESF and the United Way.

OSI call center representatives also frequently refer customers to other Universal Services, such as LIURP and CARES. OSI representatives reported that when a customer complains about high bills, the protocol is to review the usage history (i.e., rate screen) and if the usage is higher than average the representative will refer the customer to LIURP.

<u>Other Referrals</u>

Call center representatives in both call centers are prompted in their customer service scripts to "listen carefully for any references to extenuating circumstances and health usage". Extenuating circumstances may include:

- Health-related issues (e.g., injury, illness, disability, high medical bills, medically related usage, death in the family, etc.)
- High-risk households members (e.g., children under the age of eight with an injury or illness, disabled individuals, infirmed elderly, etc.)
- Sudden loss of employment or household income
- High non-discretionary electric usage related to shelter conditions not susceptible to mitigation through LIURP measures.

Increased usage as a result of medical conditions is the definition of health usage.

The call center representatives do not specifically ask questions related to extenuating circumstances or health usage. However, the call center representatives are expected to make referrals to a Universal Services CARES Consultant whenever a customer mentions anything that resembles an extenuating circumstance or health usage. A referral to a CARES consultant is based on information the customer volunteers and the ability of the call consultant to discern and report this information. In the system, the call consultant refers the customer by selecting the appropriate extenuating circumstance category and documenting the details in the CAP Program Detail Window. Once this transaction is complete, the system automatically refers the account to a Universal Services CARES Consultant through a system-reporting package (Cognos).

Before February 2004, customers were referred manually (phone calls or delivered messages as opposed to system generated reports) from the call centers (NCO, OSI, Customer Service), other Universal Services staff, government and military officials, or community agencies. Customers can still be referred to CARES manually, but the system-generated reports are currently the most common mode of referral.

During our site visit, APPRISE evaluators did note that the PECO Universal Services Call Center (OSI) made referrals for customers who have incomes greater than 150 percent of the FPL. There was no evidence of referrals for non-CAP eligible clients at the PECO credit call center (NCO).

Deposits

Deposits are charged to new accounts without credit references from previous utilities; accounts with previous unpaid balances; and accounts that suffer late payments, bankruptcy, or are shut off for non-payment. The deposit amount is the average bill for two months and is charged as equal payments over a three-month period.

The PUC states that confirmed low-income customers shall not be charged a deposit. PECO's systems do not automatically make such an exception for low-income customers, but call center representatives are expected to waive the deposits charged to low-income customers. PECO reported that these deposits are only waived when a low-income customer contacts the credit or Universal Services call center.

Service Restoration

Customers who have had their service terminated must pay their account balance, a reconnection fee[51], and a deposit to have their service restored. Some customers are eligible for service reinstatement after paying a "required" portion of the balance owed. The minimum required payment for service restoration is dependent upon the customer's income level, past due balance, "previous agreement history" and financial statement status.

When a customer calls to request restoration, a call representative reviews the account to confirm that payment requirements to restore service have been met. If the requirements have been met, the representative completes a restoration form. A restoration form is also completed when customer's service is restored based on confirmed medical need or following erroneous shutoff. Restoration forms are collected and delivered (by hand or email) to the restoration department located in the PECO credit call center Upper Darby

[51] The reconnection fee is usually $60 for the cost of re-establishing the meter. The reconnection fee can be as high as $250 if reconnection requires restoration of disconnected wires into the home.

office. There are four restoration representatives in the PECO credit call center. Within NCO, only those four restoration representatives have the authority to initiate a restoration.[52]

The restoration department reviews the restoration form and the customer's account to ensure that restoration is appropriate. All forms are processed on the day of receipt. If the restoration order is confirmed, the restoration department will schedule a PECO field agent to visit the customer property and restore the customer's service by 8 PM on the following day. The restoration department records the number of daily restoration requests processed for city and suburban accounts. The restoration department receives and processes approximately 400 restorations per day.

PUC complaints and President cases

PECO transferred the responsibility for the processing of PUC Cases from OSI to its regulatory department. OSI handling of PUC Cases is restricted to those cases that are CAP Rate billing/usage disputes.

In addition to PUC Cases, there are President cases and Off-in-Error cases that are handled between the customer and PECO without PUC or BCS involvement. President cases are customer complaints that PECO officials believe may be warranted. "Off-in-error" cases are situations where a customer was shut off possibly due to an error. Whenever any of these cases involves a CAP customer, OSI is required to review the matter and provide a response. If there was an error made by OSI, OSI is expected to report, "which representative was responsible" and "what was/will be done to prevent it from happening again". These cases occur approximately 4-5 times per month and do not warrant a regular report like the PUC Cases.

Other Call Center Functions

The call representative can also:

- Offer payment extensions to customers who are not on a payment arrangement and are less than one month past due
- Place customers on a budget-billing plan
- Send a duplicate copy of the bill to customers.

CAP Functions

Both the PECO credit call center (NCO) and the Universal Services call center (OSI) are expected to assist low-income customers by providing information to help enroll these customers into the CAP. NCO has no responsibilities beyond examining income eligibility and sending a CAP application. OSI is responsible for all CAP functions.

Call center representatives from both centers can request financial information, determine CAP eligibility based on income level and household size, and send a customer CAP Rate

[52] There are several PECO employees with authority to initiate restorations.

application. The customer is expected to complete, sign, and send the CAP Rate application along with proof of income to OSI.

Call center representatives will send the customer a CAP application if the customer is not currently a participant or if the financial information that was collected places the customer in a new CAP Rate tier.

The evaluation team asked call center representatives to describe how they explain the CAP to the customers. All the interviewed representatives who perform phone intake of CAP customers were able to accurately describe the CAP as a discounted rate program for low-income customers. All representatives provided similar descriptions of how the program was explained to customers. The descriptions were consistent with those outlined in PECO's CAP Rate Script. A few NCO representatives were confused about specific details of the program that had changed over the past several years (e.g., arrearage forgiveness of full amount of past due debt as opposed to forgiveness of debt greater than $500).

OSI call representatives use the Montage customer information and database system to request that a CAP application is mailed to a customer. This mechanism ensures that the number of CAP applications sent are counted and addressed accurately based on the customer's address as it is on the system. If the system is not functioning properly, CAP applications are available in the call center for manual mailings.

The NCO quality assurance specialist and PECO credit call center analyst confirmed that the NCO call representatives are not expected or responsible for processing any information within the Montage CAP Program screens. Consequently, NCO sends CAP applications manually. NCO call representatives write the name and address of the customer on an envelope that contains a business-reply envelope and a CAP application. The call representative adds a photocopy of the agency list to the envelope. The CAP application envelopes are collected and mailed throughout the day by the NCO floor coordinator. NCO does not record the number of CAP applications mailed.

The customer is expected to complete, sign, and send the CAP Rate application along with proof of income to OSI. Back office representatives cannot enroll or re-certify a customer without a completed and signed CAP application. An application is considered incomplete if the application is missing names of household members (as discussed during the phone intake), birth date (or age) of household members, Social Security numbers of household members, or signature of the ratepayer. If the application is incomplete, the back office representative photocopies the original application and notes (i.e., circles or highlights) on the copy where the missing information should be added. The representative sends the copy back to the customer with a letter explaining what information is needed along with the OSI fax number so the customer can fax the information back. The representative will document the information that is needed in the Remarks section and that an "information needed for application" letter was sent.

If the "proof of income" documents are verifiable (i.e., contain everything required and match the financial statement in Montage), then the OSI back office representative enters the

Financial Statement History Detail screen in the Montage System and notes that the income has been verified. If the customer does not provide sufficient proof of income, then the OSI back office representative manually mails a "CAP Rate Enrollment and Re-certification — Incomplete Information" letter that describes the information needed. The back office representative concludes the processing by documenting the information received, what is needed to complete the enrollment, and that an incomplete information letter was sent to the customer.

Customers who report no income must provide proof that there is no income in the household. OSI back office representatives provided the following examples: an "Unemployment Benefits exhausted" letter, a termination letter from an employer, or a notarized letter from the customer (or welfare officer / caseworker) attesting to a lack of income. A back office representative reported that she would accept letters from welfare or caseworkers or a notarized letter from the customer attesting to a lack of income. The verification of "proof of income" along with verification of completed and signed CAP applications are requirements to enroll or re-certify a customer into the CAP.

Prior to February 2004, both OSI and NCO could verify a customer's income and enroll (or re-certify) a customer into the CAP if the customer was receiving benefits from the Department of Public Welfare (DPW). This process would involve calling the DPW's automated service to verify that the customer received public benefits, which meant the customer's income was at or below 150 percent of the federal poverty level. Since the new CAP Rate tiers went into effect in February, call representatives require more detailed income information than whether a person is at or below 150 percent of the Federal Poverty Level.[53] Since February 2004, only OSI can enroll or recertify a customer.

After a call center representative has reviewed the CAP application for accuracy and completeness and verified "proof of income" for each household member, the call center representative can enroll the customer into the CAP or recertify the existing CAP customer.

Call Center Training

NCO and OSI call representatives receive 3-4 weeks of orientation and training in collection and customer service skills. Most training is designed for managing the Montage and CIS system, but there is also customer management training which involves a variety of skits and scenarios involving difficult callers. Several NCO call representatives reported that training was valuable, however, most of what a representative needed to know was learned from experience rather than training. OSI associates receive additional training in "soft skills" (i.e., training related to social service assistance, populations with special needs, etc.) and Universal Services program objectives. Veteran call representatives who receive poor scores from quality assurance observations are provided with additional coaching and training.

[53] On December 6, 2005 PECO implemented a new proactive LIHEAP and Department of Public Welfare (DPW) enrollment process to streamline the enrollment and re-certification process. The goal of the enrollment process enhancements is to enroll customers into the CAP who have had their income verified by another agency and would be eligible for the CAP.

PECO policymakers for credit and Universal Services are expected to train call center trainers and assist during training sessions when possible. There have been two major changes requiring training sessions during the evaluation period. There was a training session in February 2004 for the introduction of the new Montage customer information and management system (which coincided with the CAP Rate tier changes). There was also a training session in February 2005 for the introduction of the payment arrangement, utility report, and medical certification system redesign.

NCO associates noted that the manuals received during training were useful, however, many changes have taken place with regard to policies and procedures and the manuals have not been updated. PECO will provide system-specific and process-specific manuals related to new systems or system changes. Several NCO associates reported that both NCO and PECO are revising the manuals. OSI associates made no similar complaints regarding their manuals nor did they express any efforts to redesign the existing manuals.

The PECO credit call center analyst sends most policy and process changes and reminders via "Call Center Bulletins" to NCO and Universal Services. The bulletins are basically memoranda from PECO to the call center vendors on process changes, reminders, and work-around for system problems. The NCO site manager reported that NCO received 65 bulletins in September and October 2004. He noted that processing a call can be challenging for call representatives who are inundated with daily bulletins He noted that he has expressed this concern to PECO and NCO management. The NCO quality assurance specialist added that the representatives want to do a good job, but he thinks the "massive" number of bulletins on procedure and policy changes can be overwhelming. In addition, he would like to see the training module updated with all of these changes that are contained in the bulletins.

Other NCO associates commented that what might appear as system errors on one day sometimes turns out to be new system upgrades explained in a bulletin that is received a few days later. The project manager reported that bulletins sent from PECO are not reviewed by anyone at the NCO Upper Darby office prior to distribution. She noted that she challenges a bulletin if the changes do not make sense to her or might cause problems or errors for call representatives. She added that sometimes there are concerns with the original bulletin that lead to a revised bulletin a few days later. She suggested that these revised bulletins could be avoided if PECO discussed changes with NCO before a bulletin is released.

OSI associates did not have the same complaints regarding bulletins because the Universal Services department acts as a buffer between the PECO credit call center analyst and OSI. OSI does not receive the same number of bulletins, because a PECO Universal Services analyst reviews, revises, and consolidates the bulletins into a formal CAP Rate Communications flyer related to process and policy changes. OSI stated that they receive 12 CAP Rate Communication flyers each year, as compared to NCO's 100. In addition, a PECO Universal Services analyst will discuss any reminders or temporary workarounds over the phone with the OSI supervisor and manager before emailing the details.

The NCO quality assurance specialist reported that the representatives have a difficult time remembering all the policies and procedures. He added that the 4-page "If And Then Do" charts and the PECO definitions are the best source of reference. An NCO coach reported that these guidelines frequently change. The version distributed in August 2004 was revised and redistributed in January 2005. During the interim, NCO associates receive "letters" directing NCO associates to make certain updates on their current charts".[54] The PECO definitions were created for use with the NCO/PECO observations scoring guide. The definitions provide a brief explanation of what is expected of the call representative in order to score (or not lose) points in a monitoring situation. Each call representative has a copy of the PECO definitions. OSI uses the "If And Then Do" charts for payment arrangements, but does not have the PECO definitions to refer to since much of the information in the PECO definitions relate to credit and collection functions that OSI is not responsible for providing to PECO customers.

OSI Call Monitoring

OSI team leads review the performance of employees via productivity and attendance statistics and monitoring of employee work. Monitoring is a significant aspect of the review. A team lead monitors each representative at least three times over the course of a two-week period. Approximately 120 to 130 calls are monitored each month. Team leads can ascertain from their computer, which call representatives are on a call (as well as the duration of call) and are able to listen to a representative's live call by logging in from the team lead's own phone. The team lead cannot review the Montage or CIS (Customer Information System) screens during the call. After the call, the team lead reviews the Montage (and CIS if necessary) screens to assess whether the appropriate actions and accurate information were recorded. There is no fixed schedule for call monitoring and call representatives do not know when they are being monitored.[55]

The team lead uses a monitoring form to assess whether the representative performed the specified task and demonstrated the specified skill. Prior to September 2004, OSI used an internal telephone observation form developed in November 1999. The form had a pass/fail structure and the call would be failed if the representative missed any of the following requirements:

1. Explain the CAP Rate program
2. Explain the CAP Rate re-evaluation
3. Explain the CAP Rate discount
4. Explain and offer the budget
5. Take financial information
6. Take an action

[54] An NCO coach, provided APPRISE with an undated version of the most recent letter, which was sent to address common questions that have arisen based on the current "If And Then Do" guidelines. The letter is on file at APPRISE in the folder labeled "PECO: NCO Site Visit Documents".
[55] Sometimes back office representatives make outbound calls to obtain follow-up information on a CAP application (e.g., clarify a missing digit on birthday or social security number on application). Back office calls are not monitored.

7. Note remarks
8. Ask if a medical condition existed
9. Refer to agencies
10. Extension must be justified
11. Agreement must meet PECO requirements
12. Address current bill
13. Address past due balance
14. Transfer to the credit call center
15. Explain preprogram arrears
16. Explain Universal Services programs
17. Other (unspecified).

On August 23, 2004, the PECO Universal Services Department completed a Telephone Observation Form and Score Guide for monitoring OSI calls. The OSI/PECO Observation form describes a series of tasks and skills. The tasks and skills include, but are not limited to:

- Standard Greeting Protocol
  - Identified company
  - Verified account number
- Communication Skills
  - Used customer name
  - Showed empathy
  - Controlled to avoid lengthy calls
- Technical Skills
  - Addressed account balance issues (e.g., past due balances) when appropriate
  - Entered accurate information
  - Determined or explained appropriate CAP Rate scenario
  - Processed extenuating circumstance or health usage referral
- Action/Resolution
  - Used appropriate knowledge to resolve issue
  - Made an agency referral
- Closing protocol
  - Provided summary of call
  - Offered further assistance
  - Closed with courtesy and hung-up last

The call representative is expected to score 90 or better (out of 100) to pass. If the representative fails any of the items listed in the Technical Skills section the representative will fail. The team leads and the supervisor review monitoring statistics by associate, as well as in the aggregate. In October 2004, OSI began taping a random sample of 15 to 20 calls per week and sending these tapes to the PECO Universal Services analyst who is responsible for the CAP.

In addition, OSI and PECO are in the process of implementing and testing a back office review system using the Universal Services Back Office Audit Form. The form has a different section for each type of process that the back office performs:

- CAP Rate enrollment
- CAP Rate re-certification
- Tier change
- Incomplete CAP enrollment / re-certification
- CAP Rate refusal
- CAP Rate removal.

The audit form describes actions that the reviewer is expected to review to assess whether the call representative performed the specified task or demonstrated the specified skill. The back office representative is expected to score 90 or better (out of 100) to pass.

All monitoring results are aggregated and compiled biweekly. The team leads and the supervisor review the results for quality assurance purposes. The results of the monitoring are reported to the manager and to PECO as part of the monthly performance reports. When asked about the most common problems found in monitored calls, the OSI supervisor reported that representatives sometimes fail to conclude the call by asking the customer "are you satisfied with this call?" She also noted that newer representatives have not consistently explained the utility report (i.e., the amount past due and the date by which it has to be paid to avoid shut off). When asked about call representatives' achievements, the OSI supervisor noted that the representatives excel at explaining the CAP Rate and referring customers to agencies.

NCO Call Monitoring

The NCO quality assurance specialist and the PECO credit call center onsite analyst have workstations that allow them to review the customer screens accessed by call center representatives. Monitors can listen live, but cannot access or see the customer's screen while the call representative is in the customer's account during the call. All calls are digitally recorded and remain on file for 60 days. Consequently, monitors usually listen to recordings of the inbound calls. The monitors can then review the customer's account screens to ensure that the information was accurately entered into the system.

Monitors use the NCO/PECO Observation form to record and assess the efficiency and effectiveness of the call representative on a particular call. The NCO/PECO Observation form describes a series of tasks and skills. The tasks and skills include, but are not limited to:

- Standard Greeting Protocol
  - Identified company
  - Verified account number
- Communication Skills

  - Used customer name
  - Showed empathy
  - Controlled conversation to avoid lengthy calls
- Technical Skills
  - Explained agreement or budget
  - Explained Utility Report
  - Entered accurate information
  - Addressed past due balance
- Action/Resolution
  - Provided the correct utility report
  - Provided an appropriate agreement
- Additional Actions Taken
  - Explained and sent CAP application to customer who is CAP-eligible and not in the CAP
  - Referred low-income customer to social service agencies
- Closing protocol
  - Provided summary of call
  - Offered further assistance
  - Closed with courtesy and hung-up last

The monitor is asked to report on the form whether the representative performed the specified task, and demonstrated the specified skill. Each item (task or skill) has a point value associated with it. The call representative is expected to score 90 or better (out of 100) to pass. If the representative misses any of the items listed in the "Technical Skills / Document Remarks" section, then the representative will automatically fail.

Each month, the PECO credit call center onsite analyst reports the percentage of calls monitored that passed the quality control level on the observation form (i.e., scored 90 or more) to the PECO vendor manger and the credit call center analyst. This information is analyzed by PECO for patterns or themes that could point to a need to change processes, update manuals, or retrain.

Each week, the NCO quality assurance specialist compiles the monitors' scores into spreadsheets that are used for reporting trends and assessing the performance of call representatives. The quality assurance specialist reports each representative's scores to his or her coach and the project manager.

The credit call center liaison department, NCO coaches, the project manager, and the quality assurance specialist have a biweekly monitor calibration conference call. During the calibration conference call, everyone listens to three calls and independently completes an observation form. Everyone shares his or her scores, and any differences are discussed. The objective is to reach a resolution on how a call should have been handled and scored so monitoring is consistent across observers.

The NCO quality assurance specialist reported that the error most often committed by call representatives is incompletely explaining the utility report. He also found that the new call representatives tend to forget that regardless of why a customer calls, if the customer has a past due balance of $25 or more, then the representative must issue a payment arrangement or a utility report to address the customer's past due balance.

Call-handling Time

OSI and NCO have internal goals related to average talk time. Call representatives receive incentive bonuses if they keep their inbound average talk time at or less than five and one-half minutes. No one at OSI was able to recall or explain why the evaluation criterion was set at 5.5 minutes per call. The NCO project manager reported that the 5.5 minutes per call is a policy that was changed this year from seven minutes per call by NCO management who wanted call representatives to meet a quota of approximately ten calls per hour. The NCO quality assurance specialist reported that greater customer service (e.g., spending more time on details related to the CAP or other assistance to low-income customers) would require an increase in the expected average call-handling time.

OSI Observations of Live Calls

A researcher from APPRISE observed 30 incoming calls received by call representatives and senior call representatives at OSI in November 2004. The calls were observed live, with the researcher sitting next to the call representative, observing the use of the computer system directly and using a listening device to listen to the call. The researcher was able to hear both the customer and the call representative on the phone line, and was able to observe the call representative's use of the Montage and CIS systems to review and modify the customer's PECO account. Although there were a few deviations from PECO or OSI policy observed during the call representative observations, most customer circumstances were handled appropriately by the representatives.

Overview of Call Representative Observations

Table III-6 shows the customer's primary reason for calling OSI. The customer's primary reason for calling is defined as the first major item mentioned by the customer at the beginning of the call. The most common primary calling reasons were to verify that a payment was received or posted to an account, to verify that a CAP application or income documentation had been received, or to question a high bill or a high budget bill amount.

Table III-6
Customer's Primary Reason for Calling OSI

Customer's Primary Reason for Calling OSI	Number of Calls
Verification of payment received	6
Verification of CAP application or income verification received	4
Questions about high bills/high budget	4
Verification of amount due	3

Customer's Primary Reason for Calling OSI	Number of Calls
Questions about acceptable income documentation for the CAP application	2
Request for payment extension (Utility Report)	2
Termination notice received	1
New CAP applicant	1
Request for income verification extension	1
Customer's past due balance not written off after bankruptcy	1
Customer's CAP application was rejected	1
Questions about a medical certification	1
Information about low-income programs	1
Bill payment location options	1
Customer-initiated service termination	1

Table III-7 shows the initial source of the call. Customers were most likely to be the initial callers, although, for some of the calls that were observed, callers were friends or relatives of the customer, PECO credit customer service representatives, or representatives from local agencies. According to the call representatives observed, PECO credit customer service representatives sometimes transfer customers to OSI as a referral to the CAP. Representatives from local agencies call OSI for help in completing a customer's CAP application or re-certification application, or to ask questions about a PECO account on behalf of the customer.

Table III-7
Initial Caller

Initial Caller	Number of Calls
Customer	23
Friend or relative of customer	4
PECO credit or customer service department	2
Local agency	1

Table III-8 shows selected actions taken by call representatives. Representatives completed reviews and updates of financial statements, sent CAP re-certification applications, referred customers to local agencies, and referred customers to LIHEAP for about a third of all calls that were observed.

Table III-8
Actions Taken by Call Representative

Actions Taken by Representative	Number of Calls[1]
Full review/update of financial statement with customer	12
Sent re-certification application	11

Actions Taken by Representative	Number of Calls[1]
Referred customers to local agencies	10
Referred customers to LIHEAP	9
Inquiry about possible need for medical certification	6
Transferred customer to PECO customer service	6
Issued utility report	4
Issued verification dependent utility report	4
Sent medical certification application	3
Sent 'Blue Book'	3
Referred customer to LIURP	2
Sent CAP application for new applicant	1
Offered payment arrangement	1
CARES referral	1

[1] Answers do not total to 30, as a representative could take more than one action per call.

Deviations from PECO & OSI Procedures

There were a few instances in which the representatives deviated from prescribed procedures. Table III-9 categorizes these instances, and they are discussed in detail in the following sections.

Table III-9
Deviations from PECO & OSI Procedures

Deviations from PECO & OSI Procedures	Number of Calls
Customer given misleading information about CAP or PECO policies	3
CARES referral	1
Medical certification	1
No explanation of CAP benefits to new applicant	1
Budget enrollment for new applicant	1

Misleading Information

During the course of a call regarding requirements for the CAP Rate re-certification, an existing CAP customer asked whether she would still be eligible for the CAP Rate if two household members had moved out of the household. The representative told the customer that she would need to provide a notarized letter stating that the individuals no longer lived in the household. However, in the *PECO CAP Rate Modifications Job Aide*, dated September 20, 2004, states only that the customer must provide a Social Security Number for each household member and must verify the gross income of each household member for enrollment or re-certification. There is no explicit policy in the documents reviewed by APPRISE researchers related to customer documentation of household members who have left the household. The customer asked to just leave the two other household members on the account, which the representative did. If the two household members had left the household, failing to remove them from the account may have produced an inaccurate poverty level calculation and, possibly, an incorrect CAP Rate enrollment.

Another customer called because she received a termination notice. She said that she had returned her CAP Rate re-certification application about three weeks ago. The representative advised the customer that the application had not been received and that she was ineligible for a payment arrangement for her past due balance because she had not yet re-certified for the program. According to the *PECO Payment Terms Module*, dated 2001, eligibility for a payment arrangement is not dependent in the CAP enrollment or re-certification.

A third customer called because he was scheduled for termination and wanted to know what payment was due. He had received the CAP Rate application but had not yet returned it. The call representative advised the customer to return the CAP application and income verification by fax. The representative also advised the customer that if he enrolled in the CAP Rate, his balance could be added to his existing payment arrangement. The representative did not explain the arrearage forgiveness component of the CAP Rate, and did not advise the customer that his past due balance could be forgiven if he enrolled in the CAP Rate and made on-time payments for six months.

CARES Referrals

The *PECO CAP Rate Modifications Job Aide*, dated September 20, 2004, states that to be eligible for CARES, a customer must be one or more of the following: at or below 200 percent of the Federal Poverty Level, elderly, or the recipient of government-based income such as SSI or SSD. In addition, the customer must be payment troubled due to an extenuating circumstance, such as health issues, sudden loss of employment, or the presence of high-risk household members (i.e. children under age eight, or elderly or disabled individuals).

One customer was appropriately referred to CARES by a call representative during the observations. The customer called about high budget bills, prompting the representative to check the customer's usage and ask about any health usage. The customer told the representative that he uses medical equipment for his disability, including an ultrasound machine. The representative checked the customer's history and saw that the customer had been referred to CARES in the past, but the customer said that no one had ever followed up with him. The representative made a second referral to CARES and also made a Health Usage referral.

During the course of the observations, there was one missed opportunity for a CARES referral. The customer called because the deadline for returning her application for a medical certification was approaching. The customer mentioned that she has had problems with depression, memory loss, and diabetes. She also seemed confused about the process of obtaining a medical certification and about the amount of SSI income that she receives. The customer would be subject to termination if she did not obtain her medical certification. However, the customer was not referred to CARES. The call representative advised the customer to call back with her doctor's fax number so that a representative could fax an additional medical certification to the customer's doctor.

When the call representative who made the CARES referral was asked when she makes CARES referrals, she said that she made referrals for any extenuating circumstances, such as for a child with asthma or for a disability in the household. When the call representative who had a potential missed opportunity for a CARES referral was asked when she makes CARES referrals, she said that she made referrals mostly in health usage situations.

The call representative who made the CARES referral has worked for OSI on the PECO Universal Service programs for about three years, compared to the representative that had a missed opportunity for a referral, who has worked in the CAP Rate for six years. The disparity in the understanding of the CARES program between the two call representatives may indicate the need for updated training for some of the call representatives who have been working on the Universal Service program for several years.

Medical Certifications[56]

There are no guidelines provided in the *PECO CAP Rate Modifications Job Aide*, dated September 20, 2004, related to medical certifications. Call representatives report that they are supposed to ask about any medical conditions in the home whenever they speak to a customer who has a past due balance or reports difficulty paying his or her bill. A medical certification is different from a CARES referral or health usage. A medical certification extends the due date of a bill and temporarily prevents the customer from having his or her service discontinued in the event of nonpayment.

There was one potential missed opportunity for a medical certification observed. A customer told the call representative that she was in poor health and that she was disabled, and was worried about being able to pay her bill, because her budget settlement was due that month[57]. The call representative informed the customer that she must pay the bill in full to remain on the budget and in the CAP Rate, and advised the customer to pay as much of the bill as she could pay. The representative may have missed an opportunity for a medical certification, especially given that the budget settlement may have posed an additional hardship to the customer.

New CAP Enrollment

According to the *PECO CAP Rate Modifications Job Aide*, dated September 20, 2004, when a potential new CAP customer calls OSI to begin the CAP enrollment process, call representatives are expected to follow a script to inform the customer of the potential benefits of the CAP Rate and the customer's responsibilities as a CAP customer.

A researcher from APPRISE was able to observe one call from a potential new CAP customer. The call representative took a financial statement, told the customer that she

[56] There are no guidelines provided in the *PECO CAP Rate Modifications Job Aide*, dated September 20, 2004, or other documents that APPRISE has received as of January 3, 2005, related to medical certifications. APPRISE requested all CAP Rate memos received by OSI staff and received many of those memos. However, there were no guidelines relating to medical certifications contained in those memos.

[57] According to the *PECO CAP Rate Modifications Job Aide*, dated September 20, 2004, the budget is charged for 11 months, followed by one month in which the budget settlement is charged. The budget settlement represents either the shortfall or the overpayment of the budget bills, as compared to the customer's actual usage.

would send an application for the CAP Rate, and explained the specific income documentation required to enroll in the CAP Rate. She also advised the customer of the current bill and offered a referral to a local agency.

However, the call representative did not offer a description of the CAP Rate, nor did she inform the customer of the potential benefits or responsibilities of the program. The customer most likely would have qualified for the CAP Rate D, with a total gross monthly household income of $1400 and five household members. Although the budget is not mandatory for customers in the CAP Rate tiers D and E, it is encouraged, and the call representative did not offer or explain the budget.

Call Introduction

According to the OSI/PECO Call Model (rev. April 9, 2004), call representatives should begin the call by identifying themselves and PECO Universal Services, requesting the customer's account number, verifying the phone number, and verifying the caller's name. If the caller is not the ratepayer or the ratepayer's spouse, the caller should also be asked to provide the ratepayer's Social Security Number. These procedures were followed for all calls that were observed.

NCO Review of Recorded Calls

A researcher from APPRISE reviewed recordings of 17 randomly selected inbound calls received by NCO on November 15, 2004. The review of recorded calls was conducted in the presence of a PECO Universal Services analyst. The researcher and analyst were able to hear both the customer and the call representative on the recording as well review the Montage system to assess whether the actions described in the call were appropriate and the information communicated to the NCO call representative and to the customer was accurately entered into the system. Although there were a few deviations from PECO or NCO policy noted during the review of recorded calls, most customer circumstances were handled appropriately by the NCO call representatives.

Overview of Calls Reviewed

Table III-10 shows the customers' reasons for calling NCO. Customers most frequently called to request an extension or assistance in having a deposit waived.

Table III-10
Customer's Reason for Calling

Customer's Reason for Calling	Number of Calls
Request deposit waiver (or address to send "proof of good credit")	4
Request payment extension	4
Request confirmation that faxed documents were received	2
Request medical certification form	2
Inquiry about a high bill	1
Inquiry about never receiving bill (invoice) / Request bill	1

Customer's Reason for Calling	Number of Calls
Inquiry about the CAP	1
Request payment arrangement	1
Request to make partial payment	1
Verify payment received	1

[1] Reasons do not total to 17, because a customer could call for more than one reason.

Table III-11 shows selected actions taken by call representatives. The most common actions performed by call representatives were reviewing a customer's financial statement, offering payment arrangements, issuing utility reports, offering referrals to local agencies, and sending CAP applications.

Table III-11
Actions Taken by Call Representative

Actions Taken by Representative	Number of Actions[1]
Reviewed (updated) financial statement with customer	4
Issued "PECO Refused" utility report	3
Offered payment arrangement	3
Offered referral to local agencies	3
Sent CAP Application	3
Sent medical certification form	2
Transferred customer to PECO customer service	2
Issued "Customer Refused" utility report	1
Issued "Income Verification Required" utility report	1
Referred customers to LIHEAP	1
Waived deposit	1

[1] Actions do not total to 17, because a representative could take more than one action on a call.

Deviations From Policy

This section describes reviewed calls where NCO call representatives acted or failed to act in accordance with PECO or NCO policies.

Table III-12 shows the cases when call representatives deviated from PECO or NCO polices. The most common deviation was that call representatives failed to completely document the call in the "Remarks" section of the customer's account. Instances of policy or procedure deviations are described in detail in the "Deviations from Policy" section to follow.

Table III-12
Deviations from Policy

Deviations From Policy	Number of Deviations
Failure to document call completely in Remarks	4
Failure to explain utility report	1
Failure to provide agency referral to level 1 or level 2 customer	1

Failure to document call completely in Remarks

The PECO Payment Terms Module states that all remarks on a customer call must be documented completely, including actions, conversations (both representative and customer side), and expectations. In two of the four calls, the call representative failed to document the customer's side of the conversation, most importantly the customer's reason for calling. In the other two calls, the call representative failed to document that a call even occurred.

Failure to explain utility report

The PECO Payment Terms Module states that any action taken must be explained to the customer. The PECO definitions provide specific clarification and responsibility for procedures to follow when issuing utility reports. The PECO definitions note that the following information must be provided to consider a utility report completely explained: "type of utility report, reason for utility report, amount (past due balance) of the utility report, termination date, explanation that if the utility report is not satisfied termination can and/or will occur, and explanation that a utility report letter will be sent to the customer." In one reviewed call, a call representative did not explain to a customer that a utility report was being sent because the customer, who was calling for an extension, had a previous un-kept payment arrangement.

Failure to provide agency referral to level 1 or level 2 customer

The PECO definitions state that all low-income customers must be informed about agencies via telephone or mail. PECO has instructed NCO call representatives that any customer defined as level 1 or level 2 in the Montage system is considered a confirmed low-income customer. In one reviewed call, the call representative properly informed a customer about CAP after the customer provided a CAP-eligible financial statement. However, the call representative did not provide the customer with any information about agencies.

Suggestions for Improving Universal Services' Program Participation

The NCO call center representatives made few errors and rarely deviated from policy. However, there were potential opportunities to improve outcomes for low-income customers that were not taken advantage of, perhaps due to a lack of instruction to the call center staff.

- *No policy to follow-up on customer with "CAP Income Verification Required" status:* After collecting income and demographic information from the customer (i.e., taking a financial statement) for payment arrangement purposes, NCO call representatives are expected to send a CAP application form to a new CAP-eligible customer or an existing CAP customer who, due to a change in household size or income, might be eligible for a

CAP Rate tier change. While OSI documents this action within the CAP screens in Montage, NCO call representatives are not expected to access the CAP screens. NCO call representatives send the CAP application form manually and document sending the form in the "Remarks" section of the customer's account. Because the NCO call representative does not access the CAP screens, the representative is unaware of the customer's CAP enrollment status located in the CAP History screen.

In two reviewed calls, a CAP customer with "CAP Income Verification Required" status called NCO for a matter unrelated to the CAP. One customer called to request a medical certification form and the other called to set up a payment arrangement. In both calls, the customer's "CAP Income Verification Required" status was noticeably initiated by a November re-certification date. In both calls, the NCO call representative did not follow-up with the customer as to whether the customer received a re-certification letter and CAP application form or whether the customer had returned the completed and signed form to OSI along with "proof of income".

There is no stated policy that requires an NCO call representative to review the customer's CAP status or follow-up with customers in the CAP-related matters. Nonetheless, following-up with customers who contact a call center with a "CAP Income Verification Required" status on their account might improve PECO's overall enrollment and re-certification rates.

If a customer did not receive the mailed CAP application due to incorrect address, language issues, or other matters, then following-up may uncover this problem. The call representative can not only provide the customer with the contact information for OSI, but also note the customer's response into the Remarks section of the account, which might be useful for OSI when OSI reviews the account before removing the customer due to non-receipt of Income Verification documentation.

- *No policy to explain reason for sending out CAP application:* In one observed call, a CAP customer reported a change in income that prompted the need to send a CAP application to re-certify the customer for a CAP Rate tier change. The NCO call representative informed the customer that the representative would be sending the customer a CAP application that needed to be completed, signed, and returned. However, the call representative did not explain to the customer that he was being asked to sign and complete the CAP form for re-certification into a CAP Rate tier that would offer him a better CAP discount.

  There is no policy that requires representatives to explain to an existing CAP customer the reason the customer is being sent a CAP application. However, this is a procedure that may increase customer understanding and improve application return rates.

- *No policy to explain the CAP to non payment-troubled customers:* In one observed call, a customer requested a medical certification form and inquired about whether he was a CAP customer. When the customer was told that he was not in the CAP, the customer suggested that he thought he should be in the program. The call representative agreed to send a CAP application form with the medical certification form. However, the call representative did not explain the CAP to the customer.

The customer was on a budget and not delinquent, therefore the customer did not warranty a financial statement. Consequently, the representative had no responsibility to take a financial statement in order to assess whether the customer was eligible for the CAP. There is a policy that call representatives must explain the CAP to non-CAP customers that are eligible for the CAP. However, no such policy exists for explaining the CAP to non-CAP customers that are not eligible for the CAP.

- *Potential Missed CARES referral opportunity:* In one reviewed call, a third-party representative for a customer who was temporarily in a mental health care facility contacted NCO regarding the customer's bill. The third-party was informed that the customer was not in jeopardy of termination and had a PUC payment arrangement that could not be adjusted by the call representative. The third-party caller was satisfied with this response. The representative also provided the phone number for LIHEAP and suggested that the program might be able to assist the customer in paying down the past due balance.

  According to the Montage screens, the customer was in the CAP. The call representative did not refer this customer to CARES. The Universal Service analyst reported that she was under the impression that the call center representatives were supposed to refer low-income payment-troubled customers with special needs (e.g., family emergencies, divorce, unemployment, and medical emergencies) to CARES. The customer's medical emergency hospitalization would likely qualify as a special need. During the interview portion of the site visit, NCO associates reported that they were not referring customers to CARES because they were told that CARES was not operating.

OSI Observations of Back Office Functions

A researcher from APPRISE observed three back office representatives work on 29 customer accounts. The back office representatives were processing CAP applications and income verification documentation that was received by mail or by fax in the past day. In general, the back office work done on customer accounts was carried out more uniformly than the handling of customer calls by the call representatives, possibly due to the nature of the work. Most accounts that were observed had similar issues and problems related to their CAP applications, as noted in the detailed descriptions below. No major breaches from PECO or OSI policy related to back office work were observed.

Of the paperwork processing that was observed, 18 customers were new applicants, 10 were CAP re-certifications, and one customer was a CAP reinstatement. Unless otherwise noted in the account descriptions, all account contact histories were checked and work done on accounts was documented in the Montage system. Table III-13 shows the outcomes of the work done on each account that was observed. Representatives could make a determination of CAP eligibility or tier change in only about 25 percent of cases observed.[58]

Table III-13
Back Office Application Outcomes

Application Outcomes	**Number of Accounts**
Application Complete	
Application and income verification complete, CAP Rate Tier change	3
Application and income verification complete, no CAP Rate Tier change	2
Application and income verification complete, new enrollment	1
Application Incomplete	
Application received, no income verification	4
Missing income verification and incomplete household member information	3
Duplicate income verification received, no application	2
Additional income verification not received after first request, no additional request sent to customer	2
Duplicate application received, no income verification	2
Income verification not recent enough	1
Income verification – pay stubs not consecutive	1
Income verification – pay stubs do not cover a full month	1
Income verification – documents do not have name	1
Income verification – missing proof of no income for adult household member(s)	1
Household member information incomplete	1
Income verification received, no application	1
No application received and pay stubs do not cover a full month	1
Other	
CAP refusal – income too high	1
Customer's account is 'Open Final'	1

[58] Recommendations and information needed for completion of this section are located in a separate document. Information needed ("G:\Projects\PECO Universal Service Evaluation\Work Plan Progress\InformationNeeded.doc"), Recommendations ("G:\Projects\PECO Universal Service Evaluation\Work Plan Progress\Recommendations.doc"). Remove this footnote before final report.

IV. Customer Surveys

APPRISE designed a customer survey for each of four PECO Programs as part of a Universal Service Program evaluation. This section of the report describes the methodology for the surveys and the findings from each survey.

The following four surveys were administered in January 2006:

- *Customer Assistance Program (CAP) Survey*: Three types of respondents completed the CAP Survey:
  - 181 Current Participants
  - 58 Past Participants
  - 53 Non-Participants[59]

- *Low-Income Usage Reduction Program (LIURP) Survey*: There were 102 Program participants who completed the LIURP Survey.
- *Customer Assistance and Referral Evaluation Services (CARES) Program Survey*: There were 55 Program participants who completed the CARES Survey.
- *Matching Energy Assistance Fund (MEAF) Program Survey*: There were 43 Program participants who completed the MEAF Survey.

The customer surveys were designed to assess the following:

- Household demographics
- Reasons for program participation
- Understanding of the program
- Measures and services received from the program
- Actions taken as a result of the program
- Financial obligations and bill payment difficulties
- Impact of the program on energy usage and bills
- Impact of the program on safety and comfort
- Satisfaction with the program

A. Customer Survey Methodology

This section describes the methodology for the customer surveys, including survey implementation and sample selection.

[59] Non-participants were given a condensed version of the CAP survey that gathered information on their household characteristics, awareness of the CAP, bill payment patterns in the prior year, and their need for energy assistance.

Survey Implementation

APPRISE contracted with Braun Research to administer telephone surveys to the following number of PECO customers.

- 200 current CAP participants
- 50 past CAP participants
- 50 CAP non-participants
- 100 LIURP participants
- 50 CARES participants
- 50 MEAF participants

APPRISE staff trained Braun employees on the customer surveys in two-hour training sessions for the day time and evening interviewers. These sessions included an explanation of the Universal Service Programs, basic information on PECO and the population it serves, and a detailed review of the surveys that included a question-by-question reading of each instrument.

During the field period, APPRISE staff worked at the Braun Research call center to ensure proper administration of the survey. Staff monitored the survey by listening to the interviews as they were conducted, and viewing the responses on a computerized data entry form as they were keyed.

The surveys contained several questions seeking open-ended responses to obtain PECO customers' unprompted feedback. APPRISE staff worked with Braun Research interviewers to ensure that this information was captured as accurately and thoroughly as possible.

Sample Selection and Response Rates

The samples for each of the surveys were selected to include individuals with prior or current attachment to the four Universal Service Programs. The CAP sample also included low-income non-participants. The Table IV-1 presents the following information for the sample:

- **Number Selected**: APPRISE selected 713 customers (448 current participants, 116 non-participants, and 149 past participants) for the CAP survey, 146 customers for the MEAF survey, 149 customers for the CARES Survey, and 193 customers for the LIURP Survey.
- **Unusable:** Of the 713 CAP customers selected, 159 cases were unusable because no one able to answer the questions was present in the home during the survey, or because phone numbers were busy, disconnected, or incorrect. Similarly, 44 MEAF cases, 31 CARES cases, and 21 LIURP cases were deemed unusable. Unusable cases are not included in the denominator of the response rate or the cooperation rate. They are included in the denominator of the completed interview rate.
- **Non-Interviews:** Of the 713 CAP customers selected, 112 cases were classified as non-interviews because the qualified respondent refused to complete the interview, or

because the respondent asked the interviewer to call back to complete the interview at a later time, but did not complete the interview during the field period. Similarly, 15 MEAF cases, 12 CARES cases, and 19 LIURP cases were classified as non-interviews. These households are included in the denominator of the cooperation rate, the response rate, and the completed interview rate.

- **Unknown Eligibility:** 127 CAP cases, 28 MEAF cases, 37 CARES cases, and 31 LIURP cases were determined to have unknown eligibility to complete the interview due to answering machines, no answers, and language barriers. These households are not included in the denominator of the cooperation rate. They are included in the denominator of the response rate and the completed interview rate.
- **Not Eligible – Did Not Receive Program Services:** There were 23 CAP cases, 16 MEAF cases, 25 CARES cases, and 20 LIURP cases that were not eligible to complete the interview because the respondent did not remember receiving Program services. These households are not included in the denominator of the response rate or the cooperation rate. They are included in the denominator of the completed interview rate.
- **Completed Interviews**: The completed interviews are households that were reached and that answered the full set of survey questions. In total, 292 CAP interviews--181 current participants, 53 non-participants, and 58 past participants-- were completed. Additionally, 43 MEAF interviews, 55 CARES interviews, and 102 LIURP interviews were completed.
- **Cooperation Rate**: The cooperation rate is the percent of eligible households contacted who completed the survey. This is calculated as the number of completed interviews divided by the interviews plus the number of non-interviews (refusals plus non-completed call backs). Overall, the CAP Survey achieved a 72 percent cooperation rate: 72 percent for current and non-participants, and 73 percent for past participants. The MEAF Survey achieved a 74 percent cooperation rate, the CARES Survey an 82 percent rate, and the LIURP Survey an 84 percent rate.
- **Response Rate:** The response rate is the number of completed interviews divided by the number of completed interviews plus the number of non-interviews (refusals plus non-completed call backs) plus all cases of unknown eligibility (due to answering machines and language barriers). Overall, the CAP Survey attained a 55 percent response rate: 56 percent for current participants, and 54 percent for non and past participants. The MEAF Survey attained a 50 percent response rate, the CARES Survey a 53 percent rate, and the LIURP Survey a 67 percent rate.
- **Completed Interview Rate:** The completed interview rate is the percentage of households selected that completed the survey. Overall, the CAP Survey attained a 40 percent completed interview rate: 40 percent for current participants, 46 percent for non-participants, and 39 percent for past participants. The MEAF Survey attained a 29 percent completed interview rate, the CARES Survey a 37 percent rate, and the LIURP Survey a 53 percent rate.

Table IV-1
Sample and Response Rates
By Participation Status

	CAP			MEAF	CARES	LIURP	Total
	Current Participants	Past Participants	Non-Participants	Participants	Participants	Participants	
Number Selected	**448**	**149**	**116**	**146**	**149**	**193**	**1201**
Unusable – wrong or missing telephone number	109	30	18	44	31	21	**253**
Unusable – no one home who could answer the survey	2	0	0	0	1	0	**3**
Non-Interviews	70	21	21	15	12	19	**158**
Unknown Eligibility	74	29	24	28	37	31	**223**
Not Eligible – does not know about Program	12	11	0	16	25	20	**84**
Completed Interviews	181	58	53	43	55	103	**493**
Cooperation Rate	72%	73%	72%	74%	82%	84%	**76%**
Response Rate	56%	54%	54%	50%	53%	67%	**56%**
Completed Interview Rate	40%	39%	46%	29%	37%	53%	**41%**

B. CAP Survey

This section presents detailed findings from the CAP customer survey. CAP Survey information summarized in this section is organized by the pre-assigned participation status of the respondent, based on data provided by PECO in September and November 2005. Questions specific to the CAP were asked only of current and past CAP participants. Information on demographic characteristics of respondents, as well as their arrearages, general energy assistance needs, and bill payment patterns are presented for all respondents. Differences between current participants, past participants, and non-participants are highlighted when appropriate. Unless otherwise specified, tables include 181 current participant respondents, 58 past participants, and 53 non-participants. Percentages may not sum to 100 percent due to rounding.

Demographic Characteristics

This section examines the demographic characteristics of survey respondents. Table IV-2 shows the percentage of respondents that have an elderly member (60 years of age or older), a disabled member, one or more children (18 years of age and younger), or a household member with a health condition that requires the use of electricity or gas. Non-participants were less likely than current and past CAP participants to have at least one disabled member. Current participants were more likely than past CAP participants and non-participants to have at least one elderly member. Approximately 40 percent of the respondents stated that they had a medical condition that required the used of electricity or gas.

Table IV-2
Percent with Vulnerable Household Members

	Participation Status		
	Current Participants	**Past Participants**	**Non-Participants**
Elderly (60 or older)	37%	19%	26%
Disabled	44%	41%	25%
Children Under 18	52%	62%	68%
Children Under 5	21%	21%	23%
Condition That Requires Use of Electricity or Gas	41%	38%	43%

Respondents were asked whether they own or rent their home. Table IV-3 shows that 85 percent of non-participants owned their homes, compared to 60 percent of past participants and 46 percent of current participants.

Table IV-3
Home Ownership

	Participation Status		
	Current Participants	**Past Participants**	**Non-Participants**
Own	46%	60%	85%
Rent	53%	38%	15%
Living with Relative/Other	1%	1%	2%

Respondents were asked to report the highest level of education attained by any member of their household. Table IV-4 shows that 19 percent of current participants reported that they did not have a high school diploma or equivalent, compared to 4 percent of non-participants and 3 percent of past participants. Past and non-participants were more likely than current participants to report that they have some college or a Bachelor's Degree.

Table IV-4
Highest Level of Education Obtained By Any Household Member

	Participation Status		
	Current Participants	**Past Participants**	**Non-Participants**
Less Than High School	19%	3%	4%
High School Diploma or Equivalent	46%	48%	36%
Some College/Associates Degree	19%	36%	42%

	Participation Status		
	Current Participants	Past Participants	Non-Participants
Bachelor's Degree	7%	7%	11%
Master's Degree or Higher	3%	3%	2%
Vocational Training	4%	0%	6%
Other	0%	2%	0%

Respondents were asked to report on several sources of income and benefits received by members of their household:

- Employment income from salaries and wages, or self-employment income from a business or farm
- Retirement income, including Social Security, pensions, and other retirement funds
- Public assistance benefits from TANF, SSI, AFDC, or general assistance or public assistance
- In-kind benefits, including food stamps or public housing

Table IV-5 shows that current CAP participants were less likely than past and non-participants to receive wages or self-employment income. About half of past participants and non-participants reported employment income over the past year, and about one quarter of all respondents reported that they received retirement income.

Current participants were more likely than past or non-participants to receive cash or in-kind benefits from the government. Non-participants were the least likely to receive public assistance or in-kind benefits.

Table IV-5
Type of Income Received
Prior 12 Months

	Participation Status		
	Current Participants	Past Participants	Non-Participants
Wages or Self-Employment Income	28%	55%	51%
Retirement Income	29%	24%	23%
Public Assistance	41%	31%	15%
In-kind Benefits	48%	35%	13%

About 30 percent of all respondents reported that a member of their household was unemployed and looking for work within the past year. This percentage did not differ significantly by CAP participation status.

Table IV-6
Employment Status
Prior 12 Months

	Participation Status		
	Current Participants	Past Participants	Non-Participants
Unemployed, Looking for Work	31%	28%	32%

Table IV-7 displays the respondents' reported annual household income. The majority of all respondents reported annual income under $30,000. Current participants were most likely to report incomes in the lowest bracket, under $10,000 a year, while non-participants were the most likely to report income above $30,000.

Table IV-7
Annual Household Income

	Participation Status		
	Current Participants	Past Participants	Non-Participants
$0 - $10,000	39%	20%	10%
$10,001 - $20,000	32%	32%	21%
$20,001 - $30,000	9%	26%	18%
More than $30,000	5%	12%	27%
Don't Know	8%	7%	9%
Refused	7%	3%	15%

Customer Assistance Program Outreach

This section examines how respondents learned about the CAP. Non-participants were asked whether they were aware of the CAP. Table IV-8 shows that 62 percent of non-participants knew about the CAP, while 38 percent said that they were not aware of the Program.

Table IV-8
Non-Participants' Knowledge of CAP

	Non-Participants
Aware of CAP	62%
Not Aware of CAP	38%

Table IV-9 displays the ways in which respondents learned about the CAP. Respondents were most likely to say that they heard about the Program from a PECO representative or from a friend or relative. A number of participants also reported that they heard about the

Program from a PECO bill insert, flyer or newsletter. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-9
How Customers Learned About CAP

	Participation Status		
	Current Participants	Past Participants	Non-Participants
PECO Representative	39%	34%	39%
Friend or Relative	22%	24%	21%
PECO Bill/Flyer/Newsletter	9%	16%	6%
Agency	8%	7%	0%
Other Energy Assistance Program	6%	3%	3%
Customer Contacted PECO	4%	3%	6%
Community Workshop	3%	0%	0%
Television/Internet/Radio	1%	7%	3%
Other	2%	0%	15%
Don't Know	9%	7%	6%

Factors Affecting Enrollment Decisions

This section examines the reasons for participation and for non-participation in the Customer Assistance Program. Current and past participants were asked why they enrolled in the CAP. Table IV-10 shows that the majority of respondents said that they decided to enroll to reduce their energy bills. Respondents also said that they enrolled because of low-income or unemployment, or to reduce arrearages. Answers total to more than 100 percent because respondents could provide more than one answer.

Table IV-10
Reasons for Enrolling in CAP

	Current Participants	Past Participants
Reduce Energy Bills	70%	66%
Low/Fixed Income or Unemployed	24%	21%
Reduce Arrearages	8%	3%
General/Financial Help	4%	10%
Told to Enroll/Not Given a Choice	2%	0%
Maintain Utility Service	1%	0%
Other	4%	7%

Non-participants who reported that they knew about the CAP were asked why they had not enrolled in the Program. Table IV-11 shows that 30 percent of non-participants who knew about the Program reported that their income was too high to be eligible, while 24 percent said they believed that they were not eligible for another reason. Others said that they had not applied yet, did not need energy assistance, did not know how to enroll, or believed that they could not be on multiple programs at once.

Table IV-11
Reasons for Not Enrolling in CAP

	Non-Participants
Income is Too High	30%
Not Eligible for Other Reason	24%
Has Not Applied	9%
Does Not Need Energy Assistance	6%
Does Not Know How to Enroll	6%
On Another Program	6%
Current CAP Participant	9%
Other	9%
Don't Know	3%

Ease of Program Enrollment and Recertification

This section examines respondents' experiences with the CAP enrollment process. Respondents were asked about how difficult it was to enroll in the CAP. Table IV-12 shows that about 85 percent of current and past participants said that the enrollment process was not too difficult or not at all difficult. Respondents who said that the enrollment process was somewhat or very difficult were asked which parts of the process were most difficult. These respondents reported that providing proof of income, making the payments required to enroll in the Program, completing the application, and waiting for the benefits were the most difficult parts of enrollment.

Table IV-12
Difficulty of CAP Enrollment

	Current Participants	Past Participants
Very Difficult	2%	3%
Somewhat Difficult	9%	7%
Not Too Difficult	20%	35%
Not At All Difficult	66%	53%

Respondents were asked about the difficulty of recertifying in the CAP. Table IV-13 shows that the majority of current and past participants said that the recertification process was not too difficult or not at all difficult.

Table IV-13
Difficulty of CAP Recertification

	Current Participants[1]	Past Participants[2]
Very Difficult	3%	9%
Somewhat Difficult	5%	9%
Not Too Difficult	16%	13%
Not At All Difficult	76%	69%

[1] 115 Respondents [2] 32 Respondents

Respondents who said that the recertification process was somewhat or very difficult were asked which parts of the process were most difficult. These respondents reported that providing proof of income, completing the application and providing social security numbers were the most difficult parts of recertification.

Knowledge of Program Benefits and Requirements

This section examines how well CAP participants understand the Program. Current and past participants were asked what their responsibilities were in the CAP. Table IV-14 shows that the majority of respondents said that their responsibility was to keep up with their PECO payments. Nine percent of current participants and three percent of past participants said that they did not know what their responsibility was in the Program. Answers total to more than 100 percent because respondents could provide more than one answer.

Table IV-14
Understanding of Program Responsibilities

	Current Participants	Past Participants
Keep Up With Payments	82%	85%
Be on a Budget	6%	3%
Use Less Energy/Keep Bills Low	6%	2%
Recertify Annually	5%	10%
Notify PECO if Income Changes	2%	5%
Accept Weatherization/LIURP services	1%	2%
Apply for LIHEAP	1%	0%
No Specific Responsibility Mentioned	2%	0%
Other	3%	3%
Don't Know	9%	3%

Current and past participants were asked what their responsibility was if their income changed while they were enrolled in the Program. Table IV-15 shows that more than three-quarters of current and past participants said that they must notify PECO if their income changed while enrolled in the CAP. Eighteen percent of current participants said that they did not know what their responsibility would be if their income changed. Answers total to more than 100 percent because respondents could provide more than one answer.

Table IV-15
Understanding of Responsibilities Associated with Change in Income

	Current Participants	Past Participants
Notify PECO	75%	85%
Provide New Proof of Income	3%	5%
Reapply for the Program	2%	2%
Pay Bills	1%	2%
Ask For Help	1%	0%
Nothing	2%	2%
Other	1%	0%
Don't Know	18%	3%

Current and past participants were asked how long the CAP lasts. Forty-four percent of current participants and 52 percent of past participants reported that the Program lasts one year.[60] Seven percent of current participants and 12 percent of past participants said that the Program lasts as long as they are low-income or need assistance. A large percentage of respondents, 34 percent of current participants and 26 percent of past participants, said that they did not know how long the Program lasts.

Current and past participants were asked whether they felt they had a good understanding of the benefits provided by the CAP. About 80 percent of both current and past participants reported that they have a good understanding of CAP benefits.

Table IV-16
Understand CAP Benefits

	Current Participants	Past Participants
Yes	81%	83%
No	16%	14%
Don't Know	3%	3%

Current and past participants were asked what they felt were the benefits of the CAP. Table IV-17 shows the responses to this question. The most common answer for both current and past participants was that the Program lowered their energy bills. The second most common answer provided for both current and past participants was that the Program offered equal monthly payments. Other benefits cited by participants were maintaining their utility

[60] Customers may believe that the CAP lasts one year because they must re-certify for the program each year.

service, reducing arrearages, and general financial help. Answers total to more than 100 percent because respondents could provide more than one answer.

Table IV-17
Perception of Program Benefits

	Current Participants	Past Participants
Lower Energy Bills	50%	59%
Budget Billing/Even Payments	13%	14%
Maintaining Utility Service	11%	10%
General Financial Help	8%	10%
Reduced Arrearages	7%	7%
Helpful for Low-Income Customers	6%	9%
Other	7%	3%
No Benefits	1%	0%
Don't Know	10%	5%

After the unprompted question about Program benefits, current and past participants were asked specifically whether they felt lower bills, maintaining utility service, and reduced arrearages were benefits of participating in the CAP. Table IV-18 shows that the majority of current and past participants agreed that all three were benefits of the CAP. Both current and past participants were most likely to agree that lower energy bills were a benefit of the Program.

Table IV-18
Perception of Benefits From CAP Participation

	Current Participants	Past Participants
Reduced Energy Bills	93%	97%
Maintaining Utility Service	85%	81%
Reduced Arrearages	77%	86%

Current and past participants were then asked what they felt was the most important benefit of the Program. Table IV-19 shows that the largest share of current participants, 40 percent, and past participants, 47 percent, said that lower energy bills were the most important benefit of the Program. The second most common benefit mentioned was maintaining utility service. Thirty percent of current participants and 29 percent of past participants said that maintaining their utility service was the most important benefit of the Program. Current and past participants also mentioned even payments and general financial help as most important benefits.

Table IV-19
Most Important Benefit

	Current Participants	Past Participants
Reduced Energy Bills	40%	47%
Maintaining Utility Service	30%	29%
Budget Billing/Even Payments	7%	9%
General Financial Help	5%	7%
Reduced Arrearages	4%	2%
Helpful For Low-Income Customers	2%	0%
Customer Service/Flexibility	1%	0%
Confused With Other Program	1%	0%
Other	2%	3%
No Benefits	1%	0%
Don't Know	6%	3%

Program Impact on Bill Payment and Arrearages

This section examines the Program's impact on respondents' bill payment behavior and arrearages. Respondents were asked what percentage discount they received on their monthly PECO bill as a result of the CAP. The majority of current and past participants did not know how much of a discount they receive on their monthly PECO bills.

Table IV-20 displays the amount of money that respondents said they save on a typical monthly energy bill in the winter months as a result of the CAP. Twenty-nine percent of current participants said that they saved between $1 and $50 on a typical bill, and 26 percent said that they saved more than $50. Percentages were similar for past participants.

Only three percent of current participants and none of the past participants reported no savings on a winter energy bill. Over 40 percent of current and past participants said they did not know how much money they saved on a winter bill.

Table IV-20
Savings On Monthly PECO Bills in Winter Months
While Enrolled in CAP

	Current Participants	Past Participants
$0	3%	0%
$1-$25	12%	5%
$26-$50	17%	21%
$51-$100	18%	21%
$101 or more	8%	7%

	Current Participants	Past Participants
Don't Know	41%	45%

Respondents were asked to report their level of arrearages at the time they enrolled in the CAP, at the time of the survey, and at the time they were removed from the CAP. Table IV-21 shows that current participants reported a decline in their arrears since the time that they began participating in the CAP. Past participants reported a decline in their arrears from the time that they enrolled in the CAP to the time that they were removed from the Program. Over 40 percent of current and past participants reported that they had no arrearages at the time of the survey.

Non-participants were least likely to report that they do not currently have an arrearage. Twenty-eight percent of non-participants reported that they did not have an arrearage, while 26 percent reported that they had an arrearage between $100 and $500 and 15 percent reported that they had an arrearage over $500. This indicates a need for a payment assistance program among non-participants.

Table IV-21
Reported Arrearages

	Arrearage at Time of CAP Enrollment		Arrearage When Exited CAP	Current Arrearage		
	Current Participants	**Past Participants**	**Past Participants**	**Current Participants**	**Past Participants**	**Non-Participants**
$0	23%	29%	53%	41%	47%	28%
$1-$100	6%	7%	2%	12%	9%	11%
$101-$500	32%	24%	7%	20%	14%	26%
$501-$1000	10%	9%	9%	3%	7%	11%
$1001-$2000	4%	5%	0%	2%	3%	2%
$2001 or more	2%	2%	0%	1%	0%	2%
Don't Know/Refused	23%	26%	26%	21%	21%	17%

Current participants who reported arrearages were asked what they had to do to receive a reduction in their arrearages under the CAP. Thirty percent of current participants identified the need to keep up with payments, and 16 identified the need to pay their bill on time or in full over a set length of time. Almost one-third of respondents reported that they did not know how they could receive a reduction in their arrearages under the CAP. Seven percent of current participants said that they would have to make arrangements with PECO to receive a reduction of their arrearages.

Table IV-22
Understanding of Responsibilities Associated with Reduction of Arrearages

	Current Participants[1]
Keep Up with Payments	30%
Pay Bill On Time for Six Consecutive Months	9%
Pay Bill in Full for Six Consecutive Months	7%
Make Arrangements With PECO	7%
Report Current Income to PECO	2%
Apply for LIHEAP	2%
PECO Does Not Forgive Arrearages	1%
Other	9%
Don't Know	32%

[1] 139 Respondents

Current participants who reported that they currently have an arrearage were asked whether arrearage forgiveness makes them more likely to pay their energy bill. Table IV-23 shows that 62 percent of these respondents said that arrearage forgiveness makes them more likely to pay their PECO bill. About one-third of current participants were not asked this question because they did not understand arrearage forgiveness.

Table IV-23
Monthly Forgiveness Makes Timely Bill Payment More Likely
CAP Participants With Arrearages

	Current Participants[1]
Yes	62%
No	4%
Don't Know	1%
Does Not Understand Arrearage Forgiveness	32%

[1] 139 Respondents

Current and past participants were asked how difficult it was to make their monthly energy payments prior to enrolling and while they were enrolled in the CAP. Table IV-24 shows that 56 percent of current participants and 40 percent of past participants said that it was very difficult to pay their energy bills prior to participating in the CAP, compared to nine percent of current participants and seven percent of past participants who said it was very difficult to pay their energy bills while enrolled in the Program. These data demonstrate that customers perceive that the CAP increased the affordability of their PECO bills.

Non-participants were asked how difficult it was to make their monthly payments in the past 12 months. Seventeen percent of non-participants said that it was very difficult to make their payments in the past 12 months, and 59 percent said it was somewhat difficult.

Overall, fewer non-participants reported that paying their PECO bills was very difficult or somewhat difficult than current and past participants reported prior to enrollment. This could indicate that the non-participant respondents do not have as great a need for the CAP as current and past participants did prior to enrolling.

Table IV-24
Difficulty of PECO Bill Payment
Prior to Enrollment and While Enrolled

	Current Participants		Past Participants		Non- Participants
	Prior To Enrollment	While Enrolled	Prior To Enrollment	While Enrolled	Currently
Very Difficult	56%	9%	40%	7%	17%
Somewhat Difficult	31%	28%	45%	41%	59%
Not Too Difficult	6%	35%	9%	28%	13%
Not At All Difficult	5%	27%	5%	22%	8%
Don't Know	1%	1%	0%	0%	2%

Bill Payment Difficulty

Payment-troubled customers may not pay their PECO bills in full, or they may pay their PECO bills at the expense of other household necessities, such as food, mortgage or rent, or medical care. This section of the memo examines the financial difficulties that survey respondents reported. Current and past participants were asked to report whether they had to forego paying for the following expenses prior to enrolling in the CAP and while enrolled in the CAP:

- Food
- Medicine
- Medical or dental service
- Mortgage or rent
- Telephone or cable
- Credit card or loan
- Car payment

Table IV-25 shows that current and past participants were less likely to report that they had to forego or delay spending on these other bills while they were enrolled in the CAP than they were prior to participating in the Program. While 59 percent of current participants and 55 percent of past participants said that they had to forgo or delay spending on food prior to participating in the CAP, 28 percent of current participants and 36 percent of past participants said that they had to do so while participating in the Program. Similarly, 41 percent of current participants and 57 percent of past participants said that they had to forgo or delay paying for medical or dental services prior to participating in the CAP, while 19 percent of current participants and 35 percent of past participants reported that they faced this problem while enrolled in the CAP.

Non-participants were asked whether they had to forego or delay paying for other household necessities in the past 12 months. Non-participants reported that they had to forego or delay most of these necessities at higher rates than current and past participants did while participating in the CAP, and at rates similar to those that current and past participants reported prior to enrolling in the CAP.

Table IV-25
Forgone Household Bills

	Current Participants		Past Participants		Non-Participants
	Prior to Enrollment	While Enrolled	Prior to Enrollment	While Enrolled	In Past 12 Months
Food	59%	28%	55%	36%	47%
Medicine	36%	19%	41%	28%	30%
Medical or Dental	41%	19%	57%	35%	47%
Mortgage or Rent	41%	22%	40%	19%	40%
Telephone or cable	61%	40%	71%	53%	74%
Credit Card or Loan	32%	18%	50%	38%	45%
Car Payment	11%	5%	26%	19%	28%

Respondents were asked whether their PECO bill amounts had changed while they participated in the CAP. Table IV-26 shows that 64 percent of current participants and 57 percent of past participants said that their PECO bills were lower than they were before participating in the Program. Fourteen percent of current and past participants said that their bills had increased, and 14 percent of current participants and 24 percent of past participants said that their bills had not changed.

Respondents were also asked whether their energy usage had changed while they participated in the CAP. Table IV-26 shows that about one quarter of current and past participants said that their energy use was lower than before participating in the CAP. Ten to fifteen percent of each group reported higher energy usage since participating in the Program, and 47 percent of current participants and 62 percent of past participants said that their energy usage had not changed.

Respondents who reported that their energy usage had changed were asked why it had changed. Respondents who reported that their energy usage had increased were likely to attribute their increase in usage to less expensive energy due to CAP benefits, household member health needs, or additional household members. Respondents who reported that their energy usage had decreased were likely to attribute it to their own efforts to reduce their energy usage, and to weatherization or LIURP services.

Table IV-26
PECO Bill and Energy Usage While Enrolled
Compared to Pre-Participation Period

	Current Participants	Past Participants
PECO Bill		
Comparatively Lower	64%	57%
Comparatively Higher	14%	14%
No Change	14%	24%
Don't Know	7%	5%
Energy Usage		
Comparatively Lower	29%	26%
Comparatively Higher	15%	12%
No Change	47%	62%
Don't Know	9%	0%

Respondents were asked whether there was a time that they could not use their main source of heat for one or more of the following reasons:

- Their heating system was broken and they were unable to pay for a repair or replacement
- The utility company discontinued their electricity service because they were unable to pay their bill
- The utility company discontinued their gas service because they were unable to pay their bill

Table IV-27 shows that, generally, current and past participants were less likely to report that they did not have heat at the time that they were enrolled in the Program than they were to report that they did not have heat in the year prior to enrollment.

Twenty-five percent of current participants and 14 percent of past participants reported that they were not able to use their main source of heat because their heating system was broken in the year prior to enrolling in the CAP, compared to about 15 percent of current and past participants who reported that they faced this problem while they were enrolled in the Program. Similarly, 21 percent of current participants and 17 percent of past participants reported that they were not able to use their main source of heat because their electricity service was discontinued in the year prior to enrolling in the CAP, compared to eight percent of current participants and seven percent of past participants who reported that they faced this problem while enrolled in the Program. The results are similar for respondents who were not able to use their main source of heat because their gas service was discontinued before enrolling and after enrolling in the CAP.

Seventeen percent of non-participants said that in the past 12 months there was a time when they could not use their main source of heat because the heating system was broken, 21 percent said they could not use their main source of heat because their electricity service was discontinued, and 17 percent said they could not use their main source of heat because their gas service was discontinued.

Respondents who reported gas service terminations at any time were asked whether they used more electricity when they lost their gas service. Over 70 percent of those who had a gas service termination said that they had increased their use of electricity to heat their homes.

Table IV-27
Reasons for Inability to Use Main Source of Heat

	Current Participants		Past Participants		Non-Participants
	Prior to Enrollment	While Enrolled	Prior to Enrollment	While Enrolled	In Past 12 Months
Heating System Broken, Unable to Pay for Repair	25%	14%	14%	16%	17%
Disconnection of Electricity Service Due to Non-Payment of Bill	21%	8%	17%	7%	21%
Disconnection of Gas Service Due to Non-Payment of Bill	27%	9%	19%	7%	17%

Respondents were asked whether they used their kitchen stove or oven to provide heat in the past year, a dangerous practice that is sometimes used by low-income customers who cannot afford to pay their energy bills or service their heating systems. Table IV-28 shows that 14 percent of current participants reported that they used their kitchen stove or oven to provide heat always or frequently in the year prior to enrolling in the CAP, compared to seven percent who reported that they did so while participating in the Program. Only five percent of past participants reported that they used their kitchen stove or oven to provide heat always or frequently in the year prior to enrolling in the CAP, compared to 2 percent who reported that they did this while participating in the Program. Six percent of non-participants said that they always or frequently used their stove or oven to provide heat in the past 12 months.

Table IV-28
Use of Oven or Stove to Provide Heat

	Current Participants				Past Participants				Non-Participants	
	Prior to Enrollment		While Enrolled		Prior to Enrollment		While Enrolled		In Past 12 Months	
	Always	Freq	Always	Freq	Always	Freq	Always	Freq	Always	Freq
Used Oven or Stove to Provide Heat	4%	10%	1%	6%	2%	3%	0%	2%	2%	4%

Additional Sources of Energy Assistance

This section examines respondents' need for and receipt of additional energy assistance. The survey asked respondents whether they received energy assistance benefits from LIHEAP in the past 12 months. Table IV-29 shows that 51 percent of current participants reported that they received LIHEAP in the past 12 months, compared to 38 percent of past participants and 13 percent of non-participants.

Table IV-29
Received LIHEAP in Past 12 Months

	Participation Status		
	Current Participants	Past Participants	Non-Participants
Yes	51%	38%	13%
No	45%	60%	85%
Don't Know	2%	2%	0%

Respondents were asked whether they had ever received services from PECO's Low Income Usage Reduction Program (LIURP). Fourteen percent of current participants, 16 percent of past participants and six percent of non-participants reported that they received LIURP services in the past. Those respondents were asked whether they had moved since receiving LIURP services. One third of past and non-participants reported that they moved since receiving LIURP services, compared to eight percent of current participants.

Respondents who reported that they had never received LIURP services were asked whether they had ever been contacted to receive them. Five percent of current participants and 16 percent of past and non-participants reported that they had been contacted about LIURP. Only one percent of those who were contacted reported that they refused LIURP services.

Table IV-30
Receipt of LIURP Services

	Participation Status		
	Current Participants	Past Participants	Non-Participants
Received LIURP	14%	16%	6%
Moved Since LIURP Receipt[1]	8%	33%	33%
Has Not Received LIURP	81%	85%	94%
Was Contacted to Receive LIURP[2]	5%	16%	16%
Refused LIURP[3]	1%	1%	1%

[1] Respondents: 26 CP, 9 PP, 3 NP [2] Respondents: 146 CP, 49 PP, 50 NP [3] Respondents: 7 CP, 8 PP, 8 NP

All respondents were asked whether they needed more assistance to pay their energy bill. Table IV-31 shows that current and past participants were less likely than non-participants to say that they needed more assistance to pay their energy bill. Sixty percent of current participants and 62 percent of past participants said that they needed more assistance, compared to 79 percent of non-participants.

Table IV-31
Need Additional Assistance to Pay Energy Bill

	Participation Status		
	Current Participants	Past Participants	Non-Participants
Need Additional Help	60%	62%	79%
Do Not Need Additional Help	39%	33%	21%
Don't Know	1%	5%	0%

Participants' Expectations for Future Participation

Past participants were asked whether there was anything else that PECO could have done to help them stay on the CAP. Nine percent of past participants said that PECO could have helped them stay on the CAP by being more flexible with Program requirements. Seven percent said that PECO could have helped them stay on the Program by improving customer service, and another five percent said they could demonstrate a better understanding of each individual customer's circumstances. Almost half of all past participants surveyed reported that there was nothing PECO could have done to help them stay on the CAP, and 16 percent said that they did not know what PECO could have done to help.

Table IV-32 displays the reasons that past participants said they were no longer enrolled in the Program. Twenty-eight percent said that they were no longer enrolled because they were no longer income eligible for the Program. Sixteen percent said that they failed to recertify for the Program, and seventeen percent said that they did not know they were no longer enrolled in the Program.

Table IV-32
Reasons for Current Non-Participation

	Past Participants
No Longer Income Eligible	28%
Did Not Recertify	16%
Applied/Recertified	3%
No Longer Needed Program	3%
Missed Payment and Was Removed	2%
Program Was Not Helping	2%
Program Was Confusing	2%
Customer Reported Current Participation	17%
Other	9%
Don't Know	17%

Seventy-six percent of past participants said they would re-enroll in CAP if they were eligible. Nine percent said they would not re-enroll, and ten percent said they did not know whether they would re-enroll.

The majority of current participants, 86 percent, said that they were very likely to continue to participate, and seven percent said that they were somewhat likely to continue to participate. Additionally, 66 percent of current participants said that they would continue to participate in CAP as long as they were income eligible or otherwise able to, and another six percent said they would continue to participate until the Program ends. Fifteen percent of current participants did not know how long they would continue to participate.

General Evaluation of Program Benefits

This section of the memo examines current and past participants' satisfaction with the CAP. Respondents were asked how important the CAP had been in helping them to meet their needs. Overall, ninety-three percent of both current and past participants reported that the CAP had been somewhat or very important in helping to meet their needs. A large majority of respondents, 80 percent of current participants and 69 percent of past participants, reported that the Program had been very important.

Table IV-33
Importance of CAP in Meeting Participants' Needs

	Current Participants	Past Participants
Very Important	80%	69%
Somewhat Important	13%	24%
Of Little Importance	4%	3%
Not at All Important	2%	2%

Table IV-34 shows that 96 percent of current participants said that they were somewhat satisfied or very satisfied with the Program, compared to 91 percent of past participants.

Table IV-34
Overall Satisfaction with CAP

	Current Participants	Past Participants
Very Satisfied	76%	67%
Somewhat Satisfied	20%	24%
Somewhat Dissatisfied	2%	5%
Very Dissatisfied	1%	0%
Don't Know	0%	2%

Current and past participants were asked whether they had any recommendations for improvements to the CAP. Table IV-35 shows that seven percent of current and past participants said that the Program could be improved by providing more assistance and greater benefits. Other recommendations included improving communication about the Program, better customer assistance, increasing Program flexibility, providing referrals to other programs, improving Program outreach, requiring re-certification less frequently, and providing greater reductions in arrearages. Answers total to more than 100 percent because respondents could provide more than one answer.

Table IV-35
Recommendations for Improvements to CAP

	Current Participants	Past Participants
Larger Benefits	7%	7%
Explain Program Better	4%	7%
Better Customer Service	4%	7%
Greater Flexibility	3%	10%
Referrals to Other Programs	2%	2%
Better Program Outreach	1%	2%
Less Frequent Recertification	1%	2%
Greater Arrearage Forgiveness	1%	2%
More District Offices	1%	0%
Other	5%	2%
No Suggestions	97%	97%

Summary of CAP Survey Findings

Key findings from the CAP Survey are highlighted below.

- *Demographic Characteristics:* The CAP participants and non-participants were likely to have at least one vulnerable member, an individual over the age of 65 or under the age of 18, a disabled individual, or someone who required the use of electricity or gas for medical reasons in their household. Non-participants were less likely than current and past CAP participants to have at least one disabled member. Current participants were more likely than past CAP participants and non-participants to have at least one elderly member.

  Also, 19 percent of current participants reported that no member of their household had the equivalent of a high school education, compared to four percent of non-participants and three percent of past participants. Non-participants were more likely than current or past participants to report that they had some college or a Bachelor's Degree.

  Close to 30 percent of each participant group reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey. The majority of respondents in each group reported an annual income under $30,000.

Current participants were most likely to report incomes in the lowest bracket, below $10,000 a year, while non-participants were the most likely to report an annual income above $30,000. Only 28 percent of current participants reported that they earned wages from employment, compared to over half of past and non-participants. Close to one-fourth of each group reported that they received retirement income in the year prior to the survey.

Forty-one percent of current participants reported that they received public assistance in the year prior to the survey, compared to 31 percent of past participants and 15 percent of non-participants. Similarly, 48 percent of current participants reported that they received in-kind benefits such as food stamps or subsidized housing in the year prior to the survey, compared to 35 percent of past participants and 13 percent of non-participants.

- *Customer Assistance Program Outreach:* Current participants, past participants and non-participants who indicated that they were aware of the CAP, reported that they most commonly heard about the Program from a PECO representative. Over 20 percent of respondents in each group reported that they heard about the Program from a friend or relative. Other respondents heard about the Program from a PECO bill, or in a PECO flyer or newsletter.
- *Factors Affecting Enrollment Decisions:* Seventy percent of current participants and 66 percent of past participants reported that they enrolled in the Program to reduce their energy bills. Over 20 percent in each group said that they had a low or fixed income or were unemployed. Non-participants who were aware of the CAP were asked why they had not enrolled in the program. Thirty percent of non-participants reported that they had not enrolled in the Program because their income was too high and 25 percent reported that they believed they were not eligible for the Program for another reason.
- *Ease of Program Enrollment and Recertification:* The majority of current and past participants reported that Program enrollment and recertification were not too difficult.
- *Knowledge of Program Benefits and Requirements:* When asked to report what their responsibility was as a CAP participant, the majority of current and past participants said that they were required to keep up with their monthly PECO payments.

  About 80 percent of both current and past participants said they had a good understanding of the benefits provided by the CAP. When asked to describe CAP benefits, respondents were most likely to refer to lower energy bills, even monthly payments, and maintenance of utility service. Over 40 percent of current and past participants identified lower energy bills as the most important benefit of the CAP, and 30 percent identified not having the utility service turned off as the most important benefit.
- *Program Impact on Bill Payment and Arrearages:* The majority of current and past participants, over 80 percent, did not know what percentage discount they receive on their monthly PECO bills. Additionally, over 40 percent of current and past participants said they did not know how much money CAP saved them on a typical monthly bill in the winter.

Current and past participants reported a decline in arrearages since participating in the Program. Over 40 percent of current and past participants reported that they had no arrearages at the time of the survey. Forty-one percent of non-participants reported that they had arrearages over $100, indicating a need for the CAP. Of those who reported arrearages, over 60 percent said that arrearage forgiveness makes them more likely to pay their monthly bill on time.

Over 50 percent of current participants and 40 percent of past participants said that it was very difficult to pay their utility bills prior to participating in the CAP, compared to nine percent of current participants and seven percent of past participants who said it was very difficult to pay their gas bills while enrolled in the Program. These data demonstrate that customers perceive that the CAP increased the affordability of their PECO bills.

- *Bill Payment Difficulty:* Customers were asked how difficult it was for them to pay their bills prior to participating in the CAP and while participating in the CAP. Fifty-six percent of current participants said that it was very difficult to pay their bills prior to CAP enrollment and only nine percent of current CAP participants said that it was very difficult to pay their bills while enrolled in the Program. Sixty-four percent of current participants and 57 percent of past participants said that their PECO bills were lower than before participating in the Program.

  Current and past participants were asked whether they had foregone or delayed spending on non-energy bills such as food, medicine, medical or dental service, mortgage or rent, telephone or cable, loan or credit card, and car payments, before participating in the CAP and while participating in the CAP. Respondents were less likely to report that they had forgone or delayed these other bills while they were enrolled in the CAP than they were prior to participating in the Program. Non-participants reported that they had to forego or delay most of these necessities at higher rates than current and past participants did while participating in the CAP, and at rates similar to those that current and past participants reported prior to enrolling in the CAP.

  About one quarter of current and past participants said that their energy use was lower than what it was before participating in the CAP. Ten to fifteen percent of each group reported higher energy usage since participating in the Program, and 47 percent of current participants and 62 percent of past participants said that their energy usage had not changed.

  Current and past participants were more likely to report that they did not have heat due to a broken heating system, or because their electricity or gas had been disconnected, in the year prior to Program enrollment compared to the Program participation period.

- *Additional Sources of Energy Assistance:* Fifty-one percent of current participants, 38 percent of past participants, and 13 percent of non-participants reported that they had received LIHEAP in the year prior to the survey. Fourteen percent of current participants, 16 percent of past participants and six percent of non-participants reported that they received LIURP services in the past. Sixty percent of current participants, 62 percent of past participants, and 79 percent of non-participants reported a need for additional assistance to pay their energy bills.

- *Participants' Expectations for Future Participation:* Over three-fourths of past participants said that they would be interested in re-enrolling in the CAP if they were eligible. Eighty-six percent of current participants said that they were very likely to continue to participate in the CAP, and sixty-six percent said that they would continue to participate as long as they were eligible.
- *General Evaluation of Program Benefits:* Ninety-three percent of both current and past participants reported that the CAP had been somewhat or very important in helping to meet their needs. Ninety-six percent of current participants and 91 percent of past participants said that they were somewhat or very satisfied with the Program.

C. CARES Survey

This section presents detailed findings from the CARES customer survey. Information on demographic characteristics of respondents, general energy assistance needs, and bill payment patterns are presented for all respondents. Unless otherwise specified, tables include 55 survey respondents. Percentages may not sum to 100 percent due to rounding.

Demographic Characteristics

This section examines the demographic characteristics of survey respondents.

Table IV-36 shows the percentage of customers that have an elderly member (60 years of age or older), a disabled member, or one or more children (18 years of age and younger). Forty percent reported that they had one or more household members age 60 or older, 64 percent had one or more disabled members, and 47 percent had one or more children age 18 or younger. Additionally, 56 percent reported that they had a household member with a condition that required the use of electricity or gas.

Table IV-36
Percent with Vulnerable Household Members

	Percent of CARES Respondents
Elderly (60 or older)	40%
Disabled	64%
Children Under 18	47%
Children Under 5	22%
Condition That Requires Use of Electricity or Gas	56%

Table IV-37 shows that 46 percent of respondents owned their homes.

Table IV-37
Home Ownership

	Percent of CARES Respondents
Own	46%
Rent	53%
Other	1%

Respondents were asked to report the highest level of education attained by any member of their household. Table IV-38 shows that 69 percent of respondents reported that the highest level of education reached by any member of their household was a high school education or less, 22 percent attended some college or earned an Associates Degree, six percent earned a Bachelor's Degree or higher, and four percent completed vocational training.

Table IV-38
Highest Level of Education Obtained By Any Household Member

	Percent of CARES Respondents
Less Than High School	22%
High School Diploma or Equivalent	47%
Some College/ Associates Degree	22%
Bachelor's Degree	4%
Master's Degree or Higher	2%
Vocational Training	4%

Respondents were asked to report on several sources of income and benefits received by members of their household:

- Employment income from salaries and wages, or self-employment income from a business or farm
- Retirement income, including Social Security, pensions, and other retirement funds
- Public assistance benefits from TANF, SSI, AFDC, or general assistance or public assistance
- In-kind benefits, including food stamps or public housing

Table IV-39 shows that 26 percent of respondents reported that they received wages or self-employment income, 24 percent said they received retirement income, 49 percent said they received public assistance, and 49 percent said they received in-kind benefits. Additionally, 36 percent of respondents reported that at least one member of their household was unemployed and looking for work in the 12 months preceding the survey.

Table IV-39
Type of Income Received
Prior 12 Months

	Percent of CARES Respondents
Wages or Self-Employment Income	26%
Retirement Income	24%
Public Assistance	49%
In-kind Benefits	49%

Table IV-40 displays the respondents' reported annual household income. The majority of respondents, 78 percent, reported an annual income at or below $20,000. Only six percent reported an annual income above $30,000.

Table IV-40
Annual Household Income

	Percent of CARES Respondents
$0 - $10,000	45%
$10,001 - $20,000	33%
$20,001 - $30,000	6%
More than $30,000	6%
Don't Know	9%
Refused	2%

CARES Outreach and Communication

This section examines Program communications prior to the receipt of services. Table IV-41 shows that the majority of respondents, 73 percent, were experiencing financial problems, which led to their need for CARES services. The next most common problem was a health or medical problem: 22 percent of respondents reported that they experienced this kind of problem. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-41
Problem That Led to Need for CARES

	Percent of CARES Respondents
Financial	73%
Health/Medical	22%
High Bills	6%
Heating System Broken/Ineffective	4%
Don't Know	4%

Table IV-42 shows that 84 percent of respondents recalled that the CARES worker asked about their financial situation and needs.

Table IV-42
CARES Worker Asked Participant
About Financial Situation and Needs

	Percent of CARES Respondents
Yes	84%
No	7%
Don't Know	9%

Table IV-43 shows that only fifteen percent of respondents recall that they received a follow-up call from a CARES worker. Seventy-eight percent reported that they did not receive a follow-up call.

Table IV-43
CARES Worker Made Follow-Up Call to Participant

	Percent of CARES Respondents
Yes	15%
No	78%
Don't Know	6%

Knowledge of Program Benefits

This section examines respondents' assessment and knowledge of Program benefits. Respondents were asked what they felt was the most important benefit of the Program. Table IV-44 shows that the largest share of respondents, 36 percent, said that lower energy bills were the most important benefit of CARES. Twenty-two percent of respondents said that general help with finances and bills was the most important benefit, and seven percent said that keeping their utility service on was most important.

Table IV-44
Most Important Benefit

	Percent of CARES Respondents
Lower Energy Bills	36%
General Help With Finances/Bills	22%
Utility Service Kept On	7%
Information about Energy Assistance	4%
Information about General Assistance	4%
Referrals to General Assistance Programs	2%

	Percent of CARES Respondents
Other	9%
Don't Know	16%

Impact of CARES

This section examines the perceived impact of the Program on respondents' bill payment and financial situation. Table IV-45 shows that 31 percent of respondents received a health usage discount as a result of participating in CARES.

Table IV-45
Receipt of Health Usage Discount

	Percent of CARES Respondents
Yes	31%
No	60%
Don't Know	9%

Respondents were asked what programs or services they were informed of by the CARES worker. Table IV-46 shows that 33 percent of respondents were informed of the CAP, 26 percent were informed of LIHEAP, and nine percent were informed of LIURP. Other programs mentioned by respondents included the Health Usage Discount and housing assistance. One quarter of respondents reported that they were informed of no other programs or services.

Table IV-46
Program/Benefit Referrals Provided by CARES Worker

	Percent of CARES Respondents
CAP or CAP Rate	33%
LIHEAP/Energy Assistance	26%
LIURP	9%
Health Usage Discount	7%
Housing Assistance	2%
None	26%
Other	9%
Don't Know	13%

Table IV-47 shows that most of those who were informed of benefits did apply for them, and did receive them. Seven percent of those who were informed of LIHEAP and LIURP did not apply to receive those benefits, and seven percent of those who were informed of and applied for LIHEAP did not receive those benefits.

Most respondents who applied for and received a benefit reported that the benefit they received was very or somewhat important in helping them to meet their needs. Respondents who applied for a benefit but did not receive it reported that they were told that they were ineligible for the program or that the program was out of funds.

Table IV-47
Receipt of Other Benefits From Referrals Provided by CARES Worker

	Percent of CARES Respondents			
	Applied		Did Not Apply	Not Informed
	Received Benefits	Did not Receive Benefits		
CAP or CAP Rate	29%	0%	4%	67%
LIHEAP/Energy Assistance	15%	5%	5%	74%
LIURP	4%	0%	5%	91%
Health Usage Discount	5%	0%	2%	93%
Housing Assistance	0%	2%	0%	98%

Respondents were asked whether the assistance they received from CARES made it easier to pay their PECO bills and their non-PECO bills. Table IV-48 shows that a majority of respondents reported that CARES services did make it easier to pay their PECO bills, 75 percent, and their other bills, 73 percent.

Table IV-48
CARES Facilitated Payment of PECO and Other Bills

	Percent of CARES Respondents	
	PECO Bills	Other Bills
Yes	75%	73%
No	26%	27%

Respondents were asked how difficult it was to pay their monthly PECO bill. Table IV-49 shows that 35 percent of respondents said it was very difficult to pay their PECO bill and 36 percent said it was somewhat difficult.

Table IV-49
Difficulty of PECO Bill Payment

	Percent of CARES Respondents
Very Difficult	35%
Somewhat Difficult	36%
Not Too Difficult	20%
Not At All Difficult	7%

Financial Difficulties and Use of Alternative Heating

Payment-troubled customers may not pay their PECO bills in full, or they may pay their PECO bills at the expense of other household necessities, such as food, mortgage or rent, or medical care. This section of the memo examines the financial difficulties that survey respondents reported.

Respondents were asked to report whether they had to forego paying for the following in the past 12 months, and whether they had to do so always, frequently, sometimes, or seldom:

- Food
- Medicine
- Medical or dental service
- Mortgage or rent
- Telephone or cable
- Credit card or loan
- Car payment

Table IV-50 shows that respondents were mostly likely to have always or frequently forgone food payments, telephone or cable bills, and medical or dental services. Respondents were least likely to have always or frequently foregone car payments, which may be an indication that many of them to not have cars, or do not have car payments.

Table IV-50
Forgone Household Bills

	Percent of CARES Respondents				
	Always	**Frequently**	**Sometimes**	**Seldom**	**Never**
Food	7%	16%	15%	15%	46%
Medicine	4%	11%	16%	7%	62%
Medical or Dental	11%	7%	4%	4%	75%
Mortgage or Rent	7%	9%	22%	6%	55%
Telephone or cable	2%	20%	29%	7%	42%
Credit Card or Loan	6%	9%	9%	2%	75%
Car Payment	0%	4%	6%	2%	89%

Respondents were asked whether there was a time in the past 12 months that they could not use their main source of heat for one or more of the following reasons:

- Their heating system was broken and they were unable to pay for a repair or replacement
- The utility company discontinued their electric service because they were unable to pay their bill
- The utility company discontinued their gas service because they were unable to pay their bill

Table IV-51 shows that 22 percent of respondents said their heating system was broken and they were unable to pay for its repair or replacement in the year prior to the survey. Fifteen percent said that their electric service was discontinued, and sixteen percent said that their gas service was discontinued. Respondents who reported gas terminations in the year prior to the survey were asked whether the termination resulted in the use of more electricity to heat their homes. More three quarters of these respondents said that the termination did cause them to use more electricity to heat their homes.

Table IV-51
Reasons for Inability to Use Main Source of Heat
In the Past Year

	Percent of CARES Respondents
Heating System Broken, Unable to Pay for Repair	22%
Disconnection of Electricity Service Due to Non-Payment of Bill	15%
Disconnection of Gas Service Due to Non-Payment of Bill	16%

Respondents were asked whether they used their kitchen stove or oven to provide heat in the past year, a dangerous practice that is sometimes used by low-income customers who cannot afford to pay their heating bills or service their heating systems. Table IV-52 shows that 43 percent of respondents reported that they used their kitchen stove or oven to provide heat in the year prior to the survey.

Table IV-52
Use of Oven or Stove to Provide Heat

	Percent of CARES Respondents			
	Always	Freq	Sometimes	Never
Used Oven or Stove to Provide Heat	6%	2%	35%	58%

Additional Sources of Energy Assistance

This section examines respondents' need for and receipt of additional energy assistance. The survey asked respondents whether they received energy assistance benefits from LIHEAP in the past 12 months. Table IV-53 shows that 69 percent of respondents reported that they received LIHEAP in the past 12 months.

Table IV-53
Received LIHEAP in Past 12 Months

	Percent of CARES Respondents
Yes	69%
No	31%
Don't Know	0%

Respondents were asked whether they need more assistance to pay their energy bill. Table IV-54 shows that 75 percent of respondents reported that they needed additional help to pay their PECO bill.

Table IV-54
Need for Additional Assistance to Pay Energy Bill

	Percent of CARES Respondents
Need Additional Help	75%
Do Not Need Additional Help	26%

General Evaluation of Program Benefits

Respondents were asked how important the CARES Program was in helping them to meet their needs. Table IV-55 shows that 66 percent of respondents reported that CARES services had been very important in helping to meet their needs, and 15 percent reported that it had been somewhat important. Thirteen percent of respondents felt that the CARES Program was of little or no importance.

Table IV-55
Importance of CARES in Meeting Participants' Needs

	Percent of CARES Respondents
Very Important	66%
Somewhat Important	15%
Of Little Importance	7%
Not at All Important	6%

Table IV-56 shows that, overall, 84 percent of respondents were very or somewhat satisfied with the Program. Seven percent of respondents reported that they were very dissatisfied with the Program.

Table IV-56
Overall Satisfaction with CARES

	Percent of CARES Respondents
Very Satisfied	66%
Somewhat Satisfied	18%
Somewhat Dissatisfied	4%
Very Dissatisfied	7%
Don't Know	6%

Respondents were asked whether they had any recommendations for improvement to the CARES Program. Eighteen percent of respondents said that the Program could be improved by providing more assistance and in a more flexible manner. Eighteen percent of respondents also said that better customer assistance would improve the Program. Sixty-nine percent of respondents said that they had no recommendations for Program improvement.

Summary of CARES Survey Findings

Key findings from the CARES Survey are highlighted below.

- *Demographic Characteristics:* Households that received CARES services were likely to have vulnerable members. Sixty-four percent of households surveyed had at least one disabled member, 47 percent had at least one child under the age of 18, and 40 percent had at least one elderly member. These households were also unlikely to have any member with more than a high school diploma, and more than one-third of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

  Respondents were asked for the range of their annual household income. Forty-five percent of respondents reported an annual income of $10,000 or less, 33 percent reported an annual income between $10,001 and $20,000, six percent reported an income between $20,001 and $30,000, and six percent reported an income over $30,000. Only one-quarter of respondents reported that they earned any wages from employment, and one quarter of respondents reported that they received retirement income in the year preceding the survey. Conversely, 49 percent of respondents reported that they received public assistance, and 49 percent reported that they received in-kind benefits such as food stamps or subsidized housing in the year prior to the survey.

- *CARES Outreach and Communication:* Most respondents were first contacted by a CARES worker by telephone, or by both mail and telephone. Seventy-eight percent of respondents said that they received no follow-up phone calls to inquire about their circumstances after the initial call.

  Customers were asked about the type of problem that was faced that lead to the need for CARES. Almost three-fourths of respondents were in need of CARES services due to financial problems. Over one-fifth had experienced health or medical problems and six percent had high bills that led to the need for CARES services.

- *Knowledge of Program Benefits:* Thirty-six percent of respondents identified lower energy bills as the most important benefit of CARES. Twenty-two percent said that general help with finances and bills was the most important benefit, and seven percent said that maintaining the utility service on was the most important benefit.
- *Impact of CARES:* The survey showed that CARES helps customers to get the services that the need. Close to one-third of respondents said they received a health usage discount on their PECO bills as a result of CARES. Additionally, 39 percent of respondents received CAP as a result of CARES, 20 percent received LIHEAP, and five percent received LIURP services.

  Three-fourths of respondents reported that CARES facilitated the payment of their PECO bills and the payment of their non-PECO bills. However, over 70 percent of respondents reported that their PECO bills were still very or somewhat difficult to pay.
- *Financial Difficulties and Use of Alternative Heating:* Twenty-two percent of respondents reported that they had been unable to use their main source of heat in the year prior to the survey, 15 percent reported an electricity service termination and 16 percent reported a gas service termination. Over three-fourths of those who experienced gas service terminations used more electricity to heat their homes.
- *Additional Sources of Energy Assistance:* Sixty-nine percent of respondents reported that they received LIHEAP in the year preceding the survey. Seventy-five percent of respondents reported that they needed additional help to pay their energy bills.
- *General Evaluation of Program Benefits:* Sixty-six percent of respondents reported that CARES had been very important in helping them to meet their needs, and an additional 15 percent reported that it had been somewhat helpful in meeting their needs. Thirteen percent of respondents felt that CARES was of little importance or not at all important.

D. LIURP Survey

This section presents detailed findings from the LIURP customer survey. Information on demographic characteristics of respondents, general energy assistance needs, and bill payment patterns is presented for all respondents. Unless otherwise specified, tables include 103 survey respondents. Percentages may not sum to 100 percent due to rounding.

<u>Demographic Characteristics</u>

This section examines the demographic characteristics of survey respondents. Table IV-57 shows the percentage of customers that had an elderly member (60 years of age or older), a disabled member, or one or more children (18 years of age and younger). Thirty-eight percent reported that they had one or more household members age 60 or older, 41 percent had one or more disabled members, and 58 percent had one or more children age 18 or younger. Additionally, 35 percent of respondents had a household member with a health condition that required the use of electricity or gas.

Table IV-57
Percent with Vulnerable Household Members

	Percent of LIURP Respondents
Elderly (60 or older)	38%
Disabled	41%
Children Under 18	58%
Children Under 5	23%
Condition That Requires Use of Electricity or Gas	35%

Respondents were asked whether they own or rent their home. Table IV-58 shows that 76 percent of respondents owned their homes.

Table IV-58
Home Ownership

	Percent of LIURP Respondents
Own	76%
Rent	23%
Other	1%

Respondents were asked to report the highest level of education attained by any member of their household. Table IV-59 shows that 51 percent of respondents reported that the highest level of education reached by any member of their household was a high school education or less, 28 percent attended some college or earned an Associates Degree, and 22 percent earned a Bachelor’s Degree or higher.

Table IV-59
Highest Level of Education Obtained By Any Household Member

	Percent of LIURP Respondents
Less Than High School	8%
High School Diploma or Equivalent	43%
Some College/ Associates Degree	28%
Bachelor’s Degree	17%
Master’s Degree or Higher	5%

Respondents were asked to report on several sources of income and benefits received by members of their household:

- Employment income from salaries and wages, or self-employment income from a business or farm
- Retirement income, including Social Security, pensions, and other retirement funds

- Public assistance benefits from TANF, SSI, AFDC, or general assistance or public assistance
- In-kind benefits, including food stamps or public housing

Table IV-60 shows that 51 percent of respondents reported that they received wages or self-employment income, 33 percent said they received retirement income, 27 percent said they received public assistance, and 21 percent said they received in-kind benefits. Additionally, close to one third of respondents reported that at least one member of their household was unemployed and looking for work in the 12 months preceding the survey.

Table IV-60
Type of Income Received
Prior 12 Months

	Percent of LIURP Respondents
Wages or Self-Employment Income	51%
Retirement Income	33%
Public Assistance	27%
Non-Cash Benefits	21%

Table IV-61 displays the respondents' reported annual household income. Nearly half of all respondents, 48 percent, reported an annual income at or below $20,000. Nearly 70 percent of respondents reported an annual income at or below $30,000.

Table IV-61
Annual Household Income

	Percent of LIURP Respondents
$0 - $10,000	22%
$10,001 - $20,000	26%
$20,001 - $30,000	21%
More than $30,000	20%
Don't Know	7%
Refused	7%

LIURP Outreach and Enrollment

This section examines Program communications prior to the receipt of services and the factors affecting enrollment decisions. Table IV-62 displays the ways in which respondents learned about LIURP. Respondents were most likely to say that they heard about the Program from a PECO representative or from a friend or relative. A number of participants also reported that they heard about the Program from a PECO bill insert, flyer or newsletter, or from another agency. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-62
How Customer Learned About LIURP

	Percent of LIURP Respondents
PECO Representative	51%
Friend or Relative	14%
PECO Bill/Flyer/Newsletter	6%
Agency	4%
LIHEAP	3%
Customer Contacted PECO	2%
Internet/Television	1%
Other	5%
Don’t Know	19%

Table IV-63 shows that the majority of respondents, 58 percent, said that they wanted to receive LIURP services to reduce their energy bills. Respondents were also likely to say that they wanted to receive services to reduce their energy use, reduce their arrearages, or because they were told to enroll. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-63
Reasons for Enrolling in LIURP

	Percent of LIURP Respondents
Reduce Energy Bills	58%
Reduce Energy Use	15%
Reduce Arrearages	6%
Because it Was Offered	5%
Told to Enroll/Not Given a Choice	4%
Receive New Appliances	2%
Discomfort in Home	1%
Other	2%
Don’t Know	6%

LIURP Provider and Participant Actions

This section of the memo examines actions taken by the Program auditor during the energy audit, and actions taken by the respondents as a result of the Program. Respondents were asked whether the LIURP energy auditor did the following:

- Explained how energy use is measured
- Recommended actions that the customer could take to save electricity

- Told the customer how much money he/she could expect to save by taking the recommended actions
- Left a copy of the energy audit results
- Left the customer with educational materials about how to reduce the amount of electricity he/she uses.

Table IV-64 shows that over three fourths of respondents reported that the energy auditor explained how energy use is measured, recommended actions to save energy, left a copy of energy audit results, explained what energy audit results meant, and left educational materials about how to reduce energy use. The lowest reported auditor action, 71 percent, was outlining the amount of money customers could save by taking certain energy-saving actions[61].

Table IV-64
Energy Education Provided by Auditor

	Percent of LIURP Respondents
Explained How Energy Use is Measured	78%
Recommended Some Actions to Save Energy	91%
Outlined Amount of Money Actions Could Save	71%
Left a Copy of Energy Audit Results	82%
Explained What Energy Audit Results Meant	74%
Left Materials About How to Reduce Energy Usage	89%

Respondents were asked what actions they had taken to save energy since receiving LIURP services. Table IV-65 displays the responses to this question. The actions respondents most commonly reported were using compact fluorescent light bulbs (CFL's), reducing overall use of lighting, changing thermostat settings, reducing use of appliances, keeping the refrigerator full, installing new windows or placing plastic on windows, reducing the use of hot water, purchasing new or energy efficient appliances, and accepting LIURP services.

Table IV-65
Energy-Saving Actions
Unprompted

	Percent of LIURP Respondents
Use CFLs	34%
Reduce Use of Lighting	23%
Change Thermostat Settings	22%
Reduce Use of Appliances	19%
Keep Refrigerator Full	7%

[61] These are very positive results compared to findings from other weatherization recipient surveys.

	Percent of LIURP Respondents
New Windows/Plastic on Windows	7%
Reduce Use of Hot Water	6%
More Efficient Appliances	5%
Accept LIURP Services	5%
Use Fans Instead of AC	4%
Change Water Heater Temperature	4%
Sealed Gaps	4%
Disconnect Unused Refrigerator/Freezers	2%
Added Insulation	1%
None	16%
Other	12%

Respondents were asked whether, as a result of the Program, they had reduced their use of hot water, heating, or air conditioning. They were also asked whether, as a result of the Program, they had reduced their use of the dryer, dishwasher, lights, dehumidifier or space heater. Table IV-66 shows that the highest portion of respondents, 70 percent, reported that they had reduced their use of heating and the dishwasher. Sixty-seven percent of respondents reported that they had reduced their use of lights, 61 percent reported that they had reduced use of hot water, 59 percent reduced their use of air conditioning, and 54 percent reduced their use of the dryer and space heaters. Only 33 percent of those who had dehumidifiers reported that they reduced their use of them.

Table IV-66
Reduced End Uses
Prompted

	Percent of LIURP Respondents							
	Hot Water	**Heating[1]**	**A/C[2]**	**Dryer[3]**	**Dishwasher[4]**	**Lights**	**Dehumidifier[5]**	**Space Heater[6]**
Yes	61%	70%	59%	54%	70%	67%	33%	54%
No	29%	25%	35%	43%	30%	25%	44%	38%
Don't Know	10%	5%	6%	2%	0%	8%	22%	8%

[1]99 respondents [2]91 respondents [3]68 respondents [4]40 respondents [5] 18 respondents [6]24 respondents

Respondents who stated that they reduced their use of hot water as a result of the Program were asked what actions they had taken to do so. Table IV-67 shows that the most commonly reported actions taken to reduce hot water usage were using cold water for washing clothes, not washing clothes as often, turning down the water heater temperature, reducing the number of baths and showers, not letting the water run, and using the dishwasher less often. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-67
Actions Taken to Reduce Use of Hot Water

	Percent of LIURP Respondents[1]
Use Cold Water For Washing Clothes	37%
Don't Wash Clothes as Often	29%
Turned Down Water Heater Temperature	21%
Reduced Number of Baths/Showers	19%
Don't Let Water Run	14%
Don't Run Dishwasher as Often	13%
Reduced Length of Showers	8%
Use Water Heater Timer	6%
Use Hot Water During Off Peak Time	3%
Wash Dishes By Hand	2%
Other	11%
Don't Know	3%

[1] 63 Respondents

Respondents who reported that they reduced the amount of heat they use as a result of participating in LIURP were asked how they reduced this use. Table IV-68 shows that more than two-thirds of these respondents, 73 percent, said that they turned down the thermostat setting. Sixteen percent of respondents said that they use heat less, and 13 percent said they use a timer or programmable thermostat. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-68
Actions Taken to Reduce Use of Heat

	Percent of LIURP Respondents[1]
Turned Down Thermostat	73%
Use Heat Less	16%
Use Timer or Programmable Thermostat	13%
Use Extra Blankets/Dress Warmer	9%
Repaired or Replaced Heating System	4%
Use Heat Fewer Days Per Year	3%
Use Heat Fewer Hours Per Day	1%
Heat Fewer Rooms	1%
Other	6%
No Specific Action Mentioned	13%

[1] 69 Respondents

Respondents who reported that they reduced the amount of heat they use as a result of participating in LIURP were asked what actions they had taken to keep warm since reducing the amount of heat they use. Table IV-69 shows that the largest share of respondents, 78 percent, said that they use warmer clothes and blankets to keep warm. Ten percent of respondents said that they did not take any actions to keep warm. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-69
Actions Taken to Stay Warm Due to Reduced Use of Heat

	Percent of LIURP Respondents[1]
Wear Warmer Clothes/Use Blankets	78%
Use Space Heater	9%
Sealed Gaps/Added Insulation	3%
Keep Shades/Curtains Closed at Night	1%
Other	4%
Nothing	10%

[1] 69 Respondents

Respondents who reported that they reduced the amount of air conditioning they use as a result of participating in LIURP were asked how they reduced this use. Table IV-70 shows that 48 percent of respondents said that they use their air conditioner less, 20 percent said that they turn up the thermostat or use a lower setting on the air conditioner, and 19 percent said that they use their air conditioning fewer hours per day. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-70
Actions Taken to Reduce Use of Air Conditioning

	Percent of LIURP Respondents[1]
Use Air Conditioning Less	48%
Turn up Thermostat	20%
Use Air Conditioning Fewer Hours Per Day	19%
Use Air Conditioning in Fewer Rooms	11%
Use Fans Instead or In Addition	9%
Don't Use Air Conditioning At All	6%
Use Efficient Air Conditioner	6%
Other	9%
Don't Know	4%

[1] 54 Respondents

Respondents who reported that they reduced the amount of air conditioning they use as a result of participating in LIURP were asked what actions they had taken to keep cool since reducing the amount of air conditioning they use. Table IV-71 shows that 65 percent of respondents said that they use fans to keep cool, and 17 percent of respondents open windows. Some respondents also said that they wear lighter or less clothing, leave the house for an air conditioned location, or use shades. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-71
Actions Taken to Stay Cool Due to Reduced Use of Air Conditioning

	Percent of LIURP Respondents[1]
Use Fans	65%
Open Windows	17%
Wear Less/Lighter Clothing	6%
Leave For An Air Conditioned Location	6%
Use Shades	6%
Cool Drinks	2%
Go Swimming	2%
Other	4%
Nothing	9%
Don't Know	4%

[1] 54 Respondents

Respondents who reported that they reduced the amount of energy used by their clothes dryer were asked what actions they had taken to reduce this use. Table IV-72 shows that over half of the respondents said that they have reduced the number of loads that they dry, and 30 percent said that they line dry clothes. Sixteen percent of respondents only dry full loads, and 11 percent reported that they did not use the dryer at all. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-72
Actions Taken to Reduce Use of Dryer

	Percent of LIURP Respondents[1]
Reduce Number of Loads	54%
Line Dry Clothes	30%
Dry Only Full Loads	16%
Don't Use the Dryer	11%
Clean Lint	3%
Use Double Spin in Washer	3%
Other	11%

[1] 37 Respondents

Respondents who reported that they reduced the amount of electricity used by their dishwasher were asked what actions they had taken to do so. Table IV-73 shows that 46 percent of respondents said that they do not use the dishwasher much or at all, 39 percent said that they use the dishwasher less than they did prior to receiving services, 29 percent said they wash only full loads, and 11 percent said that they use the energy saver mode. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-73
Actions Taken to Reduce Use of Dishwasher

	Percent of LIURP Respondents[1]
Don't Use Dishwasher Much or At All	46%
Use Dishwasher Less Often	39%
Wash Only Full Loads	29%
Use Energy Saver Mode	11%
Use More Paper Products	7%
Other	4%

[1] 28 Respondents

Table IV-74 displays data about how many lights respondents left on all night prior to receiving LIURP services and how many lights they leave on all night currently. The table shows that 51 percent of respondents reported that they left lights on all night prior to receiving LIURP services, and 35 percent of respondents reported that they currently leave lights on all night.

Those respondents who said that they did or do leave lights on all night were asked how many lights they left on all night. The mean number of lights left on stayed almost the same: 1.7 prior to receiving LIURP services, and 1.6 currently.

Table IV-74
Lights Left On All Night

	Prior to Receiving LIURP Services	Currently
Percent of LIURP Respondents	51%	35%
Mean Number of Lights Left On	1.7	1.6

Table IV-75 displays actions that respondents reported taking as a result of the Program to reduce the electricity used by their lights. Thirty-one percent of respondents reported that they turn lights off when they are not in use, 26 percent said that they use compact fluorescent light bulbs (CFL's), 18 percent said that they turn lights off at night, and eight percent said they reduced their use of lights in the daytime. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-75
Actions Taken to Reduce Lighting

	Percent of LIURP Respondents
Nothing/Have Not Reduced	33%
Turn Off When Not in Use	31%
Use CFL Bulbs	26%
Turn Off at Night	18%
Reduce Daytime Use	8%
Use Lower Watt Bulbs	4%
Use Motion Detector	1%
Other	7%
Don't know	2%

Respondents were asked, "Is there anything else in your home that we haven't discussed that you think uses a lot of electricity? If yes, what uses a lot of electricity?" As shown in Table IV-76, 27 percent of respondents said that they had something else that used a lot of electricity. Respondents were likely to say that their freezer or refrigerator, computer, television, or stove or microwave use a lot of electricity. Fifty percent of respondents reported that the service provider discussed these uses with them, and 68 percent said that they had taken actions to reduce these uses. Respondents who said that they took actions to reduce these uses were most likely to say that they turned the item off when not in use or use the item less.

Table IV-76
Other Energy Uses

	Percent of LIURP Respondents
Freezer/Refrigerator	8%
Computer	5%
Television	5%
Stove/Microwave	4%
Medical Device	2%
Clothes Washer	2%
Other	5%
None	71%

Knowledge of Program Benefits and Requirements

This section examines how well clients understand the benefits provided by LIURP. Seventy-nine percent of respondents said they had a good understanding of the benefits of the Program. Table IV-77 displays answers to the question "What do you feel are the benefits of the Program?" Forty-one percent of respondents said that a benefit of LIURP was to receive energy education, 31 percent said a benefit was to reduce energy bills, and 30 percent said a benefit was to reduce energy use. Other benefits mentioned included help for the low-income customer, a safer or more comfortable home and the receipt of new appliances. Answers total more than 100 percent because respondents could provide more than one answer.

Table IV-77
Perception of LIURP Benefits

	Percent of LIURP Respondents
Energy Education	41%
Lower Energy Bills	31%
Lower Energy Use	30%
Helpful to Low Income Customer	6%
Safer/More Comfortable Home	4%
New Appliances	3%
Other	5%
No Specific Benefit Mentioned	4%
Nothing/No Benefit	1%
Don't Know	8%

After the unprompted question about Program benefits, respondents were asked specifically whether they felt lower energy bills, lower energy use, energy education, new appliances, and a safer or more comfortable home were benefits of participating in LIURP. Table IV-78 displays the responses to these questions. One hundred percent of respondents agreed that energy education was a benefit of the Program, 94 percent agreed that lower energy use was a benefit, 89 percent agreed that lower energy bills were a benefit, 86 percent agreed that a safer or more comfortable home was a benefit, and 79 percent agreed that new appliances were a benefit.

Table IV-78
Percent Who Agreed That Benefit Results From LIURP Participation

	Percent of LIURP Respondents
Energy Education	100%
Lower Energy Use	94%
Lower Energy Bills	89%
A Safer or More Comfortable Home	86%
New Appliances	79%

Respondents were then asked what they felt was the most important benefit of the Program. Table IV-79 shows that the largest share of respondents, 38 percent, said that energy education was the most important benefit of LIURP. Twenty-three percent of respondents said that lower energy bills were the most important benefit, 14 percent said that a safer or more comfortable home was most important, and 13 percent said lower energy use was the most important benefit[62].

Table IV-79
Most Important Benefit

	Percent of LIURP Respondents
Energy Education	38%
Lower Energy Bills	23%
Safer or More Comfortable Home	14%
Lower Energy Use	13%
New Appliances	3%
Helpful for Low Income Customer	1%
Other	6%
Nothing/No Benefit	1%
Don't Know	2%

Program Measures

This section of the memo examines measures that respondents received as a result of LIURP. Table IV-80 shows that all of the respondents who were listed as refrigerator or air conditioner recipients in the database confirmed the receipt of those appliances. Thirty percent of respondents reported that they received air sealing or insulation through LIURP. Of the eight percent of respondents who were listed in the database as a recipient of a water heater timer through the Program, three-fourths of them confirmed their receipt of the timer.

Respondents who reported that they received a new refrigerator, air conditioner, or water heater timer were asked whether the auditor provided them with an estimate of the savings they could expect to receive as a result of those measures. One hundred percent of those who received air conditioners and water heater timers reported that they received a savings estimate, and 95 percent of those who received new refrigerators received an estimate.

Table IV-80
Confirmation of Program Measures Received

	Percent of LIURP Respondents			
	Air Sealing Or Insulation	Refrigerator	Air Conditioner	Water Heater Timer
Confirmed Receipt	30%	18%	2%	6%

[62] This is a real testament to the quality of energy education provided by the Program.

	Percent of LIURP Respondents			
	Air Sealing Or Insulation	Refrigerator	Air Conditioner	Water Heater Timer
Did Not Confirm Receipt	66%	0%	0%	2%
Not Recipient Per Database	N/A	82%	98%	92%
Not a Heating Customer	4%	N/A	N/A	N/A

Respondents were then asked how satisfied they were with the sealing or insulation work, their new refrigerator, and/or a new air conditioner. All of those who received an air conditioner were very satisfied with it, as were 74 percent of those who received a refrigerator and 71 percent of those who received sealing or insulation work. Ten percent of those who received sealing or insulation work were somewhat dissatisfied, and five percent of those who received a new refrigerator were somewhat dissatisfied.

Impact of LIURP Services

This section of the memo examines the impact of LIURP services on the difficulty of PECO bill payments and the level of comfort inside the home. Respondents were asked how difficult it was to pay their monthly PECO bill. Table IV-81 shows that 20 percent of respondents said it was very difficult to pay their PECO bill and 43 percent said it was somewhat difficult.

Table IV-81
Difficulty of PECO Bill Payment

	Percent of LIURP Respondents
Very Difficult	20%
Somewhat Difficult	43%
Not Too Difficult	29%
Not At All Difficult	7%
Don't Know	1%

Table IV-82 displays whether respondents experienced a change in the warmth of their home in the winter and in the coolness of their home in the summer since receiving LIURP services. More than half of respondents reported that there was no change in the winter or summer temperature of their home. Thirty-four percent said that the warmth of their home had improved while 25 percent said that the coolness of their home in the summer had improved. Seven percent of respondents reported that the winter temperature in their home had worsened, and 10 percent reported that the summer temperature in their home had worsened. Respondents who had received LIURP heating job services were more likely to say that their home's summer and winter home temperature had improved.

Table IV-82
Changes in Temperature of Home Since Receiving LIURP Services
By LIURP Service and Customer Type

		LIURP Service		Customer Type	
	All Respondents	Baseload[1]	Heating[2]	Electric Only[3]	Combo[4]
Winter Temperature					
Improved	34%	27%	50%	29%	46%
Worsened	7%	8%	3%	8%	4%
No Change	54%	62%	37%	60%	39%
Don't Know	4%	1%	10%	1%	11%
Summer Temperature					
Improved	25%	19%	40%	23%	32%
Worsened	10%	11%	7%	11%	7%
No Change	57%	62%	47%	60%	50%
Don't Know	8%	8%	7%	7%	11%

[1]73 Respondents [2]30 Respondents [3]75 Respondents [4]28 Respondents

Bill Payment Difficulty

Payment-troubled customers may not pay their PECO bills in full, or they may pay their PECO bills at the expense of other household necessities, such as food, mortgage or rent, or medical care. This section of the memo examines the financial difficulties that survey respondents reported.

Respondents were asked to report whether they had to forego paying for the following in the past 12 months, and whether they had to do so always, frequently, sometimes, or seldom:

- Food
- Medicine
- Medical or dental service
- Mortgage or rent
- Telephone or cable
- Credit card or loan
- Car payment

Table IV-83 shows that respondents were mostly likely to have always or frequently forgone credit card or loan payments, telephone or cable bills, medical or dental services and food. Fifteen percent of respondents reported that they delayed food bills in the past 12 months, and 16 percent reported that they delayed medical or dental services in the past 12 months. Respondents were least likely to have always or frequently foregone car payments, which may be an indication that many of them to not have cars, or do not have car payments.

Table IV-83
Frequency of Foregone Household Bills

	Percent of LIURP Respondents				
	Always	Frequently	Sometimes	Seldom	Never
Food	4%	11%	23%	6%	56%
Medicine	3%	4%	17%	7%	69%
Medical or Dental	7%	9%	11%	5%	69%
Mortgage or Rent	1%	12%	14%	3%	71%
Telephone or cable	1%	18%	22%	7%	52%
Credit Card or Loan	6%	14%	15%	3%	63%
Car Payment	2%	5%	7%	4%	83%

Respondents were asked whether their PECO bill had changed since they received LIURP services. Table IV-84 shows that 44 percent of respondents said that their bill was lower, 27 percent said that their bill was higher, and 22 percent said that their bill was the same. Those who received baseload services were more likely than those who received heating services to say that their PECO bill was lower since they received services, and those who received heating services were more likely to say that their bill was higher. Additionally, electric only customers were more likely than combination customers to say that their PECO bill was lower since they received services, and combination customers were more likely to say that their bill was higher.

Table IV-84
Current PECO Bill Compared to Pre-Participation Period
By LIURP Service and Customer Type

		LIURP Service		Customer Type	
	All Respondents	Baseload[1]	Heating[2]	Electric Only[3]	Combo[4]
Comparatively Lower	44%	48%	33%	49%	29%
Comparatively Higher	27%	22%	40%	21%	43%
No Change	22%	23%	20%	23%	21%
Don't Know	7%	7%	7%	7%	7%

[1]73 Respondents [2]30 Respondents [3]75 Respondents [4]28 Respondents

Respondents were asked whether there was a time in the past 12 months that they could not use their main source of heat for one or more of the following reasons:

- Their heating system was broken and they were unable to pay for a repair or replacement
- The utility company discontinued their electric service because they were unable to pay their bill
- The utility company discontinued their gas service because they were unable to pay their bill

Table IV-85 shows that 17 percent of respondents said their heating system was broken and they were unable to pay for its repair or replacement in the year prior to the survey. Four percent said that their electric service was discontinued, and seven percent said that their gas service was discontinued. Respondents who reported gas terminations in the year prior to the survey were asked whether the termination resulted in their using more electricity to heat their homes. Four of the seven said that the termination did cause them to use more electricity to heat their homes.

Table IV-85
Reasons for Inability to Use Main Source of Heat, In the Past Year

	Percent of LIURP Respondents
Heating System Broken, Unable to Pay for Repair	17%
Disconnection of Electricity Service Due to Non-Payment of Bill	4%
Disconnection of Gas Service Due to Non-Payment of Bill	7%

Respondents were asked whether they used their kitchen stove or oven to provide heat in the past year, a dangerous practice that is sometimes used by low-income customers who cannot afford to pay their heating bills or service their heating systems. Table IV-86 shows that fourteen percent of respondents reported that they used their kitchen stove or oven to provide heat in the year prior to the survey.

Table IV-86
Use of Oven or Stove to Provide Heat

	Percent of LIURP Respondents			
	Always	Frequently	Sometimes	Never
Used Oven or Stove to Provide Heat	1%	1%	12%	86%

Seventy-four percent of respondents said that they reduced their overall energy usage as a result of LIURP. Respondents who reported that they had not reduced their overall energy usage were asked why. The reasons most commonly given by respondents were the need for new appliances or more work in their home, and the need to take the actions recommended to them through LIURP. Nine percent of respondents reported that they used the same amount of energy as before receiving LIURP services, and another nine percent reported that they had done everything that they could, but had not succeeded in further reducing their use.

Respondents were asked what else PECO could have done to help support a reduction in their energy use. Twenty-seven percent of respondents said that PECO could have helped them by sealing gaps in their home or providing new windows or doors. Others mentioned that PECO could further help them by lowering energy costs and providing more assistance, providing new appliances, and providing additional energy education. Over forty percent of respondents said that there was nothing PECO could do to help them further reduce their energy use.

Table IV-87
Suggested PECO Activities to Support Reduction in Energy Usage

	Percent of LIURP Respondents
Seal Gaps/New Windows or Doors	27%
Lower Energy Costs/More Assistance	6%
New Appliances	4%
Additional Energy Education	4%
Fix/Replace Heating System	3%
Other	4%
Nothing	44%
Don't Know	11%

Additional Sources of Energy Assistance

This section of the memo examines respondents' need for and receipt of additional energy assistance. The survey asked respondents whether they received energy assistance benefits from LIHEAP in the past 12 months. Table IV-88 shows that 35 percent of respondents reported that they received LIHEAP in the past 12 months. Respondents who received LIURP baseload job services were somewhat more likely than those who received heating job services to have received LIHEAP in the past 12 months, and electric only customers were somewhat more likely than combination customers to have received LIHEAP.

Table IV-88
Received LIHEAP in Past 12 Months
By LIURP Service and Customer Type

	All Respondents	LIURP Service		Customer Type	
		Baseload[1]	Heating[2]	Electric Only[3]	Combo[4]
Yes	35%	40%	23%	40%	21%
No	63%	59%	73%	59%	75%
Don't Know	2%	1%	3%	1%	4%

[1]73 Respondents [2]30 Respondents [3]75 Respondents [4]28 Respondents

Respondents were asked whether they needed more assistance to pay their energy bill.

Table IV-89 shows that 54 percent of respondents reported that they need additional help to pay their PECO bill.

Table IV-89
Need for Additional Assistance to Pay PECO Bill

	Percent of LIURP Respondents
Need Additional Help	54%
Do Not Need Additional Help	42%
Don't Know	4%

General Evaluation of Program Benefits

This section examines current and past participants' satisfaction with LIURP. Respondents were asked how important LIURP has been in helping them to meet their needs. Table IV-90 shows that 52 percent of respondents reported that LIURP had been very important in helping to meet their needs, and 26 percent reported that it had been somewhat important.

Table IV-90
Importance of LIURP in Meeting Participants' Needs

	Percent of LIURP Respondents
Very Important	52%
Somewhat Important	26%
Of Little Importance	11%
Not at All Important	8%

Table IV-91 shows that 64 percent of respondents were very satisfied with the energy education that they received, while 26 percent were somewhat satisfied. No respondents reported that they were very dissatisfied with the energy education. The nine percent of respondents who reported dissatisfaction with the energy education were asked what they would change about it. Changes recommended included providing more information on other services, better coordinating LIURP with other programs, quicker service, and better communication.

Table IV-91
Satisfaction with LIURP Energy Education

	Percent of LIURP Respondents
Very Satisfied	64%
Somewhat Satisfied	26%
Somewhat Dissatisfied	9%
Very Dissatisfied	0%

Table IV-92 shows that 81 percent of respondents felt that the LIURP auditor that came to their home was very knowledgeable about energy usage. Only one percent thought that the auditor was not at all knowledgeable.

Table IV-92
Knowledge Level of LIURP Auditor

	Percent of LIURP Respondents
Very Knowledgeable	81%
Somewhat Knowledgeable	16%
Not At All Knowledgeable	1%
Don't Know	3%

Table IV-93 shows that 66 percent of respondents said that work done to their home through LIURP was completed very soon or somewhat soon after it was promised. Nearly a quarter of respondents could not recall how soon the work was completed after it was promised.

Table IV-93
Promptness of Work Completion

	Percent of LIURP Respondents
Very Soon	51%
Somewhat Soon	15%
Not At All Soon	11%
Don't Know	23%

Table IV-94 shows that 89 percent of respondents said that they were somewhat satisfied or very satisfied with the Program. Only three percent of respondents reported that they were very dissatisfied with the Program.

Table IV-94
Overall Satisfaction with LIURP

	Percent of LIURP Respondents
Very Satisfied	62%
Somewhat Satisfied	27%
Somewhat Dissatisfied	7%
Very Dissatisfied	3%

Respondents were asked whether they had any recommendations for improvement to LIURP. Thirteen percent of respondents said that the Program could be improved by providing more services in the home. Other recommendations included improving Program outreach, providing better energy education materials, explaining Program requirements and benefits more thoroughly, and helping more people. Seventy-one percent of respondents had no recommendations for Program improvement.

Summary of LIURP Survey Findings

Key findings from the LIURP Survey are highlighted below.

- *Demographic Characteristics:* Households that received LIURP services were likely to have vulnerable members. About 58 percent of households surveyed had at least one child under the age of 18, 41 percent had at least disabled member, and 38 percent had one elderly member. These households were also unlikely to have any member with more than some college education, and almost one-third of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

  Respondents were asked for the range of their annual household income. Twenty-two percent of respondents reported an annual income of $10,000 or less, 26 percent reported an annual income between $10,001 and $20,000, 21 percent reported an income between $20,001 and $30,000, and 20 percent reported an income over $30,000. Half of the respondents reported that they earned wages from employment in the year preceding the survey, and one-third of respondents reported that they received retirement income.

  Twenty-seven percent of respondents reported that they received public assistance in the year prior to the survey, and 21 percent reported that they received in-kind benefits such as food stamps or subsidized housing.

- *LIURP Outreach and Enrollment:* Over half of respondents learned about LIURP from a PECO representative. The majority of respondents enrolled in LIURP to reduce their energy bills, or to reduce their energy use.

- *LIURP Provider and Participant Actions:* The respondents were asked whether the provider explained energy use, recommended actions to save energy, informed respondents how much money recommended actions could save, and left materials about how to reduce energy use. Over three-fourths of respondents reported that the provider did each of these. This is a very positive finding for the Program.

  Respondents were asked what energy saving actions they had taken as a result of the Program. The actions most commonly reported included using compact fluorescent light bulbs (CFL's), reducing the use of lighting, changing the thermostat settings, and reducing the use of appliances.

  The survey asked respondents about reducing the use of specific appliances. Of the respondents who have each appliance 70 percent said that they reduced the use of heat and the use of the dishwasher, 67 percent reduced the use of lights, 61 percent reduced the use of hot water, 59 percent reduced the use of air conditioning, 54 percent reduced the use of the dryer and space heaters, and 33 percent reduced the use of a dehumidifier.

- *Knowledge of Program Benefits and Requirements:* Seventy-nine percent of respondents said that they had a good understanding of LIURP benefits. Forty-one percent said that energy education was a benefit of the Program, 31 percent said that lower energy bills was a benefit, and 30 percent said lower energy use was a benefit. More than one-third of respondents said that energy education was the most important benefit of the Program.

- *Program Measures:* Respondents were asked about the measures they received through LIURP. As a result of the Program, about 30 percent of respondents received air sealing or insulation, 18 percent received a new refrigerator, six percent received a water heater timer, and two percent received a new air conditioner.

- *Impact of LIURP Services:* The majority of respondents, 63 percent, reported that it was very or somewhat difficult to pay their monthly energy bills despite the LIURP services.

  Half of the customers who received heating services said that the winter temperature of their home had improved and 40 percent of the customers who received heating services said that the summer temperature of their home had improved.

- *Bill Payment Difficulty:* Customers where asked whether their bill had increased or decreased since the receipt of LIURP. Forty-four percent of customers who received LIURP said that their bill was lower since the receipt of services. Combination customers were more likely to say that their bill had increased since the receipt of LIURP services, probably due to increases in gas prices. Three-fourths of respondents said that they had reduced their overall energy use since receiving LIURP services.

  Seventeen percent of respondents reported that they were unable to use their main source of heat in the year prior to the survey, four percent reported that they experienced an electricity service termination and seven percent reported a gas service termination. These kinds of service interruptions often increase the use of alternative heat sources. Fourteen percent of respondents reported that they used their kitchen stove or oven to provide heat in the year prior to the survey, and over half of those who experienced gas service terminations used more electricity to heat their homes as a result.

- *Additional Sources of Energy Assistance:* More than one-third of respondents reported that they received LIHEAP in the year prior to the survey. Over half of respondents reported that they needed additional assistance to pay their energy bills.

- *General Evaluation of Program Benefits:* More than half of respondents said that LIURP had been very important in helping them to meet their needs. One-quarter said that it had been somewhat important. Close to 60 percent of respondents reported that the energy education had been very helpful to them. A majority of respondents said that the LIURP auditor was very knowledgeable about energy use, and over half of respondents said the work done to their homes was done very soon after it was promised to them. Overall, 89 percent of respondents said that they were very or somewhat satisfied with the Program.

E. MEAF Survey

This section presents detailed findings from the MEAF customer survey. Information on demographic characteristics of respondents, general energy assistance needs, and bill payment patterns are presented for all respondents. Unless otherwise specified, tables include 43 survey respondents. Percentages may not sum to 100 percent due to rounding.

Demographic Characteristics

This section examines the demographic characteristics of survey respondents. Table IV-95 shows the percentage of customers that have an elderly member (60 years of age or older), a disabled member, or one or more children (18 years of age and younger). Twenty-six percent reported that they had one or more household members age 60 or older, 54 percent had one or more disabled members, and 63 percent had one or more children age 18 or younger. Additionally, 51 percent reported that they had a household member with a condition that required the use of electricity or gas.

Table IV-95
Percent with Vulnerable Household Members

	Percent of MEAF Respondents
Elderly (60 or older)	26%
Disabled	54%
Children Under 18	63%
Children Under 5	16%
Condition That Requires Use of Electricity or Gas	51%

Table IV-96 shows that 40 percent of respondents owned their homes.

Table IV-96
Home Ownership

	Percent of MEAF Respondents
Own	40%
Rent	61%

Respondents were asked to report the highest level of education attained by any member of their household. Table IV-97 shows that 75 percent of respondents reported that the highest level of education reached by any member of their household was a high school education or less, 14 percent attended some college or earned an Associates Degree, seven percent earned a bachelor's degree or higher, and five percent completed vocational training.

Table IV-97
Highest Level of Education Obtained By Any Household Member

	Percent of MEAF Respondents
Less Than High School	26%
High School Diploma or Equivalent	49%

	Percent of MEAF Respondents
Some College/ Associates Degree	14%
Bachelor's Degree	5%
Master's Degree or Higher	2%
Vocational Training	5%

Respondents were asked to report on several sources of income and benefits received by members of their household:

- Employment income from salaries and wages, or self-employment income from a business or farm
- Retirement income, including Social Security, pensions, and other retirement funds
- Public assistance benefits from TANF, SSI, AFDC, or general assistance or public assistance
- In-kind benefits, including food stamps or public housing

Table IV-98 shows that 37 percent of respondents reported that they received wages or self-employment income, 16 percent said they received retirement income, 58 percent said they received public assistance, and 56 percent said they received in-kind benefits.

Thirty percent of respondents reported that at least one member of their household was unemployed and looking for work in the 12 months preceding the survey.

Table IV-98
Types of Income Received
Prior 12 Months

	Percent of MEAF Respondents
Wages or Self-Employment Income	37%
Retirement Income	16%
Public Assistance	58%
In-kind Benefits	56%

Table IV-99 displays the respondents' reported annual household income. The majority of respondents, 78 percent, reported an annual income at or below $20,000. None of the respondents reported an annual income above $30,000.

Table IV-99
Annual Household Income

	Percent of MEAF Respondents
$0 - $10,000	59%
$10,001 - $20,000	19%

	Percent of MEAF Respondents
$20,001 - $30,000	14%
More than $30,000	0%
Don't Know	5%
Refused	5%

MEAF Outreach and Application

This section of the memo examines interactions between the respondents and the Program prior to grant receipt, as well as reasons for and the difficulty of applying for the grant. Table IV-100 displays the ways in which respondents learned about MEAF. Respondents were most likely to say that they heard about the Program from a PECO representative, a friend or relative, an agency, or a community workshop.

Table IV-100
How Customer Learned About MEAF

	Percent of MEAF Respondents
PECO Representative	30%
Friend or Relative	26%
Agency	19%
Community Workshop	14%
Other	7%
Don't Know	5%

Table IV-101 shows that most respondents identified the location at which they applied for the MEAF grant as UESF, or another agency. One fifth of respondents did not know where they had applied for the grant.

Table IV-101
Location Where Participant Applied for MEAF Grant

	Percent of MEAF Respondents
UESF	21%
Community Service Council of Chester	5%
Bucks Country Opportunity Council	2%
CAA of Delaware County	2%
Montgomery County Action Development Corp.	2%
Other Agency	44%
Other	5%
Don't Know	19%

Table IV-102 shows that 30 percent of respondents applied for the MEAF grant due to high bills, 23 percent applied due to the loss of a job or other income, and 21 percent applied due to a health or medical reason. An additional nine percent reported that they applied for the MEAF grant due to personal reasons. Fourteen percent said that they did not have a specific emergency that led them to apply for the grant.

Table IV-102
Emergency That Led to MEAF Application

	Percent of MEAF Respondents
High Bills	30%
Loss of Job/Income	23%
Health/Medical	21%
Personal	9%
Other	2%
No Emergency	14%
Don't Know	5%

Respondents were asked about the difficulty of applying for the MEAF grant.
Table IV-103 shows that 72 percent of respondents said that the application process was not too difficult or not at all difficult. Respondents who said that applying for the MEAF grant was very or somewhat difficult were asked what parts of the process were most difficult. They reported that providing proof of income and social security numbers and going to the agency to apply were the most difficult parts of the process.

Table IV-103
Difficulty of Application for MEAF Grant

	Percent of MEAF Respondents
Very Difficult	5%
Somewhat Difficult	19%
Not Too Difficult	14%
Not At All Difficult	58%

Impact of MEAF Grant on Bill Payment

This section examines the perceived impact of the grant on respondents' bill payment. or two of the past five years.

Table IV-104 shows that the majority of respondents, 88 percent, reported that they received the MEAF grant in one or two of the past five years.

Table IV-104
Number of Years MEAF Grant Received
Past Five Years

	Percent of MEAF Respondents
1	67%
2	21%
3	2%
4	0%
5/Every Year	5%
None	2%

Table IV-105 shows that 72 percent of respondents reported that they had been able to make all of their PECO bill payments since receiving the MEAF grant.

Table IV-105
Ability to Make PECO Bill Payments Since Receiving MEAF Grant

	Percent of MEAF Respondents
Yes, Able to Make All Payments	72%
No, Not Able to Make All Payments	26%
Don't Know	2%

Financial Difficulties and Use of Alternative Heating

Payment-troubled customers may not pay their PECO bills in full, or they may pay their PECO bills at the expense of other household necessities, such as food, mortgage or rent, or medical care. This section of the memo examines the financial difficulties that survey respondents reported.

Respondents were asked to report whether they had to forego paying for the following in the past 12 months, and whether they had to do so always, frequently, sometimes, or seldom:

- Food
- Medicine
- Medical or dental service
- Mortgage or rent
- Telephone or cable
- Credit card or loan
- Car payment

Table IV-106 shows that respondents were mostly likely to have always or frequently foregone telephone or cable bills, food, medicine, and mortgage or rent. Respondents were least likely to have always or frequently foregone car payments, which may be an indication that many of them to not have cars, or do not have car payments.

Table IV-106
Forgone Household Bills

	Percent of MEAF Respondents				
	Always	Frequently	Sometimes	Seldom	Never
Food	14%	9%	33%	9%	33%
Medicine	7%	9%	23%	0%	61%
Medical or Dental	7%	7%	14%	0%	72%
Mortgage or Rent	7%	9%	21%	16%	47%
Telephone or cable	12%	16%	40%	2%	30%
Credit Card or Loan	7%	2%	14%	7%	70%
Car Payment	0%	0%	2%	0%	98%

Respondents were asked whether there was a time in the past 12 months that they could not use their main source of heat for one or more of the following reasons:

- Their heating system was broken and they were unable to pay for a repair or replacement
- The utility company discontinued their electric service because they were unable to pay their bill
- The utility company discontinued their gas service because they were unable to pay their bill

Table IV-107 shows that 21 percent of respondents said their heating system was broken and they were unable to pay for its repair or replacement in the year prior to the survey. Sixteen percent said that their electric service was discontinued, and twenty-three percent said that their gas service was discontinued. Respondents who reported gas terminations in the year prior to the survey were asked whether the termination resulted in the use of more electricity to heat their homes. More than half of these respondents said that the termination did cause them to use more electricity to heat their homes.

Table IV-107
Reasons for Inability to Use Main Source of Heat
In the Past Year

	Percent of MEAF Respondents
Heating System Broken, Unable to Pay for Repair	21%
Disconnection of Electricity Service Due to Non-Payment of Bill	16%
Disconnection of Gas Service Due to Non-Payment of Bill	23%

Respondents were asked whether they used their kitchen stove or oven to provide heat in the past year, a dangerous practice that is sometimes used by low-income customers who cannot afford to pay their heating bills or service their heating systems. Table IV-108 shows that 38 percent of respondents reported that they used their kitchen stove or oven to provide heat in the year prior to the survey.

Table IV-108
Use of Oven or Stove to Provide Heat

	Percent of MEAF Respondents			
	Always	**Frequently**	**Sometimes**	**Never**
Used Oven or Stove to Provide Heat	5%	7%	26%	58%

Additional Sources of Energy Assistance

This section of the memo examines respondents' need for and receipt of additional energy assistance. The survey asked respondents whether they received energy assistance benefits from LIHEAP in the past 12 months. Table IV-109 shows that 65 percent of respondents reported that they received LIHEAP in the past 12 months.

Table IV-109
Received LIHEAP in Past 12 Months

	Percent of MEAF Respondents
Yes	65%
No	35%

Respondents were asked if they had ever received services from the following PECO Programs:

- Low Income Usage Reduction Program (LIURP)
- Customer Assistance and Referral Evaluation Services (CARES)
- Customer Assistance Program (CAP)

Table IV-110 shows that a majority, 86 percent, of respondents reported that they participated in CAP at some point, and that 63 percent of respondents were participating in CAP at the time of the survey. One quarter of respondents reported that they received LIURP services at some time, and 14 percent reported that they received CARES.

Table IV-110
Participation in Other PECO Assistance Programs

	Percent of MEAF Respondents
Previous CAP Participant	86%
Current CAP Participant	63%
LIURP	26%
CARES	14%

Respondents were asked whether they need more assistance to pay their energy bill. Table IV-111 shows that 65 percent of respondents reported that they need additional help to pay their energy bill.

Table IV-111
Need for Additional Assistance to Pay Energy Bill

	Percent of MEAF Respondents
Need Additional Help	65%
Do Not Need Additional Help	33%
Don't Know	2%

Respondents were asked what other programs they were informed of when they applied for the MEAF grant. Table IV-112 shows that 37 percent of respondents were informed of LIHEAP. Other programs mentioned by respondents included CAP, LIURP, and Weatherization. A significant portion of respondents, 35 percent, said that they were informed of no programs.

Table IV-112
Program/Benefit Referrals Provided by MEAF Agency

	Percent of MEAF Respondents
LIHEAP/Energy Assistance	37%
CAP	7%
LIURP	5%
Weatherization	5%
CARES	2%
Welfare/General Assistance	2%
Other	19%
None	35%
Don't Know	7%

For each benefit that a respondent reported, he or she was asked whether they applied for that benefit, whether they received that benefit, and if not, why they did not receive it. Table IV-113 shows that most of those who were informed of benefits did apply for them, and did receive them. All respondents who applied for and received a benefit reported that the benefit they received was very or somewhat important in helping them to meet their needs. Respondents who applied for a benefit but did not receive it reported that they were ineligible for the program.

Table IV-113
Receipt of Other Benefits From Referrals Provided by MEAF Agency

	Percent of MEAF Respondents			
	Applied		Did Not Apply	Not Informed
	Received Benefits	Did Not Receive Benefits		
LIHEAP/Energy Assistance	23%	2%	12%	63%
CAP	7%	0%	0%	93%
LIURP	2%	0%	2%	96%
Weatherization	0%	2%	4%	94%
CARES	0%	2%	0%	98%
Welfare/General Assistance	2%	0%	0%	98%

General Evaluation of Program Benefits

This section examines current and past participants' satisfaction with the MEAF grant. Table IV-114 shows that 84 percent of respondents reported that the MEAF grant restored or helped to maintain their utility service.

Table IV-114
MEAF Grant Restored or Maintained Utility Service

	Percent of MEAF Respondents
Yes	84%
No	16%

Respondents were asked how important the MEAF grant was in helping them to meet their needs. Table IV-115 shows that 86 percent of respondents reported that the MEAF grant had been very important in helping to meet their needs, and 12 percent reported that it had been somewhat important.

Table IV-115
Importance of MEAF in Meeting Participants' Needs

	Percent of MEAF Respondents
Very Important	86%
Somewhat Important	12%
Of Little Importance	2%
Not at All Important	0%

Table IV-116 shows that 97 percent of respondents reported that they were very or somewhat satisfied with the Program.

Table IV-116
Overall Satisfaction with MEAF

	Percent of MEAF Respondents
Very Satisfied	67%
Somewhat Satisfied	30%
Somewhat Dissatisfied	0%
Very Dissatisfied	2%
Don't Know	0%

Respondents were asked whether they had any recommendations for improvement to MEAF. Twelve percent of respondents said that the Program could be improved by providing larger and more grants, and nine percent recommended more flexibility in Program requirements. Other recommendations included providing more information about other resources, and processing grants more quickly. Sixty-seven percent of respondents said that they had no recommendations for Program improvement.

Summary of MEAF Survey Findings

Key findings from the MEAF Survey are highlighted below.

- *Demographic Characteristics:* Households that received MEAF grants were likely to have vulnerable members. Over 60 percent of households surveyed had at least one child under the age of 18, over half had at least one disabled member, and about one-quarter of households had at least one elderly member. These households were also unlikely to have any member with more than a high school diploma, and 30 percent of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

  Respondents were asked for the range of their annual household income. Sixty percent of respondents reported an annual income of $10,000 or less, 19 percent reported an annual income between $10,001 and $20,000, and 14 percent reported an income between $20,001 and $30,000. Fifty-eight percent of respondents reported that they had received public assistance in the year prior to the survey, and 56 percent reported that they received in-kind benefits such as food stamps or subsidized housing.

- *MEAF Outreach and Application:* Thirty percent of respondents reported that they applied for the MEAF grant due to high bills. Twenty-three percent needed the grant due to a loss of income or job, 21 percent because of health or medical problems, and 9 percent due to personal reasons.
- *Impact of MEAF Grant on Bill Payment:* Over 70 percent of respondents reported that they have been able to make all their PECO bill payments since receiving the MEAF grant.
- *Financial Difficulties and Use of Alternative Heating:* Twenty-one percent of respondents reported that they had been unable to use their main source of heat in the year prior to the survey, sixteen percent reported an electricity service termination, and twenty-three percent reported a gas service termination. Over half of those who experienced gas service terminations used more electricity to heat their homes as a result.
- *Additional Sources of Energy Assistance:* Sixty-five percent of respondents reported that they received LIHEAP in the year preceding the survey. Sixty-three percent reported that they were participating in CAP at the time of the survey. One-quarter of respondents reported that they received LIURP services, and 14 percent received CARES. Sixty-five percent of respondents reported that they needed additional help to pay their energy bills.
- *General Evaluation of Program Benefits:* Eighty-four percent of respondents reported that the MEAF grant they received helped to restore or maintain their utility service. Eighty-six percent identified the MEAF grant as very important in helping them to meet their needs, and 97 percent of respondents said they were very or somewhat satisfied with MEAF.

V. CAP Program Operations and Impacts Analysis

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, account balance data, usage data, and collections data for 2003 and 2004 CAP participants.[63] APPRISE used the data to analyze CAP operations and impacts of the CPA on affordability, bill payment, account balances, collections actions, and usage. The remainder of this section describes the goals of the data analysis, the methodology that was used, and the results.

A. *Goals*

The CAP analysis is divided into a program operations analysis and a program impacts analysis. Below we describe the goals for each analysis.

Program Operations Analysis

The main purpose of the program operations data analysis is to develop quantifiable measures of CAP participant household demographic and account status information. This information can be used to characterize the program population and assess whether these characteristics are correlated with CAP retention rates and with arrearage forgiveness. Below we describe the program operations analysis and the data that were used to conduct the analysis.

- *Universal Services Program Population Characteristics:* We examine the demographic and account characteristics of the Universal Services program participants and the comparison groups used in the analyses. Available PECO data allows us to examine whether there is an elderly individual in the household, whether there is a child in the household, annual household income, poverty level, utility service type (i.e., combination, electric only, or gas only), and arrears at the time of enrollment in the CAP.[64]

- *CAP Rate Tier:* We examine the CAP Rate tier for CAP customers.

- *CAP Retention Rates:* We analyze how long customers stay in the CAP and determine whether demographic variables, utility service type, arrears at enrollment, and CAP Rate tier are correlated with retention rates.

- *Arrearage Forgiveness:* We analyze the number of customers who received arrearage forgiveness and the amount of arrearage forgiveness received in the year after CAP

[63] PECO reported that due to the redesign and development of automated support for CARES, CARES data was unavailable prior to October 2004. Consequently, there was not enough data history for useful data analysis. MEAF program operations and impacts analysis is reported separately in Section VI. LIURP program operations analysis is reported separately in Section VIII.

[64] PECO provided population characteristics at the time of the data download.

enrollment, and determine whether these indicators are correlated with demographic variables, utility service type, arrears at enrollment, and CAP Rate tier.

Program Impacts Analysis

The main purpose of the program impact data analysis is to assess whether CAP participation improves bill affordability and payment behavior, and reduces arrearages and collection costs. Below we describe the analyses that are addressed in this section, and the data that are used to conduct the analyses.

- *Affordability Impacts:* We analyze the impacts of the CAP on the affordability of utility bills by comparing the asked to pay amount and energy burden in the year preceding CAP enrollment and the year following CAP enrollment. Comparison groups are used to control for changes in affordability that are unrelated to the CAP.

- *Payment Impacts:* We compare payment behavior for CAP participants in the year preceding CAP enrollment and the year following CAP enrollment. Comparison groups are used to control for changes that are unrelated to the CAP.

- *Bill Coverage Impacts:* We compare coverage of the asked to pay amount for CAP participants in the year preceding CAP enrollment and the year following CAP enrollment. Comparison groups are used to control for changes that are unrelated to the CAP.

- *Balance:* We compare customer balances just prior to CAP enrollment to those just after the customer has participated in the CAP for a full year. Comparison groups are used to control for changes that are unrelated to the CAP.

- *Assistance Payments:* We compare assistance payments received by CAP participants in the year preceding CAP enrollment and the year following CAP enrollment. Comparison groups are used to control for changes that are unrelated to the CAP.

- *Service Termination and Collection Actions:* We compare the number and rate of service terminations in the year preceding CAP enrollment and the year following CAP enrollment for customers who enrolled in the CAP to that for the comparison groups. We also compare the number and rate of collections actions associated with each group of customers.

- *Usage:* We compare gas and electric usage in the year preceding CAP enrollment and the year following enrollment for CAP customers to usage for the comparison group.

B. Methodology

This section describes the how evaluation data were obtained and the selection of participants for the CAP operations and impact analysis.

Evaluation Data

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, account balance data, usage data, and collections data for 2003 CAP participants, 2004 CAP participants, and low-income customers who never participated in the CAP. These data were provided in electronic format. Customer household demographics and account characteristics were provided in stages between February and October 2005. Program participation data were provided in stages between February and September 2005. Transactions data (i.e., billing and payment data, account balance data, usage data, and collections data) provided in stages between April 2005 and February 2006.

Selected Participants: Study Groups

Customers who enrolled in the CAP between January 1, 2003 and December 31, 2003 were included as potential members of the study group. This group was chosen for the analysis, as one full year of post-program data is required for an analysis of program impacts.

Selected Participants: Comparison Groups

Comparison groups were constructed for the CAP data analysis to control for exogenous factors. The comparison groups were designed to be as similar as possible to the treatment group, those who received services and who we are evaluating, so that the exogenous changes for the comparison groups are as similar as possible to those of the treatment group.

When measuring the impact of an intervention, it is necessary to recognize other exogenous factors that can impact changes in outcomes. Changes in a client's payment behavior and bill coverage rate, between the year preceding CAP enrollment and the year following enrollment, may be affected by many factors other than program services received. Some of these factors include changes in household composition or health of family members, changes in utility prices, changes in weather, and changes in the economy.

The ideal way to control for other factors that may influence payment behavior would be to randomly assign low-income customers to a treatment or control group. The treatment group would be given the opportunity to participate in the program first. The control group would not be given an opportunity to participate in the program until one full year later. This would allow evaluators to determine the impact of the program by subtracting the change in behavior for the control group from the change in behavior for the treatment group. Such random assignment is rarely done in practice because of a desire to include all eligible customers in the benefits of the program or to target a program to those who are most in need.

In the evaluation of the CAP, we were able to obtain two good comparison groups. Each comparison group is described below.

- *2004 CAP Enrollee Comparison Group (CG1):* We use customers who last enrolled in the CAP in 2004 and who did not receive CAP discounts in the two years preceding enrollment as a comparison group. We require that they have no discounted bills in the two years preceding enrollment to ensure that they are non-participants in both periods. These participants serve as a good comparison because they are lower income households who were eligible for the program and chose to participate. We use data for these participants for the two years preceding CAP enrollment, to compare their change in payment behavior in the years prior to enrolling to the treatment group's change in payment behavior after enrolling. Because these customers did not participate in the CAP in both analysis years, changes in bills and behavior should be related to factors that are exogenous to the program.

- *Low-Income Non-participant Comparison Group (CG2):* We obtained a sample of customers who PECO identified as low-income and had never enrolled in the CAP, to utilize as a comparison group. The group of customers was replicated to represent customers who enrolled in the program in each quarter of 2003. A quasi intervention date of the middle of the quarter was chosen for each group to compare to the participating customers who enrolled in that quarter.

The actual impact of the CAP on customer affordability and payment is estimated as the average of the estimates using the two comparison groups. The 2004 enrollees (CG1) are probably worse off because these customers' behavior is examined in the year prior to program enrollment, when they need more assistance in paying their bills. The low-income non-participants (CG2) are probably somewhat better off than the 2003 enrollees, because they have not needed to enroll in the program.

For the CAP program impact analysis, we examine pre and post-treatment statistics. 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 are 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.

Customers who participated in the CAP in the year prior to enrollment were excluded from the analysis, to allow for a comparison of data while not participating and while participating in the CAP. Customers who did not have a full year of data prior to joining the program or a full year of data following the program start date were not included in the impact analysis. The subject of data attrition is addressed more fully below.

The data that were used for the study and comparison groups were as follows:

- 2003 CAP enrollee treatment group (TG) data extended from one year before the customer joined the CAP to one year after the customer joined the CAP.

- 2004 CAP enrollee comparison group (CG1) data extended two years before the customer joined the CAP.

- Low-Income non-participant comparison group (CG2) data included one year of data before the mid-point of the first quarter of 2003 to one year of data after the mid-point of the last quarter of 2003.

Table V-1 describes the treatment and comparison groups that are included in the analyses in this section.

Table V-1
Treatment and Comparison Groups: 2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)	**2004 CAP Enrollees Comparison Group 1 (CG1)**	**Non-participants Comparison Group 2 (CG2)**
Group	2003 CAP Enrollees	2004 CAP Enrollees	Non-participants
Enrollment Requirement	Last enrollment date is in 2003	Last enrollment date is in 2004	Did not participate in the CAP
CAP Participation Requirement	Did not participate in the CAP in the year prior to enrollment	Did not participate in the CAP in the two years prior to enrollment	Never participated in the CAP
Pre-participation Dates	1 year prior to enrollment	2 years prior to enrollment	One year prior to the quasi enrollment dates of 2/15/03, 5/15/03, 7/15/03, 11/15/03
Post-participation Dates	1 year after enrollment	1 year prior to enrollment	One year after the quasi enrollment dates of 2/15/03, 5/15/03, 7/15/03, 11/15/03

C. *Data Attrition*

Customers were divided into the treatment group (TG) and comparison groups (CG1 and CG2) as described above. However, some of these customers were not included in the analyses in this section because they did not have adequate data available. We refer to all eligible customers (those who meet the enrollment and CAP participation requirements as described in Table V-1 above) in these groups as the original analysis groups and to those customers who have enough data to be included in the analysis as the final analysis group.

Table V-2 displays the number of customers in each group, the reasons why customers were not included in the analyses that follow, and the number of customers in each group that are included in the final analysis. Two factors must be weighed when selecting the sample for the final analysis. First, when conducting a program evaluation, the goal is always to include as much of the original analysis group in the research as possible, so that the estimated results are not biased due to elimination of distinctive subgroups. However, to provide good estimates of program impacts, it is also necessary to restrict the sample to those customers who have a minimum level and quality of data.

Customers were excluded from the final analysis group for the following reasons:

- *Full Year of Pre or Post Billing Data Not Available:* The analyses that are conducted require that customers have a full year of bills for the year prior to CAP enrollment and the year following CAP enrollment. Customers were excluded from the analyses if the pre or post year of billing data that could be constructed contained less than 330 days or more than 390 days.

- *Full Year of Pre or Post Payment Data Not Available:* The analyses also require that customers have a full year of payment data for the year prior to CAP enrollment and the year following CAP enrollment. Customers were excluded from the analyses if the pre or post year of payment data that could be constructed contained less than 330 days or more than 390 days.

- *Indistinguishable Duplicate Payment:* The data obtained from PECO did not provide a mechanism to distinguish between different payment types that occurred on the same day. Customers were excluded from the analysis if there were any indistinguishable duplicate payments occurring during the analysis period.

Table V-2 shows that a significant percentage of the original analysis groups had to be eliminated. The primary cause of the attrition is that the analysis does not follow customers who receive a new account number during the analysis period. This factor would eliminate customers who have their account terminated for nonpayment and don't reconnect within ten days, customers who move, and customers who have requested a new account number because of an inability to meet past PECO bill obligations.[65] PECO was not able to provide a linkage for customers who opened new accounts, so these customers could not be included in the analysis.

Below we describe the percentage of original customers that remain in the analysis, and reasons for different attrition rates by group.

- *2003 CAP Enrollee Treatment Group (TG):* 40 percent of the original analysis group was included in the final analysis sample.

- *2004 CAP Enrollee Comparison Group (CG1)*: 26 percent of the original analysis group was included in the final sample. Customers were included in the 2004 participant group if they enrolled in the CAP in 2004, and had not participated in the CAP in the two years prior to this enrollment. These customers were required to have data for the two years prior to enrollment to be included in the final analysis group. This is more of a

[65] The practice of payment-troubled customers signing up for new utility accounts in different names to avoid the requirement of past bill payment has been well documented, and utilities acknowledge that this is a serious bill payment problem.

restriction, and therefore there is more data attrition for this group than for the other analysis groups.

- *Nonparticipant Comparison Group (CG2):* 73 percent of the original analysis group was included in the final analysis sample. Non-participants are less likely to be payment-troubled, so they are less likely to be terminated and have a new account number assigned. Therefore, the attrition rate for this group is lower than for the other groups.

Table V-2
Data Attrition

	2003 CAP Enrollees Treatment Group (TG)	2004 CAP Enrollees Comparison Group (CG1)	Non-participants Comparison Group (CG2)
All Eligible	18,200	6,630	1756
Full Year of Pre Billing Data	8,198	1,879	1432
Full Year of Pre Payment Data	8,193	1,879	1430
Full Year of Post Billing Data	8,124	1,873	1430
Full Year of Post Payment Data	8,042	1,860	1402
Indistinguishable Duplicate Payments	7,274	1,795	1,259
% of Total	40%	26%	73%

D. 2003 CAP Program Operations Analysis

The following sections describe the results from the program operations analysis for 2003 CAP enrollees.

<u>Household Demographic Characteristics</u>

This section examines the household demographic characteristics for the customers in the 2003 CAP Enrollee Treatment Group (TG) and the comparison groups. We compare the original and final analysis groups to determine if there is a bias from eliminating customers from the analysis. We compare the treatment and comparison groups to determine if the comparison groups are similar enough to the treatment group to serve as a good comparison. Table V-3 shows that the customers had the following characteristics:

- *Elderly*: Twenty-eight percent of the customers in the final treatment group (TG) had at least one person age 65 or older in the household, as compared to 20 percent in the original TG. This is similar to the 29 percent of customers in the final 2004 CAP enrollee program participants group (CG1) and 15 percent in the original CG1 who had at least one elderly household member. It is expected that the final analysis group is somewhat older than the entire group that includes those with incomplete data, because elderly households are less likely to move. However, fourteen percent of the customers in the final non-participant group (CG2) and 13 percent in the original CG2 had at least one elderly household member.

- *Children*: Forty-eight percent of the customers in the final TG had at least one child 18 or younger in the household, as compared to 56 percent in the original TG. This is similar to the 43 percent of customers in the final CG1 and 60 percent in the original CG1 who had at least one child. However, 63 percent of customers in the final CG2 and 64 percent in the original CG2 had at least one child.

- *Young child*: Nineteen percent of the customers in the final TG had at least one child age five or younger in the household, as compared to 26 percent in the original TG. This is similar to the 16 percent of customers in the final CG1 and 27 percent in the original CG1 who had at least one young child. However, 24 percent of the customers in the final CG2 and 26 percent in the original CG2 had at least one young child.

- *Household Size*: Thirty-eight percent of the customers in the final TG resided in single-person households, as compared to 33 percent in the original TG. This is similar to the 42 percent of customers in the final CG1 and 31 percent in the original CG1 who lived alone. However, 17 percent of the customers in the final CG2 and 18 percent in the original CG2 resided in single-person households.

- *Annual Income*: Forty-four percent of the customers in the final TG had annual household incomes of less than $10,000, as compared to 49 percent in the original TG. This is similar to the 43 percent of customers in the final CG1 and 50 percent in the original CG1 who had annual household incomes of less than $10,000. However, approximately 21 percent of customers in the final CG2 and 23 percent in the original CG2 had annual income of less than $10,000.

- *Poverty Level*: Customers in the final TG were similar to the other comparison groups with respect to the Federal Poverty Level (FPL). Sixteen percent of the customers in the final TG had income less than or equal to 50 percent of the FPL, compared to 21 percent in the final CG1 and 18 percent in the final CG2. However, customers in the CG2 were more likely than the other comparisons groups to have income at or above 150 percent of the FPL. Twenty-one percent of the customers in the final CG2 had reported income at or above 150 percent of the FPL, compared to seven percent in the final TG and three percent in the CG1. Customers were included in the non-participant comparison group (CG2) because they had received LIHEAP at some point in the past. However, their income may have increased since the time of LIHEAP receipt.

In summary, customers in the non-participant comparison group are somewhat more likely to have larger households with more children and less elderly members, higher incomes, and incomes at or above 150 percent of the FPL than the treatment group and 2004 CAP enrollee comparison group. The treatment group is very similar on all characteristics to 2004 CAP enrollee comparison group participants.

Table V-3
Household Demographic Characteristics

	2003 CAP Enrollees Treatment Group (TG)		2004 CAP Enrollees Comparison Group (CG1)		Non-participants Comparison Group (CG2)	
	Original	**Final**	**Original**	**Final**	**Original**	**Final**
Observations	18,200	7,274	6,630	1,795	1,756	1,259
Observations with: Demographics Data Available	17,248	6,869	6,517	1,764	1,756	1,259
Age 65 or Older	20%	28%	15%	29%	13%	14%
Age 18 or Under	56%	48%	60%	43%	64%	63%
Age 5 or Under	26%	19%	27%	16%	26%	24%
Household Size						
1	33%	38%	31%	42%	18%	17%
2	20%	20%	20%	21%	18%	17%
3	17%	17%	19%	14%	21%	22%
4	14%	14%	15%	12%	21%	22%
5	9%	9%	9%	6%	14%	13%
6 or more	7%	7%	7%	4%	9%	10%
Observations with: Income Data Available	17,272	6,883	6,517	1,829	1,756	1,402
Annual Income						
<=$10,000	49%	44%	50%	43%	23%	21%
$10,001-$20,000	38%	40%	37%	42%	39%	40%
$20,001-$30,000	11%	12%	11%	12%	24%	25%
>$30,000	3%	4%	3%	3%	13%	14%
Poverty Level						
<=50%	20%	16%	31%	21%	22%	18%
51%-100%	51%	49%	38%	39%	28%	29%
101%-150%	23%	29%	28%	38%	30%	32%
151%-200%	4%	5%	2%	2%	13%	13%
>200%	2%	2%	1%	1%	7%	8%

Account Characteristics

This section examines the account characteristics for the customers in the 2003 CAP Enrollee Treatment Group (TG) and the comparison groups. Table V-4 shows that the customers had the following characteristics:

- *Service Type:* Customers in the treatment group are more likely than customers in the 2004 CAP enrollee comparison group (CG1) and less likely than customers in the non-participant group (CG2) to receive only electric services from PECO. Eighty-two percent of customers in the TG were electric only, compared to 77 percent in CG1 and 95 percent in CG2.

- *Arrears at Enrollment or Start of Post-treatment Analysis Period:* Customers in the final TG were similar to the comparison groups with regard to arrears at the time of CAP enrollment or start of comparable analysis period for comparison groups. At the time of CAP enrollment, six percent of customers in the final TG had no arrears; 21 percent had arrears between $1 and $100; 23 percent had arrears between $101 and $250; 20 percent had arrears between $251 and $500; 16 percent had arrears between $501 and $1,000, and 14 percent had arrears greater than $1,000.

Table V-4
Account Characteristics

	2003 CAP Enrollees Treatment Group (TG)		2004 CAP Enrollees Comparison Group (CG1)		Non-participants Comparison Group (CG2)	
	Original	**Final**	**Original**	**Final**	**Original**	**Final**
Observations	18,200	7,274	6,630	1,795	1,756	1,259
Service Type						
Combination	19%	18%	23%	23%	6%	5%
Electric Only	81%	82%	77%	77%	94%	95%
Gas Only	<.1%	<.1%	<.1%	0%	0%	0%
Arrears at Enrollment or Start of Post Period[1]						
<= $0	14%	6%	24%	1%	10%	2%
$1 - $ 100	20%	21%	15%	24%	18%	21%
$101 - $ 250	21%	23%	17%	24%	26%	29%
$251 - $ 500	18%	20%	17%	21%	22%	24%
$501-$1,000	15%	16%	14%	15%	14%	15%
>$1,000	11%	14%	12%	14%	9%	9%

[1] Original CAP TG group missing four observations that did not have balance data.

CAP Rate Tier

Effective February 2004, PECO has five CAP Rate tiers, which can be summarized as followed:

- *CAP Rate A*: Customers with household income less than or equal to 25 percent of the FPL with extenuating circumstances are eligible. Electric non-heating customers receive a minimum $12 per month bill and electric heating customers receive a minimum $30 per month bill.

- *CAP Rate B*: Customers with household income less than or equal to 25 percent of the FPL without extenuating circumstances are eligible. They receive an 85 percent discount on their first 500 kWh monthly.

- *CAP Rate C*: Customers with household income between 26 and 50 percent of the FPL are eligible. They receive a 75 percent discount on their first 500 kWh monthly.

- *CAP Rate D*: Customers with household income between 51 and 100 percent of the FPL are eligible. They receive a 50 percent discount on their first 500 kWh monthly.

- *CAP Rate E*: Customers with household income between 101 and 150 percent of the FPL are eligible. They receive a 25 percent discount on their first 500 kWh monthly.

Detailed eligibility and benefit details for each CAP Rate tier are shown in Table III-1.

CAP Rate customers with gas service also receive a discount on their gas variable distribution charge. The gas CAP Rate discount results in a discount of up to 28 cents per cubic foot (ccf) of monthly gas usage.

Customers in the TG were enrolled during a time period when there were only two CAP Rate tiers, CAP Rate I and CAP Rate II. When PECO developed the new CAP Rate tiers in February 2004, existing customers were automatically transferred over to the comparable CAP Rate tier. CAP Rate I customers became CAP Rate D customers and CAP Rate II customers became CAP Rate E customers.

PECO provided CAP information as of September 2005. Table V-5 displays the CAP Rate tier of the treatment group (TG) and the 2004 CAP enrollee comparison participants (CG1). Sixty-four percent of customers in the TG were in CAP Rate D and 36 percent of customers in the TG were in CAP Rate E.

Most customers in CG1 were enrolled after implementation of the new CAP Rate tiers. Eight percent of CG1 customers were in CAP Rate B, 13 percent were in CAP Rate C, 39 percent were in CAP Rate D, and 40 percent were in CAP Rate E.

Table V-5
CAP Rate Tier

	2003 CAP Enrollees Treatment Group (TG)		2004 CAP Enrollees Comparison Group (CG1)	
	Original	**Final**	**Original**	**Final**
Observations	18,200	7,274	6,630	1,795
CAP Rate Tier				
A	0%	0%	<1%	<1%

	2003 CAP Enrollees Treatment Group (TG)		2004 CAP Enrollees Comparison Group (CG1)	
	Original	Final	Original	Final
B	0%	0%	10%	8%
C	<1%	0%	21%	13%
D	73%	64%	40%	39%
E	27%	36%	29%	40%

Retention Rates

This section examines customers' retention in the CAP. We analyze the percent of CAP customers that remained on the program every month after enrollment, through months three, six, twelve and eighteen. Customers are considered to have remained on the program if they received the CAP discount in that month's billing cycle.

Table V-6 shows that 99 percent of the original 2003 treatment group received a discount in each of the first three months after enrollment, 98 percent remained in the CAP for the first six months, 96 percent remained on for the first twelve months, and 88 percent remained on for the first eighteen months. The final treatment group had a slightly greater full year retention rate. Ninety-one percent of these customers remained in the CAP for eighteen months after enrollment.

Table V-6 also examines the retention rates by household demographic characteristics for the final treatment group. This table shows that households with elderly members, households with no children, and single-person households had somewhat higher 18-month retention rates. Households with higher incomes had the lowest retention rates, because their income increased to the point where they were no longer eligible for CAP.

Table V-6
Retention Rates by Household Characteristics
2003 CAP Enrollees

	Obs.	Percent in the CAP Every Month Until X Months After Enrollment			
		Months After Enrollment			
		3 months	6 months	12 months	18 months
2003 CAP Participants (Original)	18,200	99%	98%	96%	88%
2003 CAP Participants (Final)	7,274	99%	99%	98%	91%
Elderly	1,977	99%	99%	99%	95%
Not Elderly	4,892	99%	99%	98%	90%
Children	3,286	99%	99%	98%	90%

	Obs.	Percent in the CAP Every Month Until X Months After Enrollment			
		Months After Enrollment			
		3 months	6 months	12 months	18 months
No Children	3,583	99%	99%	98%	93%
1 Person Household	2,615	100%	99%	99%	94%
2 – 3 Person Household	2,451	99%	99%	98%	89%
4 or more Person Household	1,803	99%	99%	98%	89%
Income <=$10,000	3,083	100%	99%	99%	96%
Income $10,001 – $20,000	2,729	99%	99%	99%	93%
Income $20,001 – $30,000	796	99%	99%	95%	79%
Income >$30,000	275	99%	98%	90%	59%
Poverty Level <=50%	1,100	100%	99%	99%	92%
Poverty Level 51%-100%	3,346	99%	99%	99%	96%
Poverty Level 101%-150%	1,962	99%	99%	99%	95%
Poverty Level 151%-200%	316	99%	97%	85%	38%
Poverty Level >200%	159	98%	94%	80%	39%

Table V-7 examines the retention rates by account characteristics for the final treatment group. Differences by service type and CAP tier are not significant. Customers with no arrears or arrears less or equal to $100 had the highest 18-month retention rates.

Table V-7
Retention Rates by Account Characteristics
2003 CAP Enrollees

	Obs.	Percent In the CAP Every Month Until X Months After Enrollment			
		Months After Enrollment			
		3 months	6 months	12 months	18 months
2003 CAP Participants (Original)	18,200	99%	98%	96%	88%
2003 CAP Participants (Final)	7,274	99%	99%	98%	91%
Service: Combination	1,340	99%	99%	98%	89%
Service: Electric Only	5,931	99%	99%	99%	92%

	Obs.	Percent In the CAP Every Month Until X Months After Enrollment			
		Months After Enrollment			
		3 months	6 months	12 months	18 months
Arrears at Enrollment					
<= $0	406	100%	100%	99%	97%
$1 - $ 100	1,536	99%	99%	99%	95%
$101 - $ 250	1,639	99%	99%	98%	91%
$251 - $ 500	1,483	99%	99%	98%	90%
$501-$1,000	1,198	100%	99%	98%	89%
>$1,000	1,012	100%	99%	98%	91%
CAP Rate Tier					
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
D	4,659	99%	99%	99%	93%
E	2,615	99%	99%	98%	89%

Arrearage Forgiveness

PECO provides arrearage forgiveness to CAP customers who pay their bills on time and in full, and who are current with their CAP payment obligations for six consecutive months. Customers who met these criteria prior to February 2004 received arrearage forgiveness only for their arrearages greater than $500 at the time of CAP enrollment. Beginning in February 2004, customers received forgiveness for their full pre-program arrearages.

Table V-8 shows that 55 percent of the original 2003 treatment group and 68 percent of the final treatment group received arrearage forgiveness in the twelve months after CAP enrollment. It is expected that a larger percentage of the final treatment group would receive arrearage forgiveness, because the final treatment group has a more stable account history (i.e., no moves or extended periods shut off for nonpayment).

Table V-8 also displays the median, mean, and range of arrearage forgiveness received. The median arrears forgiven for the final treatment group was $139 and the mean was $392. The considerable difference between the median and mean is attributable to a small number of customers who had very high levels of arrearages forgiven. The median is less sensitive to extreme scores than the mean and this makes it a better measure than the mean for highly skewed distributions. Among the final treatment group, 32 percent did not receive any arrearage forgiveness, 13 percent received between $1 and $100, 33 percent received between $101 and $500, and 22 percent received greater than $500 in arrearage forgiveness.

Table V-8 also displays the amount of arrearage forgiveness by household demographic characteristics. This table shows that households with no elderly members, households with children, large households, and higher income households received greater forgiveness. Customers with household income at or below 50 percent of the FPL received greater arrearage forgiveness than those with household incomes above 51 percent of the FPL.

Table V-8
Arrearage Forgiveness by Household Characteristics
2003 CAP Enrollees

	Obs.	Percent Received Arrearage Forgiveness	Median Arrearage Forgiveness	Mean Arrearage Forgiveness	Percent in Each Range			
					$0	$1 - $100	$101 - $500	>$500
2003 CAP Participants (Original)	18,200	55%	$54	$310	45%	11%	26%	18%
2003 CAP Participants (Final)	7,274	68%	$139	$392	32%	13%	33%	22%
Elderly	1,977	62%	$50	$234	39%	22%	28%	12%
Not Elderly	4,892	73%	$217	$475	27%	10%	36%	27%
Children	3,286	76%	$269	$548	24%	7%	37%	32%
No Children	3,583	64%	$76	$275	36%	19%	31%	14%
1 Person HH	2,615	61%	$56	$228	39%	20%	29%	12%
2 – 3 Person HH	2,451	73%	$198	$438	27%	11%	39%	24%
4 or more Person HH	1,803	76%	$324	$620	24%	6%	34%	37%
Income								
<=$10,000	3,083	66%	$103	$319	34%	16%	33%	17%
$10,001 – $20,000	2,729	71%	$168	$430	29%	14%	34%	23%
$20,001 – $30,000	796	76%	$309	$567	24%	5%	36%	35%
>$30,000	275	72%	$310	$651	28%	4%	30%	37%
Poverty Level								
<=50%	1,100	70%	$223	$498	30%	7%	35%	28%
51%-100%	3,346	69%	$126	$370	31%	15%	34%	20%
101%-150%	1,962	70%	$148	$397	30%	14%	33%	23%
151%-200%	316	68%	$178	$458	32%	9%	34%	25%
>200%	159	67%	$221	$473	33%	8%	31%	28%

Table V-9 displays the amount of arrearage forgiveness by account characteristics. Combination customers received greater arrearage forgiveness than electric only customers. However, combination customers were no more likely to receive arrearage forgiveness than electric only customers. Customers with arrears at enrollment between $1 and $100 were less likely to receive arrearage forgiveness than customers with arrears at enrollment greater than $101. Customers in CAP Rate D at the time of data download were more likely to receive forgiveness than customers in CAP Rate E.

Table V-9
Arrearage Forgiveness by Account Characteristics
2003 CAP Enrollees

	Obs.	Percent Received Arrearage Forgiveness	Median Arrearage Forgiveness	Mean Arrearage Forgiveness	Percent in Each Range			
					$0	$1 - $100	$101 - $500	>$500
2003 CAP Participants (Original)	18,200	55%	$54	$310	45%	11%	26%	18%
2003 CAP Participants (Final)	7,274	68%	$139	$392	32%	13%	33%	22%
Service: Combination	1,340	65%	$162	$573	35%	7%	27%	31%
Service: Electric Only	5,931	69%	$134	$351	31%	15%	34%	20%
Arrears at Enrollment								
<= $0	406	-	-	-	-	-	-	-
$1 - $ 100	1,536	59%	$30	$38	41%	58%	1%	0%
$101 - $ 250	1,639	73%	$140	$128	27%	3%	70%	0%
$251 - $ 500	1,483	80%	$314	$285	20%	1%	77%	1%
$501-$1,000	1,198	77%	$589	$521	23%	0%	7%	71%
>$1,000	1,012	72%	$1230	$1517	28%	0%	1%	70%
CAP Rate Tier								
A	-	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-
D	4,659	70%	$157	$400	30%	13%	34%	22%
E	2,615	64%	$106	$376	36%	13%	30%	21%

E. 2003 CAP Program Impacts Analysis

The following section describes the results from the program impacts analysis for 2003 CAP enrollees.

Affordability

The purpose of the CAP is to make bills more affordable for low-income customers. The program achieves this goal by offering rate discounts depending on poverty level, heating status, and time of year (i.e., summer months versus non-summer months). This section analyzes the impacts of the CAP on bill affordability for program participants.

Table V-10 displays the gross impacts for the final treatment group, and the net impacts as compared to the two comparison groups. The table shows that the CAP had a positive impact on affordability for program participants.

- *Asked to Pay Amount:* The asked to pay amounts are the bills that the customer was asked to pay. If the customer had been participating in the CAP, then the asked to pay amount would be his or her CAP Rate discounted bill. If the customer had not been participating in the CAP, the asked to pay amount bill would be a regular rate bill.

  The asked to pay amount decreased by $312 for the 2003 CAP enrollee treatment group, increased by $82 for the 2004 CAP enrollee comparison group, and was unchanged for the non-participants. Taking the average of the non-participant and 2004 enrollee comparison groups, the net impact of the CAP on the asked to pay amount was a decrease of $354.

- *Energy burden:* This statistic is the percentage of income that bills represent, an indicator of the affordability of the bills.[66] CAP participants experienced a decrease in energy burden, from 12.0 percent in the year prior to participating in the program, to 8.6 percent in the first year of program participation. This was a gross decrease of 3.4 percentage points. The average net impact of the CAP on the energy burden was a decrease of 3.7 percentage points.

[66] The income that is used in this calculation is the income that has most recently collected or the customer, as of the time of the download (May 2005), and does not differ between the two periods examined in the analysis. Therefore, the change in energy burden that is measured here results only from changes in energy costs.

Table V-10
Affordability Impacts
Combination and Electric Only Customers
2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Non-participant Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Number of Customers	7,274[1]			1,795		1,259	
Asked to Pay Amount	$1,209	$897	-$312**	$82**	-$393**	$3	-$315**
Total Energy Burden[2]	12.0%	8.6%	-3.4%**	0.6%**	-4.0%**	-0.1%	-3.3%**

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.
[1] TG includes three gas only accounts. There were no gas only accounts in CG1 or CG2. Gas only accounts are not analyzed in a separate table due to their rarity.
[2] 6,882 observations in TG, 1,763 observations in CG1, and 1,259 observations in CG2 had income data available.

Table V-11 displays the affordability impacts for the final treatment group customers who receive a combination of both electric and gas utility service. These CAP customers are eligible to receive a discount on both their electric and gas charges. As in the previous table, this table also shows the net impacts as compared to the two comparison groups. Among CAP combination customers, the asked to pay amount decreased by $300. However, comparison group combination customers experienced an increase in the asked to pay amounts on their combined bill of $249 for customers in the 2004 CAP enrollee comparison group and $322 for customers in the non-participant comparison group. The average net impact of the CAP on the asked to pay amount for combination customers was a decrease of $586.

CAP combination customers experienced a decrease in energy burden, from 16.2 percent in the year prior to participating in the program, to 13.3 percent in the first year of program participation. This was a gross decrease of 2.9 percentage points. The average net impact of the CAP on energy burden for CAP combination customers was a decrease of 4.7 percentage points.

Table V-11
Affordability Impacts
Combination Customers Only
2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Nonparticipants Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Number of Customers	1,340			414		65	
Asked to Pay Amount	$1,875	$1,575	-$300**	$249**	-$549**	$322**	-$623**
Total Energy Burden [1]	16.2%	13.3%	-2.9%**	2.3%**	-5.2%**	1.2%**	-4.1%**
Electric Energy Burden	8.9%	6.2%	-2.7%**	0.0%	-2.6%**	0.5%	-3.2%**
Gas Energy Burden	7.1%	7.0%	0.0%	2.3%**	-2.3%**	1.6%**	-1.6%**

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.
[1] 1,225 observations in TG, 408 observations in CG1, and 65 observations in CG2 had income data available.

Table V-12 displays the affordability impacts for the final treatment group customers who receive only electric service. Among CAP electric only customers, the asked to pay amount decreased by $315. However, 2004 enrollee comparison group electric only customers experienced an increase in the asked to pay amounts on their electric bill of $31. There was no significant change in the asked to pay amount for non-participant comparison group customers. The average net impact of the CAP on the asked to pay amount for electric only customers was a decrease of $324.

CAP electric only customers experienced a decrease in energy burden, from 11.0 percent in the year prior to participating in the program, to 7.6 percent in the first year of program participation. This was a gross decrease of 3.5 percentage points. The comparison groups experienced very small changes in energy burden, due to their similarly unsubstantial changes in bills. The average net impact of the CAP on energy burden for CAP electric only customers was 3.5 percentage points.

Table V-12
Affordability Impacts
Electric Service Only
2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Nonparticipants Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Number of Customers	5,931			1,380		1,194	
Asked to Pay Amount	$1,059	$744	-$315**	$31**	-$346**	-$14	-$301**
Total Energy Burden [1]	11.0%	7.6%	-3.5%**	0.1%	-3.6%**	-0.2%**	-3.3%**

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.
[1] 5,655 observations in TG, 1,354 observations in CG1, and 1,194 observations in CG2 had income data available.

In general, CAP customers had approximately $300 in lower bills and a three percentage point reduction in energy burden in the year following CAP enrollment as a result of CAP participation. Positive net impacts were greater for CAP customers who received both electric and gas service. Combination customers who were not in the CAP experienced a rise in the gas portion of their bill. CAP combination customers did not experience the same rise likely due to the CAP Rate discount on the gas variable distribution charge on their monthly gas bill.[67]

Payment

This section examines the customers' payments and their coverage of the CAP bill. Customer payment behavior is compared in the year preceding CAP enrollment and the year following CAP enrollment.

- *Asked to Pay Amount:* These are the same data as are presented in the previous affordability analysis, but are shown in these tables as well for completeness. The asked to pay amount decreased by $312 for the CAP participants. The average net impact of the CAP on the asked to pay amount was a decrease of $354.

- *Number of Cash Payments*: Cash payments are defined as payments that are made directly by the customers (as opposed to assistance payments). The number of cash payments is an indicator of payment regularity. Many payment-troubled customers miss bills and then make up payments in lump sums, or with energy assistance payments when they are in danger of termination. This practice results in less than twelve cash payments made over the course of a year. The CAP is designed to increase payment regularity by providing an affordable monthly payment.

[67] More details regarding the gas discount are described in Section III.

Table V-13 shows that customers made an average of eight cash payments in the year preceding CAP enrollment and an average of eight cash payments in the year following enrollment. There was a statistically significant, but small decrease in the number of cash payments. Customers in the comparison groups also had only small changes in the number of cash payments made, so the average net impact of the CAP on the number of cash payments was very small.

- *Total Cash Payments:* This is the dollar value of the cash payments made over the course of the year. Participants made a total of $948 in cash payments in the year preceding CAP enrollment and $716 in cash payments in the year following enrollment, for a gross decrease of $232. Customers in the comparison groups experienced no significant change in cash payments. The average net impact of the CAP on cash payments was a decrease of $241.

- *LIHEAP Payments*: LIHEAP assistance payments that customers can receive include LIHEAP cash and LIHEAP crisis. While participating in the CAP, LIHEAP cash grants are applied to the customer's account in the same manner as for non-CAP participants. LIHEAP cash payments are applied to the account balance including preprogram arrears. LIHEAP crisis payments are applied to the accounts balance and extra monies reflect as a credit because they are not applied to pre-program arrearages. CAP customers received $43 in LIHEAP payments in the year prior to program enrollment, and $50 in the year following enrollment, for a gross increase of $7. Customers in the 2004 CAP enrollee comparison group (CG1) experienced a $14 increase in LIHEAP payments. Customers in the non-participant comparison group (CG2) experienced no significant change in LIHEAP payments. The average net impact of the CAP on LIHEAP payments was not statistically significant.

- *MEAF Payments*: CAP customers received an average of $3 in Matching Energy Assistance Fund (MEAF) grants in the year prior to program enrollment, and an average of $1 in MEAF grants in the year following enrollment, for a gross decrease of $2.[68] CG1 customers experienced a $2 gross increase in MEAF grants. CG2 customers experienced a $4 gross decrease in MEAF grants. There was very little average net impact of the CAP on MEAF payments.

- *Total Payments*: Total payments are the sum of cash and assistance payments. Total payments for CAP participants decreased from $994 in the year preceding enrollment to $768 in the year following enrollment, for a gross decrease of $226. Customers in the comparison groups experienced no significant change in cash payments. The average net impact of the CAP on total payments was a decrease of $241.

[68] Matching Energy Assistance Fund (MEAF) grants, other small grants, and other uncategorized transfers are recorded in PECO's database as "miscellaneous" payments. For this analysis, MEAF payments were identified as "miscellaneous" payments valued between $1 and $500, the maximum allowed MEAF grant. "Miscellaneous" transactions of amounts less than $1 or greater than $500 were classified as cash payments. Consequently, an inestimable number of transactions identified as MEAF payments in the analysis period might be non-MEAF payments.

- *Cash Coverage Rate*: The cash coverage rate is defined as the total cash payments for the year divided by the asked to pay amount for the year. It is the average percentage of the asked to pay amount that was covered with cash payments. Participants had an average cash coverage rate of 80 percent in the year preceding enrollment and an average cash coverage rate of 81 percent in the year following CAP enrollment. CG1 customers experienced a decrease in the cash coverage rate of six percentage points and CG2 customers experienced an increase in the cash coverage rate of two percentage points. The average net impact of the CAP on cash coverage was 1.5 percentage points.

- *Total Coverage Rate*: The total coverage rate is defined as total payments (cash payments plus assistance payments) divided by the asked to pay amount for the year. Participants had an average total coverage rate of 85 percent in the year preceding enrollment and an average total coverage rate of 89 percent in the year following CAP enrollment, an increase of four percentage points. CG1 customers experienced a decrease in the total coverage rate of five percentage points and CG2 customers experienced an increase in the total coverage rate of two percentage points. The average net impact of the CAP on total coverage was an increase of 4.5 percentage points.

- *Shortfall*: The shortfall is the asked to pay amount for the year minus the total payments for the year. A positive shortfall indicates that on average, customers did not pay their entire asked to pay amount. Participants had an average shortfall of $215 in the year preceding enrollment and an average shortfall of $129 in the year following enrollment. The gross change in shortfall was a decrease of $86. CG1 customers exhibited worse payment behavior with an increase in shortfall of $70. CG2 customers experienced no significant change in shortfall. The average net impact of the CAP on shortfall was a decrease of $113.

- *Arrearage Forgiveness*: By paying their pay their CAP bills and staying current with their CAP payment obligations for six consecutive months, CAP Customers received $392 in arrearage forgiveness in the year following enrollment for a gross and net increase of $392.

- *Balance*: We examine participants' balances immediately prior to enrolling in the CAP and after one year of participation in the CAP. If CAP participants were successful on the program, then their balances would decrease. Balances decreased from $573 at the end of the year preceding enrollment to $326 at the end of the year following enrollment, for a gross decrease of $248. Balances for CG1 customers increased by $239. Balances for CG2 customers were unchanged. The average net impact of the CAP on balances was a decrease of $374.

In summary, CAP customers experienced large reductions in their asked to pay amounts and their total payments. However, due to their lower bills they had increased bill coverage rates. Due to their lower bills and arrearage forgiveness, they reduced their balances.

Table V-13
Payment Impacts
Combination and Electric Only Customers
2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Non-participants Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Number of Customers	7,274			1,795		1,259	
Asked to Pay Amount	$1,209	$897	-$312**	$82**	-$393**	$3	-$315**
Number Cash Payments	8.44	8.22	-0.22**	-0.42**	0.21*	0.36**	-0.57**
Total Cash Payments	$948	$716	-$232**	-$5	-$227**	$22	-$254**
LIHEAP Payments	$43	$50	$7**	$14**	-$7	$1	$7
MEAF Payments	$3	$1	-$2**	$2*	-$4**	-$4*	$2*
Total Payments	$994	$768	-$226**	$11	-$237**	$19	-$244**
Cash Coverage Rate	80%	81%	0%	-6%**	6%**	2%*	-2%**
Total Coverage Rate	85%	89%	4%**	-5%**	9%**	2%*	2%
Shortfall	$215	$129	-$86**	$70**	-$156**	-$16	-$70**
Arrearage Forgiveness	$0	$392	$392**	$0	$392**	$0	$392**
Balance	$573	$326	-$248**	$239**	-$486**	$14	-$262**

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.

One of the concerns with the analysis above is the high attrition rate due to the lack of data for customers in the year prior to enrollment. Table V-14 shows payment statistics in the year following enrollment for all customers with complete post enrollment data. This analysis is able to include 11,070 customers, as compared to the 7,274 customers included in the table above. This table shows that many of the key statistics do not differ significantly when the larger group is included in the analysis. For example, the table above showed that the average asked to pay amount in the year following enrollment was $897 and the total cash payments made were $716. Table V-14 shows that the average asked to amount was $898 and the total cash payments made were $687. Total coverage rates and balances are also similar.

Table V-14 also shows how payment statistics differ by participant characteristics. Customers who are elderly, have no children, and with smaller households have the highest coverage rates.

Table V-14
Payment Statistics
Customers with Complete Data in the Year Following Enrollment
2003 CAP Enrollees

	Obs.	Asked to Pay Amount (Post)	Cash Payments (Post)	Total Coverage Rate (Post)	Beginning Balance	Ending Balance
2003 CAP Participants with Complete Post Data	11070	$898	$687	88%	$537	$369
Elderly	2485	$813	$681	94%	$317	$177
Not Elderly	8027	$924	$685	86%	$625	$440
Children	5011	$1041	$765	83%	$712	$521
No Children	5501	$740	$596	93%	$376	$221
1 Person HH	3722	$663	$525	94%	$326	$190
2 – 3 Person HH	3819	$892	$694	87%	$571	$362
4 or more Person HH	2971	$1197	$870	81%	$811	$636
Poverty Level						
<=50%	2017	$892	$598	82%	$660	$519
51%-100%	5179	$799	$603	90%	$492	$319
101%-150%	2706	$1023	$839	88%	$552	$356
151%-200%	419	$1195	$978	84%	$697	$491
>200%	208	$1205	$963	86%	$698	$534

The previous analysis showed that CAP enrollees reduce the amount that they paid in the year following enrollment. This is contrary to most other payment program evaluations that we have conducted, where participants have a gross increase in the amount of payments made. Therefore, we take a closer look at CAP payment impacts in the tables below.

Table V-15 divides customers into three groups, those who paid less than 90 percent of their bill in the year prior to enrollment, those who paid between 90 and 100 percent of their bill in the year prior to enrollment, and those who paid 100 percent or more of their bill in the year prior to enrollment.

This table shows that all three groups of customers have a reduction in their asked to pay amount and a reduction in their total cash payments made. Customers who had the lowest coverage rates have a significant increase in coverage rates, those with coverage rates between 90 and 100 percent of the bill in the year prior to enrollment have a small decline in coverage rates, and those with the highest coverage rates, reduce their coverage rates.

Table V-15
Payment Impacts
By Pre Participation Total Coverage Rates

	<90% Total Coverage Rate in the Year Prior to Enrollment		90% - 100% Total Coverage Rate in the Year Prior to Enrollment		100% or Greater Total Coverage Rate in the Year Prior to Enrollment	
	Pre	Post	Pre	Post	Pre	Post
Number of Customers	3524		1366		2384	
Percent of Total	48%		19%		33%	
Asked to Pay Amount	$1293	$934	$1185	$912	$1098	$834
Total Cash Payments	$759	$691	$1088	$781	$1147	$716
Total Coverage Rate	63%	84%	95%	92%	112%	94%
Balance	$897	$501	$282	$168	$262	$157

Table V-16 separates customers into two groups, those who were asked to pay less than their total payments in their year prior to enrollment, and those who were asked to pay more than their total payments in the year prior to enrollment. This table shows that 69 percent of customers were asked to pay less in CAP than they paid in the year prior to enrollment. These customers made $1037 in cash payments in the year prior to enrollment and were asked to pay $773 in CAP. These customers reduced their cash payments to $662, and their total coverage rate dropped from 97 percent of their full bill in the year prior to enrollment to 93 percent of their CAP bill in the year following enrollment.

Only 31 percent of customers were asked to pay greater than or equal to the amount that they paid in the year prior to enrollment. These customers made $749 in cash payments in the year prior to enrollment and were asked to pay $1176 in the year following enrollment. These customers made an average of $837 in cash payments in the year following enrollment. Their total coverage rates increased from 59 percent of their full bill in the year prior to enrollment to 79 percent of their CAP bill in the year following enrollment.

This analysis shows that most customers did a fairly good job of paying their bill in the year prior to enrollment. They had a 97 percent average coverage rate, and an average balance of $353. These customers were asked to pay significantly less under CAP then they paid prior to enrolling, and as a result, they significantly reduced their cash payments. Customers with real payment problems, an average coverage rate of only 59 percent in the year prior to enrollment and an average balance of $1067 were asked to pay more under CAP than they had in the year prior to enrollment. These customers increased their cash payments by nearly $100 after enrolling in CAP.

Table V-16
Payment Impacts
By Asked to Pay Amount Versus Total Payments

	CAP Asked to Pay Amount < Total Payments Prior to CAP		CAP Asked to Pay Amount ≥ Total Payments Prior to CAP	
	Pre	Post	Pre	Post
Number of Customers	5027		2247	
Percent of Total	69%		31%	
Asked to Pay Amount	$1136	$773	$1372	$1176
Total Cash Payments	$1037	$662	$749	$837
Total Coverage Rate	97%	93%	59%	79%
Balance	$353	$166	$1067	$683

Table V-17 shows that this same finding holds for all of the poverty groups. In each of the poverty groups, customers who were asked to pay more than they were paying in the pre-enrollment year increase their cash payments, and customers who were asked to pay less than they paid in the pre-enrollment year decrease their cash payments.

Table V-17
Payment Impacts
By Asked to Pay Amount Versus Total Payments

	CAP Asked to Pay Amount < Total Payments Prior to CAP						CAP Asked to Pay Amount ≥ Total Payments Prior to CAP					
	<50%		51%-100%		101-150%		<50%		51%-100%		101-150%	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Number of Customers	652		2273		1199		448		1073		763	
Percent of Total	59%		68%		61%		41%		32%		39%	
Asked to Pay Amount	$1171	$747	$1051	$672	$1187	$883	$1313	$1102	$1307	$1071	$1429	$1275
Total Cash Payments	$1032	$595	$950	$571	$1123	$791	$614	$680	$658	$730	$871	$968
Total Coverage Rate	94%	90%	96%	95%	98%	93%	50%	73%	56%	79%	65%	81%
Balance	$517	$235	$335	$139	$337	$177	$1175	$853	$1077	$660	$991	$605

Energy Assistance

This section examines energy assistance received by CAP participants.

- *Percent Received LIHEAP Cash*: This is the percent of customers in the group that received LIHEAP cash assistance. In the treatment group, 17.2 percent of customers received LIHEAP cash assistance in the year prior to enrollment compared to 18.7 in the year after enrollment, for an increase of 1.5 percentage points.[69] In the year after enrollment, there was a 4.3 percentage point increase in the percentage of CG1 customers who received a LIHEAP cash grant. CG2 customers did not experience a change during the analysis period.[70] The average net impact of CAP on the percent of customers who received LIHEAP cash grants was a decrease of 1.4 percentage points.

- *Mean LIHEAP Cash Grant:* This is the mean LIHEAP cash grant for those customers who received LIHEAP cash assistance grants. Customers in the treatment group received an average LIHEAP cash grant of $227 in the year prior to enrollment and an average LIHEAP cash grant of $213 in the year after enrollment, for a decrease of $14. Customers in the comparison groups experienced no significant change in their average LIHEAP cash assistance grants. The average net impact of CAP on the average LIHEAP cash grants received was a decrease of $33.

- *Percent Received Crisis*: This is the percent of customers in the group that received LIHEAP crisis assistance in the pre or post enrollment year. Approximately one percent of customers in the treatment group received crisis assistance in the year prior to enrollment, and 3.5 percent received crisis in the year after enrollment, an increase of 2.5 percentage points. In the year after enrollment, there was a 1.2 percentage point increase in the percentage of CG1 customers who received a LIHEAP crisis grant. CG2 did not experience a change during the analysis period. The average net impact of CAP on the percent of customers who received LIHEAP crisis grants was a decrease of two percentage points.

- *Mean Crisis Grant*: This is the mean LIHEAP crisis grant for those customers who received crisis grants. Customers in the treatment group received an average LIHEAP crisis grant of $394 in the year prior to enrollment and an average LIHEAP crisis grant of $297 in the year after enrollment, for a decreased of $97. CG1 customers experienced an increase of $82 in their average LIHEAP crisis grant. CG2 customers experienced no significant change in their average LIHEAP crisis assistance grants. The average net impact of CAP on the average LIHEAP crisis grants received was a decrease of $113.

- *Total LIHEAP Grants Received*: This is the sum of LIHEAP cash and crisis assistance received by all customers in the study group, including those who did not receive a grant. Customers in the treatment group received a total of $43 in LIHEAP assistance in the year prior to enrollment, and $50 in the year following enrollment, for a gross increase of $8. CG1 experienced an increase of $14 in LIHEAP grants. CG2 customers experienced no significant change in total LIHEAP grants. The average net change was not statistically significant.

[69] Customers must have income below 135 percent of the Federal Poverty Level to qualify for LIHEAP, so some of the CAP participants with income between 135 and 150 percent of the Federal Poverty Level would not qualify for LIHEAP.
[70] The comparison groups were far less likely to receive LIHEAP cash grants. Two percent of 2004 CAP enrollees (CG1) and one percent of CAP nonparticipants (CG2) received a LIHEAP cash grant during the analysis period.

- *Percent Received MEAF Payments*: This is the percent of customers in the group that received MEAF grants in the pre or post enrollment year.[71] One and one-third percent of customers in the treatment group received MEAF grants in the year prior to enrollment compared to 0.6 percent in the year after enrollment, a decrease of 0.7 percentage points. CG1 customers experienced an increase of 1.2 percentage points in the percent that received MEAF grants. CG2 customers experienced a decrease of two percentage points in the percent that received MEAF grants. The average net impact of CAP on the percent of customers who received MEAF grants was a decrease of 0.3 percentage points.

- *Mean MEAF Payments*: This is the mean amount of MEAF grants received for those customers who received MEAF grants. Customers in the treatment group received an average MEAF grant of $229 in the year prior to enrollment and an average MEAF grant of $207 in the year after enrollment. There was no significant change in MEAF grants or miscellaneous payments between the pre and post enrollment years for any of the study groups. However, the average net change in the mean amount of MEAF grants was a decrease of $12.

- *Total MEAF or Miscellaneous Payments*: This is the sum of MEAF grants received by all customers in the study group, including those who did not receive a grant. This is the sum of MEAF grants and miscellaneous payments received. Customers in the treatment group received a total of $3 in MEAF grants in the year prior to enrollment and an average of $1 in the year following enrollment, for a decrease of $2. CG1 customers experienced a $2 increase in total MEAF grants and CG2 customers experienced a $4 decrease in total MEAF grants. The average net change in total amount of MEAF grants was a decrease of $1.

Table V-18
Energy Assistance Impacts
Combination and Electric Only Customers
2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Non-participants Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Number of Customers	7,274			1,795		1,259	
Percent Received LIHEAP Cash	17.2%	18.7%	1.5%**	4.3%**	-2.8%**	0.2%	1.4%

71 Matching Energy Assistance Fund (MEAF) grants, other small grants, and other uncategorized transfers are recorded in PECO's database as "miscellaneous" payments. For this analysis, MEAF payments were identified as "miscellaneous" payments valued between $1 and $500, the maximum allowed MEAF grant. "Miscellaneous" transactions of amounts less than $1 or greater than $500 were classified as cash payments. Consequently, an inestimable number of transactions identified as MEAF payments in the analysis period might be non-MEAF payments.

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Non-participants Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Mean LIHEAP Cash Grant	$227	$213	-$14*	-$35	$21**	$73	-$87**
Percent Received LIHEAP Crisis	1.0%	3.5%	2.5%**	1.2%**	1.3%**	-0.1%	2.6%**
Mean LIHEAP Crisis Grant	$394	$297	-$97**	$82**	-$179**	-$50	-$47*
Total LIHEAP Grants Received	$43	$50	$8**	$14**	-$7	$1	$7
Percent Received MEAF	1.3%	0.6%	-0.7%**	1.2%**	-1.9%**	-2.0%**	1.3%**
Mean MEAF Payments	$229	$207	-$22	-$10	-$12	$2	-$24**
Total MEAF Payments	$3	$1	-$2**	$2*	-$4**	-$4*	$2*

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.

The table above showed that less than 20 percent of CAP participants received LIHEAP cash assistance. However, many of these customers are not heating customers and would not be expected to receive LIHEAP. Table V-19 examines the percent of combination customers who receive LIHEAP assistance. This table shows that 26 percent received LIHEAP cash assistance in the year prior to enrollment and 38 percent in the year following enrollment. This is a large increase, however, PECO should work to further increase the percentage of combination customers who receive LIHEAP assistance.

Table V-19
Energy Assistance Impacts
Combination Customers

	2003 CAP Enrollees Treatment Group (TG)		
	Pre	Post	Change
Number of Customers	2,182		
Percent Received LIHEAP Cash	25.9%	38.2%	12.3%

Usage

This section examines whether the CAP had an impact on the electric or gas usage of program participants. Due to the high attrition rates for the payment analysis, the usage impact analysis began with the full sample of CAP participants and attempted to include all accounts with adequate usage data in the analysis. Accounts were removed from the analysis due to missing usage data, all estimated bills, a lack of data in the pre or post enrollment year, zero usage, a failure of the model to fit, outliers, and a greater than 65 percent change in usage. As a result, Table V-20 shows that the following percentages of customers could be included in the analysis:

- *Treatment Group accounts with gas service:* 52 percent were included in the analysis.
- *2004 Enrollee Comparison Group with gas service:* 26 percent were included in the analysis.
- *Treatment Group accounts with electric heat:* 34 percent were included in the analysis.
- *2004 Enrollee Comparison Group with electric heat:* 19 percent were included in the analysis.
- *Treatment Group accounts with non-electric heat*: 53 percent were included in the analysis.
- *2004 Enrollee Comparison Group accounts with non-electric heat*: 41 percent were included in the analysis.

Table V-20
Usage Analysis Data Attrition

	Gas Usage		Electric Usage – Electric Heaters		Electric Usage – Non-Electric Heaters	
	Treatment Group	2004 Enrollee Comparison Group	Treatment Group	2004 Enrollee Comparison Group	Treatment Group	2004 Enrollee Comparison Group
Accounts with Service	3,809	3,421	1,687	946	19,250	14,405
Usage Data Available	3,757	2,783	1,663	935	18,951	14,224
Has Non-Estimated Bills	3,725	2,696	1,659	921	18,898	13,992
Data in Pre and Post Year	2,735	1,251	1,149	410	13,913	7,297
Non-Zero Pre and Post Usage	2,718	1,244	1,148	410	13,904	7,297
Has Normalized Pre and Post Results	2,338	1,084	853	300	13,436	7,076
Normalized Model is a Good Fit	2,005	918	597	204	10,686	6,129
Outliers Removed	2,003	916	587	183	10,664	6,101
Less than 65% Change in Usage	1,982	891	576	180	10,222	5,859
Percent Included in Analysis	52%	26%	34%	19%	53%	41%

PRISM software was used to estimate the weather normalized change in gas usage and electric heating usage. A degree day approach was used to weather normalize the change in electric non-heating usage. Table V-21 shows the results of this analysis.

- *Gas Usage:* The table shows that there was a very small decrease in weather normalized gas usage for both the treatment and comparison groups. The change was approximately three percent of pre usage for both groups. Therefore, the net change in gas usage was not statistically significant.

- *Electric Heat Usage:* The change in weather normalized electric usage for the CAP participants with electric heat was positive, but was not statistically significant. There was a statistically insignificant decrease in electric usage for the comparison group. The net change was an increase of 555 kWh, an increase of approximately four percent of pre enrollment usage.

- *Electric Non-Heat Usage*: The 2003 CAP participants with non-electric heat increased their electric usage by 51 kWh as compared to the pre enrollment usage, a gross increase of less than one percent. The comparison group did not have a statistically significant change in the usage, and the net change in usage was not statistically significant.

Table V-21
Usage Impacts
CAP Participants

	2003 CAP Participants				2004 CAP Comparison Group		
	Obs	Pre	Post	Change	Obs	Change	Net Change
Weather Normalized Gas Usage (ccf)	1982	933	909	-24**	891	-31**	7
Weather Normalized Electric Usage – Electric Heaters (kWh)	576	12,840	12,949	109	180	-446	555*
Weather Normalized Electric Usage – Non-Electric Heaters (kWh)	10,222	7,258	7,309	51**	5,859	-3	53

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.

Collections Impact

This section examines the impact of the CAP on collections actions. The program is expected to reduce the number of collections actions needed if customers can better afford their bill and are less likely to miss payments. PECO’s collections actions were divided into eight different categories: shutoffs (i.e., service terminations), missed payment reminder letters, missed payments proactive calls, "Hard" collection efforts, ten-day notices, 72-hour notices, first call visits, and second call visits.

- *Percent Shutoff:* Table V-22 shows the change in the percentage of CAP customers who had their service terminated in the year preceding and the year following CAP enrollment. In the treatment group, 4.1 percent of customers received a shutoff in the year preceding enrollment and 1.5 percent in the year following enrollment, a gross decrease of 2.5 percentage points. The average net impact of the CAP on service terminations was a decrease of 2.1 percentage points.

- *Mean Number of Shutoffs:* CAP customers received an average of 0.05 service terminations in the year prior to enrollment and 0.02 service terminations in the year following enrollment, for a gross decrease of 0.03 service terminations. The average net change was a decrease of 0.03 service terminations.

- *Percent That Received Any Collection Action*: Table V-21 also displays the percentage of CAP customers who received any collection action, including shutoffs, in the year preceding and the year following CAP enrollment. In the treatment group, 71 percent of customers received a collection action in the year preceding enrollment and 31 percent of customers received a collection action in the year following enrollment, a gross decrease of 40 percentage points. The average net impact of the CAP on receiving any collection action was a decrease of 42 percentage points.

- *Mean Number of Collection Actions:* Customers had 7.7 collection actions in the year prior to enrollment, and 2.3 collection actions in the year following enrollment, a gross decrease of 5.0 actions. The average net change was a decrease of 5.4 collection actions.

- *Mean Number of Reminder Letters:* Customers received 0.5 reminder letters in the year prior to enrollment, and no reminder letters in the year following enrollment, a gross decrease of 0.5 reminder letters. The average net change was a decrease 0.4 reminder letters.

- *Mean Number of Proactive Calls:* Customers received 1.6 proactive calls in the year prior to enrollment, and no proactive calls in the year following enrollment, a gross decrease of 1.5 proactive calls. The average net change was a decrease of 1.6 proactive calls.

- *Mean Number of Portfolio Collection Efforts:* Customers received 0.9 portfolio collection efforts in the year prior to enrollment, and 0.2 portfolio collection efforts in the year following enrollment, a gross decrease of 0.8 portfolio collection efforts. The average net change was a decrease of 0.8 portfolio collection efforts.

- *Mean Number of Ten-Day Notices:* Customers received 1.6 ten-day notices in the year prior to enrollment, and 0.8 ten-day notices in the year following enrollment, a gross decrease of 0.8 ten-day notices. The average net change was a decrease of 0.9 ten-day notices.

- *Mean Number of 72-hour Notices:* Customers received 1.4 72-hour notices in the year prior to enrollment, and 0.7 72-hour notices in the year following enrollment, a gross decrease of 0.8 72-hour notices. The average net change was a decrease of 0.9 72-hour notices.

- *Mean Number of First Call Visits Scheduled:* Customers had 1.0 first call visits scheduled in the year prior to enrollment, and 0.4 first call visits scheduled in the year following enrollment, a gross decrease of 0.6 first call visits scheduled. The average net change was a decrease of 0.7 first call visits scheduled.

- *Mean Number of Second Call Visits Scheduled:* Customers had 0.2 second call visits scheduled in the year prior to enrollment, and 0.1 second call visits scheduled in the year following enrollment, a gross decrease of 0.2 second call visits scheduled. The average net change was a decrease of 0.2 second call visits scheduled.

In summary, CAP participation was associated with a significant reduction in all collection actions, including service terminations, experienced by low-income customers in this study.

Table V-22
Collection Actions
Combination and Electric Only Customers
2003 CAP Enrollees

	2003 CAP Enrollees Treatment Group (TG)			2004 CAP Enrollees Comparison Group (CG1)		Non-participants Comparison Group (CG2)	
	Pre	Post	Change	Change	Net Change	Change	Net Change
Number of Customers	7,274			1,795		1,259	
Percent Shutoff	4.1%	1.5%	-2.5%**	1.3%	-3.9%**	-2.2%**	-0.3%
Mean Number of Shutoffs	0.05	0.02	-0.03**	0.02	-0.05**	-0.02**	0.00
Percent That Received Any Collection Action	71%	31%	-40%**	7%**	-47%**	-4%**	-36%**
Mean Number of Collection Actions	7.3	2.3	-5.0**	1.2**	-6.3**	-0.6**	-4.4**
Mean Number of Reminder Letters	0.5	0.0	-0.5**	-0.2**	-0.3**	0.0	-0.4**
Mean Number of Proactive Calls	1.6	0.0	-1.5**	0.1*	-1.7**	-0.2*	-1.4**
Mean Number of Portfolio "Hard" Collection Efforts	0.9	0.2	-0.7**	0.2**	-0.9**	0.0	-0.7**
Mean Number of Ten Day Notices	1.6	0.8	-0.8**	0.4**	-1.2**	-0.2**	-0.6**
Mean Number of 72-hour Notices	1.4	0.7	-0.8**	0.4**	-1.2**	-0.1*	-0.6**
Mean Number of First Call Visits Scheduled	1.0	0.4	-0.6**	0.3**	-0.8**	-0.1	-0.5**
Mean Number of Second Call Visits Scheduled	0.2	0.1	-0.2**	0.1**	-0.2**	0.0	-0.1**

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.

Cost-Benefit Analysis

Table V-23 displays the net changes in CAP shortfall, shutoffs, and collections actions experienced by customers in the 2003 CAP enrollee treatment group after enrolling in the program. In 2003, the annual CAP shortfall was $34,599,628 and the average number of CAP customers was 92,861. The average CAP shortfall during this period was $373 per CAP customer. This table shows that collections costs decreased by approximately $8 per customer and shortfall increased by $373, resulting in an average net cost to PECO of $365 per CAP customer enrolled.

Table V-23
CAP Costs Benefit Analysis
2003 CAP Enrollees

Costs Category	Costs Per Action	2003 CAP Enrollees Treatment (TG) compared to 2004 CAP Enrollees Comparison Group (CG1)		2003 CAP Enrollees Treatment (TG) compared to Nonparticipants Comparison Group (CG2)	
		Net Change	Cost Change	Net Change	Cost Change
Shortfall	N/A		$372.60		$372.60
Shutoffs	$15.65	-0.05	-$0.78	0.00	$0.00
Reminder Letters	$0.60	-0.3	-$0.18	-0.4	-$0.24
Proactive Calls	$0.95	-1.7	-$1.62	-1.4	-$1.33
Portfolio "Hard" Collection Efforts (Phone)	$0.95	-0.9	-$0.86	-0.7	-$0.67
Ten Day Notices	$0.60	-1.2	-$0.72	-0.6	-$0.36
72-hour Notices[72] (Phone)	$0.72	-1.2	-$0.86	-0.6	-$0.43
First Call Visits	$6.00	-0.8	-$4.80	-0.5	-$3.00
Collection Costs Total			-$9.82		-$6.03
All Costs Total			$362.78		$366.57

Note: Costs per action as of 2/15/05.

[72] If the customer is unreachable by phone after three attempts on two consecutive days at different times, then a field agent is sent to hand-deliver the 72-hour notice. The cost for a field delivered notice is $5.50 each.

F. *Summary of CAP Data Analysis Findings*

This section summarizes findings from the data analysis of CAP participants.

- *Household Demographics*: The 2003 CAP enrollee treatment group is very similar on all household demographic characteristics to the 2004 CAP enrollee comparison group (CG1). The non-participant comparison group (CG2) was somewhat more likely to have larger households with more children and less elderly members, higher incomes, and incomes at or above 150 percent of the FPL.

- *Account Characteristics*: The 2003 CAP enrollee treatment group is very similar to the 2004 CAP enrollee comparison group with regard to service type and arrears at the start of the post-treatment analysis period. However, customers in the 2004 CAP enrollee comparison group were more likely than customers in the 2003 CAP enrollee treatment group to receive CAP Rate B or C, because most customers in 2004 CAP enrollee comparison group were enrolled into the CAP after the February 2004 implementation of the new CAP Rate tiers. In addition, customers in the non-participant comparison group were more likely than customers in the other study groups to receive only electric service from PECO.

- *Retention Rates*: Ninety-nine percent of the original 2003 treatment group received a discount in each of the first three months after enrollment, 98 percent remained in the CAP for the first six months, 96 percent remained on for the first twelve months, and 88 percent remained on for the first eighteen months. The final treatment group had a slightly greater full year retention rate. Ninety-one percent of these customers remained in the CAP for eighteen months after enrollment.

- *Arrearage Forgiveness:* PECO provides arrearage forgiveness to CAP customers who pay their bills on time and in full, and who are current with their CAP payment obligations for six consecutive months. Sixty-eight percent of the final treatment group received arrearage forgiveness in the twelve months after CAP enrollment. Among the final treatment group, 13 percent received between $1 and $100, 33 percent received between $101 and $500, and 22 percent received greater than $500 in arrearage forgiveness.

  Households with no elderly members, households with children, large households, and higher income households received greater forgiveness. Customers with household income at or below 50 percent of the FPL received greater arrearage forgiveness than those with household incomes above 50 percent of the FPL. Combination customers received greater arrearage forgiveness than electric only customers. However, combination customers were no more likely to receive arrearage forgiveness than electric only customers. Customers with greater arrears at the time of enrollment received more arrearage forgiveness. Customers in CAP Rate D at the time of data download were more likely to receive forgiveness and received more forgiveness than customers in CAP Rate E.

- *Affordability Impacts:* The CAP had a positive impact on affordability for program participants. The 2003 CAP enrollees had a gross reduction in bills of $312. Taking the average of the non-participant and 2004 enrollee comparison groups, the net impact of the CAP on the asked to pay amount was a decrease of $354. The 2003 CAP enrollees experienced a gross decrease in energy burden, from 12.0 percent in the year prior to participating in the program, to 8.6 percent in the first year of program, for a gross reduction of 3.4 percentage points and an average net decrease of 3.4 percentage points.

  CAP customers are eligible for both electric and gas CAP Rate discounts. Positive net impacts were greater for CAP customers who received both electric and gas service. Combination customers who were not in the CAP experienced a rise in the gas portion of their bill. CAP combination customers did not experience the same rise due to the CAP Rate discount on the gas variable distribution charge on their monthly gas bill. The average net impact of the CAP on energy burden for CAP combination customers was a decrease of 4.7 percentage points. The average net impact of the CAP on energy burden for CAP electric only customers was 3.5 percentage points.

- *Payment Impacts:* CAP customers experienced large reductions in their asked to pay amounts and their total payments. However, due to their lower bills they had increased bill coverage rates. Due to their lower bills and arrearage forgiveness, they reduced their balances.

  The asked to pay amount decreased by $312 for the CAP participants. The average net impact of the CAP on the asked to pay amount was a decrease of $354. CAP participants had an average total coverage rate of 85 percent in the year preceding enrollment and an average total coverage rate of 89 percent in the year following CAP enrollment, an increase of four percentage points. The average net impact of the CAP on total coverage was 4.5 percentage points.

  CAP participants had an average shortfall of $215 in the year preceding enrollment and an average shortfall of $129 on the discounted bill in the year following enrollment. The gross change in shortfall was a decrease of $86. The net change in shortfall was a decline of $113.

  By paying their pay their CAP bills and staying current with their CAP payment obligations for six consecutive months, CAP Customers received $392 in arrearage forgiveness in the year following enrollment for a gross and net increase of $392.

  Balances decreased from $573 at the end of the year preceding enrollment to $326 at the end of the year following enrollment, for a gross decrease of $248. Balances for CG1 customers increased by $239. Balances for CG2 customers were unchanged. The average net impact of the CAP on balances was a decrease of $374.

- *Assistance Impacts:* Approximately 18 percent of customers received a LIHEAP cash grant in the pre and post treatment periods. Only a small percent of customers received

LIHEAP crisis and MEAF grants. The program did not have an impact on the amount of energy assistance received.

- *Usage impacts:* The net change in gas and electric non-heating usage was not statistically significant for the 2003 CAP participants as compared to the 2004 enrollee comparison group. There was a statistically significant net change of 555 kWh for the 2003 electric heating participants as compared to the comparison group, an increase of approximately four percent of pre enrollment usage.

- *Collections actions:* CAP participation was associated with a significant reduction in all collection actions, including service terminations. Seventy-one percent of CAP participants received a collection action in the year preceding enrollment, compared to 31 percent in the year following enrollment, for a gross decrease of 40 percentage points. The average net impact of the CAP on any collection action was a decrease of 42 percentage points. Four percent of CAP participants had their service terminated in the year preceding enrollment, compared to 1.5 percent in the year following enrollment, for a gross decrease of 2.5 percentage points. The average net impact of the CAP on service terminations was a decrease of 2.1 percentage points.

- *Cost-Benefit Analysis:* Collections costs decreased by approximately $8 per customer, and shortfall increased by $373, resulting in an average net cost to PECO of $365 per CAP customer enrolled.

VI. MEAF Program Operations and Impacts Analysis

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, and account balance data for 2003 and 2004 MEAF recipients. For the program operations and program impact analysis, APPRISE used the data to analyze MEAF recipient customer characteristics and the impact of MEAF on bill payment and account balances. The remainder of this section describes the goals of the data analysis, the methodology that was used, and the results.

A. Goals

The main purpose of the program operations data analysis is to develop quantifiable measures of MEAF recipient household demographic and account status information. We examine the demographic and account characteristics of the MEAF recipients and the comparison group used in the analyses. Available PECO data allows us to examine whether there is an elderly individual in the household, whether there is a child in the household, annual household income, poverty level, utility service type (i.e., combination, electric only or gas only), and arrears.

The main purpose of the program impact data analysis is to assess whether customers who received MEAF grants are able to make their required PECO payments and reduce their account balances. We compare payment behavior and customer balances for MEAF recipients three months, six months, nine months, and twelve months following receipt of a MEAF grant. A comparison group is used to control for changes that are unrelated to MEAF participation.

B. Methodology

This section describes the how evaluation data were obtained and the selection of participants for the program operations and program impact analysis.

Evaluation Data

PECO provided APPRISE with household demographic data, Universal Services program participation data, billing and payment data, and account balance data for 2003 and 2004 MEAF recipients. These data were provided in electronic format. These data were provided in stages between February 2005 and February 2006.

Selected Participants: Study Groups

Customers who received MEAF in 2003 were included as potential members of the study group. These customers were chosen for the analysis, as one full year of post-program data is required for an analysis of program impacts.

Comparison Group

Later MEAF recipients were used as a comparison group in this analysis. Customers who received a MEAF grant in 2004 serve as a good comparison because they are lower income households who were eligible for MEAF and chose to apply for MEAF. We use data for these customers for the year preceding receipt of a MEAF grant, to compare their payment behavior in the year prior to grant receipt to the treatment group's payment behavior after grant receipt.

For the MEAF program impact analysis, we examine payment and account balance statistics at three months, six months, nine months, and twelve months after grant receipt. We compare the payment statistics for 2003 MEAF recipients in the year following grant receipts to the payment statistics for 2004 MEAF recipients in the year preceding grant receipt.

Table VI-1 describes the treatment and comparison groups that are included in the analyses in this section.

Table VI-1
Treatment and Comparison Groups

	2003 MEAF Recipient Treatment Group (MTG)	2004 MEAF Recipient Comparison Group (MCG)
Group	2003 Recipients	2004 Recipients
MEAF Recipient Requirement	MEAF grant received in 2003	Last MEAF grant in 2004 No MEAF grant in the year prior to 2004 grant
Payment Analysis Period	1 year after 2003 MEAF grant	1 year prior to 2004 MEAF grant

C. *Data Attrition*

Customers were divided into the treatment group (MTG) and comparison groups (MCG) as described above. However, some of these customers were not included in the analyses in this section because they did not have adequate data available. We refer to all eligible customers (those who meet the MEAF recipient requirements as described in Table VI-1 above) in these groups as the original analysis groups and to those customers who have enough data to be included in the analysis as the final analysis group.

Table VI-2 displays the number of customers in each group, the reasons why customers were not included in the analyses that follow, and the number of customers in each group that are included in the final analysis. Two factors must be weighed when selecting the sample for the final analysis. First, when conducting a program evaluation, the goal is always to include as much of the original analysis group in the research as possible, so that the estimated results are not biased due to elimination of distinctive subgroups. However, to provide good estimates of program impacts, it is also necessary to restrict the sample to those customers who have a minimum level and quality of data.

Customers were excluded from the final analysis group for the following reasons:

- *Full Year of Post Billing Data Not Available:* The analyses that are conducted require that customers have a full year of billing data for the year following receipt of a MEAF grant. Customers were excluded from the analyses if the post year of billing data that could be constructed contained less than 330 days or more than 390 days.

- *Full Year of Post Payment Data Not Available:* The analyses that are conducted require that customers have a full year of payment data for the year following receipt of a MEAF grant. Customers were excluded from the analyses if the post year of payment data that could be constructed contained less than 330 days or more than 390 days.

Table VI-2 shows that a significant percentage of the original analysis groups were retained. Because the MEAF impact analysis does not exclude accounts lacking billing and payment for the year prior to receiving MEAF, the impact of customers opening new accounts is not a factor in data attrition as it was for the CAP data analysis. Below we describe the percentage of original customers that remain in the analysis.

- *2003 MEAF Recipient Treatment Group (MTG):* 71 percent of the original analysis group was included in the final analysis sample. APPRISE never obtained 2005 transaction data for 2003 MEAF recipients. Consequently, customers who received a MEAF grant in December 2004 may not have had enough payment data in the year after grant receipt to be included in the final analysis group.

- *2004 MEAF Recipient Comparison Group (MCG)*: 81 percent of the original analysis group was included in the final sample.

Table VI-2
Data Attrition

	2003 MEAF Recipient Treatment Group (MTG)	2004 MEAF Recipient Comparison Group (MCG)
All Eligible	1,038	497
Full Year of Post Billing Data	993	404
Full Year of Post Payment Data	747	404
Indistinguishable Duplicate Payments	734	401
% of Total	71%	81%

D. 2003 MEAF Program Operations Analysis

The following sections describe the results from the program operations analysis for 2003 MEAF grant recipients and the 2004 MEAF grant recipient comparison group.

Household Demographic Characteristics

This section examines the household demographic characteristics for customers in the 2003 MEAF Recipient Treatment Group (MTG) and the 2004 MEAF Recipient Comparison Group (MCG). We compare the original and final analysis groups to determine if there is a bias from eliminating customers from the analysis. We compare the treatment and comparison groups to determine if the comparison group is similar enough to the treatment group to serve as a good comparison.

Table VI-3 shows that the customers had the following characteristics:

- *Elderly*: Eight percent of customers in the original and final treatment group had at least one person age 65 or older in the household. Eleven percent of customers in the original comparison group had at least one person age 65 or older in the household, and 13 percent of the final comparison group had one person age 65 or older in the household.

- *Children*: Seventy-two percent of customers in the original and final treatment group had at least one child 18 or younger in the household. Sixty-eight percent of customers in the original comparison group and 65 percent of customers in the final comparison group had one child in the household.

- *Young child*: Thirty-two percent of customers in the original treatment group and 30 percent of households in the final treatment group had at least one child age five or younger in the household. Twenty-five percent of customers in the original comparison group and 21 percent customers in the final comparison group had one child in the household.

- *Household Size*: Twenty percent of the final treatment group and 25 percent of the final comparison group resided in single-person households.

- *Annual Income*: Fifty percent of the final treatment group and 55 percent of the final comparison group had annual household income of $10,000 or less.

- *Poverty Level*: Thirty-four percent of customers in the final treatment group and 32 percent of customers in the final comparison group had income less than or equal to 50 percent of the FPL.

Customers in the final treatment group were somewhat more likely than customers in the final comparison group to have children, and somewhat less likely to have an elderly household member, live in a single-person household, or have annual household income at or below $10,000. The final treatment and comparison groups were similar with respect to the presence of elderly household members and household poverty level.

Table VI-3
Household Demographic Characteristics

	2003 MEAF Recipient Treatment Group (MTG)		2004 MEAF Recipient Comparison Group (MCG)	
	Original	Final	Original	Final
Observations	1,038	734	497	401
Observations with: Demographics Data Available	985	693	493	398
Age 65 or Older	8%	8%	11%	13%
Age 18 or Under	72%	72%	68%	65%
Age 5 or Under	32%	30%	25%	21%
Household Size				
1	21%	20%	23%	25%
2	18%	19%	19%	20%
3	23%	23%	21%	22%
4	19%	20%	16%	15%
5	10%	10%	13%	11%
6 or more	8%	8%	8%	7%
Observations with: Income Data Available	987	695	497	401
Annual Income				
<=$10,000	52%	50%	54%	55%
$10,001-$20,000	33%	34%	35%	34%
$20,001-$30,000	12%	13%	9%	9%
>$30,000	3%	4%	2%	2%
Poverty Level				
<=50%	36%	34%	35%	32%
51%-100%	39%	39%	40%	40%
101%-150%	20%	23%	19%	21%
151%-200%	3%	3%	5%	5%
>200%	1%	1%	1%	1%

Account Characteristics

This section examines the account characteristics for customers in the 2003 MEAF Recipient Treatment Group (MTG) and the 2004 MEAF Recipient Comparison Group (MCG). Table V-4 shows that the customers had the following characteristics:

- *Service Type:* 76 percent of customers in the MTG receive only electric services, compared to 80 percent of customers in the MCG. Twenty-four percent of customers in the MTG and 20 percent of 2004 recipients were combination customers.

- *Arrears after Receiving MEAF or Start of Post-treatment Analysis Period:* Customers in the final MTG were likely to have less total arrears than customers in the final MCG. Twenty-one percent of customers in the final MTG had arrears less than or equal to $100, compared to 11 percent of customer in the final MCG. Twenty-eight percent of customers in the final MTG had arrears equal to or greater than $500, compared to 40 percent of customers in the final MCG.

- *CAP Rate Tier:* Approximately 15 percent of customers in the final MTG and MCG were not participating in the CAP at the time PECO downloaded the CAP program information data used for this report. Twenty-three percent of the final MTG were enrolled in CAP Rate E, 44 percent in CAP Rate D, 14 percent in CAP Rate C, and five percent in CAP Rate B. Fifteen percent of the final MCG were enrolled in CAP Rate E, 50 percent in CAP Rate D, 15 percent in CAP Rate C, and four percent in CAP Rate B.

- *CAP Bill History:* Seventy-one percent of customers in the final MTG received a CAP bill in the year prior to MEAF receipt compared to 80 percent of the customers in the final MCG. Approximately 89 percent of customers in the MTG and MCG received a CAP bill at some point during the analysis period.

In summary, customers in the MTG and the MCG were very similar with respect to service type. Customers in the final MTG were likely to have less arrears than customers in the final MCG. Most customers in the MTG and the MCG were participating in the CAP.

Table VI-4
Account Characteristics

	2003 MEAF Recipient Treatment Group (MTG)		2004 MEAF Recipient Comparison Group (MCG)	
	Original	**Final**	**Original**	**Final**
Observations	1,038	734	497	401
Service Type				
Combination	23%	24%	20%	20%
Electric Only	76%	76%	80%	80%

	2003 MEAF Recipient Treatment Group (MTG)		2004 MEAF Recipient Comparison Group (MCG)	
	Original	Final	Original	Final
Arrears after Receiving MEAF or Start of Post Period				
<= $0	4%	3%	10%	1%
$1 - $ 100	18%	18%	10%	10%
$101 - $ 250	28%	28%	18%	21%
$251 - $ 500	22%	24%	26%	28%
$501-$1,000	14%	15%	21%	23%
>$1,000	14%	13%	15%	17%
CAP Rate Tier				
No CAP	14%	14%	17%	15%
A	0%	0%	1%	1%
B	5%	5%	4%	4%
C	13%	14%	17%	15%
D	46%	44%	47%	50%
E	22%	23%	14%	15%
CAP Bill in Year Prior to Receiving MEAF	71%	71%	76%	80%
CAP Bill in 1 or 2 Years Prior to Receiving MEAF	72%	72%	77%	82%
CAP Bill Ever in Account History	89%	89%	87%	89%

E. 2003 MEAF Program Impacts Analysis

The following sections describe the results from the program impacts analysis for 2003 MEAF recipients.

<u>Payment</u>

This section examines the customers' payments and bill coverage three, six, nine, and twelve months following MEAF grant receipt.

- *Asked to Pay Amount:* The asked to pay amounts are the dollar value of bills that the customer was asked to pay. Customers in the 2003 MEAF recipient treatment group (MTG) had been asked to pay $1,114 in the year after grant receipt and customers in the 2004 MEAF recipient comparison group (MCG) had been asked to pay $1,138 in the year preceding grant receipt. This difference was not statistically significant.

- *Number of Cash Payments:* Cash payments are defined as payments that are made directly by the customers (as opposed to assistance payments). The number of cash payments is an indicator of payment regularity. Many payment-troubled customers miss bills and then make up payments in lump sums, or with energy assistance payments when they are in danger of termination. This practice results in less than twelve cash payments made over the course of a year.

  Table VI-5 shows that customers in the MTG were more likely to make cash payments than customers in the MCG. Customers in the MTG made an average of 7.4 cash payments during the analysis year, compared to customers in the MCG, who made an average of 5.6 cash payments. The net difference was 1.8 payments.

- *Total Cash Payments:* This is the dollar value of the cash payments made over the course of the year. In the year following MEAF grant receipt, customers in the MTG, on average, made more cash payments than customers in the MCG. Customers in the MTG, on average, made a total of $916 in cash payments, compared to customers in the MCG, who made a total of $634 in cash payments. The difference in payments was $282.

- *LIHEAP Payments:* LIHEAP assistance payments that customers can receive include LIHEAP cash and LIHEAP crisis. In the year following MEAF grant receipt, customers in the MTG received an average of $93 in total LIHEAP payments compared to $113 for customers in the MCG. This difference was not significant.

- *Total Payments:* Total payments are the sum of cash and assistance payments. Average total payments in the year following MEAF grant receipt for customers in the MTG was $1,009, compared to $747 for customers in the MCG. The difference was $262.

- *Cash Coverage Rate:* The cash coverage rate is defined as the total cash payments for the year divided by the asked to pay amount. It is the average percentage of the asked to pay amount that was covered with cash payments. Customers in the MTG had an average cash coverage rate of 83 percent in the year following MEAF grant receipt, compared to customers in the MCG who had an average cash coverage rate of 56 percent. The difference was 28 percentage points.

- *Total Coverage Rate:* The total coverage rate is defined as total payments (cash payments plus assistance payments) divided by the asked to pay amount. Customers in the MTG had a total cash coverage rate of 92 percent in the year following MEAF grant receipt, compared to customers in the MCG who had a total cash coverage rate of 66 percent. The difference was 26 percentage points.

- *Shortfall:* The shortfall is the asked to pay amount for the year minus the total payments for the year. A positive shortfall indicates that on average, customers did not pay their entire asked to pay amount. Customers in the MTG had an average shortfall of $105 in the year following MEAF grant receipt, compared to customers in the MCG, who had an average shortfall of $391. The difference in shortfall was $286.

- *Arrearage Forgiveness:* Some MEAF customers are also CAP customers. By paying their CAP bills and staying current with their CAP payment obligations for six consecutive months, CAP customers can receive arrearage forgiveness. Customers in the MTG received an average of $140 in arrearage forgiveness in the year following MEAF grant receipt, compared to customers in the MCG who received an average of $102 in arrearage forgiveness. This difference was not significant.

- *Balance:* We examine customers' balances after grant receipt and their ending balances after three, six, nine, and twelve months following receipt of a MEAF grant. There was no significant difference between the average balance for the MTG before MEAF grant receipt and the MCG one year prior to grant receipt. The average MEAF grant award for customers in the MTG was $210. After customers in the MTG received the MEAF grant, their average balance decreased from $745 to $535. This statistically significant difference in balance increased over the 12-month period, as the MTG kept their balance at approximately the same level, and the MCG significantly increased their balance. The average balance for customers in the MTG was $409 at 12 months after grant receipt, compared to a balance of $951. While the MTG decreased their balance by $6 as compared to their balance right after grant receipt, the MCG increased their balance by $303 as compared to one year earlier.

In summary, customers in the MTG who received the MEAF grant made higher total cash payments in the year following grant receipt, resulting in increased bill coverage, and decreased account balances.

Table VI-5
Payment Impacts After Receipt of MEAF Grant

	3 Month			6 Month			9 Month			12 Month		
	MTG	MCG	Dif.	MTG	MCG	Dif.	MTG	MCG	Dif.	MTG	MCG	Dif.
Number of Customers	734	401		734	401		734	401		734	401	
Asked to Pay Amount	$217	$264	-$47**	$489	$502	-$12	$800	$769	$31	$1114	$1138	-$24
Number Cash Payments	1.65	1.59	.07	3.38	3.18	.20	5.29	4.42	.87**	7.39	5.58	1.8**
Total Cash Payments	$188	$167	$21	$402	$347	$55*	$643	$492	$151**	$916	$634	$282**
LIHEAP Payments	$21	$48	-$27**	$57	$64	-$7	$75	$77	-$1	$93	$113	-$19
Total Payments	$209	$215	-$6	$459	$412	$47*	$718	$568	$149**	$1009	$747	$262**
Cash Coverage Rate	98%	75%	23%**	86%	75%	11%**	82%	65%	17%**	83%	56%	28%**
Total Coverage Rate	111%	97%	14%*	100%	91%	10%**	93%	76%	17%**	92%	66%	26%**
Shortfall	$8	$49	-$41*	$30	$90	-$60**	$82	$200	-$118**	$105	$391	-$286**

	3 Month			6 Month			9 Month			12 Month		
	MTG	MCG	Dif.	MTG	MCG	Dif.	MTG	MCG	Dif.	MTG	MCG	Dif.
Arrearage Forgiveness	$19	$65	-$46**	$89	$72	$16	$116	$74	$42	$140	$102	$39
Balance before Grant Receipt	$745	$786	-$41	$745	$786	-$41	$745	$786	-$41	$745	$786	-$41
MEAF Grant Amount	$210	$0	$210**	$210	$0	$210**	$210	$0	$210**	$210	$0	$210**
Balance after Grant Receipt	$535	$786	-$251**	$535	$786	-$251**	$535	$786	-$251**	$535	$786	-$251**
Period Ending Balance	$415	$648	-$232**	$376	$679	-$303**	$399	$791	-$392**	$409	$951	-$542**

**Denotes significance at the 99 percent level. *Denotes significance at the 95 percent level.

Balance

This section examines the distribution of customers' account balances at three, six, nine, and twelve months following MEAF grant receipt.

- *Balance Prior to MEAF Grant:* Table VI-6 shows that prior to receipt of the MEAF grant, the treatment and comparison groups had similar account balance distributions. However, comparison group customers in the top quarter of the distribution had higher balances than treatment group customers in the top quarter of the distribution. Whereas 25 percent of treatment group customers has balances greater than $765, 25 percent of comparison group customers had balances greater than $843.

- *Bottom Quarter of the Distribution:* Twenty-five percent of the treatment group had balances below $118 after MEAF receipt. These customers were able to eliminate their balances after three months, and kept their balance current for the full year after grant receipt. Twenty-five percent of the comparison group had balances below $228 one year prior to MEAF grant receipt. By one year after grant receipt, the 25th percentile was $374 for this group.

- *Top Quarter of the Distribution:* Twenty-five percent of the treatment group had balances above $524 after MEAF receipt. One year later, 25 percent of the treatment group had balances above $452. In comparison, 25 percent of comparison group customers had balances above $843 one year prior to MEAF grant receipt. One year later, 25 percent of the comparison group had balances above $952.

Table VI-6
Account Balance Distribution

	Pre MEAF		Post MEAF		3 Month		6 Month		9 Month		12 Month	
	MTG	MCG	MTG	MCG	MTG	MCG	MTG	MCG	MTG	MCG	MTG	MCG
Number of Customers	734	401	734	401	734	401	734	401	734	401	734	401
25^{th} Percentile	$320	$228	$118	$228	$0	$96	-$1	$105	$0	$229	$0	$374
Median Balance	$470	$470	$257	$470	$145	$275	$106	$293	$135	$405	$134	$546
Mean Balance	$744	$786	$535	$786	$415	$648	$376	$679	$399	$791	$409	$951
75^{th} Percentile	$765	$843	$524	$843	$400	$648	$403	$692	$442	$793	$452	$952

The next analysis segments customers into levels of success based on changes in account balance in the year following MEAF grant receipt. Table VI-7 shows that 12 months after MEAF grant receipt, 41 percent of customers in the MTG were classified as very successful with an ending balance less than $100. Twenty-five percent were classified as somewhat successful with an ending balance greater than or equal to $100, but less than the balance after MEAF grant receipt. Thirty-four percent were classified as unsuccessful with an ending balance greater than the balance immediately following MEAF grant receipt.

Table VI-7
Status of Ending Balance after 12 Months

	2003 MEAF Recipient Treatment Group (MTG)
Number of Customers	734
Very Successful (Ending Balance < $100)	41%
Somewhat Success (Ending Balance > $100 and < Balance after MEAF Grant Receipt)	25%
Unsuccessful (Ending Balance > Balance after MEAF Receipt)	34%

F. Summary of MEAF Data Analysis Findings

This section summarizes findings from the data analysis of MEAF recipients.

- *Household Demographics*: Customers in the final treatment group were somewhat more likely than customers in the final comparison group to have children, and somewhat less likely to have an elderly household member, live in a single-person household, or have annual household income at or below $10,000. The final treatment and comparison groups were similar with respect to the presence of elderly household members and household poverty level.

- *Account Characteristics*: Customers in the MTG and the MCG were very similar with respect to service type. Customers in the final MTG were less likely to have arrears at the start of the post-treatment analysis period than customers in the final MCG. Most customers in the MTG and the MCG were CAP participants.

- *Payment Impacts:* In the year following grant receipt, customers in the MTG had been billed $1,114, which was similar to the amount billed to the customers in the MCG. Customers in the MTG made an average of eight cash payments during the analysis year, compared to customers in the MCG, who made an average of six cash payments. Customers in the MTG, on average, made a total of $900 in cash payments, compared to customers in the MCG, who made a total of $628 in cash payments. Average total payments in the year following MEAF grant receipt for customers in the MTG was $1,009, compared to $747 for customers in the MCG. Higher payments for the customers in the MTG resulted in increased bill coverage and decreased account balances.

- *Balance:* There was no significant difference between the average balance for the MTG before MEAF grant receipt and the MCG one year prior to grant receipt. The average MEAF grant award for customers in the MTG was $210. After customers in the MTG received the MEAF grant, their average balance decreased from $745 to $535. This statistically significant difference in balance between the MTG and the MCG increased over the 12-month period, as the MTG kept their balance at approximately the same level, and the MCG significantly increased their balance. The average balance for customers in the MTG was $409 at 12 months after grant receipt, compared to a balance of $951 for the MCG. While the MTG decreased their balance by $6 as compared to their balance right after grant receipt, the MCG increased their balance by $303 as compared to one year earlier.

- *Success:* Customers were segmented based on their balance one year after MEAF grant receipt. Forty-one percent of customers in the MTG were classified as very successful with an ending balance less than $100. Twenty-five percent were classified as somewhat successful with an ending balance greater than or equal to $100, but less than the balance after MEAF grant receipt. Thirty-four percent were classified as unsuccessful with an ending balance greater than the balance immediately following MEAF grant receipt.

VII. LIURP Program Operations Analysis

This section provides statistical analysis of the demographic, account, and LIURP service characteristics of 2003 and 2004 LIURP recipients.

A. 2003 and 2004 LIURP Program Operations Analysis

This section examines the household demographic and account characteristics for customers who received LIURP in 2003 and 2004.

Household Demographic Characteristics

Table VII-1shows that LIURP recipients had the following household demographic characteristics:

- *Elderly*: Seventeen percent of 2004 LIURP recipients had at least one person age 65 or older in the household.
- *Children*: Sixty-six percent of 2004 LIURP recipients had at least one child 18 or younger in the household.
- *Young child*: Twenty-nine percent of 2004 LIURP recipients had at least one child age five or younger in the household.
- *Household Size*: Seventeen percent of 2003 LIURP recipients and 15 percent of 2004 LIURP recipients resided in single-person households.
- *Annual Income*: Thirty-nine percent of 2003 LIURP recipients and 34 percent of 2004 LIURP recipients had annual household income of less than $10,000.
- *Poverty Level*: Twenty-three percent of 2003 LIURP recipients and 22 percent of 2004 LIURP recipients had income less than or equal to 50 percent of the FPL. Fifteen percent of 2004 LIURP recipients had income at or above 150 percent of the FPL, compared to nine percent of 2003 recipients.

In summary, LIURP recipients in 2003 and 2004 were very similar with respect to number of household members, annual income, and poverty level. More than half of LIURP recipients in both years were likely to have three or more household members, annual income under $20,000, and income at or below 100 percent of the FPL.

Table VII-1
Household Demographic Characteristics

	2003 LIURP Recipients	2004 LIURP Recipients
Observations	8,042	8,006
Observations with: Age Data Available[73]	5,805	6,949
Age 65 or Older	18%	17%
Age 18 or Under	65%	66%
Age 5 or Under	29%	29%
Observations with: Income and Household Size Data Available	8,036	7,963
Household Size		
1	17%	15%
2	18%	18%
3	20%	20%
4	19%	20%
5	14%	14%
6 or more	12%	12%
Annual Income		
<=$10,000	39%	34%
$10,001-$20,000	39%	38%
$20,001-$30,000	16%	20%
>$30,000	6%	8%
Poverty Level		
<=50%	23%	22%
51%-100%	41%	34%
101%-150%	27%	29%
151%-200%	8%	14%
>200%	1%	1%

Account Characteristics

[73] PECO did not provide data on the age of household members for 2003 LIURP recipients.

Table VII-2 shows that LIURP recipients had the following account characteristics:

- *Service Type:* Seventy-two percent of 2003 LIURP recipients and 74 percent of 2004 recipients were electric only customers. Twenty-eight percent of 2003 LIURP recipients and 26 percent of 2004 recipients were combination customers.

- *Arrears:* Just prior to the receipt of LIURP services, three percent of 2003 recipients had no arrears; 16 percent had arrears between $1 and $100; 20 percent had arrears between $101 and $250; 21 percent had arrears between $501 and $1,000; and 21 percent of arrears over $1,000. The 2004 LIURP recipients had arrearage levels similar to 2003 recipients.

- *CAP Rate Tier:* Thirty-one percent of 2003 LIURP recipients and 41 percent of 2004 LIURP recipients were not participating in the CAP at the time when PECO download the CAP program information data used for this report. Nineteen percent of 2003 LIURP recipients were enrolled in CAP Rate E, 43 percent in CAP Rate D, five percent in CAP Rate C, and two percent in CAP Rate B. Sixteen percent of 2004 LIURP recipients were enrolled in CAP Rate E, 33 percent in CAP Rate D, seven percent in CAP Rate C, and two percent in CAP Rate B.

- *CAP Bill in Year Prior to Receiving LIURP:* Sixty-seven percent of 2003 LIURP recipients received a CAP bill in the year prior to receiving LIURP, compared to 55 percent of 2004 LIURP recipients. LIURP had higher income eligibility standards (200% of the FPL) than CAP and the existence of usage requirements (600 kWh or higher). These factors influence the percentage of LIURP recipients that participate in the CAP.

- *CAP Bill in One or Two Years Prior to LIURP Receipt:* Sixty-eight percent of 2003 LIURP recipients received a CAP bill in the two years prior to LIURP receipt, compared to 56 percent of 2004 recipients.

- *CAP Bill Ever in Account History:* Seventy-five percent of 2003 LIURP recipients had received a CAP bill at some time during their account history, compared to 61 percent of 2004 recipients.

In summary, LIURP recipients in 2003 and 2004 were very similar with respect to service type and arrearage levels just prior to receipt of LIURP services. Most LIURP recipients were participating in the CAP at the time of the data download. Moreover, most of these CAP participants were enrolled in CAP Rate D or E.

Table VII-2
Account Characteristics
LIURP Recipients

	2003 LIURP Recipients	2004 LIURP Recipients
Observations	8,042	8,006
Service Type		
Combination	28%	26%
Electric Only	72%	74%
Arrears at Enrollment or Start of Post Period[1]		
<= $0	3%	3%
$1 - $ 100	16%	13%
$101 - $ 250	20%	22%
$251 - $ 500	20%	21%
$501-$1,000	21%	20%
>$1,000	21%	20%
CAP Rate Tier		
No CAP	31%	41%
A	0%	0%
B	2%	2%
C	5%	7%
D	43%	33%
E	19%	16%
CAP Bill in Year Prior to Receiving LIURP	67%	55%
CAP Bill in 1 or 2 Years Prior to Receiving LIURP	68%	56%
CAP Bill Ever in Account History	75%	61%

[1] Five observations missing balance data for 2003 LIURP recipients and seven observations missing balance data for 2004 LIURP recipients.

Service Characteristics

Table VII-3 shows that LIURP recipients had the following LIURP service characteristics:

- *Audit Type:* Seventy-six percent of LIURP recipients received a baseload audit, while 24 percent received a heating audit. A similar percentage of 2004 recipients received baseload and heating audits.

- *Costs of Installed Measures:* The mean cost of installed measures was $561 for 2004 recipients and $481 for 2003 recipients.

- *Refrigerator Installed:* Fourteen percent of 2003 LIURP recipients and 12 percent of 2004 recipients had a new refrigerator installed.

- *Window Air Conditioner Installed:* Two percent of 2003 and 2004 LIURP recipients had a new air conditioner installed.

- *Timer Installed on Electric Water Heater:* Three percent of 2003 LIURP recipients and four percent of 2004 recipients had an electric water heater timer installed.

- In summary, three-fourths of 2003 and 2004 LIURP recipients received baseload audits, while one-fourth of recipients received heating audits. The mean cost of installed measures was $561 for 2004 recipients and $481 for 2003 recipients. About 14 percent of LIURP recipients received new refrigerators, and only a few percent received window air conditioners and water heater timers.

Table VII-3
LIURP Service Characteristics

	2003 LIURP Recipients	2004 LIURP Recipients
Observations	8,042	8,006
Audit Type		
Heating	24%	23%
Baseload	76%	77%
Cost of Installed Measures		
25th Percentile	$78	$87
Median	$97	$100
Mean	$481	$561
75th Percentile	$670	$693
Measures		
Refrigerator	14%	12%
Window Air Conditioner	2%	2%
Electric Water Heater Timer	3%	4%

B. Summary of LIURP Data Analysis Findings

This section summarizes findings from the LIURP data analysis.

- *Household Demographics:* The 2003 and 2004 LIURP recipients were very similar with respect to number of household members, annual income and poverty level. More than half of LIURP recipients in both years were likely to have three or more household members, annual income under $20,000, or fall at or below 100 percent of the FPL.

- *Account Characteristics:* Seventy-two percent of 2003 LIURP recipients and 74 percent of 2004 recipients were electric only customers. Twenty-eight percent of 2003 LIURP recipients and 26 percent of 2004 recipients were combination customers. Just prior to the receipt of LIURP services, three percent of 2003 recipients had no arrears; 16 percent had arrears between $1 and $100; 20 percent had arrears between $101 and $250; 21 percent had arrears between $501 and $1,000; and 21 percent had arrears over $1,000. The 2004 LIURP recipients had arrearage levels similar to 2003 recipients. Sixty-seven percent of 2003 LIURP recipients received a CAP bill in the year prior to LIURP receipt, compared to 55 percent of 2004 LIURP recipients. Moreover, most of these CAP participants were enrolled in CAP Rate D or E.

- *Service Characteristics:* Three-fourths of 2003 and 2004 LIURP recipients received baseload audits, while one-fourth of recipients received heating audits. The mean cost of installed measures was $561 for 2004 recipients and $481 for 2003 recipients. About 14 percent of LIURP recipients received new refrigerators, and only a few percent received window air conditioners and water heater timers.

VIII. Summary of Findings and Recommendations

This section of the report summarizes the findings and recommendations from the evaluation activities. Findings and recommendations are grouped into categories of customer needs assessment, program administration and procedures, customer perspectives, CAP analysis, and MEAF analysis.

A. *Customer Needs Assessment*

In this section of the report, we assess the penetration of PECO's Customer Assistance Program. We present information on the size of the population eligible for CAP benefits and the number of PECO customers who participate in CAP. These data are used to evaluate how effective the program has been in enrolling customers who are at or below 150 percent of the federal poverty guidelines and eligible to participate in PECO's CAP.

1. PECO's CAP-Eligible Population

Seventeen percent of all households with PECO residential service are income-eligible for the CAP program. Of the 1.38 million households with residential utility service from PECO, approximately 234,000 are under 150 percent of the federal poverty guidelines. Of all CAP-eligible households, 28 percent have income below 50 percent of the federal poverty level (FPL), 33 percent between 50 and 100 percent of the FPL, and 39 percent between 100 and 150 percent of the FPL.

Analysis of CAP-eligible populations in the counties in PECO's service territory indicates that Bucks, Chester, Delaware, and Montgomery counties have similar portions of households that are income-eligible for benefits. In these counties, approximately 10 percent of households with electric service are income-eligible for CAP benefits. In Philadelphia county, nearly 30 percent of households with electric service are income-eligible for CAP.

Total annual utility bills for all CAP eligible residential customers with both electric and gas service are approximately $1,500. For many CAP-eligible households this creates an energy burden that is defined as unaffordable by the PUC guidelines. For households with both types of service, the median energy burden exceeds the target set by the PUC for each of the groups under 100 percent of the FPL. The median energy burden is 18 percent for the 50 to 100 percent group, 31 percent for the 25 to 50 percent group, and 100 percent for the 0 to 25 percent group.

2. CAP Characteristics

The CAP program was serving nearly 105,000 PECO households by January 2006. Twenty-one percent, or approximately 22,000 households, had annual household income below 50 of the federal poverty guidelines and received CAP benefits corresponding to rate tiers A, B, and C. The majority of CAP program participants have income between 50 and 100 percent of the federal poverty guidelines and receive CAP Rate Tier D benefits; 54 percent of participants enrolled in December 2005 had annual household income between 50 and 100 percent of federal guidelines and received a 25 percent discount on their utility bill.

Since implementation of CAP rate tiers A, B, and C, the number of households who receive these benefits expanded from 600 in February 2004 to over 21,000 in December 2005. However, over this time, only a small number of households received CAP Rate Tier A benefits. In January 2006, the program disbursed benefits corresponding to CAP Rate Tier A to 78 households.

The monthly volume of participant enrollment has increased substantially from 2004 to 2005. In 2004, an average of 1,789 eligible customers were enrolled each month. In 2005, an average of 2,428 eligible customers were enrolled and approximately 2,100 successful re-certifications were completed each month.

3. CAP Participation Rates

Overall, forty-five percent of eligible households participated in PECO's CAP in 2005. Approximately 105,000 PECO customers participated in the CAP program, while almost 234,000 PECO customers are eligible for some level of CAP benefit. Sixteen percent of eligible households with annual income below 25 percent of the FPL participated in the CAP; however, 64 percent of households between 25 percent and 50 percent of the FPL participated in the CAP.

PECO has higher CAP participation than other electric utilities in Pennsylvania. Using Census data estimates on the number of households in Pennsylvania with income at or below 150 percent of the FPL and data reported to the PUC on the number of households served by electric utilities in December 2004, we estimated that 43 percent of PECO households who are income-eligible receive CAP benefits, while only 14 percent of income-eligible households in other electric utilities' service territories participate in CAP.

4. CAP Needs Assessment Summary

While this analysis indicates that 45 percent of PECO's eligible customers participate in the CAP, it also indicates that the program has been unable to enroll a significant portion of households in the lowest income group. More in-depth analysis of this group is required to develop a better understanding of the energy assistance needs of these households and to determine why participation rates are so low. Once that analysis is complete, it may be possible to develop a strategy that will allow PECO to enroll a greater percentage of this group in the CAP.

Recommendation: *The evaluation should undertake additional analyses to develop a better understanding of the energy assistance needs of households with income below 25* *percent of the FPL and why these households have low CAP participation rates. Depending on the results of this analysis, we may develop recommendations for increasing the CAP participation rate of this group.*

B. Program Administration and Procedures

The review of program administration and procedures found that PECO has an experienced and dedicated group of staff members that work hard to design and implement their Universal Service programs so that they are most beneficial to their low-income customers. They have recently revised their CAP to more effectively serve the lowest income customers, and are constantly revising procedures and policies so that they are more effective and efficient.

We found that the LIURP education component has been well designed with many customer follow-ups to ensure that customers understand the program and how to reduce their energy usage. We found that PECO has successfully reduced the number of PUC cases by implementing new CAP Rate tiers, upgrading their database, and providing increased responsibility for payment arrangements to the PECO Universal Service Services Call Center.

We recommended that PECO update their computer system so that all customers with income below 200 percent of the FPL can be referred for CARES, that PECO develop manuals to document all potential referral services, and that PECO develop a computer system to manage CARES data and indicate CARES status in the customer information system.

We also recommended that PECO provide less frequent updates to the CAP and payment processes, and provide NCO with consolidated update information as they do for OSI; that NCO staff follow-up with customers who call in about their CAP status if they have been requested to send in income verification; and that PECO informs all NCO staff that the CARES program has been reinitiated.

1. Referrals to CARES

Through interviews with program staff, we found that PECO's call center representative can only initiate CARES referral through their database when a customer is processed for CAP intake. The system will only process CAP intake procedures for customers with income below 150 percent of the FPL. However, CARES is intended to extend to customers up to 200 percent of the FPL. If a customer is between 150 percent and 200 percent of the FPL, the call center representative must manually refer that customer to CARES. During call center site visits conducted in November, APPRISE investigators noted that the Universal Services Call Center (OSI) representatives made manual referrals to CARES for customers with incomes greater than 150 percent of the FPL. There was no evidence that credit call center (NCO) representatives provided referrals for non-CAP eligible clients.

Recommendation: *Update database so that any eligible customer can be referred for CARES, whether or not they are concurrently referred for CAP.*

2. **CARES Services**

During interviews with CARES representatives, staff noted that they do not have a manual that lists potential referrals and procedures for these referrals. One of the staff members had several scraps of paper in his desk drawer with this information. PECO should develop a manual that lists available programs, contact information, eligibility criteria, application procedures, and any other important information. This manual should be updated on a regular basis and provided to the CARES representatives. Additionally, the CARES representatives should have regular meetings where they share new insights about programs that customers may be referred to.

Recommendation: *Develop a manual that documents all potential CARES referral services.*

3. **CARES Data**

PECO staff interviews revealed that CARES consultants manually record all customer information on paper intake sheets that become part of the customer's case file. Customer case files are stored at the PECO Market Street offices. However, no information from the intake sheets is databased for electronic storage or analysis. There is also no indicator in the customer information system to identify whether a customer is or has been served by CARES. PECO is in the process of developing a database for CARES. The database may include a table with all available referrals and application locations and procedures, as well as recent customer experience with the referrals. PECO should also code a customer's account if the customer has received CARES.

Recommendation: *Develop a computer system to manage CARES data and indicate CARES status in the customer information system.*

4. **LIURP Education**

PECO's LIURP has a well designed and executed education component. CMC staff reported that they worked with PECO to design the energy education portion of LIURP so that it facilitated customers' clear understanding of the reasons for high energy use, and communicated how customer behaviors contribute to energy use and energy bills. As such, there are several steps involved in the education process. First, the auditor provides the primary LIURP energy education session during the initial audit visit. This session lasts at least 30 minutes. Second, further education is often provided by subcontractors when major measures are installed. Third, additional education is provided by other CMC staff during quality control inspections and follow-up telephone calls. In addition, CMC mails monthly progress letters to customers to highlight any changes in monthly usage. Each quarter CMC revises the letters to emphasize energy saving tips that are specific to the current season. CMC provides an additional telephone energy education session to customers who do not reduce energy usage after receiving LIURP services. The LIURP survey showed that these intensive education efforts have impacts on client understanding and behavior, as described below.

5. Customer Complaints

Interviews with PECO representatives showed that there have been large reductions in the number of PUC cases. PECO Universal Services call center representatives reported that there used to be 100 PUC cases per day until the new CAP Rate tiers and Montage system upgrades were implemented in February 2004. The number of PUC cases then decreased to approximately 10 to 20 per month by the end of 2004.

The decrease in PUC cases has been largely attributed to an increase in both the ability to satisfactorily resolve customer issues, as a result of the new CAP Rate tiers, the Montage system upgrade, and the increased responsibility for handling payment arrangements at the PECO Universal Service Services Call Center without having to transfer customers to the PECO Credit Call Center.

6. Call Center Manuals

NCO associates noted that the manuals received during training were useful, however, many changes have taken place with regard to policies and procedures and the manuals have not been updated.

The PECO credit call center analyst sends most policy and process changes and reminders via “Call Center Bulletins” to NCO and Universal Services. The bulletins are basically memoranda from PECO to the call center vendors on process changes, reminders, and work-around for system problems. The NCO site manager reported that NCO received 65 bulletins in September and October 2004. He noted that processing a call can be challenging for call representatives who are inundated with daily bulletins. The NCO quality assurance specialist added that the representatives want to do a good job, but he thinks the “massive” number of bulletins on procedure and policy changes can be overwhelming. In addition, he would like to see the training module updated with all of these changes that are contained in the bulletins.

Other NCO associates commented that what might appear as system errors on one day sometimes turns out to be new system upgrades explained in a bulletin that is received a few days later. The project manager reported that bulletins sent from PECO are not reviewed by anyone at the NCO Upper Darby office prior to distribution. She added that sometimes there are concerns with the original bulletin that lead to a revised bulletin a few days later. She suggested that these revised bulletins could be avoided if PECO discussed changes with NCO before a bulletin is released.

OSI associates did not have the same complaints regarding bulletins because the Universal Services department acts as a buffer between the PECO credit call center analyst and OSI. OSI does not receive the same number of bulletins, because a PECO

Universal Services analyst reviews, revises, and consolidates the bulletins into a formal CAP Rate Communications flyer related to process and policy changes. OSI stated that they receive 12 CAP Rate Communication flyers each year, as compared to NCO's 100. In addition, a PECO Universal Services analyst will discuss any reminders or temporary workarounds over the phone with the OSI supervisor and manager before emailing the details.

Recommendation: *Limit the number of CAP process changes, and provide the same review and consolidation to those memos for NCO as they do for OSI.*

7. **Call Center Customer Follow-up**

During review of NCO calls we found that there were instances in which the customer had a "CAP Income Verification Required" status but the NCO call representative did not follow-up with the customer as to whether the customer received a re-certification letter and CAP application form or whether the customer had returned the completed and signed form to OSI along with "proof of income".

There is no stated policy that requires an NCO call representative to review the customer's CAP status or follow-up with customers in the CAP-related matters. Nonetheless, following-up with customers who contact a call center with a "CAP Income Verification Required" status on their account might improve PECO's overall enrollment and re-certification rates.

If a customer did not receive the mailed CAP application due to incorrect address, language issues, or other matters, then following-up may uncover this problem. The call representative can not only provide the customer with the contact information for OSI, but also note the customer's response into the Remarks section of the account, which might be useful for OSI when OSI reviews the account before removing the customer due to non-receipt of Income Verification documentation.

Recommendation: *Direct NCO staff to follow-up with customers who call in about their CAP status if they have been requested to send in income verification.*

8. **Call Center Referral to CARES**

During an interview with NCO associates, they reported that they were not referring customers to CARES because they were told that CARES was not operating. PECO should make sure that all representatives understand that the program is running again.

Recommendation: *Inform all NCO staff that the CARES program has been reinitiated.*

C. Customer Perspectives

This section provides a summary of findings and recommendations from the customer surveys.

General Findings

Results that were consistent across all Program surveys are summarized below.

1. **Need for programs**

   An analysis of the demographic characteristics of the CAP, LIURP, CARES, and MEAF participants showed that these customers had significant need for the programs. A majority of the households were vulnerable, with elderly or disabled individuals, young children, or individuals who required the use of electricity or gas for health reasons. Additionally, most did not have more than a high school education, and many had been unemployed and looking for work in the past year.

2. **Use of Electric Supplemental Heat**

   Most customers who experienced gas service terminations reported that they used more electricity to heat their homes as a result. This included over 70 percent of CAP participants who experienced gas service terminations, over three-fourths of CARES recipients who experienced gas service terminations, over half of the LIURP recipients who experienced gas service terminations, and over half of MEAF recipients who experienced gas service terminations.

   Recommendation: *The use of supplemental electric heat due to gas service terminations is a dangerous and inefficient practice. It is a problem that could be faced by most low-income customers in Pennsylvania who have separate gas and electric fuel suppliers. In light of limits on the number of customers who may receive LIHEAP grants in each county, and the tension between PECO and PGW over the award of LIHEAP grants, the BCS should work with the utilities to develop a coordinated approach to better serve the needs of their low-income customers.*

CAP Survey Findings

Findings from the CAP survey are summarized below.

1. **CAP Targeting**

   CAP participants were likely to have at least one vulnerable member, an individual over the age of 65 or under the age of 18, a disabled individual, or someone who required the use of electricity or gas for medical reasons, in their household.

   Nineteen percent of current participants reported that no member of their household had the equivalent of a high school education, compared to four percent of non-participants and three percent of past participants.

   Close to 30 percent of CAP participants reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey. Only 28 percent of current participants reported that they earned wages from employment, compared to over half of past participants and non-participants.

2. **CAP enrollment and re-certification**

   The majority of current and past participants reported that Program enrollment and recertification were not difficult.

3. **Non-participant need for CAP**

   Forty-one percent of non-participants reported that they had arrearages over $100, indicating a need for the CAP. Additionally, 79 percent of non-participants, compared to 60 percent of current participants and 62 percent of past participants, reported a need for additional assistance to pay their energy bills.

4. **Impacts of the CAP on bill payment difficulty**

   Customers were asked how difficult it was for them to pay their bills prior to participating in the CAP and while participating in the CAP. Fifty-six percent of current participants said that it was very difficult to pay their bills prior to CAP enrollment and only nine percent of current CAP participants said that it was very difficult to pay their bills while enrolled in the Program. Sixty-four percent of current participants and 57 percent of past participants said that their PECO bills were lower than before participating in the Program.

5. **Importance of CAP**

   Ninety-three percent of both current and past participants reported that the CAP had been somewhat or very important in helping to meet their needs. Ninety-six percent of current participants and 91 percent of past participants said that they were somewhat or very satisfied with the Program.

CARES

Findings from the CARES survey are summarized below.

1. **CARES recipients are vulnerable**

   Households that received CARES services were likely to have vulnerable members. Sixty-four percent of households surveyed had at least one disabled member, 47 percent had at least one child under the age of 18, and 40 percent had at least one elderly member. These households were also unlikely to have any member with more than a high school diploma, and more than one-third of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

2. **Lack of CARES follow-up**

   Seventy-eight percent of respondents said that they received no follow-up phone calls to inquire about their circumstances after the initial call.

Recommendation: *Require a follow-up call for CARES recipients to ensure that they have been able to obtain the needed assistance. Determine whether the followed up on their referrals and whether additional assistance is needed. The additional assistance may include new referrals, or help with the original referrals.*

3. CARES Recipients Continue to Report Difficulty with Bill Payment

Three-fourths of respondents reported that CARES facilitated the payment of their PECO bills and the payment of their non-PECO bills. However, over 70 percent of respondents reported that their PECO bills were still very or somewhat difficult to pay. Additionally, 75 percent of respondents reported that they need additional help to pay their energy bills.

4. CARES helps recipients to get the services that they need

Close to one-third of respondents said they received a health usage discount on their PECO bills as a result of CARES. Additionally, 39 percent of respondents received CAP as a result of CARES, 20 percent received LIHEAP, and five percent received LIURP services.

5. Importance of CARES

Sixty-six percent of respondents reported that CARES had been very important in helping them to meet their needs, and an additional 15 percent reported that it had been somewhat helpful in meeting their needs.

<u>LIURP Survey</u>

Findings from the LIURP survey are summarized below.

1. LIURP Energy Education

The respondents were asked whether the provider explained energy use, recommended actions to save energy, informed respondents how much money recommended actions could save, and left materials about how to reduce energy use. Over three-fourths of respondents reported that the provider did each of these. This is a very positive finding for the Program.

Additionally, 41 percent said that energy education was a benefit of the Program, compared to 31 percent who said that lower energy bills were a benefit, and 30 percent who said lower energy use was a benefit. More than one-third of respondents said that energy education was the most important benefit of the Program.

Recommendation: *Continue to provide intensive education efforts as part of LIURP, as education appears to be an important and effective component of the program.*

2. **Impact of LIURP on Comfort**

   Half of the customers who received heating services said that the winter temperature of their home had improved and 40 percent of the customers who received heating services said that the summer temperature of their home had improved.

3. **Impact of LIURP on Bills and Usage**

   Customers where asked whether their bill had increased or decreased since the receipt of LIURP. Forty-four percent of customers who received LIURP said that their bill was lower since the receipt of services. Combination customers were more likely to say that their bill had increased since the receipt of LIURP services, probably due to increases in gas prices. Three-fourths of respondents said that they had reduced their overall energy use since receiving LIURP services.

MEAF Survey

Findings from the MEAF survey are summarized below.

1. **MEAF Client Vulnerability**

   Households that received MEAF grants were likely to have vulnerable members. Over 60 percent of households surveyed had at least one child under the age of 18, over half had at least one disabled member, and about one-quarter of households had at least one elderly member. These households were also unlikely to have any member with more than a high school diploma, and 30 percent of respondents reported that at least one member of their household had been unemployed and looking for work in the year prior to the survey.

2. **Need for MEAF**

   Households were asked about the situation that led to the need for MEAF. Thirty percent of respondents reported that they applied for the MEAF grant due to high bills. Twenty-three percent needed the grant due to a loss of income or job, 21 percent because of health or medical problems, and 9 percent due to personal reasons.

3. **Impact of MEAF on bill payment**

   Over 70 percent of respondents reported that they have been able to make all their PECO bill payments since receiving the MEAF grant.

4. **Importance of MEAF**

   Eighty-four percent of respondents reported that the MEAF grant they received helped to restore or maintain their utility service. Eighty-six percent identified the MEAF grant as very important in helping them to meet their needs, and 97 percent of respondents said they were very or somewhat satisfied with MEAF.

D. CAP Analysis

This section summarizes findings from the data analysis of CAP participants.

1. CAP Retention Rates

Ninety-nine percent of the original 2003 treatment group received a discount in each of the first three months after enrollment, 98 percent remained in the CAP for the first six months, 96 percent remained on for the first twelve months, and 88 percent remained on for the first eighteen months. The final treatment group had a slightly greater full year retention rate. Ninety-one percent of these customers remained in the CAP for eighteen months after enrollment.

2. Arrearage Forgiveness

PECO provides arrearage forgiveness to CAP customers who pay their bills, and who are current with their CAP payment obligations. Sixty-eight percent of the final treatment group received arrearage forgiveness in the twelve months after CAP enrollment. Among the final treatment group, 13 percent received between $1 and $100, 33 percent received between $101 and $500, and 22 percent received greater than $500 in arrearage forgiveness.

Households with no elderly members, households with children, large households, and higher income households received greater forgiveness. Customers with household income at or below 50 percent of the FPL received greater arrearage forgiveness than those with household incomes above 50 percent of the FPL. Combination customers received greater arrearage forgiveness than electric only customers. However, combination customers were no more likely to receive arrearage forgiveness than electric only customers. Customers with greater arrears at the time of enrollment received more arrearage forgiveness. Customers in CAP Rate D at the time of data download were more likely to receive forgiveness and received more forgiveness than customers in CAP Rate E.

3. CAP Affordability Impacts

The CAP had a positive impact on affordability for program participants. The 2003 CAP enrollees had a gross reduction in bills of $312. Taking the average of the non-participant and 2004 enrollee comparison groups, the net impact of the CAP on the asked to pay amount was a decrease of $354. The 2003 CAP enrollees experienced a gross decrease in energy burden, from 12.0 percent in the year prior to participating in the program, to 8.6 percent in the first year of program, for a gross reduction of 3.4 percentage points and an average net decrease of 3.4 percentage points.

CAP customers are eligible for both electric and gas CAP Rate discounts. Positive net impacts were greater for CAP customers who received both electric and gas service. Combination customers who were not in the CAP experienced a rise in the gas portion of their bill. CAP combination customers did not experience the same rise due to the CAP Rate discount on the gas variable distribution charge on their monthly gas bill. The average net impact of the CAP on energy burden for CAP combination customers was a decrease of 4.7 percentage points. The average net impact of the CAP on energy burden for CAP electric only customers was 3.5 percentage points.

4. CAP Payment Impacts

CAP customers experienced large reductions in their asked to pay amounts and their total payments. However, due to their lower bills they had increased bill coverage rates. Due to their lower bills and arrearage forgiveness, they reduced their balances.

Most customers did a fairly good job of paying their bill in the year prior to CAP enrollment. They had a 97 percent average coverage rate, and an average balance of $353. These customers were asked to pay significantly less under CAP then they paid prior to enrolling, and as a result, they significantly reduced their cash payments. Customers with real payment problems, an average coverage rate of only 59 percent in the year prior to enrollment and an average balance of $1067 were asked to pay more under CAP than they had in the year prior to enrollment. These customers increased their cash payments by nearly $100 after enrolling in CAP.

Recommendation: *PECO should re-examine the CAP payment structure and consider other options. One potential method is to develop two tiers of CAP discounts, higher discounts for customers who are severely payment-troubled with arrears over $500, and lower discounts for customers with less severe payment problems.*

CAP participants had an average total coverage rate of 85 percent in the year preceding enrollment and an average total coverage rate of 89 percent in the year following CAP enrollment, an increase of four percentage points. The average net impact of the CAP on the total coverage rate was 4.5 percentage points.

CAP participants had an average shortfall of $215 in the year preceding enrollment and an average shortfall of $129 on the discounted bill in the year following enrollment. The gross change in shortfall was a decrease of $86. The net change in shortfall was a decline of $113.

By paying their pay their CAP bills and staying current with their CAP payment obligations for six consecutive months, CAP Customers received $392 in arrearage forgiveness in the year following enrollment.

5. CAP Impact on Balances

Balances decreased from $573 at the end of the year preceding enrollment to $326 at the end of the year following enrollment, for a gross decrease of $248. The average net impact of the CAP on balances was a decrease of $374.

6. CAP Assistance Impacts

Approximately 18 percent of customers received a LIHEAP cash grant in the pre and post treatment periods. Twenty-six percent of combination customers received LIHEAP cash assistance in the year prior to enrollment and 38 percent in the year following enrollment. This is a large increase, however, PECO should work to further increase the percentage of combination customers who receive LIHEAP assistance.

Recommendation: *PECO should attempt to increase the percentage of combination customers who receive LIHEAP grants.*

7. CAP Usage Impacts

The net change in gas and electric non-heating usage was not statistically significant for the 2003 CAP participants as compared to the 2004 enrollee comparison group. There was a statistically significant net increase of 555 kWh for the 2003 electric heating participants as compared to the comparison group, an increase of approximately four percent of pre enrollment usage.

8. CAP Collections Impacts

CAP participation was associated with a significant reduction in all collection actions, including service terminations. Seventy-one percent of CAP participants received a collection action in the year preceding enrollment, compared to 31 percent in the year following enrollment, for a gross decrease of 40 percentage points. The average net impact of the CAP on any collection action was a decrease of 42 percentage points. Four percent of CAP participants had their service terminated in the year preceding enrollment, compared to 1.5 percent in the year following enrollment, for a gross decrease of 2.5 percentage points. The average net impact of the CAP on service terminations was a decrease of 2.1 percentage points.

9. CAP Cost-Benefit Analysis

Collections costs decreased by approximately $8 per customer, and shortfall on the non-discounted bill increased by $373, resulting in an average net cost to PECO of $365 per CAP customer enrolled.

E. MEAF Analysis

This section summarizes findings from the data analysis of MEAF recipients.

1. MEAF Client Payments One Year After Grant Award

In the year following grant receipt, customers in the MTG had been billed $1,114, which was similar to the amount billed to the customers in the MCG. Customers in the MTG made an average of eight cash payments during the analysis year, compared to customers in the MCG, who made an average of six cash payments. Customers in the MTG, on average, made a total of $900 in cash payments, compared to customers in the MCG, who made a total of $628 in cash payments. Average total payments in the year following MEAF grant receipt for customers in the MTG was $1,009, compared to $747 for customers in the MCG. Higher payments for the customers in the MTG resulted in increased bill coverage and decreased account balances.

2. MEAF Client Balances One Year After Grant Award

There was no significant difference between the average balance for the MTG before MEAF grant receipt and the MCG one year prior to grant receipt. The average MEAF grant award for customers in the MTG was $210. After customers in the MTG received the MEAF grant, their average balance decreased from $745 to $535. This statistically significant difference in balance between the MTG and the MCG increased over the 12-month period, as the MTG kept their balance at approximately the same level, and the MCG significantly increased their balance. The average balance for customers in the MTG was $409 at 12 months after grant receipt, compared to a balance of $951 for the MCG. While the MTG decreased their balance by $6 as compared to their balance right after grant receipt, the MCG increased their balance by $303 as compared to one year earlier.

3. MEAF Client Payment Categorization

Customers were segmented based on their balance one year after MEAF grant receipt. Forty-one percent of customers in the MTG were classified as very successful with an ending balance less than $100. Twenty-five percent were classified as somewhat successful with an ending balance greater than or equal to $100, but less than the balance after MEAF grant receipt. Thirty-four percent were classified as unsuccessful with an ending balance greater than the balance immediately following MEAF grant receipt.

F. Information Technology

This section provides recommendations for information technology.

1. Data Systems

PECO had a difficult time providing data needed for the impact evaluation included in this report. Several erroneous data files were sent to APPRISE and analyses needed to be re-run after new data were received.

Recommendation: *PECO should enhance their data systems so that it is easier to obtain data needed to conduct the impact analyses included in this report, and so that evaluations can follow customers who change account numbers. PECO believes that some of these issues will be addressed with their new data systems.*

2. **Data Warehouse**

   PECO's data warehouse is essential to obtain data needed for low-income customer impact evaluation.

   Recommendation: *PECO should continue to maintain their data warehouse, as it is essential to the Universal Services impact evaluation.*

3. **CARES Database**

   PECO does not currently have a database to manage the CARES program information.

   Recommendation: *PECO should expand and enhance their CARES database to better track CARES participants and referral options. PECO is in the process of investigating potential developers.*

4. **CARES Indicator**

   PECO's customer system does not currently record whether a customer has received CARES.

   Recommendation: *PECO should create an indicator for CARES participants in their customer database.*