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**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION**

505 Van Ness Avenue
San Francisco, CA 94102-3298

SUBJECT: Submission of the Arrearage Management Plan (AMP)
Final Evaluation Report

On July 12, 2018, the California Public Utilities Commission (CPUC) launched a statewide effort to reduce the number of residential electricity and gas service disconnections. This initiative was part of Senate Bill 598 and aimed to simplify and clarify how customers can stay connected and get reconnected if electricity and/or natural gas service was interrupted. As part of this effort, the CPUC introduced AMP, a program designed to help customers manage unpaid bills and avoid future disconnections by encouraging consistent monthly payments.

In Resolution E-5114 (dated December 17, 2020), the CPUC approved AMP from the California's investor-owned utilities (IOUs)—Pacific Gas & Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE), and Southern California Gas Company (SoCalGas) and they began implementation in 2021. Since September 2024, the CPUC Energy Division (ED) and the California IOUs have worked with third party consultant, APPRISE, to complete an evaluation of AMP during its operation in 2022 and 2023.

Pursuant to Decision D.23-08-049 Ordering Paragraph 4, Southern California Edison (SCE) hereby informs the Service List of the completion of an Evaluation, Measurement & Verification (EM&V) report of the AMP for Program Years 2022-2023. The IOUs recognize the extensive effort APPRISE exhibited with their detailed analysis of the impacts of the statewide AMP program. The study covers evaluation insights related to changes in bill payment behavior, arrearage forgiveness, and changes in collections actions using both qualitative and quantitative data.

Some of the IOUs noted challenges with the evaluation, which are highlighted in the Executive Summary and throughout the report. The report also includes a section with IOU comments.

Southern California Edison Company

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Arrearage Management Plan

Final Evaluation Report

September 2025

Table of Contents

Executive Summary	i
GLOSSARY OF TERMS	G-1
IOU Comments	IOU-1
A. PG&E.....	IOU-1
B. SCE	IOU-2
C. SDG&E.....	IOU-2
D. SoCalGas.....	IOU-2
I.Introduction	1
E. AMP Program and Evaluation Goals.....	1
F. Evaluation Research.....	1
G. Report Contents	2
II.AMP Design and Implementation.....	3
A. AMP Design.....	3
B. Design Options from Literature Review	4
C. AMP Implementation.....	7
D. AMP Participation Statistics	12
III.Research Methodology	15
A. Utility Interviews	16
B. AMP Participant Survey	16
C. Quasi Experimental Design	19
D. Impact Analysis Data and Attrition	25
E. Study Limitations.....	29
IV.AMP Analysis.....	31
A. Bill Payment.....	31
B. AMP Participation and Arrearage Forgiveness	55
C. Arrearages	64
D. Collections and Disconnections	75
E. Energy Usage	90
F. AMP Costs and Benefits.....	94
G. Analysis Summary	97
V.Findings and Recommendations	102
Appendices.....	105
A. Detailed Analysis Findings - On-Time Payment	106
B. Detailed Analysis Findings - Charges, Credits, Shortfall, and Bill Payment Percentage	111
C. Detailed Analysis Findings - Length of Time on AMP	117
D. Detailed Analysis Findings – Number and Amount of Credits Received	118
E. Detailed Analysis Findings - Percent of Arrearages Forgiven	122

F. Detailed Analysis Findings - Arrearages	123
G. Detailed Analysis Findings - Collections and Disconnections	127
H. Detailed Analysis Findings - Energy Usage	137
I. Detailed Analysis Findings - Program Data	140
J. Participant Survey Instrument	142
K. Participant Survey Findings	153
L. IOU AMP Reporting	205

Executive Summary

The California Public Utilities Commission (CPUC or the Commission) approved Rulemaking (R.) 18-07-005 on July 12, 2018, to address residential disconnection rates across California's electric and gas investor-owned utilities. In Decision (D) 20-06-003 on June 16, 2020, the Commission authorized the Arrearage Management Payment Plan (AMP). AMP provides forgiveness of arrearages for residential customers who make on-time bill payments. The CPUC approved the plans of the Large Investor-Owned Utilities' (IOUs); Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison (SCE), and Southern California Gas (SoCalGas) to implement AMP in Resolution E-5114 on December 17, 2020. In D.23-08-049, the CPUC authorized a third-party AMP evaluation. This report presents the findings from the AMP evaluation.

AMP Design and Implementation

The primary goal of AMP is to reduce residential disconnections and improve reconnection processes. AMP provides forgiveness of arrearages for eligible residential customers who make on-time bill payments. AMP also allows eligible disconnected customers to reconnect service without paying their arrears if they enroll in the program.

AMP provides eligible California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA) Program customers with forgiveness of up to \$8,000 of unpaid electric and gas utility bills if they pay their current monthly bills on time and in full over the course of a year. Customers can miss up to two consecutive payments, or three non-consecutive payments, before being removed from the program. Customers who complete or are removed from the program are eligible for re-enrollment after a 12-month stay out period.

AMP was heavily promoted by the IOUs and enrolled a total of more than one million unique customers in the first four years of implementation beginning in 2021.

Table ES-1
Total Number of Unique Customers Enrolled in AMP
2021-2025

PG&E	SCE	SDG&E	SoCalGas	All IOUs
424,827	215,501	79,655	341,554	1,061,537

AMP Evaluation Research

The AMP evaluation included the following research activities. Each activity provided different insights and was used to inform the analysis and conclusions.

1. **Background Research:** APPRISE engaged in a review of the program design, regulatory framework, and marketing materials to develop an understanding of AMP design and implementation.
2. **Literature Review:** APPRISE examined our previous arrearage forgiveness program evaluations to analyze key program parameters and compare AMP to the other program designs. Citations are not provided because the studies are not publicly available.
3. **IOU Interviews:** APPRISE conducted written and telephone interviews with IOU program managers to further understand program design and implementation, challenges, and recommendations for AMP refinement.
4. **Participant Survey:** APPRISE conducted a survey with a stratified random sample of AMP participants whose accounts remained active over the evaluation period. The survey assessed program marketing, customer knowledge, program understanding, perceived impacts, and recommendations for AMP improvement.
5. **AMP Data Analysis:** APPRISE analyzed available AMP program data to characterize the length of AMP participation, the distribution of arrearages forgiven, and the reasons for disenrollment.
6. **Billing and Payment Analysis:** APPRISE developed a matched comparison group and implemented a difference-in-differences analysis to develop an estimate of the impact of AMP on bill payment, arrearages, collections actions, disconnections, and energy usage.
7. **Cost Analysis:** APPRISE analyzed AMP costs and benefits to inform program recommendations.
8. **Synthesis:** APPRISE synthesized the information from all the evaluation research to assess how well the AMP program achieved its objective of reducing residential disconnections and whether the CPUC should extend, discontinue, or modify the AMP program.

Study Limitations

The evaluation had the following limitations, including those that are inherent to the analysis of customer billing data. Because customer billing data are used in the impact analysis, nonrandom exclusion of program participants whose accounts did not remain active can bias the estimates of the program's impact. The evaluation results are not representative of **all** AMP enrollees, but of AMP enrollees who maintained their utility service for at least 12 months following enrollment for the 2023 enrollees and at least 24 months following enrollment for the 2022 enrollees.

1. **Active Accounts:** The impact analysis required customers to have billing data for two years after AMP enrollment for 2022 AMP enrollees, and for one year after AMP enrollment for 2023 AMP enrollees. Therefore, customers with inactive accounts (not currently receiving

service from the IOU) at the time of sample selection were not included in the study. This has the potential to bias the results since customers who no longer had service may have been disconnected due to non-payment. The number and amount of AMP credits received and mean arrearage forgiveness, are most likely to be upwardly biased. For the net impacts that include a comparison group adjustment, the bias will be reduced because nonparticipating customers with inactive accounts were also excluded from the comparison group.

In the initial AMP data provided by the IOUs, PG&E and SCE AMP participants who were marked as inactive did not have information on CARE and FERA participation, which were stratification variables for the sample selected. The following number of each were excluded from the selected sample.

- PG&E: 103,794 of 378,051 (27 percent) unique inactive AMP participant accounts were excluded from the selection process.
- SCE: 25,423 of 100,429 (25 percent) unique inactive AMP participant accounts who enrolled in 2022 or 2023 were excluded from the selection process.

SDG&E and SoCalGas did not indicate whether customers were inactive in their initial samples of AMP participants and these customers had all data required for selection, so these customers were included in the sample selection, but were removed later in the analysis if sufficient data were not available for the analysis.¹

- SDG&E: 25,455 of 88,386 (29 percent) unique accounts enrolled in AMP from the inception of the program through September 2025 became inactive customers.
 - SoCalGas: 13,918 of 175,869 (eight percent) unique accounts who enrolled in 2022 or 2023 became inactive customers.
2. Collections Analysis: The IOUs have different policies regarding the implementation of collections actions and apply different types of collections actions. Some of the collections actions are more indicative of the risk of disconnection than others. However, data were not available at the level of specificity needed to make such distinctions between different collections activities.
 3. Disconnections Analysis: A key goal of AMP was to reduce residential disconnections. However, due to the pandemic, disconnections were halted by Commission order beginning in March 2020, and several extensions to the moratorium prevented disconnections until September 30, 2021. Because of additional protection from disconnection for three months following utility application of California Arrearage Payment Program (CAPP) to customers' accounts, IOUs did not ramp up disconnections until May 2023. Each IOU had a different date for re-starting disconnections following the end of the pandemic.

Customers are prevented from being disconnected while on a payment plan, which includes AMP. Additionally, the CPUC placed IOU-specific caps on the number of disconnections that each IOU can implement, further impacting the disconnection rate.

¹ The data request did not specifically ask for an indication of whether the customer had active utility service.

Because of these factors, it was challenging to assess the impact of AMP on residential disconnections, so the evaluation also assesses bill payment, arrearages, and collections actions to determine the *risk of disconnection*, as well analyzing disconnections.

4. **Income Data:** Household income data was often missing and of mixed quality. Therefore, conclusions regarding poverty level and energy burden interactions with AMP effectiveness are suggestive but not conclusive.
5. **Literature Review:** There are few publicly available evaluations of arrearage forgiveness programs. The search for evaluations found only two publicly available studies that were not completed by APPRISE. These two studies did not provide sufficient information to assess the meaning of the impact results. Therefore, the literature review only includes studies completed by APPRISE, most of which have not been publicly released. This limits the ability to compare this study to others that may have been done with alternative methods.

Methodology

The evaluation implemented a quasi-experimental design to assess the impact of AMP on bill payment, collections actions, arrearages, and energy usage. The analysis used a difference-in-differences approach to provide the best possible estimate of AMP's impact.

- **Treatment Group:** The treatment group is a representative subset of AMP enrollees with active utility accounts at the time of the analysis. Customers who enrolled in AMP in 2022 and 2023 and who had active utility service were randomly selected for analysis to allow for the availability of pre- and post-participation data. A sample was used rather than all AMP participants because of the extremely large program size. The sample is not representative of AMP enrollees whose service was discontinued during the evaluation period.
- **Comparison Group:** The comparison group was selected to best match the AMP enrollees whose accounts remained active over the evaluation period. Each comparison customer is a one-to-one match with an AMP participant (and can match to more than one participant). The purpose is to understand what the experiences and behaviors would have been for customers if they had not enrolled in the program, i.e., the counterfactual, so that the impact of the program can be estimated. This is important because some of the changes experienced by participants will not be due to the program, such as changes in IOU rates or in IOU collections practices.

AMP Evaluation Findings

Key findings from the evaluation are summarized below, followed by responses to the evaluation research questions. All findings include customers who had active utility accounts at the time of sample selection. The evaluation results are not representative of **all** AMP enrollees, but of AMP enrollees who maintained their utility service for at least 12 months following enrollment for the 2023 enrollees and at least 24 months following enrollment for the 2022 enrollees.

- **Bill Payment:** The selected sample of AMP participants were estimated to improve their on-time bill payment and the percent of the bill amount paid as compared to the comparison group, but the improvements drop off significantly in months 13 to 24 after AMP enrollment.

- The selected AMP participants were estimated to increase the average number of on-time payments, defined as payments made by the due date with no past due balance, by 4.1 payments (2022 enrollees) and by 4.5 payments (2023 enrollees) in months one to 12 after AMP enrollment and by 1.4 payments in months 13 to 24 after AMP enrollment (2022 enrollees).
 - The selected AMP participants were estimated to have a 22 percentage point net increase (2022 enrollees) and a 27 percentage point net increase (2023 enrollees) in the percentage who made ten or more on-time payments in the 12 months after AMP enrollment and a seven percentage point net increase in months 13 to 24 after AMP enrollment (2022 enrollees).
 - The selected AMP participants were estimated to increase the percent of their bills paid by 14 percentage points (2022 enrollees) and three percentage points (2023 enrollees) in months one to 12 after AMP enrollment and by eight percentage points in months 13 to 24 after AMP enrollment (2022 enrollees).
 - For the selected sample of program participants with active accounts in 2022 and 2023, AMP was estimated to have greater impacts on bill payment for SCE customers, customers not on PIPP, CARE participants, customers who remained on AMP longer, customers with higher starting arrearages, and customers with income at higher poverty levels. While there were some differences for other subgroups, these differences were not consistent across all of the bill payment metrics that were analyzed.
- **Arrearage Forgiveness:** The selected sample of AMP participants were estimated to receive a significant amount of arrearage forgiveness, averaging \$537 for all 2022 AMP enrollees and \$876 for 2023 AMP enrollees. Customers enrolled for longer received significantly higher amounts of forgiveness. The research estimated that 20 percent of 2022 AMP enrollees and 15 percent of 2023 AMP enrollees completed AMP by having all of their arrearages forgiven.
 - AMP forgives 1/12 of arrearages each month that participants pay their bill on time and in full (or when they make up missed payments). The 2022 AMP enrollees with active accounts over the analysis period were estimated to receive an average of 6.2 arrearage forgiveness credits in the 12 months after enrollment and 2023 AMP enrollees were estimated to receive an average of 7.0 credits.
 - For the selected sample of program participants with active accounts in 2022 and 2023, SCE customers, PIPP participants, CARE participants, CAPP recipients, customers who did not receive LIHEAP, customers enrolled in AMP for longer, customers with larger starting arrearages, and customers with higher bills were estimated to receive more arrearage forgiveness.
 - Longer enrollment in AMP, higher bill amounts after enrollment, and PIPP participation were associated with a higher percentage of AMP arrearages forgiven. In contrast, participation in the other assistance programs (CAPP, FERA, or LIHEAP) or having higher arrearages were associated with a lower percentage of AMP arrearages forgiven.
- **Arrearages:** The 2022 AMP participants who maintained active accounts for the evaluation period were estimated to reduce their arrearages by nearly \$600 more than the comparison group, somewhat more than mean AMP arrearage forgiveness received (\$537). Participants who are successful on the program are expected to reduce their arrearages by more than the nonparticipants. While the research estimated that 22 percent of the 2022 AMP enrollees had no arrearages 24 months after AMP enrollment, 16 percent of the comparison group had no arrearages at that time.

The selected sample of 2023 AMP participants were estimated to reduce their arrearages by \$824 more than the comparison group, somewhat less than mean AMP arrearage forgiveness received (\$876). While the research estimated that 33 percent of 2023 AMP enrollees had no arrearages 12 months after AMP enrollment, nine percent of the comparison group had no arrearages at this point.

- For the selected sample of program participants with active accounts in 2022 and 2023, SDG&E participants, customers enrolled in AMP for longer, customers with higher starting arrearages, and customers at higher poverty levels were estimated to have the greatest net reductions in arrearages. Customers with higher energy burdens had the highest starting arrearages and the largest reductions in arrearages.
 - The evaluation plan proposed that the program would be deemed effective in reducing arrearages if there were statistically significant net reductions in arrearages of at least \$200 or 20 percent. The percentage reduction for 2022 enrollees was estimated to be 49 percent (\$583/\$1181) in the first year after enrollment and 51 percent in the second year after enrollment (\$597/\$1181). The percentage reduction for 2023 enrollees was estimated at 52 percent (\$824/\$1,580). Based on these measures, the program was successful in reducing arrearages in the first and second year after AMP enrollment.
- **Collections Actions: AMP was estimated to reduce the percentage of customers that experienced one or more collections actions, for customers with active accounts over the evaluation period.**
 - The selected sample of AMP participants were estimated to have an 11 percentage point net reduction (2022 enrollees) and a 26 percentage point net reduction (2023 enrollees) in the percentage who had one or more collections actions in the 12 months after AMP enrollment and a five percentage point net reduction in months 13 to 24 after AMP enrollment (2022 enrollees).
 - The evaluation plan proposed that statistically significant net reductions of at least five percentage points (in the risk of disconnection) will be assessed to conclude that the program was effective. Based on this metric regarding collections actions, the program is assessed to be effective.
 - For the selected sample of program participants with active accounts in 2022 and 2023, PG&E and SDG&E customers, customers not on PIPP, CARE participants, customers enrolled in AMP for longer, and customers at higher poverty levels were estimated to have the largest net reductions in the percentage with one or more collections actions.
- **Disconnections: Based on the selected sample of program participants, AMP was estimated to result in a net reduction in the percentage of customers that experienced one or more disconnections (however, while on AMP customers cannot be disconnected, so this influences the disconnection rate).**
 - The selected sample of AMP participants were estimated to have a two percentage point net reduction (2022 enrollees) and a three percentage point net reduction (2023 enrollees) in the percentage who had one or more disconnections in the 12 months after AMP enrollment and a three percentage point net reduction in months 13 to 24 after AMP enrollment (2022 enrollees).
 - The evaluation plan proposed that statistically significant net reductions of at least five percentage points (in the risk of disconnection) will be assessed to conclude that the program was effective. Based on this metric regarding disconnections, the program is not assessed to be effective. However, the smaller reduction in disconnections is also due to the low percentage of

customers with disconnections prior to enrolling in AMP due to moratoriums and limits on disconnections and, for this reason, the evaluation plan stated that other measures of the risk of disconnection would also be assessed.

- For the selected sample of program participants with active accounts in 2022 and 2023, PG&E and SDG&E customers, customers not on PIPP, CARE participants, customers enrolled in AMP for longer, and customers at higher poverty levels were estimated to have the largest net reductions in the percentage with one or more disconnections.
- **Energy Usage: There were no statistically significant changes in mean weather-normalized electric or gas usage from the year before AMP enrollment to the year after AMP enrollment for 2022 AMP enrollees overall (but there were some estimated reductions in electric usage for SCE and SDG&E customers), and small, statistically significant, estimated net reductions in usage for 2023 AMP enrollees.**
- **Differential Impacts: For the selected sample of program participants with active accounts in 2022 and 2023, some groups of participants were estimated to have greater impacts from AMP participation. Potential reasons for these differences are discussed below.**
 - SCE Customers: AMP was estimated to have greater impacts on improved bill payment for SCE customers than for customers of other IOUs. Part of this difference is due to the fact that the SCE comparison group had less improvement in the post AMP enrollment period than the other comparison groups, so the net impact for SCE was a larger improvement. This means that the SCE customers were estimated to have done far worse in terms of bill payment if they had not enrolled in AMP. Additionally, SCE was more likely to disconnect customers than the other IOUs, so these customers may have placed more importance on receiving arrearage forgiveness.
 - PG&E and SDG&E participants were estimated to have larger reductions in the percentage with collections actions and disconnections than the other IOUs. Their comparison groups were estimated to have larger increases in these indicators, so their net reduction was greater. These IOUs may have been more active in implementing these collections practices.
 - PIPP Nonparticipants: AMP was estimated to have greater impacts on improved bill payment, and greater reductions in the percentage with collections actions and disconnections for PIPP nonparticipants as compared to PIPP participants. This is also because of relatively poorer performance of comparison group customers who were not enrolled in PIPP, compared to those who were enrolled in PIPP.

PIPP nonparticipants were estimated to have greater reductions in the percent with collections actions and disconnections. This is also because customers not on PIPP had large increases in the percentage with collections actions and disconnections, so the net reduction for PIPP nonparticipants was greater.
 - PIPP Participants: These customers received more arrearage forgiveness and have a higher percentage of their arrearages forgiven. This is related to their PIPP discounts which enabled them to pay more of their bills and receive more arrearage forgiveness.
 - CARE Participants: AMP was estimated to have greater impacts on improved bill payment, reductions in the percentage with collections actions, and reductions in the percentage with disconnections for CARE participants as compared to FERA participants. CARE participants were also estimated to receive more arrearage forgiveness and a higher percentage of their arrearages forgiven than FERA participants. This is likely related to the greater discounts that CARE participants receive on their energy bills.

- CAPP Participants: These customers were estimated to receive more arrearage forgiveness than non-CAPP participants because some utilities credited the CAPP payments toward the monthly payment obligation, and that made the customers eligible for arrearage forgiveness. CAPP participants were estimated to have a lower percentage of their arrearages forgiven because they had arrearages removed through CAPP instead of AMP, and because they had higher starting arrearages.
- LIHEAP Non-Recipients: These customers were estimated to receive more arrearage forgiveness than LIHEAP recipients and a higher percentage of their arrearages forgiven. This may be because the more payment-troubled customers were more likely to apply for LIHEAP as they needed additional bill payment assistance.
- Higher Starting Arrearages: AMP was estimated to have greater impacts on improved bill payment for customers with higher starting arrearages. This is because these customers had worse bill payment prior to AMP enrollment.
Customers with higher starting arrearages were estimated to receive more arrearage forgiveness because each arrearage forgiveness credit received was larger.
- Higher Bills: These customers were estimated to receive more arrearage forgiveness and have a higher percentage of their arrearages forgiven. They received more arrearage forgiveness because they started out with higher arrearages.
- Higher Poverty Levels: AMP was estimated to have greater impacts on improved bill payment, and greater reductions in the percentage with collections actions and disconnections for customers at higher poverty levels. This is likely because these customers with higher incomes had greater ability to pay their utility bills.
Customers at higher poverty levels had the greatest net reductions in arrearages because they started with the highest levels of arrearages.

Table ES-2 provides summary responses to the AMP Evaluation research questions. Findings presented below are based on a sample of participants whose accounts remained active over the evaluation period and similar nonparticipants who formed a comparison group.

Table ES-2
AMP Evaluation Research Questions and Findings

1	<p>To what extent are there differences in bill payment and disconnection related events between similar nonparticipants and the sample of AMP participants who remained in the program for 12 months or longer (participants cannot receive more than 12 months of arrearage forgiveness)?</p> <ul style="list-style-type: none"> On-Time Bill Payment: AMP participants who remain in the program for 12 months or longer were estimated to have a net increase of 7.5 to 7.8 on-time bill payments in months 1-12 after enrollment and a net increase of 3.2 on-time bill payments in months 13-24 after enrollment. Percent of Bill Paid: AMP participants who remain in the program for 12 months or longer were estimated to have a net increase in the percent of bill paid of 12 to 30 percentage points in months 1-12 after enrollment and of 17 percentage points in months 13-24 after enrollment. Collections Activities: AMP participants who remain in the program for 12 months or longer were estimated to have a net reduction in the percent with one or more collections actions of 22 to 50 percentage points in months 1-12 after enrollment and of 18 percentage points in months 13-24 after enrollment. Disconnections: AMP participants who remain in the program for 12 months or longer were estimated to have a net reduction in the percent with one or more disconnections of 3 percentage points in months 1-12 after enrollment and of 4 percentage points in months 13-24 after enrollment. (The AMP participants were not eligible for disconnection in months 1-12 while on AMP and only a few AMP participants were disconnected following the end of the 12 months, particularly since the IOUs did not fully return to disconnecting accounts until the last quarter of the evaluation period.)
2	<p>To what extent are there differences in bill payment and disconnection related events between similar nonparticipants and the sample of AMP participants who remained in the program for (at least) 6 months?</p> <ul style="list-style-type: none"> On-Time Bill Payment: AMP participants who remain in the program for 6-11 months were estimated to have a net increase of 4.7 to 5.2 on-time bill payments in months 1-12 after enrollment and a net increase of 1.2 on-time bill payments in months 13-24 after enrollment. Percent of Bill Paid: AMP participants who remain in the program for 6-11 months were estimated to have a net increase in the percent of bill paid of 15 percentage points (for 2022 enrollees, but no significant increase for 2023 enrollees) in months 1-12 after enrollment and of 9 percentage points in months 13-24 after enrollment. Collections Activities: AMP participants who remain in the program for 6-11 months were estimated to have a net reduction in the percent with one or more collections actions of 18 to 29 percentage points in months 1-12 after enrollment and of 7 percentage points in months 13-24 after enrollment. Disconnections: AMP participants who remain in the program for 6-11 months were estimated to have a net reduction in the percent with one or more disconnections of 3 to 5 percentage points in months 1-12 after enrollment and of 4 percentage points in months 13-24 after enrollment.
3	<p>What are key differentiators between participants and similar nonparticipants in terms of energy use, bill amount, and bill payment practices?</p> <ul style="list-style-type: none"> Energy Use: There were no statistically significant changes estimated in mean weather-normalized electric or gas usage from the year before AMP enrollment to the year after AMP enrollment for 2022 AMP enrollees overall (but there were some reductions estimated in electric usage for SCE and SDG&E customers – annual reduction of 1% to 2%), and small, statistically significant, net reductions in usage estimated for 2023 AMP enrollees (1% annual electric and gas usage reduction). Bill Amount: There was a small net reduction in energy bills for AMP participants as compared to nonparticipants with an annual average reduction of \$84 to \$144 or 5% to 8% estimated from the 12 months before AMP enrollment to the 12 months after AMP enrollment. Bill Payment: AMP participants were estimated to increase the amount paid (including customer payments and LIHEAP assistance) and the percent of the bill paid from the year before AMP enrollment to the 12 months after enrollment. The net change in the first 12 months after enrollment was estimated as a net increase of \$197 to \$220 paid and a 3% to 14% net increase in the percent of bill paid. The net change in months 13-24 after enrollment was estimated as a net increase of \$80 paid and an 8% net increase in the percent of bill paid.

4	<p>How much did participants take advantage of bill payment resources (such as enrollment in the Low-Income Home Energy Assistance Program (LIHEAP) and IOU-sponsored programs) that assist with bill payments or provide arrearage forgiveness relative to similar nonparticipating customers?</p> <ul style="list-style-type: none"> • LIHEAP: AMP participants had no significant change in receipt of LIHEAP in the 12 months after AMP enrollment as compared to the comparison group. There was an overall estimated increase of two percentage points in the percent that received LIHEAP in months 13 to 24 after enrollment. • CAPP: There were mixed findings regarding AMP participants' receipt of CAPP. This has to do with the timing of available CAPP assistance and how the IOUs credited the CAPP assistance to customers' accounts.
5	<p>Why do the AMP programs have high involuntary removal rates?</p> <ul style="list-style-type: none"> • Almost all of the AMP participants who left the program before completion were removed for nonpayment. (Customers who miss two consecutive payments or three nonconsecutive payments are removed from AMP.) • Some respondents (about 20%) to the AMP participant survey reported that they did not understand the consequences of not paying the full monthly bill on time.
6	<p>What AMP program improvements can be made to help more participants complete the AMP program?</p> <p>We recommend that the CPUC requires the following changes and that the IOUs implement these changes as soon as possible.</p> <ul style="list-style-type: none"> • AMP Eligibility: Require customers to have made at least one payment in the past six months to enroll in AMP (instead of the current requirement for one payment in the past 24 months). • AMP Removal: Allow disconnection of AMP participants who become past due instead of removing them from AMP for missed payments. Disconnections should align with the IOU's current disconnection threshold. Unenroll AMP participants at the time of disconnection. • IOU Bills: IOUs should send an insert with their monthly bills that includes the original AMP arrearage, the amount forgiven each month if they pay their bill, the amount forgiven to date, and the amount remaining. • IOU Communication: IOUs should remind AMP participants one week before the bill date about the upcoming due date via text, email, and automated phone call. IOUs should also contact customers via these methods if they miss a bill due date. These changes should only be made to the extent permitted by law and if customers have opted into these communications methods. (IOUs should review communication methods that customers have agreed to at the time of AMP enrollment to help ensure that customers receive messages about upcoming and missed bill dates.) • Disconnections: The IOUs should be required to disconnect all customers in alignment with the IOU's current disconnection threshold if they do not have a documented medical condition. Prior to implementing this revised policy, there should be a broad education campaign to inform customers about available assistance and when the new policy will take effect. The new policy should be phased in to start with customers with the highest levels of arrearages and then work down to customers who just meet the IOU disconnection threshold.

7	<p>Among AMP participants, to what extent are there meaningful differences in payment behaviors during AMP enrollment and post program based on:</p> <ul style="list-style-type: none"> • IOU-specific practices, such as late notices and customer communications: There are differences in IOU practices related to notices and communication, but because there are larger differences in customer bills and arrearages, it is not possible to relate differences in these practices to differences in payment behaviors. • Length of time enrolled in AMP (3, 6, and 12 months): Customers enrolled in AMP for longer, have greater improvements in their bill payment. This is by definition, as if they do not pay their bills, they are removed from AMP. • Post AMP enrollments: Only a small part of the estimated improvement in payment behavior was retained in months 13 to 24 after AMP enrollment. • Amount of pre and post arrearages: AMP had greater estimated impacts on bill payment for customers with higher starting arrearages. These customers had larger reductions in arrearages but still had higher arrearages after 12 and 24 months because they started with so much higher arrearages. • Average utility bill: Customers with higher bills did not have consistent differences in bill payment than customers with lower bills. • Reasons for de-enrollment: Almost all customers de-enrolled because they did not pay their bills or completed the program, so this is not a factor in bill payment. • AMP understanding, expectations, and requirements: AMP participants who remembered that they received an encouragement letter from the IOU were estimated to make more on-time payments and to have larger arrearage reductions than those who did not remember receipt of the letter. Customers who completed AMP reported a greater understanding of AMP rules than those who did not complete AMP. • Demographics: AMP participants at higher poverty levels had greater estimated net improvements in their bill payment after enrolling in AMP.
8	<p>To what extent do AMP rules support program goals?</p> <p>We recommend the CPUC requires the following changes to AMP rules and that the IOUs implement these changes as soon as possible.</p> <ul style="list-style-type: none"> • Eligibility – CARE/FERA Participation: Customers are permitted to enroll in AMP if they self-certify that they are eligible for CARE or FERA. They may be found to be ineligible for CARE/FERA but the IOUs are required to keep the customers enrolled in AMP. <i>Customers should be required to complete CARE post enrollment verification prior to enrolling in AMP.</i> • Eligibility – Bill Payment: Customers are eligible to enroll in AMP if they made one payment in the previous 24 months. This does not show a commitment or ability to pay the energy bill. <i>Customers should be required to make at least one payment in the past six months to enroll in AMP.</i> • AMP Removal – Late and Missed Payments: Customers are removed from AMP if they miss two consecutive payments (or make them late or less than in full) or if they miss three non-consecutive payments (or make them late or less than in full). <i>Customers should be permitted to make up missed payments and remain on the program. If they bring their current balance to date, they should not be removed from AMP, even if they missed payments during AMP participation. However, allow disconnection of AMP participants if they incur additional post-enrollment arrearages above the level that aligns with the IOU's current disconnection threshold.</i> • AMP Removal – Assistance: <i>Prior to removing customers from AMP, the IOUs should send the customer a letter, email, or text, with information on a local CBO that they can reach out to for energy assistance from LIHEAP or other available resources. These communications should only be made to the extent permitted by law and if customers have opted into these communications methods.</i> • AMP Re-Enrollment: Customers are permitted to re-enroll in AMP after a 12-month stay-out period. This allows customers to receive arrearage forgiveness, build up additional arrearages, and then re-enroll in AMP. <i>There should be limits on re-enrollment and additional arrearage forgiveness because the current approach provides disincentives for bill payment. Customers should be limited to participating in AMP one time and only participate again after at least five years have elapsed.</i>

9	<p>What is the average amount of arrearage forgiven by: <u>The estimates, based upon AMP participants with active accounts over the evaluation period, were as follows.</u></p> <ul style="list-style-type: none"> • IOU <ul style="list-style-type: none"> ○ PG&E average forgiveness was \$791 (2022 enrollees) and \$1,070 (2023 enrollees) ○ SCE average forgiveness was \$885 (2022 enrollees) and \$1,395 (2023 enrollees) ○ SDG&E average forgiveness was \$672 (2022 enrollees) and \$1,151 (2023 enrollees) ○ SoCalGas average forgiveness was \$303 (2022 enrollees) and \$459 (2023 enrollees) • Length of time in arrearage: <ul style="list-style-type: none"> ○ <3 months on AMP average forgiveness was \$291 (2022 enrollees) and \$35 (2023 enrollees) ○ 3-6 months on AMP average forgiveness was \$316 (2022 enrollees) and \$205 (2023 enrollees) ○ 7-11 months on AMP average forgiveness was \$718 (2022 enrollees) and \$1,069 (2023 enrollees) ○ 12+ months on AMP average forgiveness was \$942 (2022 enrollees) and \$1,259 (2023 enrollees) • Starting Arrearages <ul style="list-style-type: none"> ○ <\$1,000 starting arrearage average forgiveness was \$353 (2022 enrollees) and \$356 (2023 enrollees) ○ \$1,000-\$2,999 starting arrearage average forgiveness was \$920 (2022 enrollees) and \$971 (2023 enrollees) ○ \$3,000+ starting arrearage average forgiveness was \$2,043 (2022 enrollees) and \$2,732 (2023 enrollees) <p>(Note: 2022 enrollee average forgiveness amount includes months 1-24 after enrollment, which may include an additional AMP enrollment. 2023 average forgiveness amount includes months 1-12 after enrollment.)</p>
10	<p>To what extent does AMP result in cost shifting from participating customers to nonparticipants?</p> <ul style="list-style-type: none"> • We estimate an average annual ratepayer subsidy of \$5.31 to \$6.16 for gas customers and \$8.34 to \$13.13 for electric customers. The estimated average annual ratepayer subsidy for both fuels is \$13.65 to \$19.29. <p>Considering program benefits and costs, should the CPUC modify, extend, or discontinue AMP?</p> <ul style="list-style-type: none"> • AMP should continue as a permanent program with some modifications. Additional information on recommended modifications is included earlier in this table and in the recommendations section.

Recommendations

The evaluation found that AMP had positive impacts for customers who retained energy services throughout the evaluation period. While the research does not provide findings for all AMP participants, it does show that customers who participate in AMP and retain energy services have better outcomes than those who do not participate in AMP. As with all programs, not all participants are successful. However, given the findings of this research and other studies of low-income energy issues, we make the following recommendations for how to best serve low-income customers.

- **Affordability:** Provide a monthly bill that is targeted to an affordable energy burden (percent of income spent on energy).
- **Arrearage Forgiveness:** Forgive arrearages that were incurred prior to provision of an affordable bill and prior to implementation of robust collection practices (following through with disconnections of customers who do not pay their bills).
- **Collections Practices:** Adhere to documented and consistent collections practices so customers understand that there are consequences for failure to pay their energy bills.

The following specific AMP recommendations are made. **We recommend that the CPUC require these changes to AMP and that the IOUs implement these changes as soon as possible.**

1. **AMP Continuation** – For customers who remained active through the evaluation period, the program was estimated to have positive impacts on bill payment, collections actions, and arrearages. However, impacts in months 13 to 24 after AMP enrollment were much smaller than those in months one to 12 after enrollment.

Customers who are not able to pay their bill and build up arrearages will not be able to pay off those arrearages that they accrued. If the arrearages keep increasing and there are strict limits on disconnections, the customer has no incentive to pay the bill. The customer will continue to build up arrearages to the level that they will not be able to pay them off. Therefore, it is important that low-income customers have affordable bills and a method to pay off the arrearages that they accrued.

Recommendation: The CPUC should require that AMP continues as a permanent program with some modifications.

2. **Eligibility – CARE/FERA Participation:** Customers are permitted to enroll in AMP if they self-certify that they are eligible for CARE or FERA. They may be found to be ineligible for CARE/FERA but the IOUs are required to keep the customers enrolled in AMP. There is a concern that customers will sign up for CARE even if they are not eligible, because of the large arrearage forgiveness that is available to them through AMP enrollment. Therefore, it is important to ensure that new CARE enrollees with arrearages are eligible for the program.

Recommendation: The CPUC should require that customers complete CARE post enrollment verification prior to enrolling in AMP.

3. **Eligibility – Bill Payment:** Customers are eligible to enroll in AMP if they made one payment in the previous 24 months. This does not show a commitment or ability to pay the energy bill, which is needed for the customer to be successful on AMP.

Recommendation: The CPUC should require that customers must make at least one payment in the past six months to enroll in AMP.

4. **AMP Removal – Late and Missed Payments:** Customers are removed from AMP if they miss two consecutive current bill payments (or make them late or less than in full) or if they miss three non-consecutive payments (or make them late or less than in full). With these rules, some customers who are making a good faith effort to make their utility payments and are bringing their account current during the year will be removed from AMP.
Recommendation: The CPUC should require disconnection of AMP participants who become past due instead of requiring that they are removed from AMP for missed payments. Disconnections should align with the IOU's current disconnection threshold. AMP participants should be unenrolled at the time of disconnection.
5. **AMP Removal – Assistance:** Customers who are involuntarily removed from AMP need additional assistance with their utility bills.
Recommendation: The CPUC should require that prior to removing customers from AMP, the IOUs send the customer a letter, email, or text, with information on a local CBO that they can reach out to for energy assistance from LIHEAP or other available resources. These communications should only be made to the extent permitted by law and if customers have opted into these communications methods.
6. **AMP Re-Enrollment:** Customers are permitted to re-enroll in AMP after a 12-month stay-out period. This allows customers to receive arrearage forgiveness, build up additional arrearages, and then re-enroll in AMP. A stay out provision of five years (with a new disconnection policy) will ensure that customers have re-established good payment patterns for some time and are only re-entering AMP after facing additional hardship.
Recommendation: The CPUC should place limits on re-enrollment and additional arrearage forgiveness because the current approach provides disincentives for bill payment. The CPUC should require that customers are limited to participating in AMP one time and only participate again after at least five years have elapsed.
7. **IOU Bills:** Some IOUs include no AMP information on the monthly bills and some IOUs are developing the capability to include AMP progress on monthly bills. Information on AMP forgiveness is important for customers to understand their status in the program and their progress toward having all of their arrearages forgiven. While this information is currently included on quarterly updates sent by the IOUs, it is important for customers to have this reinforcement each month and to have a more recent understanding of their status in the program.
Recommendation: The CPUC should require that IOUs provide bill inserts with customer monthly bills that include the original AMP arrearage, the amount forgiven each month if they pay their bill, the amount forgiven to date, and the amount remaining.
8. **IOU Communication:** Many AMP customers miss bill payment due dates and do not fully understand the requirement to pay their bill on time and in full each month.
Recommendation: The IOUs should remind AMP participants one week before the bill due date about the upcoming due date via methods that the customers have agreed to (including text, email, and automated phone call). IOUs should also contact customers via these methods

if they miss a bill due date. These communications should only be made to the extent permitted by law and if customers have opted into these communication methods.

Recommendation: IOUs should review communication methods that customers have agreed to at the time of AMP enrollment to help ensure that customers receive messages about upcoming and missed bill dates.

9. Disconnections: The CPUC places limits on the number of customers who can have their services disconnected. This provides disincentives for bill payment and increases costs for ratepayers who pay their bills.

Recommendation: The CPUC should require that the IOUs disconnect all customers in alignment with the IOU's current disconnection threshold if they do not have a documented medical condition. Prior to implementing this revised policy, there should be a broad education campaign to inform customers about available assistance and when the new policy will take effect. The new policy should be phased in to start with customers with the highest levels of arrearages and then work down to customers who just meet the IOU disconnection threshold.

GLOSSARY OF TERMS

Term	Definition
Active Account	A customer who is currently receiving service from the IOU.
AMP (Arrearage Management Plan)	A program for eligible CARE or FERA customers that forgives one-twelfth (1/12) of a participant's past-due balance each month they make an on-time payment. Pre-enrollment arrearages are "frozen" and gradually forgiven over the program's duration.
Analysis Group	A smaller subset of the selected sample used in the final impact analysis. This group has sufficient billing data for the periods needed to measure program impact.
Arrearage Forgiveness Credit	The amount of arrearages that are forgiven each month when the customer is on AMP and pays their bills on time and in full. This is equal to the starting arrearages at AMP enrollment divided by 12. However, if starting arrearages are over \$8,000, then the monthly arrearage forgiveness is \$8,000/12. If a customer misses a payment and then makes it up in full, they will receive two arrearage forgiveness credits that month.
Arrearages	Past-due charges that a customer owes from prior billing periods. In AMP, pre-enrollment arrearages are frozen (no collections are conducted for these arrears) while the participant makes on-time payments to earn forgiveness.
Attrition	The process of removing customers from the analysis due to missing or insufficient data. A customer in the selected sample may be excluded from the analysis group if they lack sufficient billing or usage data.
Bill Coverage Rate / Percent of Bill Paid	The percentage of a customer's current bill that is covered by payments and assistance credits (this does not include arrearage forgiveness). A coverage rate over 100% means that the customer paid more than their current charges to reduce their past due balance. It is calculated as $(\text{Total Credits} \div \text{Total Charges}) \times 100$.
CAPP (California Arrearage Payment Program)	A statewide program that provided credits to reduce customer arrearages incurred during the COVID-19 pandemic.
CARE (California Alternate Rates for Energy)	A program that provides a 30–35% discount on electric bills and a 20% discount on gas bills for customers with household income up to 200% of the Federal Poverty Guidelines.
Comparison Group	Nonparticipants who are eligible for AMP and are matched to be as similar as possible to AMP participants for impact measurement.
Federal Poverty Guidelines (FPG) / Federal Poverty Level (FPL)	Income thresholds set annually by the U.S. government to determine eligibility for certain assistance programs, adjusted for household size. The lower the percentage of FPG, the lower the household income compared to the standard threshold and the poorer the household.
FERA (Family Electric Rate Assistance Program)	A program that provides an 18% discount on electric bills for customers with household incomes between 200% and 250% of the Federal Poverty Guidelines.
Inactive Account	A customer who is not currently receiving service from the IOU because they were disconnected, moved, or deactivated the account for some other reason.
Low-Income Home Energy Assistance Program (LIHEAP)	A federally funded program that provides credits on utility bills for eligible low-income households.
On-Time Payment	A payment in full made by the bill due date with no past-due charges other than any frozen arrearages under AMP.

Term	Definition
PIPP (Percentage of Income Payment Plan) Program	A pilot program that caps monthly energy bills at two levels for customers with annual household income below 100% of FPG and those between 101-200% of FPG.
Post 1 Period	Months 1 to 12 after AMP enrollment.
Post 2 Period	Months 13 to 24 after AMP enrollment.
Pre Period	Months 1 to 12 before AMP enrollment.
PRISM (PRInceton Scorekeeping Method)	A statistical procedure that processes billing data to produce a weather-adjusted Normalized Annual Consumption (NAC) index, which is the customer's annualized weather-normalized energy usage.
Risk of Disconnection	The likelihood that a customer will experience involuntary service termination due to nonpayment of utility bills, assessed through payment behavior, arrears, and collections activity. These factors can provide an estimate of customer vulnerability to disconnection, as shutoffs were restricted by moratoria, CAPP protections, and IOU disconnection limits. Customers with worse payment behaviors, higher arrearages, and more collections actions are at higher risk of being disconnected.
Selected Sample	The group of AMP participants randomly selected for inclusion in the analysis from the total participant population of 2022 and 2023 AMP enrollees.
Shortfall	The difference between what the customer should have paid for utility bills during the year and what is actually paid. This does not include past due amounts. It is calculated as Total Charges – Total Credits.
Total Charges	The total amount a customer is charged for energy usage and other miscellaneous fees after all applicable discounts have been applied. This does not include past due amounts or payment arrangements.
Total Credits	All payments, assistance credits (such as LIHEAP), and other miscellaneous credits applied to a customer's account, excluding arrearage forgiveness, for the year.
Treatment Group	AMP participants who enrolled in the program in 2022 or 2023, with sufficient billing data to be included in the analysis.
Usage Analysis	Analysis of how participants' energy usage changes compared to the Comparison Group, based on a subset of the analysis group with sufficient usage data.

IOU Comments

This section provides comments from the IOUs on this evaluation report. The comments represent the views of the IOUs, but do not necessarily reflect the opinions of APPRISE.

A. PG&E

PG&E appreciates APPRISE's diligent and thoughtful efforts in completing the Arrearage Management Plan (AMP) Final Evaluation Report (Report) on schedule. This was a complex, statewide evaluation with multiple challenges, and APPRISE demonstrated professionalism in navigating these throughout the process.

As noted in the Report's executive summary and limitations section, the evaluation results are not representative of all AMP enrollees. Specifically, the analysis includes only customers who maintained continuous utility service for at least 12 months (for 2023 enrollees) or 24 months (for 2022 enrollees). The exclusion of inactive accounts—many of which may have been disconnected due to non-payment—introduces a selection bias that likely overstates program success. Accordingly, key metrics such as on-time payments, arrearage forgiveness, reductions in arrearage levels, collection actions, and disconnections may be positively skewed.

For PG&E, 103,794 of 378,051 AMP participants (over 27 percent) from 2022 and 2023 were excluded from the sampling frame due to service discontinuance. Similar exclusion rates were observed across other IOUs. Additionally, the COVID-19 disconnection moratorium and subsequent protections further complicate the assessment of AMP's impact on residential disconnections.

Given these limitations—including inconsistent collections data across IOUs, missing or unreliable income data, and a narrow literature review base—PG&E recommends that the evaluation's findings and recommendations be interpreted with appropriate caution. The Report's conclusions may not fully capture the experiences or outcomes of the broader AMP participant population.

Finally, the Report includes general low-income policy recommendations (p. xiii and p. 102).

- **Affordability:** Provide a monthly bill that is targeted to an affordable energy burden (percent of income spent on energy).
- **Arrearage Forgiveness:** Forgive arrearages that were incurred prior to provision of an affordable bill and prior to implementation of robust collection practices (following through with disconnections of customers who do not pay their bills).
- **Collections Practices:** Adhere to documented and consistent collections practices so customers understand that there are consequences for failure to pay their energy bills.

These appear to be based on uncited studies and extend beyond the scope of the Commission-approved AMP research plan. PG&E encourages future evaluations to align more closely with approved scopes and to clearly cite supporting evidence for general policy recommendations.

B. SCE

This report was prepared in collaboration with the CPUC Energy Division and a third-party evaluator, APPRISE. SCE recognizes the extensive effort APPRISE exhibited with their detailed analysis of the impacts of the statewide AMP program. The work that went into this evaluation was evident over the course of the project. This study covers a wide array of evaluation insights related to changes in bill payment behavior, arrearage forgiveness, and changes in collections actions using both qualitative and quantitative data. With that said, SCE is concerned that some of the findings and recommendations of this evaluation are flawed.

Parsing out the impact of AMP is complex due to several interrelated challenges. AMP participants must either be enrolled in CARE or the FERA program, and may also be enrolled in LIHEAP, CAPP, or PIPP. The overlapping programs make it difficult to disentangle the impacts of the AMP program. Additionally, customers can re-enroll after a 12-month stay out period if they complete the program, withdraw from it, or are removed for non-payment of current bills. Allowing for re-enrollment after a year makes it difficult to track outcomes across multiple enrollment cycles.

The report includes a literature review that does not extend beyond non-public studies carried out by APPRISE, potentially limiting its usefulness in this evaluation. APPRISE gleaned findings about eight programs they evaluated, but it is unclear how applicable the implementation strategies of these programs are to California low-income customers with arrears. Part of the benefit of including a literature review is to explore methods that other researchers have used to study similar programs. Unfortunately, this literature review lacks descriptions of diverse methodologies used to analyze the impacts of other arrearage management programs. We understand APPRISE looked for other studies, but noted there were none that were applicable.

The main source of bias in this study comes from the complete exclusion of AMP participants who had accounts that became inactive over the evaluation period. Approximately 25% of SCE's and 27% of PG&E's accounts went inactive in 2022 and 2023 and were therefore dropped from the analysis. If these accounts were closed because the customer could no longer afford service or had to move because of their financial constraints, this analysis excludes the AMP participants who are in the worst condition and therefore the results of the evaluation are biased in favor of the program.

Additionally, results presented by poverty level and by energy burden use a mere fraction of the AMP participants in the analysis. This too results in biased estimates of the AMP Program's performance. SCE cautions the reader of this evaluation to take note of the biases present in this study.

C. SDG&E

SDG&E submits no comments.

D. SoCalGas

SoCalGas submits no comments.

I. Introduction

The California Public Utilities Commission (CPUC or the Commission) approved Rulemaking (R.) 18-07-005 on July 12, 2018, to address residential disconnection rates across California's electric and gas investor-owned utilities. In Decision (D) 20-06-003 on June 16, 2020, the Commission authorized the Arrearage Management Payment Plan (AMP). AMP provides forgiveness of arrearages for residential customers who make on-time bill payments. The CPUC approved the plans of the Large Investor-Owned Utilities' (IOUs); Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison (SCE), and Southern California Gas (SoCalGas) to implement AMP in Resolution E-5114 on December 17, 2020. In D.23-08-049, the CPUC authorized a third-party AMP evaluation. This report presents the findings from the AMP evaluation.

E. *AMP Program and Evaluation Goals*

AMP provides forgiveness of arrearages for eligible residential customers who make on-time bill payments.

The AMP evaluation was directed to assess the extent to which the program achieved its goal of reducing the threat of disconnection and meet the following objectives.

1. Determine the extent to which AMP is effective in reducing and/or eliminating current arrearages.
2. Assess the program's impact on customer bill payment practices.
3. Examine the additional program impacts on key subgroups of customers.
4. Assess program administration and implementation challenges.
5. Make recommendations to the design of the program and assess whether AMP should be discontinued, modified, or extended.

F. *Evaluation Research*

The AMP evaluation included the following research activities. Each activity provided insights that informed the evaluation findings and recommendations.

1. Background Research: APPRISE engaged in a review of the program design, regulatory framework, and marketing materials to develop an understanding of AMP design and implementation.
2. Literature Review: APPRISE examined our previous arrearage forgiveness program evaluations to analyze key program parameters and compare AMP to the other program designs. Citations are not provided because the studies are not publicly available.
3. IOU Interviews: APPRISE conducted written and telephone interviews with IOU program managers to further understand program design and implementation, challenges, and recommendations for AMP refinement.

4. Participant Survey: APPRISE conducted a quantitative 15-minute mixed mode telephone and web survey with a stratified random sample of 760 AMP participants whose accounts remained active over the evaluation period. The survey assessed program marketing, customer knowledge, program understanding, perceived impacts, and recommendations for AMP improvement.
5. AMP Data Analysis: APPRISE analyzed available AMP program data to characterize program participants and inform the impact analysis.
6. Billing and Payment Analysis: APPRISE developed a matched comparison group and implemented a difference-in-differences analysis to develop an estimate of the impact of AMP on bill payment, arrearages, collections actions, disconnections, and energy usage. The analysis examines a stratified, random sample of 2022 and 2023 AMP program enrollees whose accounts remained active over the evaluation period to assess impacts in months one to 12 and months 13 to 24 after AMP enrollment.
7. Cost Analysis: APPRISE analyzed the costs and benefits of AMP.
8. Synthesis: APPRISE synthesized the information from all the evaluation research to assess how well the AMP program achieved its objectives and whether the CPUC should extend, discontinue, or modify the program.

G. Report Contents

Four sections and several appendices follow this introduction.

- Section II – AMP Design and Implementation
- Section III – Research Methodology
- Section IV – AMP Analysis
- Section V – Findings and Recommendations
- Appendices – Detailed Analysis Findings

APPRISE prepared this report for the Joint Investor-Owned Utilities (IOUs), Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric Company (SDG&E), Southern California Edison Company (SCE), and Southern California Gas Company (SoCalGas). 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 the IOUs.

II. AMP Design and Implementation

The California Public Utilities Commission (CPUC or the Commission) approved Rulemaking (R.) 18-07-005 on July 12, 2018, to address residential disconnection rates across California's electric and gas investor-owned utilities. In Decision (D) 20-06-003 on June 16, 2020, the Commission authorized the Arrearage Management Payment Plan (AMP). AMP provides forgiveness of arrearages for residential customers who make on-time bill payments. The CPUC approved the plans of the Large Investor Owned Utilities' (IOUs); Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison (SCE), and Southern California Gas (SoCalGas) to implement AMP in Resolution E-5114 on December 17, 2020.

AMP's goal is to reduce the risk of disconnection from energy services by providing arrearage forgiveness and rewarding on-time bill payments. This program is open to customers who participate in the California Alternate Rates for Energy (CARE) or the Family Electric Rate Assistance Program (FERA). CARE provides a 30 to 35 percent discount on the electric bill and a 20 percent discount on the gas bill for customers with income up to 200 percent of the Federal Poverty Guidelines. FERA provides an 18 percent discount on the electric bill for customers with an income between 200 and 250 percent of the Federal Poverty Guidelines.

A. AMP Design

Customers must meet the following eligibility criteria to be eligible for AMP.²

- Enrolled in CARE or FERA.
- Been a customer of the IOU for at least six months.
- Has had continuous active service. (Closed accounts are not eligible for AMP.)
- Customers of PG&E, SDG&E, and SCE must be at least \$500 in arrears. (PG&E gas only customers must be \$250 in arrears.)
- Customers of SoCalGas must have natural gas bills at least \$250 in arrears.
- A portion of the arrears must be at least 90 days old.
- Customers must have made at least one on-time payment in the past 24 months.
- AMP eligible customers currently on another payment plan may switch to AMP.

AMP provides customers with forgiveness of their unpaid electric and gas utility bills if they pay their current monthly bills on time. The program has the following benefits and requirements.

- Customers receive an arrearage forgiveness credit equal to 1/12 of their starting arrearage balance each month they pay their bill on time.
- The maximum amount of arrearage forgiveness that a customer can receive in a 12-month period is \$8,000.

² Information on AMP is available on the IOUs' websites.

<https://www.pge.com/en/account/billing-and-assistance/financial-assistance/arrearage-management-plan-amp.html>

<https://www.sce.com/save-money/income-qualified-programs/arrearage-management-plans>

<https://www.sdge.com/residential/pay-bill/get-payment-bill-assistance/amp>

<https://www.socalgas.com/billing-payment/assistance-programs/forgiveness>

- Customers who do not make an on-time bill payment in two sequential months are removed from AMP if they do not make up the payment by the next bill due date with an on-time payment of both the current bill and the past due bills.
- Customers who do not make an on-time bill payment in three non-sequential months are removed from AMP.
- Successful and unsuccessful customers can re-enroll in AMP after a 12-month waiting period if they are still eligible for the program.
- Third Party Accounts (customers of Community Choice Aggregators, Core Transport Agent, or Direct Access) can only receive forgiveness for the portion of the arrearage owed to the IOU unless the Third Party voluntarily participates to forgive generation costs.
- Net Energy Metering (NEM) customers, master meter customers, and direct access customers are not eligible for AMP.

B. Design Options from Literature Review

When undertaking this evaluation, it is important to learn from previous arrearage forgiveness programs, the challenges that they faced, and how the lessons learned can be applied to AMP. This section reviews key design parameters from other arrearage forgiveness programs, and how other programs compare to AMP.

There are few publicly available evaluations of arrearage forgiveness programs. The search for evaluations found only two publicly available studies that were not completed by APPRISE. These two studies did not provide sufficient information to assess the meaning of the impact results. Therefore, the literature review only includes studies completed by APPRISE, most of which have not been publicly released. This limits the ability to compare this study to others that may have been done with alternative methods.

- *Bill Payment Assistance:* Most of the other arrearage forgiveness programs reviewed were tied to bill payment assistance that reduces the burden of the customer's monthly energy bill. Because customers are required to make their monthly payments to receive arrearage forgiveness and remain on AMP, it is critical that they can afford their energy bill if they are going to be successful on the program. This is expected to be one important weakness of AMP and a deterrent to participants' success in the program. While customers in California have the CARE and FERA programs to reduce their energy bills, that discount is not tied to the customer's energy burden, so while some customers will have an affordable bill after the application of the discount, others with very low income or very high energy bills will not.

Percentage of Income Payment Plan Programs (PIPP) were implemented around the country to reduce household energy burdens (the percent of income spent on energy) to a designated level and achieve energy affordability for program participants. The way that these programs reach these outcomes is to use each household's income to determine what their energy bill should be. In its simplest form the monthly energy bill would be calculated as follows.

- Annual household income = \$15,000
- Target energy burden = 4%

- Target annual energy bill = $(.04 * \$15,000) = \600
- Target monthly energy bill = $\$600/12 = \50
- Monthly discount = Monthly bill - \$50

Under the CARE program, customers receive a 30 to 35 percent discount on their electric bill and a 20 percent discount on their gas bill, so it does not enable customers to reach a targeted energy burden.

- *Forgiveness Time Period:* Most of the programs reviewed used a 12-month period to forgive a customer's arrearages. A few programs used 24 or 36 months. The 12-month period is beneficial because customers can see significant reductions in their past balances each month that they pay their bill on time. Unless the customer has very large arrearages, forgiving only 1/36 of the owed amount each month will not show up as a significant reduction on the customer's bill. For example, with a 36-month time period, even if the customer owed \$2,000, they would only see \$56 removed from their arrearages each month that they paid their bill.
- *On-Time Payment Requirement:* Programs differ in whether they require the payment to be made on time for arrearage forgiveness to be received that month. Low-income customers struggling with their bill payment will be more successful if there is flexibility in the application of arrearage forgiveness. Some programs moved to forgiving all missed amounts when payments were made up. For example, if a customer missed three payments and then made a large payment that covered all of the missed payments, they would receive forgiveness for those three months. While this does not provide as much of an incentive for customers to stay current with their utility bills, it does provide an incentive for customers to apply for a grant such as LIHEAP, or to apply lump sum income to their utility bills, such as from the Earned Income Tax Credit (EITC).
- *Time Limit:* AMP provides 12 months of arrearage forgiveness, and then customers must wait a year to re-enroll in AMP if they have arrearages remaining. Other programs allow customers to remain on the program and to continue to receive arrearage forgiveness when they pay their bills. The programs without the time limits also provide greater opportunity for customers to succeed on the program. Even if they do not receive forgiveness when past bills are made up, they can continue to receive forgiveness over time without a stay-out period.
- *Additional Arrearage Development and Forgiveness:* AMP allows customers to re-enter the program after a 12-month stay-out period. Customers can exit AMP, build up significant arrears again, and then re-enter the program to have those arrears forgiven. Some programs only provide one-time entry into the program. If there are programs that provide affordable monthly payments, it is reasonable to expect that customers should stay current with their bills and not build up additional arrearages.

- *Co-Payment:* Some programs require customers to pay an additional \$5 per month toward their arrearage amount. This less common provision may help customers to see themselves as a partner in overcoming their arrearages. However, it can reduce the affordability of monthly payments for customers who have very low income.
- *Program Success:* Rates of success on arrearage forgiveness programs are typically low. Customers who enter these programs have been struggling with their energy bills and face many challenges. The following results were found in eight reviewed programs.
 - *Initial Arrears:* For all program participants with arrears, the initial arrears ranged from \$440 to \$932 with an average of \$615. For the new enrollees with arrears, the initial arrears ranged from \$221 to \$1,193 with an average of \$637.
 - *Percent Received Forgiveness:* Across the eight programs reviewed, the percent of all program participants with arrears who received forgiveness ranged from 23 to 100 percent with an average of 67 percent. The percent of the new enrollees with arrears who received forgiveness ranged from 30 to 100 percent with an average of 86 percent.
 - *Mean Number of Payments:* The mean number of arrearage forgiveness payments for all participants with arrears ranged from 2.1 to 10.1 with an average of 4.9 payments.
 - *Mean Amount Forgiven:* The mean amount forgiven for all participants with arrears ranged from \$40 to \$365 with an average of \$134. The mean amount forgiven for the new enrollees with arrears ranged from \$14 to \$641 with an average of \$208.

Key takeaways from the literature review are summarized below.

- *Bill Paid in Full:* Requiring customers to pay their bill in full to receive an arrearage credit provides an incentive for customers to make their payments in full and on time. However, participants often do not understand that they will receive this benefit or how substantial of a benefit they will receive if they pay their bills, and therefore the incentive does not have the effect that it could. Education is important to ensure that customers understand how beneficial it is for them to make timely bill payments.
- *Missed Payments Made Up:* Many programs provide arrearage forgiveness for all missed bills once those bills are paid. This enables customers to receive the benefit of arrearage forgiveness even if they do not stay on the utility's bill payment schedule and provides an additional opportunity for participants to become current on their bill.
- *Arrearage Co-payment:* Some programs add a small co-payment to the customer's monthly bill that helps to pay off the accumulated arrears. Because this payment is usually only five dollars per month, it should not have a large impact on affordability. However, it could increase the customer's energy burden over a targeted level.
- *Removal for Missed Payments:* While some programs allow customers to remain in the program until their service is terminated for nonpayment, others remove customers from the program following missed payments. Removal from the program will increase

the customer's monthly payment obligation and may even return the pre-program arrearages to the customer's balance. This will not provide the customer with the opportunity to catch up with overdue bills and return to an affordable energy bill.

C. AMP Implementation

AMP was implemented beginning in February 2021. The IOUs developed a combination of automated and manual systems to manage and track outreach, enrollment, and bill credits. The IOUs undertook extensive outreach to enroll eligible customers in the Program and enrolled over one million unique customers in the following four years. This section provides information on the IOUs implementation efforts and experiences.

Marketing, Education, and Outreach

IOUs used several different methods for AMP marketing, education, and outreach (ME&O), displayed in Table II-1. These methods included telephone outreach, social media, bill inserts, texts, and emails to reach eligible customers. The following methods were used.

- Mail: IOUs sent AMP program information to eligible customers with high arrearages via bill inserts.
- Email and Text: Program information was sent electronically to customers with available email addresses and enrolled in text messaging.
- Websites: AMP information was available on IOU websites that included program requirements and eligibility criteria. Some IOUs developed an online application that was available on their website.
- Customer Service Representatives (CSRs): IOUs trained their CSRs to inform eligible customers about AMP and resolve basic issues. Outbound call campaigns were also used to reach eligible customers.

Some IOUs created eligibility flags in their billing system to ensure that all AMP-eligible customers received outreach and participation opportunities.

The participant survey found that the most common source of information about AMP was from customers calling in to their IOU, followed by customers visiting their IOU website.

Table II-1
IOU Marketing, Education, and Outreach Methods

Method	PG&E	SCE	SDG&E	SoCalGas
Mail	☑	☑	☑	☑
Email	☑		☑	☑
Website	☑	☑	☑	☑
Customer Service Reps	☑	☑	☑	☑

Method	PG&E	SCE	SDG&E	SoCalGas
Other	Included in low-income program collateral.	Web page with information on all available programs. Information included in Home Energy Reports.	Information included in bill inserts, organic social media, credit pre-notice communications, and CARE/FERA outreach. They also conduct AMP outreach campaigns and do presentations.	They also advertised at Department of Motor Vehicles offices, conducted social media promotions, implemented bill messaging, informed CBOs, and cross promoted AMP with other assistance programs.

Enrollment

Applications for AMP were available online and/or via the phone. Table II-2 displays information on the available application methods by IOU.

Table II-2
AMP Application Methods

Method	PG&E	SCE	SDG&E	SoCalGas
Live Agent Phone Call	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automated Voice Enrollment	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Online Enrollment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

- Some IOUs had planned or completed improvements to the online application. These improvements included assessing customer eligibility, providing information as to why they were ineligible, and providing links to other sites, such as the CARE application if they were ineligible because they were not currently enrolled.
- IOUs provided applications in Spanish as well as English.
- A manual override by IT staff was sometimes required to enroll eligible customers for some IOUs.

Administration

The approach to AMP administration varied by utility.

- PG&E, SDG&E, and SoCalGas integrated AMP processes into their existing IT systems, requiring upfront investment of time and resources.
- SCE was undergoing an IT system update at the time that AMP processes were created, so they developed separate processes and databases that were coordinated with existing

billing systems, but that required additional resources to maintain over the program's duration.

Table II-3 displays information on the types of systems developed for AMP.

Table II-3
AMP IT Systems

Task	PG&E	SCE	SDG&E	SoCalGas
Administration	Main System	Separate System	Main System	Main System
Enrollment & Re-enrollment	Main System	Separate System	Main System	Main System
Billing & Adjustments	Main System	Main System	Main System	Main System
Forgiveness Tracking	Main System	Separate System	Main System	Main System
Reporting	Main System	Separate System	Separate System	Main System
Manual Elements	<ul style="list-style-type: none"> • Addressing edge cases and exceptions 	<ul style="list-style-type: none"> • Reviewing applications • Calling customers with missed payments • Reviewing reporting • Reviewing and sending letters • Addressing edge cases and exceptions 	<ul style="list-style-type: none"> • Processing re-enrollments 	<ul style="list-style-type: none"> • Addressing edge cases and exceptions

The IOUs had various policies and procedures to provide ongoing information to AMP participants and help them to succeed on the program.

- **AMP Progress Updates:** Some IOUs included information about AMP progress in the monthly bills and all IOUs provided quarterly milestone letters.
- **Bill Reminders:** IOUs used automatic notification systems to send reminders to customers about upcoming bill due dates as well as missed payments.
- **Bill Due Date Flexibility:** Only SCE customers were able to change their bill due date. However, PG&E provides three weeks from the date the bill is issued until the due date, and customers can choose to pay early, giving them flexibility on when they pay their bill.
- **Grace Period:** Some IOUs offered a two-to-five-day grace period before counting payments as late.

Stakeholders expressed concern that electronic payments could be considered late if they were not credited to the customer's account in time. When asked specifically about this issue, some IOUs reported that the grace period should address this issue.

Table II-4A and II-4B display the reminder communication methods used by the IOUs.

Table II-4A
Proactive IOU Communications about Bill Due Date

	PG&E	SCE	SDG&E	SoCalGas
Phone	No	No	Yes	No
Email	Yes (Opt-in)	No	Yes	No
Text	Yes (Opt-in)	No	Yes	No

Table II-4B
IOU Communications about Missed Payments

	PG&E	SCE	SDG&E	SoCalGas
Phone	No	Yes (60%)	Yes	No
Email	No	No	Yes	Yes
Text	No	No	Yes	Yes
Other	Past Due Notice on Next Bill	Direct Mail Letters		Mailed letter if the customer is not enrolled in paperless and does not have a cell phone.

Customer service representatives (CSRs) were instrumental in AMP implementation. They played the following roles.

- AMP Awareness: CSRs are required to inform customers about their eligibility for various programs, including AMP if the customer is at risk of disconnection.
- AMP Education: Education customers on program eligibility, requirements, current enrollment status, and program questions.
- Enrollment: Complete the AMP enrollment process with the customer over the phone or send a link to the online application.

Challenges

IOU managers and staff expressed concerns about the complexity and costs associated with AMP implementation and management, potential adverse incentives that result from the program, as well as the high involuntary removal rate.

- Staffing: IOUs staffing requirements must respond to the need for confirming correct application of program credits and resolving issues and exceptions.
- IT Systems: Maintaining compliance with AMP rules and other CPUC requirements within the systems required additional time and resources beyond the initial system integration.
- Manual Processes: IOUs with separate IT systems for AMP faced challenges coordinating the AMP data with their billing systems. The coordination sometimes required manual processes for applications, tracking on-time payments, and resolving issues related to the separate systems and databases.

- Resources: Both the integrated and manual approaches required significant investments of IOU time.
- Payment Incentives: AMP may incentivize delayed payments if customers understand that they can skip payments and then enroll in the program.
- Program Turnover: Customers struggle to make payments on time and in full, so removal rates are high and successful completion rates are low. Even when customers complete AMP successfully, they often incur additional arrearages after completing the program.
- Ratepayer Subsidy: AMP imposes costs on other ratepayers which may impact their affordability.

IOU staff reported that customers often struggled to understand AMP rules and requirements.

- Programs: Customers sometimes have difficulty when receiving information from CSRs about many different programs. They also face challenges knowing which programs they are enrolled in and what benefits are provided by each program.
- AMP Design: Customers did not understand what “arrearage” and “forgiveness” meant.
- AMP Rules: Customers did not appear to understand the importance of making on-time payments to receive AMP forgiveness, the missed payment requirements and rules, the monthly forgiven amounts, and the exclusion of arrearages over \$8,000 from AMP forgiveness.
- AMP Process: Customer inquiries often related to how arrearage forgiveness worked, how much they needed to pay, and when they needed to pay.
- AMP Progress: Customers at some IOUs were confused about how much forgiveness they had already received because they needed to contact customer service to obtain this information.
- Bills and Debt: Customers contacted the IOUs when they could not pay the current charges and when they were unenrolled due to nonpayment and unforgiven debt was added back to their account.

IOU Recommendations

IOU staff expressed concerns about re-enrollment and eligibility requirements and made recommendations related to AMP rules.

- AMP Eligibility: Some IOU staff made recommendations regarding changes in AMP eligibility.
 - Past Payments: Customers are only required to make one payment in the previous 24 months to be eligible for AMP. Ability to pay should require at least one on-time payment in the previous six months or 12 months.
 - CARE/FERA: Customers can self-certify that they qualify for these programs and enroll in AMP. This can result in a customer later being found to be ineligible for CARE or FERA, but the customer remains enrolled in AMP. More controls should be put in place to ensure that only eligible customers receive benefits.

- **AMP Payments:** There was a recommendation that customers only be permitted to miss two payments, whether or not they are consecutive, to encourage better payment behavior.
- **AMP Re-Enrollment:** Customers who successfully complete AMP can stop paying their bills, accumulate new arrearages over a year, and then re-enroll in AMP to have those arrearages forgiven. Some program staff recommended making AMP a one-time program to prevent misuse and reduce administrative costs, or to only let the customer re-enroll once. Others recommended a 24-month stay out provision instead of the current 12-month provision.
- **AMP Forgiveness:** Another recommendation was to only allow a maximum of \$8,000 in arrearage forgiveness for each account, rather than for each AMP enrollment.
- **Energy Efficiency:** Some IOU staff recommended that customers are required to participate in weatherization as a condition for AMP enrollment.
- **Budget Counseling:** There was a recommendation that customers be required to participate in education that helps them to budget their energy bills.

Program staff from all IOUs emphasized the positive impact of AMP in providing arrearage forgiveness to vulnerable populations and helping customers avoid service terminations. They also acknowledged customer feedback about program appreciation and satisfaction.

D. AMP Participation Statistics

The IOUs began enrolling customers in AMP in February 2021 and continue to enroll customers in the program. Table II-5 displays the total number of customers enrolled in AMP by the IOUs from program inception through February 2025 (March 2025 for SCE). Across all four IOUs, over one million unique customers were enrolled in the program.

Table II-5
Total Number of Unique Customers Enrolled in AMP
2021-2025

PG&E	SCE	SDG&E	SoCalGas	All IOUs
424,827	215,501	79,655	341,554	1,061,537

The following tables display information from the IOUs' AMP program data. The tables provide information on the sample of AMP participants selected for the study (see methodology section for more details) and the subgroup of that sample that had sufficient data to be included in the analysis, referred to as the Analysis Group. Customers with accounts that did not remain active over the evaluation period are not included in the

sample. A small percentage of AMP participants who were missing program data are excluded from these tables.³

Table II-6 displays the average arrearage forgiveness that customers were eligible to receive through the program, which is the customer's arrearages at enrollment up to a maximum of \$8,000.

- 2022 AMP enrollees in the analysis group had an average of \$1,114 in arrearages that could be forgiven through AMP.
- 2023 AMP enrollees in the analysis group had an average of \$1,488 in arrearages that could be forgiven through AMP.
- The selected sample of AMP participants had very similar levels of arrearages to the analysis group (with sufficient data for the analysis of bills and payments). One larger difference was for SCE that had a somewhat higher level of attrition.

Table II-6
Mean Arrearage Forgiveness Eligibility
(Arrearages at Enrollment up to \$8,000)
2022 and 2023 AMP Enrollees

IOU	2022 AMP Enrollees				2023 AMP Enrollees			
	Selected Sample		Analysis Group		Selected Sample		Analysis Group	
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
PG&E	13,850	\$1,485	11,758	\$1,471	13,713	\$1,856	11,541	\$1,872
SCE	9,869	\$1,119	5,230	\$1,354	9,433	\$1,819	6,144	\$2,207
SDG&E	9,998	\$1,255	6,552	\$1,194	9,064	\$1,746	6,649	\$1,768
SoCalGas	9,998	\$573	6,838	\$565	9,612	\$845	7,957	\$841
All IOUs	43,715	\$1,097	30,338	\$1,114	41,822	\$1,410	32,291	\$1,488

Table II-7 displays the reasons for AMP disenrollment as reported by the IOUs. The most common reason was nonpayment, followed by successfully completing AMP. However, the percentage of customers who successfully completed AMP is not consistent with other IOU reports or with the billing and payment data that were analyzed in this evaluation. IOUs report that the reason for this discrepancy is that **customers who received CAPP arrearage forgiveness were marked as AMP completions, overstating the AMP completion rate in the table below.**

SDG&E had a higher rate of 2022 AMP enrollees who were disenrolled after they received CAPP and no longer had an arrearage, but this is due to the way these cases were coded,

³ 2022 Selected Sample: 142 participants were missing program data. 2023 Selected Sample: 2,335 participants were missing program data. 2022 Analysis Group: 46 participants were missing program data. 2023 Analysis Group: 2,016 participants were missing program data.

as other IOUs coded these customers as having completed AMP. A small percentage of AMP participants who were missing program data are excluded from these tables.⁴

Table II-7
AMP Disenrollment Reason

Disenrollment Reason	2022 AMP Enrollees									
	Selected Sample					Analysis Group				
	PG&E	SCE	SDG&E	SCG	All IOUs	PG&E	SCE	SDG&E	SCG	All IOUs
Observations	13,850	9,869	9,998	9,998	43,715	11,718	5,230	6,552	6,838	30,338
Nonpayment	64%	54%	42%	68%	62%	64%	47%	42%	68%	61%
Completed AMP	35%	40%	7%	23%	28%	35%	49%	7%	27%	31%
CAPP Deactivation	0%	4%	42%	0%	5%	0%	3%	49%	0%	6%
No Service	0%	0%	7%	4%	2%	0%	0%	< 1%	< 1%	< 1%
Customer Request	< 1%	< 1%	2%	5%	2%	< 1%	< 1%	2%	4%	2%
Balance too Low	0%	< 1%	0%	0%	< 1%	0%	< 1%	0%	0%	< 1%
Not Eligible	< 1%	2%	0%	0%	< 1%	< 1%	1%	0%	0%	< 1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Disenrollment Reason	2023 AMP Enrollees									
	Selected Sample					Analysis Group				
	PG&E	SCE	SDG&E	SCG	All IOUs	PG&E	SCE	SDG&E	SCG	All IOUs
Observations	13,713	9,433	9,064	9,612	41,822	11,541	6,144	6,649	7,957	32,291
Nonpayment	65%	59%	56%	55%	59%	65%	50%	59%	55%	58%
Completed AMP	34%	39%	31%	39%	37%	35%	48%	37%	43%	41%
CAPP Deactivation	0%	0%	2%	0%	< 1%	0%	0%	2%	0%	< 1%
No Service	0%	0%	11%	5%	3%	0%	0%	1%	1%	< 1%
Customer Request	< 1%	< 1%	1%	< 1%	< 1%	< 1%	< 1%	1%	< 1%	< 1%
Balance too Low	0%	< 1%	0%	0%	< 1%	0%	< 1%	0%	0%	< 1%
Not Eligible	< 1%	1%	0%	0%	< 1%	< 1%	1%	0%	0%	< 1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

⁴ 2022 Selected Sample: 142 participants were missing program data. 2023 Selected Sample: 2,335 participants were missing program data. 2022 Analysis Group: 46 participants were missing program data. 2023 Analysis Group: 2,016 participants were missing program data.

III. Research Methodology

This section provides information on the methodology for the study. Primary and secondary data were collected and analyzed as part of the evaluation. The primary data included IOU interview responses and program documentation as well as quantitative survey responses from a sample of AMP participants. Secondary data including bills, payments, usage, and collections actions were collected and analyzed for a stratified sample of AMP participants and a matched comparison group.

Table III-1 displays the evaluation research that was undertaken to address each research question.

Table III-1
AMP Evaluation Objectives and Research Activities

Research Question		Research Activities
1	To what extent are there differences in bill payment and disconnection related events between similar nonparticipants and AMP participants who remained in the program for 12 months or longer?	Impact Analysis
2	To what extent are there differences in bill payment and disconnection related events between similar non-participants and AMP participants who remained in the program for (at least) 6 months?	Impact Analysis
3	What are key differentiators between participants and similar nonparticipants in terms of energy use, bill amount, and bill payment practices?	Impact Analysis
4	How much did participants take advantage of bill payment resources (such as enrollment in the Low-Income Home Energy Assistance Program (LIHEAP) and IOU-sponsored programs) that assist with bill payments or provide arrearage forgiveness relative to similar nonparticipating customers?	Impact Analysis
5	Why do the AMP programs have high involuntary removal rates?	Impact Analysis Participant Survey
6	What AMP program improvements can be made to help more participants complete the AMP program?	Impact Analysis IOU Interviews Participant Survey
7	Among AMP participants, to what extent are there meaningful differences in payment behaviors during AMP enrollment and post program based on: <ul style="list-style-type: none"> • IOU-specific practices, such as late notices and customer communications • Length of time enrolled in AMP (3, 6, and 12 months) • Amount of pre and post arrearages • Average utility bill • Reasons for de-enrollment • AMP understanding, expectations, and requirements • Demographics – income, age, climate region, home tenure, etc. 	Impact Analysis Participant Survey
8	To what extent do AMP rules support program goals?	Impact Analysis IOU Interviews Participant Survey
9	What is the average amount of arrearage forgiven by: <ul style="list-style-type: none"> • IOU • Length of time in arrearage • Other variables that inform program outcomes 	Impact Analysis

	Research Question	Research Activities
10	To what extent does AMP result in cost shifting from participating customers to nonparticipants? Considering program benefits and costs, should the CPUC modify, extend, or discontinue AMP?	Cost Analysis Synthesis

Additional information including survey instruments are included in the appendices.

A. Utility Interviews

In-depth interviews were conducted with managers and staff at the four IOUs. The purpose of these interviews was to further understand program design and implementation, challenges, and recommendations for AMP refinement.

These interviews collected information on program implementation experiences, information technology developed and used for the program, marketing and education methods, and customer service training and roles. They were conducted by telephone and by written response. Because much of the information was provided through written responses, an average interview length is not available.

B. AMP Participant Survey

A quantitative survey was conducted with 760 AMP participants to develop information on a representative group of AMP participants. Surveys were designed to develop information on participant characteristics, motivation for participation, the AMP enrollment process, AMP understanding, AMP impact, and AMP satisfaction.

Sample Design

A sample of 1,600 customers from the 4 California Investor-Owned Utilities (IOUs) was selected based on the following criteria.

- Customers who first enrolled in AMP between 10/1/2023 and 12/31/2023 were eligible for selection.
- Because there were recent fires, customers in SoCalGas' service territory and in SCE's service territory who were impacted by evacuations were excluded.
- While AMP participation varied by IOU, 400 customers were selected for each IOU so that results could be presented by IOU.

Within each IOU, the sample frame was stratified by participation in the Percentage of Income Payment Plan (PIPP), successful AMP completion, and annual energy bill, so that the survey could provide findings on various subpopulations of interest.

- PIPP: Customers who had ever participated in PIPP were oversampled.
- AMP Completion: Customers who successfully completed AMP were oversampled.

- Annual Energy Bills: Customers were divided into higher and lower energy bills for each IOU so that about 30% to 40% of the customers of each IOU were in the higher bill group

Completed surveys were weighted in the analysis so that the distribution of respondents matched the overall population of AMP participants.

Implementation Procedures

The survey was conducted via a mixed-mode web/telephone approach in March and April 2025. This approach provides a balanced and high response rate, as it is not biased toward younger or working participants who prefer to complete the survey online or to older participants who prefer to complete the survey by phone.

Outreach to the sample is summarized in Table III-2.

Table III-2
Survey Outreach

Contact Method	Date
First Advance Letter	02/28/25
First Advance Email	03/06/25
Survey Calling Implementation	03/10/25
Second Email	03/14/25
Third Email	03/21/25
Fourth Email	03/28/25
Fifth Email	04/11/25
Final Email	04/18/25

Response

Surveys were completed with 760 AMP participants, with the following results.

- Completion Rate: 48% of the selected sample completed the survey.
- Response Rate: Adjusting for ineligible customers who said they did not participate or were not aware of the program, there was a 58% response rate.
- Cooperation Rate: 82% of customers who were reached completed the survey.
- Online: Overall, 30% of the surveys were completed online.
- Telephone: 70% were completed by phone.

Table III-3 furnishes information on the final disposition for each IOU and the entire sample.

**Table III-3
Survey Response**

Survey Response Status	PG&E		SCE		SDG&E		SoCalGas		All IOUs	
	#	%	#	%	#	%	#	%	#	%
Total	400	100%	400	100%	400	100%	400	100%	1,600	100%
Voicemail/No Answer/Busy	130	33%	104	26%	107	27%	83	21%	424	27%
Refusal	30	8%	26	7%	38	10%	54	14%	148	9%
Non-Working/Wrong Number	20	5%	55	14%	14	4%	20	5%	109	7%
Ineligible	23	6%	19	5%	28	7%	38	10%	108	7%
Said will complete Online	7	2%	2	1%	4	1%	8	2%	21	1%
Ill/Deceased/Not Available	3	1%	4	1%	3	1%	3	1%	13	1%
No Phone Number	3	1%	0	0%	5	1%	2	1%	10	1%
Asked to call back	0	0%	3	1%	1	<1%	3	1%	7	<1%
Complete	184	46%	187	47%	200	50%	189	47%	760	48%
Survey Method										
Phone	124	67%	143	76%	135	68%	128	68%	530	70%
Online	60	33%	44	24%	65	33%	61	32%	230	30%
Cooperation Rate	-	83%	-	87%	-	83%	-	75%	-	82%
Response Rate	-	55%	-	62%	-	58%	-	58%	-	58%

Surveys were offered in languages other than English when requested by the targeted respondents. Across all IOUs, 80 surveys were conducted in Spanish and one survey was conducted in Arabic.

**Table III-4
Foreign Language Response**

Language	PG&E	SCE	SDG&E	SoCalGas	All IOUs
Spanish	34	25	17	4	80
Arabic	0	0	1	0	1
Total	34	25	18	4	81

The evaluation also analyzed a subset of 610 survey respondents with billing data to examine how AMP impacts on payment behavior and collections activities and disconnections varied by responses to some of the survey questions.

C. Quasi Experimental Design

The evaluation used a quasi-experimental design to assess the impact of AMP on bill payment, collections actions, arrearages, and energy usage. The analysis used a difference-in-differences approach to provide the best possible estimate of AMP's impact. The analysis required the development of a treatment group and a comparison group.

- The treatment group is a representative subset of AMP enrollees with active utility accounts at the time of the analysis. Customers who enrolled in AMP in 2022 and 2023 and who had active utility service were randomly selected for analysis to allow for the availability of pre- and post-participation data. A sample was used rather than all AMP participants because of the extremely large program size. The sample is not representative of AMP enrollees whose service was discontinued during the evaluation period.
- Comparison Group: The comparison group was selected to best match the enrollees whose accounts remained active over the evaluation period. Each comparison customer is a one-to-one match with an AMP enrollee (and can match to more than one participant). The purpose is to understand what the experiences and behaviors would have been for customers if they had not enrolled in the program, i.e., the counterfactual. This is important because some of the changes experienced by participants will not be due to the program, such as changes in IOU energy rates or in IOU collections practices.

Table III-5 describes how the difference-in-differences analysis provides a good estimate of the impact of the program. While the change for the treatment group measures both the program impact and the impact of other factors, the change for the comparison group provides an estimate of the change that is only due to factors other than the program (which are the same as those for the AMP enrollees). When the change for the comparison group is subtracted from the change for the treatment group, the program impact is what remains, which is what the evaluation aims to measure.

Table III-5
Difference-in-Differences Analysis

	Pre	Post	Change	Measured
Treatment Group	Year Before AMP Enrollment	Year After AMP Enrollment	After – Before	Program Impact + Other Factors
Comparison Group	Same Time Period as Treatment Group	Same Time Period as Treatment Group	After – Before	Other Factors
Treatment – Comparison				Program Impact

Two treatment groups are analyzed in the study.

- Treatment Group 1 (T1): Customers who enrolled in AMP in 2022.
- Treatment Group 2 (T2): Customers who enrolled in AMP in 2023.

T1 allowed for analysis of three time periods.

- Pre-Enrollment: The 12 months prior to AMP enrollment.

- Post-Enrollment Y1: The 12 months after AMP enrollment. This is the time period when participants receive arrearage forgiveness if they meet AMP requirements.
- Post-Enrollment Y2: The 13 to 24 months after AMP enrollment. This is the time period when participants would have had all their arrearages forgiven if they paid all bills on time and successfully completed AMP participation (and started with \$8,000 or less in arrearages). Some customers received some of their arrearage forgiveness in this second year after enrollment because they missed a few payments and received forgiveness more than 12 months after enrollment, or because they left AMP relatively soon, and received AMP forgiveness as part of a re-enrollment.

T2 (2023 enrollees) only allowed for analysis of Pre-Enrollment and Post-Enrollment Y1 but assesses a more recent group of AMP participants who experienced the program in more of a post-pandemic time period when all IOUs had re-initiated disconnections. While the statewide moratorium on electric and gas disconnections was from March 2020 through September 2021, some of the IOUs only introduced disconnections later.

- PG&E resumed residential disconnections in October 2022.
- SCE resumed residential disconnections in November 2022.
- SoCalGas and SDG&E resumed residential disconnections in 2023.

Because of the large number of customers who participated in AMP, a representative sample of participants with active accounts over the evaluation period was selected for analysis. Inactive customers were excluded from the sample, as they would not have billing and payment data available for analysis. This is a potential source of bias in the study, as the inactive customers are likely to be less successful AMP participants. However, because the analysis employs the difference-in-differences analysis described above, the exclusion of such customers from the comparison group should reduce the bias in measured program outcomes.

A sample of at least 10,000 customers from each IOU who first enrolled in AMP in 2022 and at least 10,000 customers from each IOU who first enrolled in 2023 was selected. PG&E's sample group was larger to account for both single fuel customers and dual fuel customers. The sample frame was stratified by program participation and fuel type for more precise subgroup estimates and meaningful analysis for these customers of interest.

- PIPP: Customers who had ever participated in PIPP were oversampled.
- FERA: Customers who had ever participated in FERA were oversampled.

AMP analysis results are weighted so that the distribution of customers analyzed matched the overall population of AMP participants who still had utility service.

The comparison group was selected to be as similar as possible to the treatment group but without AMP participation. This included that the customer was eligible for AMP, which required the following.

- Enrolled in CARE or FERA.
- Been a customer of the IOU for at least six months.
- Has had continuous active service. (Closed accounts are not eligible for AMP.)

- Customers of PG&E, SDG&E, and SCE must be at least \$500 in arrears. (PG&E gas only customers must be \$250 in arrears.)
- Customers of SoCalGas must have natural gas bills at least \$250 in arrears.
- A portion of the arrears must be at least 90 days old.
- Customers must have made at least one on-time payment in the past 24 months.
- AMP eligible customers currently on another payment plan may switch to AMP.

The matched comparison group was selected using the Mahapick package in the Stata statistical software program.⁵ This package calculated multiple matches for each AMP participant using a Mahalanobis distance, a measure of closeness between two customers on several variables.⁶ Three comparison matches were selected for each AMP treatment group participant because some comparison group customers would not have data available for the full analysis period due to the timing of account opening and closings. This is especially true of customers who are in arrears and face the possibility of service termination.

The matches were ranked in order of how well they matched the AMP participant. Tables III-6 and III-7 show the percent of AMP participants that used the best, second best, and third best match.

Table III-6
Matched Comparison Customer Used
2022 AMP Enrollees

	PG&E		SCE		SDG&E		SoCalGas		Overall	
	#	%	#	%	#	%	#	%	#	%
2022 Enrollee Sample	11,758	100%	5,234	100%	6,554	100%	6,838	100%	30,384	100%
1 st Match	10,192	87%	3,627	69%	6,279	96%	4,459	65%	24,557	81%
2 nd Match	1,296	11%	1,073	21%	265	4%	1,716	25%	4,350	14%
3 rd Match	270	2%	534	10%	10	< 1%	663	10%	1,477	5%
Total Comparison Accounts	11,758	100%	5,234	100%	6,554	100%	6,838	100%	30,384	100%

⁵ The Mahapick command seeks matching observations for a set of "treated" observations, using a Mahalanobis distance measure which it calculates from provided covariates. The "treated" observations are the AMP participants for which we seek matches; the others, the non-treated, form the pool of potential matches (or "control" observations). For each treated observation, the closest matching non-treated observation(s) were chosen, according to the calculated distance measure. The selection of matches is done independently for each treated observation; a given control observation may appear as a match for more than one treated observation. The covariates are used to build the distance measure - the Mahalanobis score. For each pair of observations, the distance measure (or score) is the matrix product $d'Xd$, where d is a vector of differences in the set of variables, and X is the inverse of the covariance matrix of the covariates. If i and j are indices of two observations, then $d = (v1[i]-v1[j] \ v2[i]-v2[j] \ \dots \ vn[i]-vn[j])$, where $v1 \ v2 \ \dots \ vn$ are the variables of the covariate varlist.

⁶ This is a measure of the distance between a point and a probability distribution. It looks at the standard deviations of all of the variables and takes the correlations between the variables into account.

Table III-7
Matched Comparison Customer Used
2023 AMP Enrollees

	PG&E		SCE		SDG&E		SoCalGas		Overall	
	#	%	#	%	#	%	#	%	#	%
2023 Enrollee Sample	11,921	100%	6,559	100%	7,516	100%	8,311	100%	34,307	100%
1 st Match	10,386	87%	4,910	75%	7,274	97%	6,582	79%	29,152	85%
2 nd Match	1,297	11%	1,153	18%	221	3%	1,412	17%	4,083	12%
3 rd Match	238	2%	496	8%	21	< 1%	317	4%	1,072	3%
Total Comparison Accounts	11,921	100%	6,559	100%	7,516	100%	8,311	100%	34,307	100%

The match procedure allowed one customer in the comparison group to match to more than one AMP treatment group participant and allowed a comparison customer to be matched to a 2022 and a 2023 AMP enrollee.⁷ This did not introduce bias or considerably impact the variance of our estimates but allowed for the best match to be selected for each participant.

Variables were selected for matching to generate a comparison group as similar as possible to the AMP participants, on the characteristics that were expected to impact or be correlated with program success that are assessed in the impact evaluation.

Key variables that were used to match nonparticipants to AMP enrollees are displayed in Table III-8, based on the availability of data provided by the IOUs.⁸

- Matching was done separately for the 2022 AMP enrollees and the 2023 AMP enrollees.
- Matching was done separately for each fuel type within each IOU. Dual fuel customers were matched to dual fuel customers, electric only customers were matched to electric only customers, and gas only customers were matched to gas only customers.
- Matching was conducted based on covariate values in the year prior to the enrollment year.
- Matches were restricted to being in PIPP or FERA if the treatment group was in that program.

⁷ There were 19,206 unique customers in the 2022 comparison group matched to 30,384 2022 AMP enrollees and 23,632 unique customers in the 2023 comparison group matched to 34,307 2023 AMP enrollees. Across the 2022 and 2023 comparison groups, there were 39,976 unique customers (because some customers were in both comparison groups). For the 2023 participants 75 percent of comparison group customers were only matched once, 92 percent were matched no more than two times, and 98 percent were matched no more than four times. One percent were matched more than five times, with the most times matched equal to 73. Statistics for the 2022 matches are about the same.

⁸ Variables were not included in matching if more than ten percent of the AMP participants or comparison group were missing. If less than ten percent was missing, the values were imputed as the mean value for the missing observations.

- For all other customers (other than PIPP and FERA participants), matches were restricted to being within the same zip code.

Table III-8
Matching Covariates used in Comparison Group Selection

Covariate	Units	PG&E	SCE	SDG&E	SoCalGas
Electricity Usage	kWh/year	✓	✓	✓	
Gas Usage	Therms/year	✓		✓	✓
Time of Use Rate	TOU Indicator	✓	✓		
Annual Electric Bill	\$/year	✓	✓	✓	
Annual Gas Bill	\$/year	✓		✓	✓
CCA Customer	Indicator	✓	✓	✓	
Payment Plan Participant	Indicator	✓	✓	✓	✓
Disconnected	Indicator	✓	✓	✓	
PIPP	Indicator	✓	✓	✓	✓
CAPP	Indicator	✓	✓	✓	✓
LIHEAP	Indicator	✓	✓	✓	✓
FERA	Indicator	✓	✓	✓	
Credit Risk Rating	Grades A-E	✓		✓	
Annual Household Income	\$/Year			✓	✓
Medical Baseline Customer	Indicator	✓	✓	✓	✓
Single-Family Home	Indicator	✓		✓	✓
Household Size	# Members	✓		✓	
Children in Home	Indicator	✓		✓	
Zip Code	5-digit	✓	✓	✓	✓

Table III-9 compares the AMP enrollee samples and the comparison group in the year prior to AMP enrollment. The table shows that there were some differences between the comparison group customers and the AMP participants included in the evaluation. The reason is that AMP was heavily marketed to eligible customers and those who did not join were in less need of assistance, so they had somewhat lower bills and better payments. However, because the difference-in-differences methodology is used, these comparison customers still provide a good control to develop an estimate of AMP's impact.

Because of the extensive IOU outreach and the large percentage of eligible customers who enrolled in AMP, it was challenging to develop a comparison group that very closely matched the AMP participants on all relevant variables. Most of the differences between the AMP participants and the comparison group shown in Table III-9 were statistically significant at the 95 percent level because of the large sample size. However, most are not analytically meaningful differences except for the ones discussed below.

The key areas of difference are highlighted below.

- Time of Use (TOU) Rate: AMP participants are more likely to be on TOU rate than the comparison group customers.
- Annual Bill: AMP participants have higher average annual bills than the comparison group customers.
- Annual Credits: Comparison group customers have greater payments toward their bills than the AMP participants.
- Bill Payment: Comparison group customers paid a greater percentage of their bills and had more on-time payments. This is one area where the better pre-AMP performance for the comparison group may most affect the interpretation of the net impact, because the comparison group is starting with a higher percentage of bill paid and does not have as much room for improvement.
- Starting Balances: AMP participants had higher levels of arrearages.
- Collections Activities: AMP participants were more likely to have one or more collections actions.

Table III-9
AMP Participants and Comparison Group Characteristics
Year Prior to AMP Enrollment

	2022 AMP Enrollee Sample		2023 AMP Enrollee Sample	
Variable	AMP Enrollees	Comparison Group	AMP Enrollees	Comparison Group
# of Observations	30,384		34,307	
% with Income Data	75.8%	71.1%	75.9%	74.9%
Mean Annual Income	\$23,299	\$32,896	\$35,999	\$21,330
% Received LIHEAP Grant	6.1%	4.1%	8.1%	6.5%
% Received PIPP Credits	0%	0%	0.6%	1.1%
% Received CAPP Credits	20.3%	18.0%	30.0%	26.8%
% on FERA	26.5%	26.0%	29.6%	28.7%
% TOU Participant	30.6%	16.0%	34.3%	18.1%
Mean Annual Net Bill	\$1,722	\$1,483	\$2,040	\$1,674
Mean Annual PIPP Discount	\$0	\$0	\$1.8	\$2.9
Mean Annual PIPP Discount if on PIPP	\$0	\$0	\$271	\$259
Mean Annual CARE Discount	\$554	\$509	\$534	\$506
Mean Annual CARE Discount if on CARE	\$622	\$565	\$641	\$589
Mean Annual FERA Discount	\$22	\$17	\$27	\$25
Mean Annual FERA Discount if on FERA	\$420	\$387	\$381	\$417
Mean Annual Total Credits (excluding CAPP)	\$1,047	\$1,272	\$1,147	\$1,421
Mean Annual LIHEAP Credits	\$56	\$38	\$91	\$72

	2022 AMP Enrollee Sample		2023 AMP Enrollee Sample	
Variable	AMP Enrollees	Comparison Group	AMP Enrollees	Comparison Group
Mean Annual LIHEAP Credits if on LIHEAP	\$920	\$920	\$1,119	\$1,114
Mean % of Annual Bill Paid	54.9%	79.0%	52.9%	81.7%
Mean Number of On Time Payments	0.6	1.5	0.6	1.2
Mean Annual CAPP Forgiveness	\$139	\$110	\$198	\$129
Mean Annual CAPP Forgiveness if received	\$683	\$608	\$661	\$480
Mean Past Due Starting Balance	\$594	\$445	\$1,074	\$626
Percent with 1+ Collections Actions	4.7%	3.1%	40.9%	28.2%
Percent with 1+ Disconnections	0.11%	0.06%	2.6%	2.8%
# of Gas Usage Observations	17,748	17,748	19,083	19,083
Mean Annual Gas Usage (Therms)	448	421	438	408
# Electric Usage Observations	19,299	19,299	21,222	21,222
Mean Annual Electric Usage (kWh)	8,287	7,287	8,153	6,809

D. Impact Analysis Data and Attrition

This section provides information on attrition in the impact analyses, which include assessment of the impact of AMP on bill payment, arrearages, collections actions, disconnections, and energy usage. The matching comparison group availability is also discussed.

A selected sample of AMP enrollees from participants with active accounts over the evaluation period was targeted for the impact analyses. Some customers were deemed ineligible for the analysis because (for SCE) they were found to have no arrearages at the start of AMP enrollment (an issue with SCE's AMP data). A small percentage of AMP enrollees from PG&E, SCE, and SoCalGas were not matched because there were no eligible comparison accounts within the zip code for that customer.

Table III-10 shows that 72 percent of 2022 AMP enrollee eligible selected sample were included in the payment, arrearages, collections actions, and disconnections analysis. Table III-11 shows that 81 percent of 2023 AMP enrollees were included in this analysis. Attrition rates are higher for the 2022 AMP enrollees due to the requirement of an additional year of sufficient data for the analysis. Accounts were excluded from the analysis for insufficient pre- or post-AMP enrollment data, outliers, and attrition of the matched comparison account. The data were deemed to be insufficient if there were fewer than 11 bills in the pre-AMP enrollment year, post-AMP enrollment Y1, or post-AMP enrollment Y2 (for the 2022 AMP enrollees).

Table III-10
Payment, Arrearages, Collections, and Disconnections Analysis Data Attrition
2022 AMP Enrollees

	PG&E		SCE ¹		SDG&E		SoCalGas		All IOUs	
	#	%	#	%	#	%	#	%	#	%
Eligible Selected Sample¹	13,869	100%	8,643	100%	10,000	100%	9,998	100%	42,510	100%
Insufficient Billing Data ²	1,783	13%	1,905	22%	3,396	34%	2,428	24%	9,512	22%
Data Outlier ³	125	1%	910	11%	41	< 1%	83	1%	1,159	3%
No Comparison	203	1%	594	7%	9	< 1%	649	6%	1,455	3%
Analysis Group	11,758	85%	5,234	61%	6,554	66%	6,838	69%	30,384	72%

¹ SCE customers who did not have arrearages at the start of the Post period were removed from the eligible selected sample.

² This includes customers that did not have billing data or had fewer than 11 bills in either the Pre, First Post, or Second Post period.

³ Outliers fall into the following categories: billing days, full bill amounts, changes in balance, total credits, and coverage rate. Additionally, accounts with negative net bills were removed as outliers. Customers with annual payments and other credits that totaled more than \$30,000 were removed for PG&E and for SDG&E and that totaled more than \$20,000 were removed for SCE and SoCalGas. Customers with total annual bills less than \$100 or more than \$30,000 were removed for PG&E and SDG&E. Customers with total annual bills less than \$50 or more than \$20,000 were removed for SCE and SoCalGas.

Table III-11
Payment, Arrearages, Collections, and Disconnections Analysis Data Attrition
2023 AMP Enrollees

	PG&E		SCE ¹		SDG&E		SoCalGas		All IOUs	
	#	%	#	%	#	%	#	%	#	%
Eligible Selected Sample¹	14,138	100%	8,448	100%	10,000	100%	9,999	100%	42,585	100%
Insufficient Billing Data ²	1,886	13%	1,114	13%	2,446	24%	1,457	15%	6,903	16%
Data Outlier ³	160	1%	405	5%	17	< 1%	68	1%	650	2%
No Comparison	171	1%	370	4%	21	< 1%	163	2%	725	2%
Analysis Group	11,921	84%	6,559	78%	7,516	75%	8,311	83%	34,307	81%

¹ SCE customers who did not have arrearages at the start of the Post period were removed from the eligible selected sample.

² This includes customers that did not have billing data or had fewer than 11 bills in either the Pre, First Post, or Second Post period.

³ Outliers fall into the following categories: billing days, full bill amounts, changes in balance, total credits, and coverage rate. Additionally, accounts with negative net bills were removed as outliers. Customers with annual payments and other credits that totaled more than \$30,000 were removed for PG&E and for SDG&E and that totaled more than \$20,000 were removed for SCE and SoCalGas. Customers with total annual bills less than \$100 or more than \$30,000 were removed for PG&E and SDG&E. Customers with total annual bills less than \$50 or more than \$20,000 were removed for SCE and SoCalGas.

Table III-12 shows that 65 percent of 2022 AMP enrollee eligible selected sample were included in the electric usage analysis. Table III-13 shows that 72 percent of 2023 AMP enrollee eligible selected sample were included in the electric usage analysis. The usage analysis includes customers who survived the payment, arrearages, collections actions, and disconnections analysis attrition and additional usage-related attrition.

Table III-12
Electric Usage Analysis Data Attrition
2022 AMP Enrollees

	PG&E		SCE		SDG&E		All IOUs	
	#	%	#	%	#	%	#	%
Eligible Selected Sample¹	11,127	100%	8,643	100%	10,000	100%	29,770	100%
Removed in Payment Analysis	1,645	15%	3,409	39%	3,446	34%	8,500	29%
Insufficient Usage Data ²	55	< 1%	7	< 1%	15	< 1%	77	< 1%
Data Outlier ³	452	4%	241	3%	348	3%	1,041	3%
No Comparison	247	2%	323	4%	283	3%	853	3%
Analysis Group	8,728	78%	4,663	54%	5,908	59%	19,299	65%

¹ The Eligible Selected Sample in this table only includes Dual Fuel and Electric Only customers.

² This includes customers that did not have usage data or had fewer than 6 months of usage data in the Pre or Post period.

³ Outliers include those with zero usage in the whole pre or post period, no PRISM (weather normalization program) output, and a change in degree-day normalized or PRISM usage of greater than 65%. PG&E and SCE customers with total annual electric usage of more than 60,000 kWh were removed. SCE customers with total annual electric usage of less than 400 kWh were removed. SDG&E customers with total annual electric usage of more than 40,000 kWh were removed.

Table III-13
Electric Usage Analysis Data Attrition
2023 AMP Enrollees

	PG&E		SCE		SDG&E		All IOUs	
	#	%	#	%	#	%	#	%
Eligible Selected Sample¹	11,186	100%	8,448	100%	10,000	100%	29,634	100%
Removed in Payment Analysis	1,765	16%	1,889	22%	2,484	25%	6,138	21%
Insufficient Usage Data ²	55	< 1%	22	< 1%	74	1%	151	1%
Data Outlier ³	465	4%	329	4%	307	3%	1,101	4%
No Comparison	403	4%	345	4%	274	3%	1,022	3%
Analysis Group	8,498	76%	5,863	69%	6,861	69%	21,222	72%

¹ The Eligible Selected Sample in this table only includes Dual Fuel and Electric Only customers.

² This includes customers that did not have usage data or had fewer than 6 months of usage data in the Pre or Post period.

³ Outliers include those with zero usage in the whole pre or post period, no PRISM (weather normalization program) output, and a change in degree-day normalized or PRISM usage of greater than 65%. PG&E and SCE customers with total annual electric usage of more than 60,000 kWh were removed. SCE customers with total annual electric usage of less than 400 kWh were removed. SDG&E customers with total annual electric usage of more than 40,000 kWh were removed.

Tables III-14 and III-15 show the gas usage attrition for the 2022 and 2023 AMP enrollee eligible selected sample. The overall attrition rates between the gas and electric usage analyses

are similar, with 67 percent of the 2022 AMP enrollee eligible selected sample and 71 percent of the 2023 AMP enrollee eligible selected sample included in the gas usage analysis.

Table III-14
Gas Usage Analysis Data Attrition
2022 AMP Enrollees

	PG&E		SoCalGas		SDG&E		All IOUs	
	#	%	#	%	#	%	#	%
Eligible Selected Sample¹	10,245	100%	9,998	100%	6,358	100%	26,601	100%
Removed in Payment Analysis	1,523	15%	3,160	32%	2,010	32%	6,693	25%
Insufficient Usage Data ²	81	1%	106	1%	5	< 1%	192	1%
Data Outlier ³	417	4%	157	2%	362	6%	936	4%
No Comparison	459	4%	289	3%	284	4%	1,032	4%
Analysis Group	7,765	76%	6,286	63%	3,697	58%	17,748	67%

¹ The Eligible Selected Sample in this table only includes Dual Fuel and Gas Only customers.

² This includes customers that did not have usage data or had fewer than 6 months of usage data in the Pre or Post period.

³ Outliers include those with zero usage in the whole pre or post period, no PRISM output, and a change in degree-day normalized or PRISM usage of greater than 65%. PG&E customers with total annual gas usage of less than 20 therms or more than 2,000 therms were removed. SoCalGas customers and SDG&E customers with total annual gas usage of less than 75 therms were removed.

Table III-15
Gas Usage Analysis Data Attrition
2023 AMP Enrollees

	PG&E		SoCalGas		SDG&E		All IOUs	
	#	%	#	%	#	%	#	%
Eligible Selected Sample¹	10,308	100%	9,999	100%	6,391	100%	26,698	100%
Removed in Payment Analysis	1,547	15%	1,688	17%	1,464	23%	4,699	18%
Insufficient Usage Data ²	96	1%	201	2%	3	< 1%	300	1%
Data Outlier ³	524	5%	232	2%	495	8%	1,251	5%
No Comparison	596	6%	429	4%	340	5%	1,365	5%
Analysis Group	7,545	73%	7,449	74%	4,089	64%	19,083	71%

¹ The Eligible Selected Sample in this table only includes Dual Fuel and Gas Only customers.

² This includes customers that did not have usage data or had fewer than 6 months of usage data in the Pre or Post period.

³ Outliers include those with zero usage in the whole pre or post period, no PRISM output, and a change in degree-day normalized or PRISM usage of greater than 65%. Additional outliers are also included in this category.

Energy burden is often used as a metric to understand energy affordability as it is an indicator of whether households can afford this essential need. Energy burden is measured as the energy bill costs as a percentage of household income. As such, it is affected by both the cost of energy and by household income.

Income data and household size information were not available for all AMP enrollees or matched comparison accounts, so energy burdens and poverty levels could not be calculated for all customers. Analysis tables that separate findings by energy burden only include AMP enrollees with a non-missing, non-zero income and matched comparison customers with the same restrictions. Tables that display findings by poverty level also only include customers with non-missing household size data and income data.

E. *Study Limitations*

The evaluation had the following limitations, including those that are inherent to the analysis of customer billing data. Because customer billing data are used in the impact analysis, nonrandom exclusion of program participants whose accounts did not remain active can bias the estimates of the program's impact. The evaluation results are not representative of **all** AMP enrollees, but of AMP enrollees who maintained their utility service for at least 12 months following enrollment for the 2023 enrollees and at least 24 months following enrollment for the 2022 enrollees.

1. **Active Accounts:** The impact analysis required customers to have billing data for two years after AMP enrollment for 2022 AMP enrollees, and for one year after AMP enrollment for 2023 AMP enrollees. Therefore, customers with inactive accounts (not currently receiving service from the IOU) at the time of sample selection were not included in the study. This has the potential to bias the results since customers who no longer had service may have been disconnected due to non-payment. The number and amount of AMP credits received and mean arrearage forgiveness, are most likely to be upwardly biased. For the net impacts that include a comparison group adjustment, the bias will be reduced because nonparticipating customers with inactive accounts were also excluded from the comparison group.

In the initial AMP data provided by the IOUs, PG&E and SCE AMP participants who were marked as inactive did not have information on CARE and FERA participation, which were stratification variables for the sample selected. The following number of each were excluded from the selected sample.

- PG&E: 103,794 of 378,051 (27 percent) unique inactive AMP participant accounts were excluded from the selection process.
- SCE: 25,423 of 100,429 (25 percent) unique inactive AMP participant accounts who enrolled in 2022 or 2023 were excluded from the selection process.

SDG&E and SoCalGas did not indicate whether customers were inactive in their initial samples of AMP participants and these customers had all data required for selection, so these customers were included in the sample selection, but were removed later in the analysis if sufficient data were not available for the analysis.⁹

- SDG&E: 25,455 of 88,386 (29 percent) unique accounts enrolled in AMP from the inception of the program through September 2025 became inactive customers.

⁹ The data request did not specifically ask for an indication of whether the customer had active utility service.

- SoCalGas: 13,918 of 175,869 (eight percent) unique accounts who enrolled in 2022 or 2023 became inactive customers.
2. Collections Analysis: The IOUs have different policies regarding the implementation of collections actions and apply different types of collections actions. Some of the collections actions are more indicative of the risk of disconnection than others. However, data were not available at the level of specificity needed to make such distinctions between different collections activities.
 3. Disconnections Analysis: A key goal of AMP was to reduce residential disconnections. However, due to the pandemic, disconnections were halted by Commission order beginning in March 2020, and several extensions to the moratorium prevented disconnections until September 30, 2021. Because of additional protection from disconnection for three months following utility application of California Arrearage Payment Program (CAPP) to customers' accounts, IOUs did not ramp up disconnections until May 2023. Each IOU had a different date for re-starting disconnections following the end of the pandemic.

Customers are prevented from being disconnected while on a payment plan, which includes AMP. Additionally, the CPUC placed IOU-specific caps on the number of disconnections that each IOU can implement, further impacting the disconnection rate.

Because of these factors, it was challenging to assess the impact of AMP on residential disconnections, so the evaluation also assesses bill payment, arrearages, and collections actions to determine the *risk of disconnection*, as well analyzing disconnections.

4. Income Data: Household income data was often missing and of mixed quality. Analyses are presented for the subset of customers with income data where that information is required.
5. Literature Review: There are few publicly available evaluations of arrearage forgiveness programs. The search for evaluations found only two publicly available studies that were not completed by APPRISE. These two studies did not provide sufficient information to assess the meaning of the impact results. Therefore, the literature review only includes studies completed by APPRISE, most of which have not been publicly released. This limits the ability to compare this study to others that may have been done with alternative methods.

IV. AMP Analysis

The evaluation was designed to determine if AMP reduced the risk of disconnection and to address additional analytical issues. This section presents findings from the AMP analyses regarding AMP's estimated impact on bill payment, arrearages, collections and disconnections, and energy usage.

A. Bill Payment

The evaluation was directed to address whether enrollment in AMP impacted participants' bill payment practices, and how the program impacted the payment behavior of key subgroups. This section examines the estimated impact of AMP on the number of on-time payments made and the percent of the energy bill that is paid (coverage rate) for customers with active utility service.

On-Time Payments

Chart IV-1 displays the estimated net change in the number of on-time payments made by 2022 AMP enrollees in the 12 months before AMP enrollment compared to months one to 12 (Post 1) and months 13 to 24 (Post 2) after AMP enrollment. On-time payments are defined as payments made by the bill due date with no past due charges on the account (arrearages incurred prior to AMP enrollment are not included in this amount). The net change is the difference for the 2022 AMP enrollees as compared to their matched comparison group.

The chart shows that the selected sample of AMP participants were estimated to improve their on-time bill payment in the year after enrolling in AMP as compared to the change for the comparison group. While 2022 AMP enrollees still paid better than the comparison group in months 13-24 after enrollment (Post 2), their payment behavior declined significantly from the previous year.

Additional information regarding the analysis is provided below.

- The net change for Post 1 is defined as the change for the AMP participants minus the change for the matched comparison group in the first 12 months after AMP enrollment as compared to the year prior to AMP enrollment.

$$[(\text{Number of on-time payments made by AMP participants in months 1-12 after AMP enrollment}) - (\text{Number of on-time payments made by AMP participants in the 12 months before AMP enrollment})] -$$

$$[(\text{Number of on-time payments made by AMP nonparticipants in months 1-12 after matched AMP enrollment}) - (\text{Number of on-time payments made by AMP nonparticipants in the 12 months before matched AMP enrollment})]$$

- The estimated net change for Post 1 was an increase of 4.1 on-time bill payments.

- The net change for Post 2 is defined as the change for the AMP participants minus the change for the matched comparison group in months 13-24 after AMP enrollment as compared to the year prior to AMP enrollment.

$$[(\text{Number of on-time payments made by AMP participants in months 13-24 after AMP enrollment}) - (\text{Number of on-time payments made by AMP participants in the 12 months before AMP enrollment})] -$$

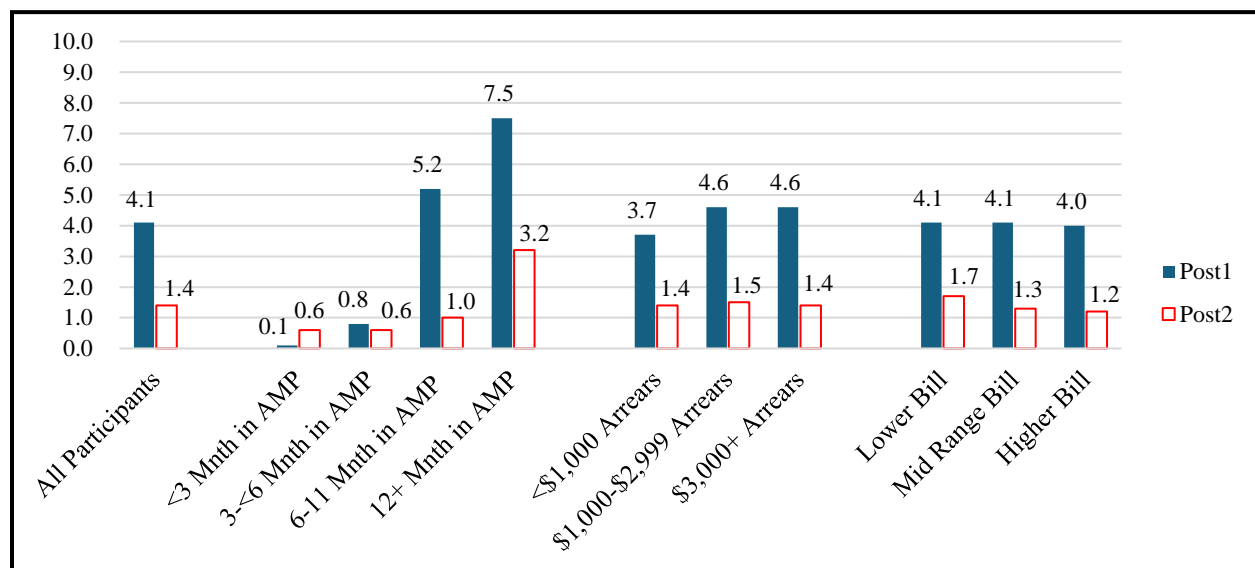
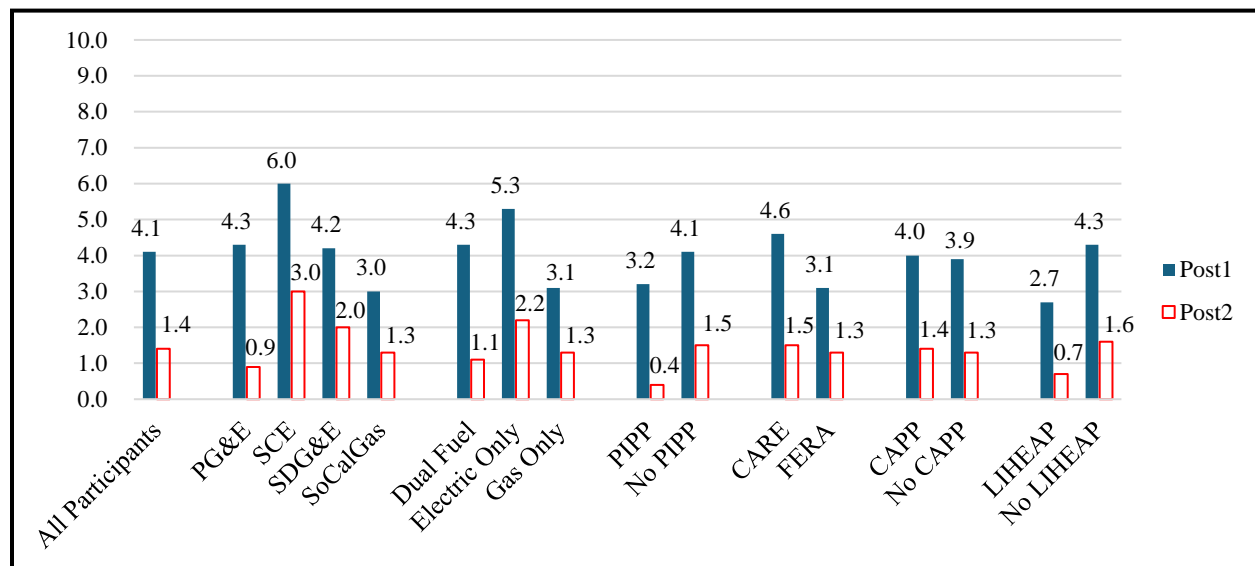
$$[(\text{Number of on-time payments made by AMP nonparticipants in months 13-24 after matched AMP enrollment}) - (\text{Number of on-time payments made by AMP nonparticipants in the 12 months before matched AMP enrollment})]$$

- The estimated net change for Post 2 was an increase of 1.4 on-time bill payments.
- This analysis shows that the selected sample of 2022 AMP enrollees were estimated to have a large improvement in on-time bill payment in the first 12 months after enrollment (Post 1), when they were receiving most of their arrearage forgiveness credits. While 2022 AMP enrollees still paid better than the comparison group in months 13-24 after enrollment (Post 2), their payment behavior declined significantly from the previous year.
- The chart also shows estimated differences in these net changes in on-time bill payment by subgroup for the selected sample of 2022 enrollees, with the following key differences found.
 - IOU: SCE 2022 AMP enrollees had the greatest improvement in on-time bill payment.
 - Fuel Type: Electric only customers had the greatest increase in on-time bill payment, driven by SCE electric only customers.
 - PIPP: Customers not on PIPP had greater improvements in on-time bill payment than customers on PIPP. While this is not what is expected, the evaluation was not designed to assess PIPP, and the PIPP participants may not be comparable to the non-PIPP participants. The PIPP enrollment also may not be timed appropriately to assess the differential impacts.
 - CARE/FERA: CARE participants had greater improvements in on-time bill payment than FERA participants.
 - LIHEAP: Customers who did not receive LIHEAP grants had greater improvements in on-time bill payments than customers who did receive LIHEAP grants. While this may be counter to expectations, it may result from the fact that only those customers with the greatest bill payment problems apply for LIHEAP assistance.
 - Enrollment Length: Customers enrolled in AMP for six or more months had greater improvements in on-time bill payment than customers enrolled for fewer than six months.

Note that in all cases where customers were segmented by bill size, the following breakdowns were used.

	Dual Fuel	Electric Only	Gas Only
Low Bill	<=\$2,000	<=\$1,500	<=\$600
Medium Bill	\$2,001-\$4,000	\$1,501-\$3,000	\$601-\$1,200
High Bill	>\$4,000	>\$3,000	>\$1,200

Chart IV-1
Net Change in Number of On-Time Bill Payments
2022 AMP Enrollees

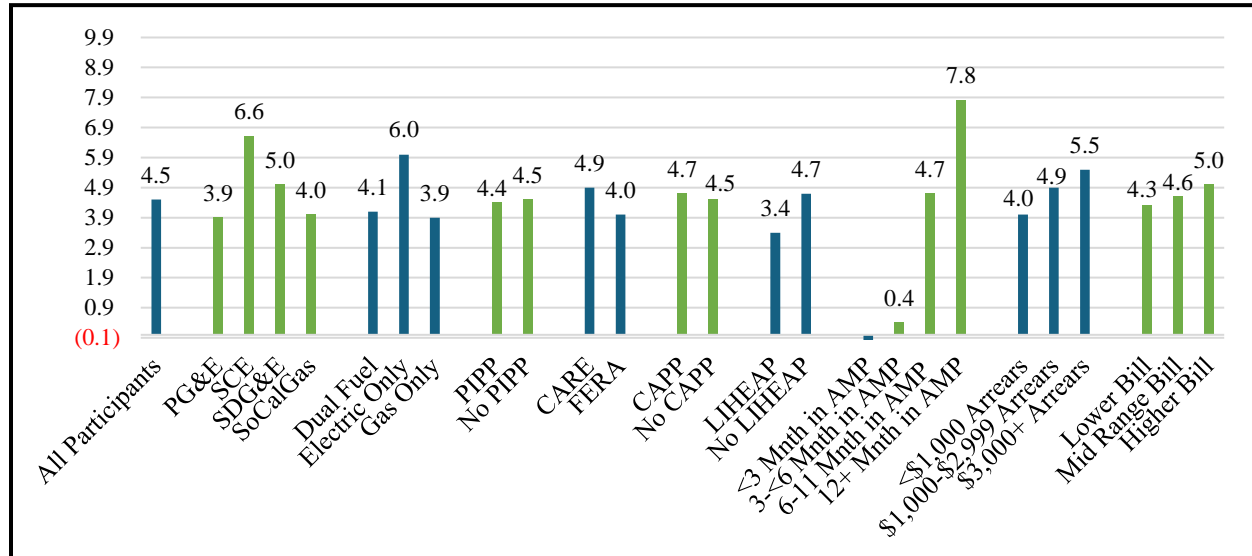


N = 30,384

Chart IV-2 displays the estimated net change in the number of on-time payments made by the selected sample of 2023 AMP enrollees in the 12 months before AMP enrollment compared to months one to 12 months after AMP enrollment. The net change shows the difference for the 2023 AMP enrollees as compared to their matched comparison group. **The chart shows that the selected sample of AMP participants were estimated to increase their on-time bill payment as compared to the matched comparison group.**

- The estimated net change for 2023 AMP enrollees was an increase of 4.5 on-time bill payments.
- The chart also shows estimated differences in these net changes in on-time bill payment by subgroup for the selected sample of 2023 enrollees, with the following key differences found.
 - IOU: SCE 2023 AMP enrollees had the greatest improvement in on-time bill payment.
 - Fuel Type: Electric only customers had the greatest increase in on-time bill payment, driven by SCE electric only customers.
 - CARE/FERA: CARE participants had greater improvements in on-time bill payment than FERA participants.
 - LIHEAP: Customers who did not receive LIHEAP grants had greater improvements in on-time bill payments than customers who did receive LIHEAP grants. While this may be counter to expectations, it may result from the fact that only those customers with the greatest bill payment problems apply for LIHEAP assistance.
 - Enrollment Length: Customers who enrolled in AMP for a longer time had the greatest improvement in bill payment.
 - Starting Arrearages: Customers with larger starting arrearages had greater improvements in on-time bill payments.

Chart IV-2
Net Change in Number of On-Time Bill Payments
2023 AMP Enrollees



N = 34,307

Table IV-1 displays the distribution of the number of on-time bill payments for 2022 AMP enrollees and comparison customers in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net changes in the distribution.

- **The selected sample of 2022 AMP Enrollees with active accounts over the evaluation period were estimated to improve their on-time bill payment compared to the matched comparison group.**
 - While less than one percent of 2022 enrollees made ten to 12 on-time payments in the 12 months before AMP enrollment, 22 percent of enrollees made ten to 12 on-time payments in the 12 months after enrollment, an estimated increase of 22 percentage points.
 - The comparison group customers only increased from two percent making ten to 12 on-time payments in the same Pre period to three percent in the same Post 1 period, an estimated increase of only one percentage point.
 - Therefore, the AMP enrollees showed an estimated net increase of 22 percentage points (with rounding) compared to the change for the comparison customers.
- This impact diminished in the 13 to 24 months after enrollment with ten percent of 2022 enrollees making ten to 12 on-time payments, an estimated net increase of seven percentage points (with rounding) [(10% - <1%) - (6% - 2%)].
- While 93 percent of 2022 enrollees made zero to three on-time payments in the 12 months before enrollment, 47 percent made zero to three on-time payments in the 12

months after enrollment, an estimated net decline of 43 percentage points compared to the change for the comparison customers.

- This impact diminished in the Post 2 period with 67 percent of 2022 enrollees making zero to three on-time payments, an estimated net decrease of 16 percentage points compared to the change for the comparison customers.

Table IV-1
Number of On-Time Bill Payments
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, All IOUs

Number of On-Time Payments	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
0-3	93%	47%	67%	85%	83%	74%	-43% ^{**}	-16% ^{**}
4-6	6%	16%	15%	9%	10%	13%	10% ^{**}	5% ^{**}
7-9	2%	15%	9%	4%	5%	7%	12% ^{**}	4% ^{**}
10-12	<1%	22%	10%	2%	3%	6%	22% ^{**}	7% ^{**}
Total	100%	100%	100%	100%	100%	100%	--	--

^{**} Denotes significance at the 95% level. ^{*} Denotes significance at the 90% level.

Table IV-2 displays the distribution of the average number of on-time bill payments for 2023 AMP enrollees and comparison customers in the 12 months before AMP enrollment (Pre) and 12 months after AMP enrollment (Post), as well as the net changes in the distribution. **The table shows estimated improvements in bill payment for AMP participants with active accounts over the evaluation period as compared to the matched comparison group.**

- While less than one percent of 2023 AMP enrollees made ten to 12 on-time payments in the 12 months before enrollment, 29 percent of enrollees made ten to 12 on-time payments in the 12 months after enrollment, an estimated net increase of 27 percentage points compared to the change for the comparison customers.
- While 92 percent of 2023 AMP enrollees made zero to three on-time payments in the 12 months before enrollment, 39 percent of enrollees made zero to three on-time payments in the 12 months after enrollment, an estimated net decline of 46 percentage points compared to the change for the comparison customers.

Table IV-2
Number of On-Time Bill Payments
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, All IOUs

Number of On-Time Payments	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
Obs.	34,307			34,307			--
0-3	92%	39%	-52% **	85%	79%	-6% **	-46% **
4-6	6%	16%	10% **	9%	12%	3% **	7% **
7-9	2%	16%	14% **	4%	6%	2% **	12% **
10-12	< 1%	29%	29% **	1%	3%	2% **	27% **
Total	100%	100%	100%	100%	100%	100%	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

The data shown above on improved on-time bill payment after AMP enrollment matches what was reported in the AMP participant survey.

- While seven percent of survey respondents reported that they never made an incomplete payment prior to AMP enrollment, 41 percent reported never making an incomplete payment after AMP enrollment.
- While eight percent of survey respondents reported that they never missed a bill payment prior to AMP enrollment, 51 percent reported never missing a payment after AMP enrollment.

Tables IV-3 and IV-4 display the average number of on-time bill payments by poverty level for AMP participants and comparison customers in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net changes in these variables. Customers missing household size or income data are excluded from these tables, but the overall results for customers in these tables are very close to the overall results for all customers shown in the previous charts.¹⁰ **The table shows that AMP had greater estimated impacts on bill payment for customers with income above the poverty level than for customers below the poverty level.**

- AMP participants with a poverty level over 200 percent had the largest estimated net increase in the number of on-time payments in the 12 months after enrollment among the poverty level groups as compared with the comparison group.
- While AMP participants across poverty levels still paid better than the comparison group in months 13 to 24 after enrollment, their payment behavior declined from the previous year.

¹⁰ 23,456 accounts were removed from Table IV-3 because they had \$0 income, were missing income data, were missing household size data, or the matched comparison was missing these data. 25,252 accounts were removed from Table IV-4 because they had \$0 income, were missing income data, were missing household size data, or the matched comparison was missing these data.

Table IV-3
Mean Number of On-Time Bill Payments
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	0.7	4.8	3.0	1.1	1.3	1.9	3.9**	1.6**
101%-200%	3,213	0.7	5.2	3.2	1.5	1.5	2.4	4.5**	1.6**
>200%	1,648	0.9	5.6	3.4	1.8	2.0	2.9	4.6**	1.5**
Total	6,928	0.7	5.1	3.2	1.5	1.6	2.4	4.3**	1.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-4
Mean Number of On-Time Bill Payments
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	1.1	5.7	4.6**	1.5	1.8	0.3**	4.3**
101%-200%	3,174	0.8	5.8	5.0**	1.5	1.9	0.5**	4.5**
>200%	3,193	0.4	6.3	5.9**	1.3	2.0	0.7**	5.2**
Total	9,055	0.8	5.9	5.1**	1.4	1.9	0.4**	4.6**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Energy burden is defined as the percent of income that is spent on energy, equal to energy costs divided by income. Tables IV-5 and IV-6 display the average number of on-time bill payments by energy burden for AMP participants and comparison customers in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net changes in these variables. Customers missing income data are excluded from these tables, but the overall results are the same as those shown for the full population in the earlier charts.¹¹ **These tables show no meaningful difference in the number of on-time payments by energy burden.**

¹¹ 19,652 accounts were removed from Table IV-5 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues. 21,564 accounts were removed from Table IV-6 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues.

Table IV-5
Mean Number of On-Time Bill Payments
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	0.6	4.6	2.9	1.4	1.5	2.2	3.8**	1.6**
5%-8%	3,085	0.8	5.3	3.1	1.4	1.6	2.5	4.3**	1.2**
>8%	1,598	1.0	5.5	3.2	1.5	1.5	2.6	4.6**	1.1**
Total	10,732	0.7	5.0	3.0	1.4	1.5	2.3	4.1**	1.4**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-6
Mean Number of On-Time Bill Payments
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	0.6	5.6	5.0**	1.2	1.5	0.4**	4.7**
5%-8%	4,298	0.9	5.9	4.9**	1.6	2.1	0.5**	4.4**
>8%	2,528	0.9	5.9	5.1**	1.6	2.2	0.6**	4.5**
Total	12,743	0.7	5.8	5.0**	1.4	1.9	0.5**	4.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

A series of multivariate difference-in-differences regression models were used to jointly analyze differences in AMP impacts on the number of bills paid on time by the duration of AMP enrollment, post period bill amount, AMP arrearage amount, and participation in PIPP, CAPP, FERA, and LIHEAP. The reference groups – customers enrolled for less than three months, those with a low post period bill amount, and those with less than \$1,000 AMP arrearages – are not included in the equation below. Additional versions of the regression are shown that include IOUs (with SoCalGas as the reference group)¹² and without the duration of AMP enrollment.

The four versions of the regression shown in the table are as follows.

- (1) All controls except IOUs.
- (2) All controls except IOUs and length of time on AMP.
- (3) All controls, including IOUs.

¹² For each set of variables, one group must be selected as the reference group. For the IOUs, SoCalGas is used as the reference group because their customers generally have lower bills and lower arrearages than all of the other IOUs.

(4) All controls, including IOUs, but excluding length of time on AMP.

The general format of the regression is shown below.

$$\begin{aligned}
 Y = & \beta_0 + \beta_1 Treat + \beta_2 Post + \beta_3 Treat \times Post \\
 & + \delta_1 PIPP + \delta_2 PIPP \times Post + \delta_3 PIPP \times Treat + \delta_4 PIPP \times Treat \times Post \\
 & + \theta_1 CAPP + \theta_2 CAPP \times Post + \theta_3 CAPP \times Treat + \theta_4 CAPP \times Treat \times Post \\
 & + \gamma_1 FERA + \gamma_2 FERA \times Post + \gamma_3 FERA \times Treat + \gamma_4 FERA \times Treat \times Post \\
 & + \alpha_1 LIHEAP + \alpha_2 LIHEAP \times Post + \alpha_3 LIHEAP \times Treat \\
 & \quad + \alpha_4 LIHEAP \times Treat \times Post \\
 & + \sum_{i=2}^4 [\varphi_{1i} Time_i + \varphi_{2i} Time_i \times Post + \varphi_{3i} Time_i \times Treat \\
 & \quad + \varphi_{4i} Time_i \times Treat \times Post] \\
 & + \sum_{j=2}^3 [\mu_{1j} BillAmt_j + \mu_{2j} BillAmt_j \times Post + \mu_{3j} BillAmt_j \times Treat \\
 & \quad + \mu_{4j} BillAmt_j \times Treat \times Post] \\
 & + \sum_{k=2}^3 [\omega_{1k} AMPArr_k + \omega_{2k} AMPArr_k \times Post + \omega_{3k} AMPArr_k \times Treat \\
 & \quad + \omega_{4k} AMPArr_k \times Treat \times Post] + \varepsilon
 \end{aligned}$$

The variables are defined as follows.

- Y = number of on-time bill payments (with no arrears)
- $Treat$ = 1 if enrolled in AMP, 0 otherwise
- $Post$ = 1 if in the year after enrollment, 0 otherwise
- $PIPP$ = 1 if on PIPP in any period, 0 otherwise
- $CAPP$ = 1 if on CAPP in any period, 0 otherwise
- $FERA$ = 1 if on FERA in any period, 0 otherwise
- $LIHEAP$ = 1 if on LIHEAP in any period, 0 otherwise
- $TIME_2$ = 1 if customer was enrolled in AMP for 3 to less than 6 months, 0 otherwise
- $TIME_3$ = 1 if customer was enrolled in AMP for 6 to less than 12 months, 0 otherwise
- $TIME_4$ = 1 if customer was enrolled in AMP for 12 or more months, 0 otherwise
- $BillAmt_2$ = 1 if customer had a mid bill amount in year after enrollment, 0 otherwise
- $BillAmt_3$ = 1 if customer had a high bill amount in year after enrollment, 0 otherwise
- $AMPArr_2$ = 1 if customer had \$1,000 - \$2,999 in arrears, 0 otherwise
- $AMPArr_3$ = 1 if customer had \$3,000 or more in arrears, 0 otherwise

Table IV-7 displays the results of the multivariate difference-in-differences with the number of on-time payments as the outcome. The key findings are as follows.

- As expected, even when controlling for the other factors, customers who remain enrolled in AMP for longer, especially those enrolled for more than six months, have the greatest net increase in on-time payments. This is by definition, as customers must make on-time payments to remain enrolled in AMP.
- Most of the other factors have a relatively small impact on the number of on-time payments compared to the length of time enrolled in AMP.
- Removing the amount of time spent on AMP from the regression generally does not have a large impact on the other explanatory factors, with the following exceptions.
 - The overall impact of the program is larger, for example an estimated increase of 4.9 on-time payments instead of only 0.4 on-time payments in the 12 months after enrollment for the 2022 AMP enrollees (shown by the coefficients on the term “Treatment X Post Period” in the applicable regressions). Controlling for PIPP, CAPP, FERA, LIHEAP, and bill amount, AMP participation is estimated to increase the number of bills paid on time by 4.9, as compared to the univariate estimated impact of an increase of 4.1 bills paid on time that was shown in Chart IV-1.
 - The impact of AMP for SCE as compared to the impact for SoCalGas for the 2022 AMP enrollees was an estimated increase of 3.0 more bills paid on-time when the number of months on AMP was not included in the regression, compared to an estimated increase of only .5 more bills paid on time when the amount of time on AMP was included in the regression.

Table IV-7
Multivariate Analysis of Number of On-Time Payments

Regression Results								
Regression Term ¹	2022 Enrollees ²				2023 Enrollees ³			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Constant Term	1.7**	2.2**	1.4**	1.7**	1.3**	1.5**	1.4**	1.5**
Treatment	-0.7**	-1.0**	-0.8**	-0.9**	-0.5**	-0.7**	-0.5**	-0.4**
Post Period	< 0.1	-0.2**	< 0.1	> -0.1	0.8**	0.5**	0.4**	0.4**
Treatment X Post Period	0.4**	4.9**	-0.9**	3.1**	-0.4**	4.8**	-1.9**	3.4**
PIPP X Treatment X Post Period	-1.0**	-0.9**	-0.9**	-0.9**	-0.7**	-0.2	-0.6**	-0.2
CAPP X Treatment X Post Period	> -0.1	-0.4**	< 0.1	-0.4**	-0.2**	-0.5**	-0.1	-0.6**
FERA X Treatment X Post Period	-0.9**	-1.5**	0.1	0.2	-1.1**	-0.8**	0.4**	0.5**
LIHEAP X Treatment X Post Period	-0.9**	-1.8**	-0.9**	-1.7**	-0.3**	-1.4**	-0.4**	-1.2**
Time on AMP X Treatment X Post Period								
3 to < 6 Months	1.0**	--	1.2**	--	1.2**	--	1.2**	--
6 to < 12 Months	5.1**	--	5.1**	--	5.2**	--	5.2**	--
12+ Months	7.4**	--	7.7**	--	8.5**	--	8.5**	--
Bill Amount X Treatment X Post Period								
Mid Bill	-0.2**	> -0.1	> -0.1	0.1	-0.1**	-0.1	> -0.1	0.1

Regression Results								
Regression Term ¹	2022 Enrollees ²				2023 Enrollees ³			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
High Bill	-0.1	> -0.1	< 0.1	0.2	-0.1	-0.2**	0.1	0.1
AMP Arrearages X Treatment X Post Period								
\$1,000 - \$2,999	0.3**	0.2**	0.3**	0.1	0.6**	0.8**	0.5**	0.6**
\$3,000+	0.5**	0.2	0.4**	0.1	0.8**	1.3**	0.6**	1.0**
IOU X Treatment X Post Period								
PG&E	--	--	1.1**	1.5**	--	--	1.4**	0.5**
SCE	--	--	0.5**	3.0**	--	--	1.7**	3.0**
SDG&E	--	--	1.7**	1.5**	--	--	1.7**	1.4**

** Denotes significance at the 95% level.

¹ Covariates (indicators for PIPP, CAPP, FERA, LIHEAP, Time on AMP, Bill Amount, and AMP Arrearages), each of their interactions with Treatment, and each of their interactions with Post Period were included in the regression. This table does not report the coefficients of those regression terms.

² The number of observations for all regressions for 2022 Enrollees is 30,384.

³ The number of observations for all regressions for 2023 Enrollees is 34,307.

Charges, Credits, Shortfall, and Bill Payment Percentage

A key indicator for payment behavior is the coverage rate, or the percentage of bills that customers pay or receive credits for, as defined below.

- Coverage Rate = Annual Credits / Annual Bills
- Annual Credits = Customer Payments + LIHEAP Grants + Other Miscellaneous Credits
- Arrearage Forgiveness Credits are NOT included in the Annual Credits
- Annual Bills = Charges for Customer Usage + Other Miscellaneous Fees
- Annual Bills does NOT include past due amounts or payment arrangements

For example, if the customer's annual bill was \$1,000 and the customer paid \$750 over the year, the coverage rate would be $\$750/\$1,000 = 75$ percent. Sometimes customers pay more than the current bill because they are paying extra to cover past bills that they had not paid, to reduce their arrearages. In this case the coverage rate may be $\$1,200$ paid on a $\$1,000$ bill, or $\$1,200/\$1,000 = 120$ percent.

It is important to analyze the coverage rate over as close to a full year as possible, as bills may fluctuate seasonally, and customers may receive energy assistance during a particular season. That is why customers were only included in the analysis if they had at least 11 bills (and months of payment opportunities over an 11-month period) during the time period analyzed.

Table IV-8 displays the average total charges, total customer credits (customer payments, assistance payments such as LIHEAP, and other miscellaneous credits, but does not include AMP arrearage forgiveness), shortfall, and coverage rates for 2022 AMP enrollees and comparison customers in the 12 months before enrollment (Pre), 12 months after

enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the estimated net changes in these variables. **The table shows improvements in bill payment for AMP participants with active accounts over the evaluation period as compared to the matched comparison group.**

- Coverage Rate: This is the total customer credits divided by the total amount the customer was billed.
 - 2022 AMP enrollees were estimated to increase their coverage rate from 52 percent of bills paid in the 12 months before AMP enrollment to 79 percent of bills paid in months one to 12 after enrollment, and to 89 percent paid in months 13 to 24 after enrollment.
 - The matched comparison group was estimated to increase their coverage rate from 76 percent of bills paid in the 12 months before AMP enrollment to 88 percent of bills paid in months one to 12 after the matched enrollment, and to 104 percent in months 13 to 24 after the matched enrollment. The coverage rate of more than 100 percent means that these customers were paying off some of their arrearages.
 - The net change for Post 1 is defined as:
$$[(\text{AMP participants' coverage rate in months 1-12 after AMP enrollment}) - (\text{AMP participants' coverage rate in the 12 months before AMP enrollment})] -$$

$$[(\text{AMP nonparticipants' coverage rate in months 1-12 after matched AMP enrollment}) - (\text{AMP nonparticipants' coverage rate in the 12 months before matched AMP enrollment})]$$
 - The estimated net change in the coverage rate for Post 1 was 14 percentage points (rounded), meaning that 2022 AMP enrollees increased the percent of bill paid from the 12 months before AMP enrollment to the 12 months after AMP enrollment by 14 percentage points more than the matched nonparticipants $[(79\% - 52\%) - (88\% - 76\%)]$.
 - The net change for Post 2 is defined as:
$$[(\text{AMP participants' coverage rate in months 13-24 after AMP enrollment}) - (\text{AMP participants' coverage rate in the 12 months before AMP enrollment})] -$$

$$[(\text{AMP nonparticipants' coverage rate in months 13-24 after matched AMP enrollment}) - (\text{AMP nonparticipants' coverage rate in the 12 months before matched AMP enrollment})]$$
 - The estimated net change in the coverage for Post 2 was eight percentage points, meaning that 2022 AMP enrollees increased the percent of bill paid from the 12 months before AMP enrollment to months 13 to 24 after AMP enrollment by eight percentage points more than the matched nonparticipants.
- Shortfall: This is the total annual bill minus the total annual credits. The table also shows that 2022 AMP enrollees were estimated to reduce their shortfall by more than the matched comparison group.

Table IV-8
Mean Charges and Credits
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, All IOUs

	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
Total Charges	\$1,598	\$1,768	\$1,794	\$1,397	\$1,651	\$1,697	-\$84**	-\$104**
Total Credits	\$957	\$1,486	\$1,604	\$1,183	\$1,515	\$1,749	\$197**	\$80**
Shortfall	\$641	\$283	\$190	\$214	\$136	-\$52	-\$281**	-\$185**
Coverage Rate	52%	79%	89%	76%	88%	104%	14%**	8%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-9 displays the average total charges, total customer credits, shortfall, and coverage rates for 2023 AMP enrollees and comparison customers in the 12 months before enrollment (Pre) and 12 months after enrollment (Post), as well as the estimated net changes in these variables. **The table shows that AMP was estimated to have a positive impact on AMP participants' bill payment as compared to the comparison group, but the estimated net differences were smaller than for the 2022 AMP enrollees.**

- Coverage Rate: This is the total customer credits divided by the total amount the customer was billed.
 - 2023 AMP enrollees were estimated to increase their coverage rate from 51 percent of bills paid in the 12 months before AMP enrollment to 95 percent of bills paid in the 12 months following enrollment.
 - The matched comparison group was estimated to increase their coverage rate from 82 percent of bills paid in the 12 months before AMP enrollment to 123 percent of bills paid in months one to 12 after the matched enrollment. The coverage rate of more than 100 percent means that these customers were paying off some of their arrearages.
 - The estimated net change was three percentage points, meaning that 2023 AMP enrollees increased the percent of bill paid by three percentage points more than the matched nonparticipants.
- Shortfall: This is the total annual bill minus the total annual credits. The table also shows that 2023 AMP enrollees were estimated to reduce their shortfall by more than the matched comparison group.

Table IV-9
Mean Charges and Credits
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, All IOUs

	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
Obs.	34,307			34,307			--
Total Charges	\$1,812	\$1,515	-\$297**	\$1,509	\$1,356	-\$153**	-\$144**
Total Credits	\$1,008	\$1,482	\$474**	\$1,306	\$1,559	\$254**	\$220**
Shortfall	\$804	\$33	-\$771**	\$203	-\$203	-\$407**	-\$364**
Coverage Rate	51%	95%	44%**	82%	123%	41%**	3%**

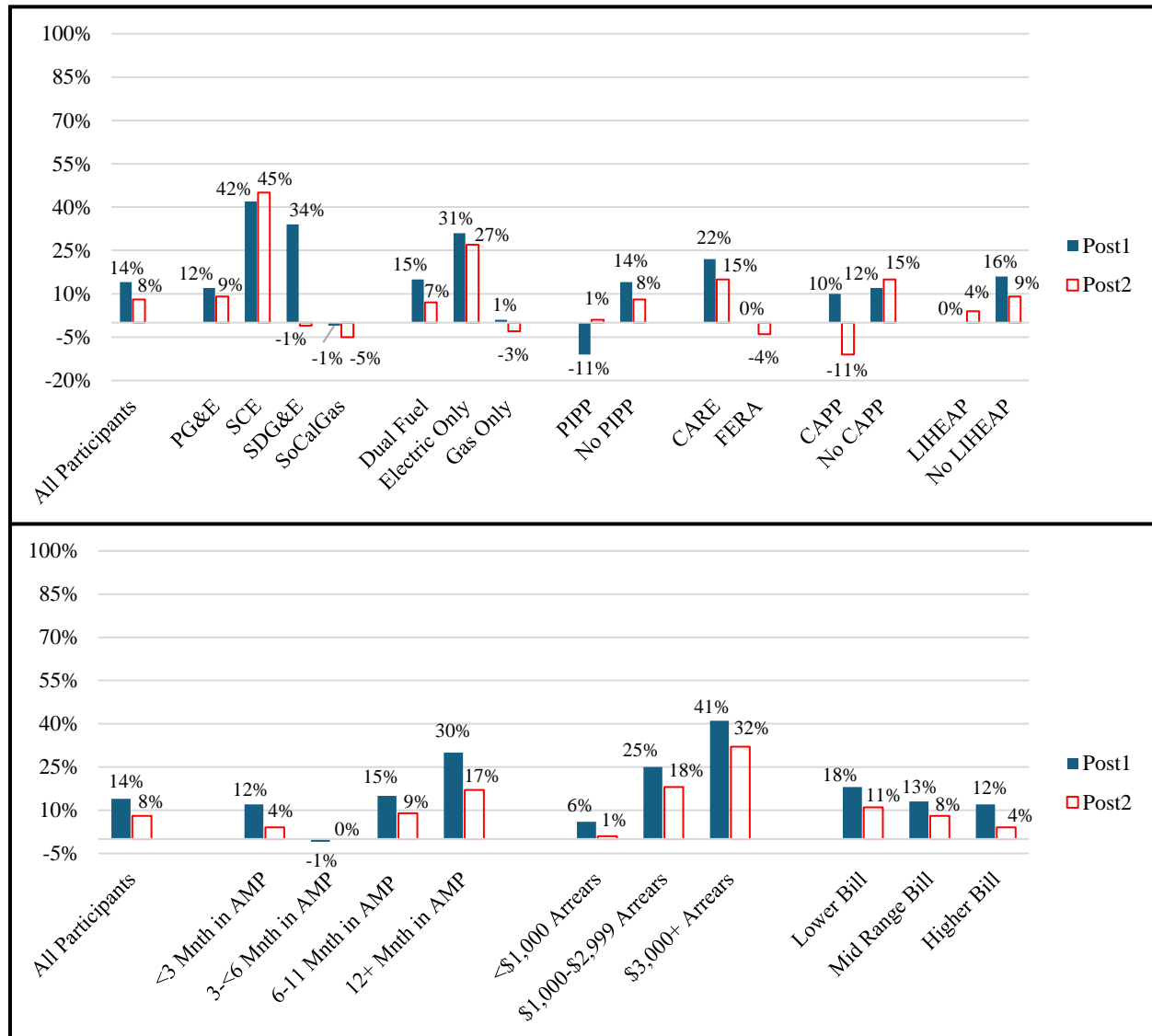
** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-3 displays the estimated net change in the bill coverage rate for the 2022 AMP enrollees in the 12 months before AMP enrollment compared to months one to 12 and months 13 to 24 after AMP enrollment. The estimated net change shows the change for the AMP participants as compared to their matched comparison group. **The chart shows that AMP participants with active accounts over the evaluation period were estimated to improve their coverage rates by more than the matched comparison group in months 1 to 12 and months 13 to 24 after AMP enrollment, and that the impacts were greatest for SCE, non-PIPP participants, CARE participants, customers who did not receive LIHEAP, customers with larger starting arrearages, and customers with lower bills.**

- The estimated net change in the 12 months after enrollment was an increase of 14 percentage points as compared to the comparison group.
- The estimated net change in months 13 to 24 after enrollment was an increase of eight percentage points as compared to the comparison group.
- The chart also shows differences in these estimated net changes in bill coverage rate by subgroup, with the following key differences found.
 - IOU: SCE AMP participants had the greatest improvement in coverage rate. SDG&E AMP participants made a large improvement in the 12 months following enrollment but experienced no significant net change in months 13 to 24 after enrollment. SoCalGas AMP participants experienced no improvements in coverage rate.
 - Fuel Type: Electric only customers had the greatest increase in coverage rate, driven by SCE electric only customers.
 - PIPP: Customers not on PIPP had improved their coverage rates, but customers on PIPP did not. This may be due to the timing of PIPP participation and how that related to the timing of AMP participation.
 - CARE/FERA: CARE participants had a net improvement in their coverage rates, but FERA participants did not.

- LIHEAP: Customers who did not receive LIHEAP grants had greater improvements in coverage rate than customers who did receive LIHEAP grants.
- Enrollment Length: Customers who enrolled in AMP for six or more months had greater improvements in their coverage rate than customers enrolled for fewer than six months.
- Starting Arrearages: Customers with larger starting arrearages before AMP enrollment had greater improvements in coverage rate than customers with smaller starting arrangements.
- Bill Amount: Customers with lower bill amounts had greater improvements in their coverage rate than customers with higher bill amounts.

Chart IV-3
Net Change in Mean Percent of Bill Paid (Excluding Arrearages)
2022 AMP Enrollees

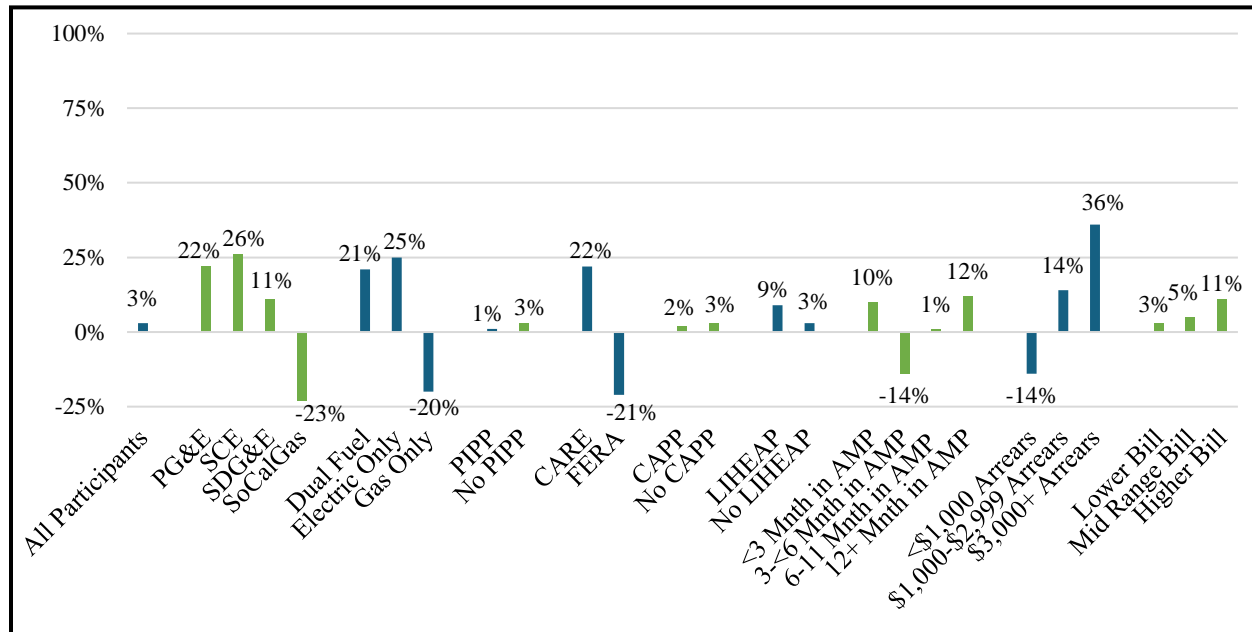


N = 30,384

Chart IV-4 displays the estimated net change in the bill coverage rate for the 2023 AMP enrollees in the 12 months before AMP enrollment compared to months one to 12 after AMP enrollment. The estimated net change shows the change for the AMP participants as compared to their matched comparison group. **The chart shows smaller estimated net impacts of AMP on bill coverage rates than for the 2022 AMP enrollees, with the same general patterns except that the 2023 AMP enrollees who received LIHEAP had greater improvements than those who did not and the AMP enrollees with higher bills had greater improvements than those with lower bills.**

- The chart shows differences in these estimated net changes in bill coverage rate by subgroup, with the following key differences found.
 - IOU: SCE AMP participants had the greatest improvement in the bill coverage rate. SoCalGas AMP participants experienced a significant decline in the coverage rate.
 - Fuel Type: Electric only customers had the greatest increase in coverage rate, driven by SCE electric only customers. Gas only customers had a decrease in coverage rate, driven by SoCalGas gas only customers.
 - CARE/FERA: CARE participants had a net improvement in their bill coverage rate, but FERA participants had a net decline in their bill coverage rate.
 - LIHEAP: Customers who received LIHEAP grants had greater improvements in coverage rate than customers who did not receive LIHEAP grants.
 - Enrollment Length: Customers who enrolled in AMP for 12 or more months had greater improvements in their coverage rate than customers enrolled for fewer than six months.
 - Starting Arrearages: Customers with larger starting arrearages just before AMP enrollment had greater improvements in their coverage rate than customers with smaller starting arrangements.
 - Bill Amount: Customers with higher bill amounts had greater improvements in their coverage rate than customers with lower bill amounts.

Chart IV-4
Net Change in Mean Percent of Bill Paid (Excluding Arrears)
2023 AMP Enrollees



N = 34,307

Tables IV-10 and IV-11 display the distributions of the bill coverage rate in the 12 months before enrollment (Pre), the one to 12 months after enrollment (Post 1), and the 13 to 24 months after enrollment (Post 2), as well as the same statistics for the comparison group. **The tables show an estimated net improvement in the percentage of customers with active accounts over the evaluation period paying their full bill as compared to the change for the comparison group.**

- Only six percent of the 2022 AMP enrollees paid their full bill in the 12 months prior to enrollment¹³, and this increased to 33 percent in the 12 months after enrollment and 43 percent in the 13 to 24 months following enrollment.
- The estimated net change for 2022 AMP enrollees in the percentage paying the full bill, as compared to the comparison group, was an 11 percentage point increase in the 12 months after enrollment $[(33\% - 6\%) - (48\% - 32\%)]$ and a nine percentage point increase in the 13 to 24 months after enrollment $[(43\% - 6\%) - (60\% - 32\%)]$.
- Only eight percent of the 2023 AMP enrollees paid their full bill in the 12 months prior to AMP enrollment, and this increased to 52 percent in the 12 months following AMP enrollment.

¹³ Even though six percent paid the full bill in the 12 months before AMP, they enrolled in AMP because they had outstanding arrearages that they did not pay. This coverage rate only looks at payment of bills that were incurred during the 12 months before AMP enrollment and does not include payment of outstanding arrearages.

- The estimated net change in the percentage of 2023 AMP enrollees paying the full bill in the 12 months after AMP enrollment, as compared to the comparison group, was a 12 percentage point increase.

Table IV-10
Percent of Bill Paid (Excluding Arrearages)
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Percent of Bill Paid	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
<50%	44%	24%	20%	28%	23%	16%	-15%**	-13%**
51%-75%	28%	12%	14%	15%	10%	6%	-10%**	-5%**
76%-99%	21%	30%	23%	25%	19%	18%	15%**	8%**
100% or More	6%	33%	43%	32%	48%	60%	11%**	9%**
Total	100%	100%	100%	100%	100%	100%	--	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-11
Percent of Bill Paid (Excluding Arrearages)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Percent of Bill Paid	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
Obs.	34,307			34,307			--
<50%	49%	15%	-34%**	25%	12%	-13%**	-21%**
51%-75%	26%	11%	-15%**	15%	5%	-10%**	-5%**
76%-99%	18%	22%	5%**	22%	14%	-9%**	13%**
100% or More	8%	52%	44%**	37%	69%	32%**	12%**
Total	100%	100%	100%	100%	100%	100%	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Additional analysis of the percent of bill paid found the following with respect to specific metrics discussed in the evaluation plan.

- 2022 AMP enrollees were estimated to have a 23 percentage point net increase in the percentage with coverage rates of 90 percent or more in the first 12 months after enrollment and a 15 percentage point net increase in months 13 to 24 after enrollment. Their pre-AMP percentage with coverage rates of 90 percent or more was 12 percent. Therefore, the estimated net percent increase was 192 percent for months one to 12

- (23%/12%) after AMP enrollment and 125 percent (15%/12%) for months 13 to 24 after AMP enrollment.
- 2023 AMP enrollees had an estimated 21 percentage point net increase in the percentage with coverage rates of 90 percent or more in the first 12 months after AMP enrollment. Their pre-AMP percentage with coverage rates of 90 percent or more was 12 percent. Therefore, the estimated net percent increase was 175 percent for months one to 12 (21%/12%).

Tables IV-12 and IV-13 display the average bill coverage rate by poverty level for AMP participants and comparison customers in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net changes in these variables. Customers missing household size or income data are excluded from these tables.¹⁴ **The tables show that customers at higher poverty levels had greater net improvements in their bill coverage rates after AMP enrollment.**

- 2022 AMP enrollees with income above 200 percent of the poverty level had the largest estimated net increase in coverage rates (20 percentage points), which was maintained in the 13 to 24 months after enrollment.
- 2023 AMP enrollees with income above 200 percent of the poverty level had the largest estimated net increase in the coverage rate (22 percentage points) in the 12 months after AMP enrollment.
- 2023 AMP enrollees with income below the poverty level experienced an estimated net decline (negative 12 percentage points) in the bill coverage rate in the 12 months after AMP enrollment.

Table IV-12
Mean Percent of Bill Paid (Excluding Arrearages)
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	47%	70%	88%	65%	79%	99%	9% **	7% **
101%-200%	3,213	53%	81%	92%	76%	86%	107%	17% **	8% **
>200%	1,648	61%	93%	97%	91%	104%	107%	20% **	20% **
Total	6,928	53%	79%	92%	76%	89%	104%	15% **	11% **

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

¹⁴ 23,456 accounts were removed from Table IV-12 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues. 25,252 accounts were removed from Table IV-13 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues.

Table IV-13
Mean Percent of Bill Paid (Excluding Arrearages)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	45%	84%	39% **	73%	125%	52% **	-12% **
101%-200%	3,174	51%	95%	45% **	86%	126%	41% **	4% **
>200%	3,193	60%	111%	50% **	95%	124%	29% **	22% **
Total	9,055	51%	95%	44% **	82%	125%	43% **	2%

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Tables IV-14 and IV-15 display the average bill coverage rate by energy burden for AMP participants and comparison customers in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net changes in these variables. Customers missing income data are excluded from these tables.¹⁵ **These tables do not show the expected relationship between energy burden and the impact of AMP on bill coverage rates. While there is no clear relationship for the 2022 AMP enrollees, the 2023 AMP enrollees with the highest energy burdens show the greatest net improvement in their bill coverage rate in the 12 months following AMP enrollment. This may be related to the finding that customers with higher arrearages had greater improvements in bill coverage rates.**

- 2023 enrollees with an energy burden less than or equal to eight percent did not experience net significant changes in their coverage rate.
- 2023 enrollees with an energy burden greater than eight percent were estimated to have an eight percentage point net increase in the bill coverage rate.

Table IV-14
Mean Percent of Bill Paid (Excluding Arrearages)
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	44%	70%	86%	71%	84%	103%	13% **	11% **
5%-8%	3,085	59%	84%	92%	82%	91%	104%	16% **	11% **
>8%	1,598	63%	92%	94%	84%	98%	107%	15% **	7% **

¹⁵ 19,652 accounts were removed from Table IV-14 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues. 21,564 accounts were removed from Table IV-15 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues.

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Total	10,732	53%	79%	90%	76%	88%	104%	14%**	9%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-15
Mean Percent of Bill Paid (Excluding Arrearages)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	49%	96%	47%**	80%	125%	45%**	2%
5%-8%	4,298	52%	91%	40%**	85%	123%	38%**	2%
>8%	2,528	55%	97%	42%**	88%	122%	34%**	8%**
Total	12,743	51%	95%	44%**	83%	124%	40%**	3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

A series of multivariate difference-in-differences regression models were used to jointly analyze differences in AMP impacts on the bill coverage rates by the duration of AMP enrollment, post period bill amount, AMP arrearage amount, and participation in PIPP, CAPP, FERA, and LIHEAP. The reference groups – customers enrolled for less than three months, those with a low post period bill amount, and those with less than \$1,000 AMP arrearages – are not included in the equation below. Additional versions of the regression are shown that include IOUs (with SoCalGas as the reference group) and without the duration of AMP enrollment.

The four versions of the regression shown in the table are as follows.

- (1) All controls except IOUs.
- (2) All controls except IOUs and length of time on AMP.
- (3) All controls, including IOUs.
- (4) All controls, including IOUs, but excluding length of time on AMP.

The general format of the regression is shown below.

$$\begin{aligned}
 Y = & \beta_0 + \beta_1 \text{Treat} + \beta_2 \text{Post} + \beta_3 \text{Treat} \times \text{Post} \\
 & + \delta_1 \text{PIPP} + \delta_2 \text{PIPP} \times \text{Post} + \delta_3 \text{PIPP} \times \text{Treat} + \delta_4 \text{PIPP} \times \text{Treat} \times \text{Post} \\
 & + \theta_1 \text{CAPP} + \theta_2 \text{CAPP} \times \text{Post} + \theta_3 \text{CAPP} \times \text{Treat} + \theta_4 \text{CAPP} \times \text{Treat} \times \text{Post} \\
 & + \gamma_1 \text{FERA} + \gamma_2 \text{FERA} \times \text{Post} + \gamma_3 \text{FERA} \times \text{Treat} + \gamma_4 \text{FERA} \times \text{Treat} \times \text{Post} \\
 & + \alpha_1 \text{LIHEAP} + \alpha_2 \text{LIHEAP} \times \text{Post} + \alpha_3 \text{LIHEAP} \times \text{Treat} \\
 & + \alpha_4 \text{LIHEAP} \times \text{Treat} \times \text{Post}
 \end{aligned}$$

$$\begin{aligned}
& + \sum_{i=2}^4 [\varphi_{1i}Time_i + \varphi_{2i}Time_i \times Post + \varphi_{3i}Time_i \times Treat \\
& \quad + \varphi_{4i}Time_i \times Treat \times Post] \\
& + \sum_{j=2}^3 [\mu_{1j}BillAmt_j + \mu_{2j}BillAmt_j \times Post + \mu_{3j}BillAmt_j \times Treat \\
& \quad + \mu_{4j}BillAmt_j \times Treat \times Post] \\
& + \sum_{k=2}^3 [\omega_{1k}AMParr_k + \omega_{2k}AMParr_k \times Post + \omega_{3k}AMParr_k \times Treat \\
& \quad + \omega_{4k}AMParr_k \times Treat \times Post] + \varepsilon
\end{aligned}$$

The variables are defined as follows.

- Y = bill coverage rate
- $Treat$ = 1 if enrolled in AMP, 0 otherwise
- $Post$ = 1 if in the year after enrollment, 0 otherwise
- $PIPP$ = 1 if on PIPP in any period, 0 otherwise
- $CAPP$ = 1 if on CAPP in any period, 0 otherwise
- $FERA$ = 1 if on FERA in any period, 0 otherwise
- $LIHEAP$ = 1 if on LIHEAP in any period, 0 otherwise
- $TIME_2$ = 1 if customer was enrolled in AMP for 3 to less than 6 months, 0 otherwise
- $TIME_3$ = 1 if customer was enrolled in AMP for 6 to less than 12 months, 0 otherwise
- $TIME_4$ = 1 if customer was enrolled in AMP for 12 or more months, 0 otherwise
- $BillAmt_2$ = 1 if customer had a mid bill amount in year after enrollment, 0 otherwise
- $BillAmt_3$ = 1 if customer had a high bill amount in year after enrollment, 0 otherwise
- $AMParr_2$ = 1 if customer had \$1,000 - \$2,999 in arrears, 0 otherwise
- $AMParr_3$ = 1 if customer had \$3,000 or more in arrears, 0 otherwise

Table IV-16 displays the results of the multivariate difference-in-differences with the bill coverage rate as the outcome. **The findings indicate being enrolled in AMP for 12 or more months and having higher arrearages led to a larger estimated net increase in bill coverage rates in the 12 months following AMP enrollment. In contrast, customers that also participated in the other assistance programs (PIPP, CAPP, or FERA) or had higher bills after enrollment had a relative net reduction in their bill coverage rate. While 2023 AMP participants from PG&E, SCE, and SDG&E had a net improvement in coverage rates compared to SoCalGas, 2022 AMP participants from SCE and SDG&E had a net improvement in coverage rates compared to SoCalGas, but PG&E had a net reduction in coverage rates compared to SoCalGas.**

Table IV-16
Multivariate Analysis of Bill Coverage Rate

Regression Results								
Regression Term ¹	2022 Enrollees ²				2023 Enrollees ³			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Constant Term	92%**	99%**	57%**	59%**	91%**	96%**	66%**	66%**
Treatment	-25%**	-26%**	-36%**	-33%**	-31%**	-27%**	-41%**	-35%**
Post Period	5%**	3%**	8%**	7%**	26%**	27%**	56%**	59%**
Treatment X Post Period	19%**	24%**	22%**	23%**	22%**	17%**	-8%**	-11%**
PIPP X Treatment X Post Period	-26%**	-25%**	-26%**	-26%**	-11%**	-9%**	-9%**	-8%**
CAPP X Treatment X Post Period	-9%**	-11%**	-13%**	-15%**	-19%**	-19%**	-17%**	-18%**
FERA X Treatment X Post Period	-8%**	-10%**	-9%**	-9%**	-37%**	-35%**	-8%**	-8%**
LIHEAP X Treatment X Post Period	-13%**	-15%**	-10%**	-11%**	4%**	2%	2%	1%
Time on AMP X Treatment X Post Period								
3 to < 6 Months	-8%**	--	-9%**	--	-17%**	--	-17%**	--
6 to < 12 Months	2%	--	1%	--	-13%**	--	-13%**	--
12+ Months	18%**	--	14%**	--	8%**	--	9%**	--
Bill Amount X Treatment X Post Period								
Mid Bill	-12%**	-11%**	-10%**	-9%**	-11%**	-11%**	-11%**	-11%**
High Bill	-17%**	-17%**	-14%**	-13%**	-23%**	-23%**	-24%**	-24%**
AMP Arrearages X Treatment X Post Period								
\$1,000 - \$2,999	16%**	16%**	16%**	16%**	24%**	24%**	23%**	23%**
\$3,000+	35%**	35%**	38%**	38%**	46%**	46%**	44%**	44%**
IOU X Treatment X Post Period								
PG&E	--	--	-12%**	-10%**	--	--	35%**	31%**
SCE	--	--	9%**	17%**	--	--	29%**	32%**
SDG&E	--	--	19%**	19%**	--	--	17%**	16%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

¹ Covariates (indicators for PIPP, CAPP, FERA, LIHEAP, Time on AMP, Bill Amount, and AMP Arrearages), each of their interactions with Treatment, and each of their interactions with Post Period were included in the regression. This table does not report the coefficients of those regression terms.

² The number of observations for all regressions for 2022 Enrollees is 30,384.

³ The number of observations for all regressions for 2023 Enrollees is 34,307.

B. AMP Participation and Arrearage Forgiveness

This section provides an analysis of the length of time customers remain enrolled in AMP and the amount of arrearage forgiveness received by AMP participants.

Length of Time on AMP

Tables IV-17 and IV-18 display information on the length of time customers were enrolled in AMP for the selected 2022 and 2023 AMP enrollee samples (all customers who were selected for the AMP analysis) and the 2022 and 2023 AMP enrollee analysis groups (customers with sufficient data to be included in the analysis of bills and payments before and after AMP enrollment). These tables exclude a small number of participants who were missing the relevant AMP program data.¹⁶

- For 2022 AMP enrollees selected for the analysis, the estimated average number of months enrolled in AMP ranged from 5.8 months for SDG&E's participants to 10.0 months for SCE's participants. The table shows that 50 percent of SCE's AMP participants remained enrolled in AMP for at least 12 months, significantly more than the other IOUs
- For 2023 AMP enrollees selected for the analysis, the average number of months enrolled in AMP ranged from 7.1 for SDG&E's participants to 9.0 months for SCE's participants. The table shows that 44 percent of SCE's participants and 43 percent of SoCalGas' participants were estimated to remain enrolled for 12 or more months.

Table IV-17
Number of Months Enrolled in AMP
2022 AMP Enrollees

Length of AMP Enrollment	2022 AMP Enrollees							
	Selected Sample				Analysis Group			
	PG&E	SCE	SDG&E	SCG	PG&E	SCE	SDG&E	SCG
Observations	13,850	9,869	9,998	9,998	11,718	5,230	6,552	6,838
< 3 Months	15%	7%	22%	10%	15%	< 1%	19%	7%
3 - < 6 Months	21%	20%	25%	38%	21%	15%	25%	36%
6 - 11 Months	48%	23%	47%	25%	48%	24%	50%	26%
12+ Months	17%	50%	6%	27%	17%	61%	7%	32%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Mean # Months	7.6	10.0	5.8	6.8	7.6	11.5	6.0	7.4

¹⁶ 142 customers were removed from the 2022 selected sample and 46 participants were removed from the 2022 analysis group because they were missing program data. 2,335 customers were removed from the 2023 selected sample and 2,016 participants were removed from the 2023 analysis group because they were missing program data.

Table IV-18
Number of Months Enrolled in AMP
2023 AMP Enrollees

Length of AMP Enrollment	2023 AMP Enrollees							
	Selected Sample				Analysis Group			
	PG&E	SCE	SDG&E	SCG	PG&E	SCE	SDG&E	SCG
Observations	13,713	9,433	9,064	9,612	11,541	6,144	6,649	7,957
< 3 Months	16%	5%	21%	9%	15%	< 1%	16%	6%
3 - < 6 Months	23%	23%	22%	27%	23%	14%	20%	25%
6 - 11 Months	46%	28%	34%	21%	47%	32%	37%	21%
12+ Months	15%	44%	23%	43%	15%	54%	28%	47%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Mean # Months	7.5	9.0	7.1	8.0	7.6	10.2	7.8	8.5

Number of AMP Credits Received

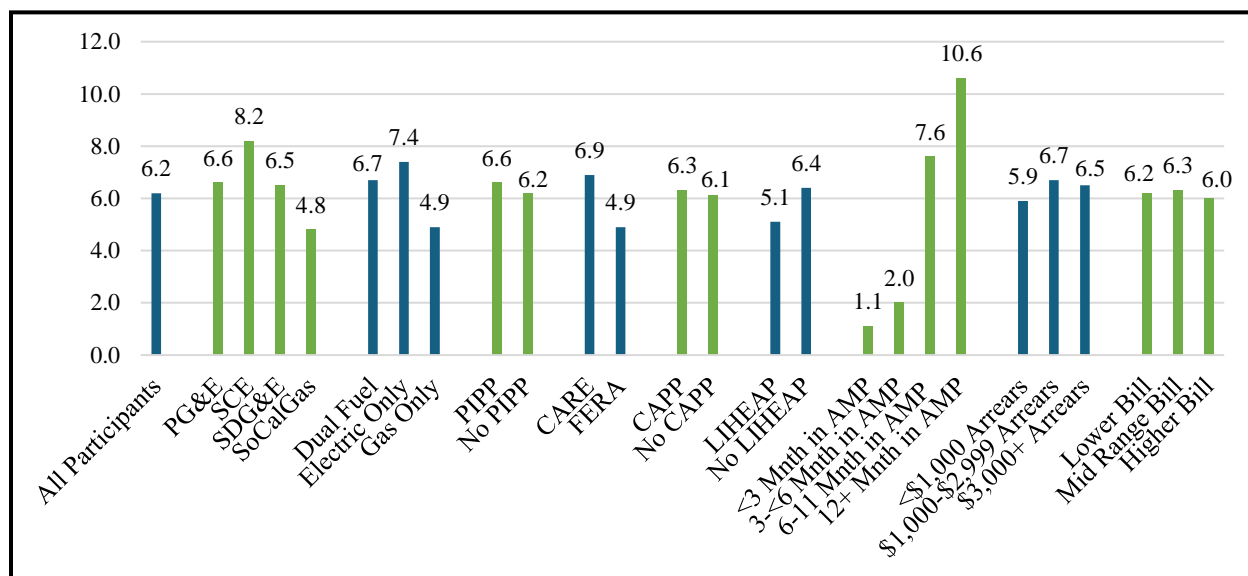
Chart IV-5 and IV-6 display the estimated mean number of AMP arrearage forgiveness credits received in the 12 months following enrollment for AMP participants. (The arrearage forgiveness credit is equal to 1/12 of the starting arrearage at AMP enrollment, unless the starting arrearages at AMP enrollment is greater than \$8,000 in which case the arrearage forgiveness credit is $\$8,000/12 = \666.67 . Note that this is not necessarily equal to the number of on-time payments, because customers who make up a payment will receive more than one arrearage forgiveness credit on that date.) The charts show the following.

- 2022 AMP enrollees with active accounts over the evaluation period received an estimated average of 6.2 arrearage forgiveness credits in the 12 months after enrollment
- 2023 AMP enrollees with active accounts over the evaluation period received an estimated average of 7.0 arrearage forgiveness credits in the 12 months after enrollment.
- The charts also show differences in the estimated average number of arrearage forgiveness credits received by subgroup, with the following key differences found.
 - IOU: SCE customers received the greatest number of credits.
 - Fuel Type: Electric only customers received the most forgiveness credits, driven by the SCE electric only customers.
 - CARE/FERA: CARE participants received more credits than FERA participants, but the difference was smaller for 2023 enrollees than for the 2022 enrollees.
 - LIHEAP: Customers who did not receive LIHEAP grants received more forgiveness credits than customers who did receive LIHEAP grants.

2022 AMP enrollees who disenrolled early in 2022 were able to re-enroll in AMP in 2023 in months 13 to 24 after their 2022 AMP enrollment. There were 5,712 2022 AMP enrollees

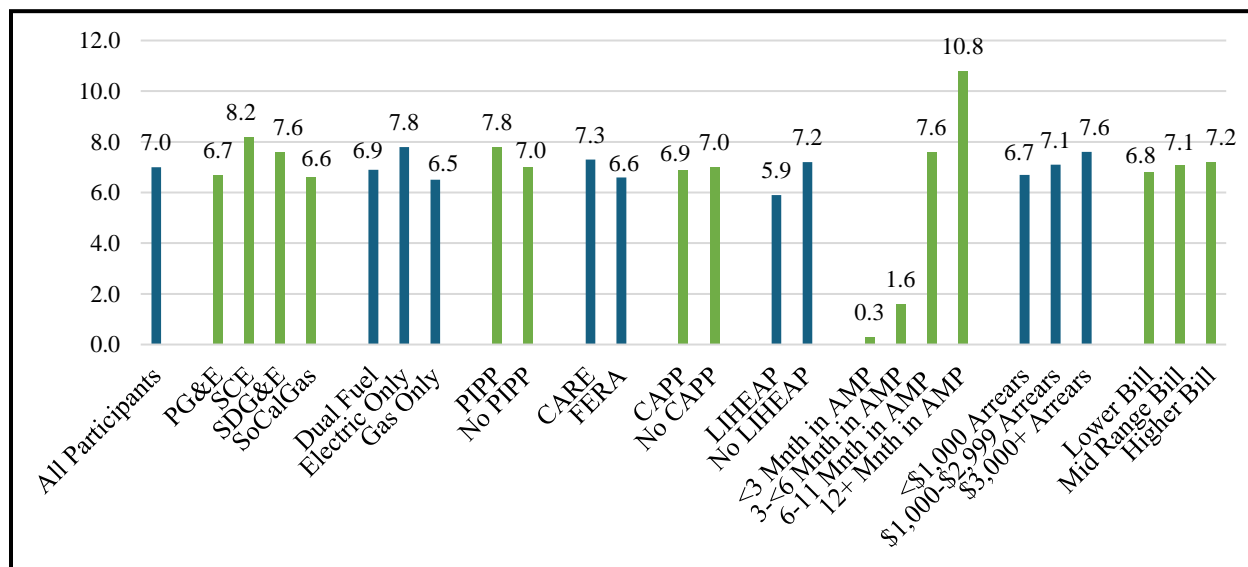
who received one or more re-enrollment credits. When including those additional credits, the estimated average total number of credits for all 2022 AMP enrollees increases from 6.2 to 6.9 credits.

Chart IV-5
Mean Number of Arrearage Forgiveness Credits Received
in the Year After AMP Enrollment
2022 AMP Enrollees



N = 30,384

Chart IV-6
Mean Number of Arrearage Forgiveness Credits Received
in the Year After AMP Enrollment
2023 AMP Enrollees



N = 34,307

Respondents to the AMP participant survey were asked whether they received help or encouragement, such as letters, after enrolling in the program. Table IV-19 shows that the 2023 survey respondents who remembered receiving help or encouragement from their IOU were estimated to receive 0.6 more arrearage credits and \$184 more in arrearage forgiveness on average than those who did not report receiving that help or encouragement.

Table IV-19
Arrearage Credits and AMP Forgiveness
By Recalled Receipt of IOU Encouragement
2023 Survey Respondents

Metric	2023 AMP Enrollees Who Completed Survey	
	Recalled Letter Receipt	Did not Recall Letter Receipt
Observations	266	344
Number of Arrearage Credits	7.4	6.8
Amount of Forgiveness	\$961	\$777

AMP survey respondents were asked whether it was easy or difficult to pay their energy bills on time and in full while they were on AMP. Those customers who reported that it was very or somewhat difficult to pay their energy bills on time or who reported that it was very or somewhat difficult to pay their energy bills in full were considered to report challenges about bill payment. Table IV-20 shows that 2023 survey respondents who reported challenges in paying their bills were estimated to receive 1.7 fewer arrearage credits and \$153 less in arrearage forgiveness on average than those who did not report those challenges.

Table IV-20
Arrearage Credits and AMP Forgiveness
By Reported Bill Payment Challenges
2023 Survey Respondents

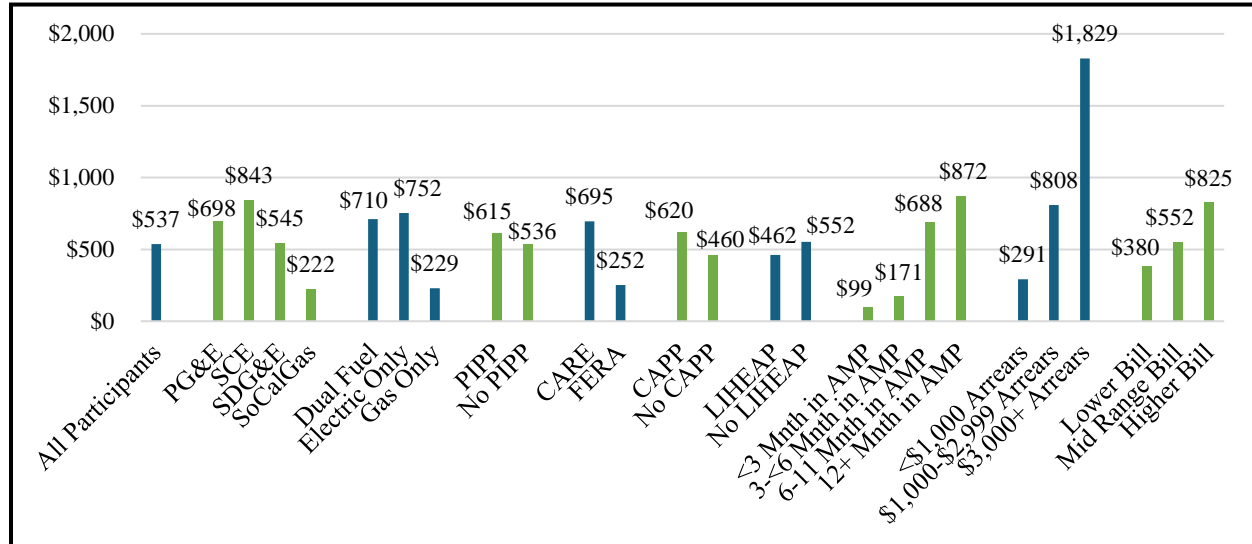
Metric	2023 AMP Enrollees Who Completed Survey	
	Reported Challenges Paying Bills While on AMP	Did not Report Challenges Paying Bills While on AMP
Observations	286	324
Number of Arrearage Credits	6.2	7.9
Amount of Forgiveness	\$785	\$938

Arrearages Forgiveness Receipt

Charts IV-7 and IV-8 display the estimated mean amount of AMP arrearage forgiveness received in the 12 months following enrollment for AMP participants with active accounts over the evaluation period. The charts show the following.

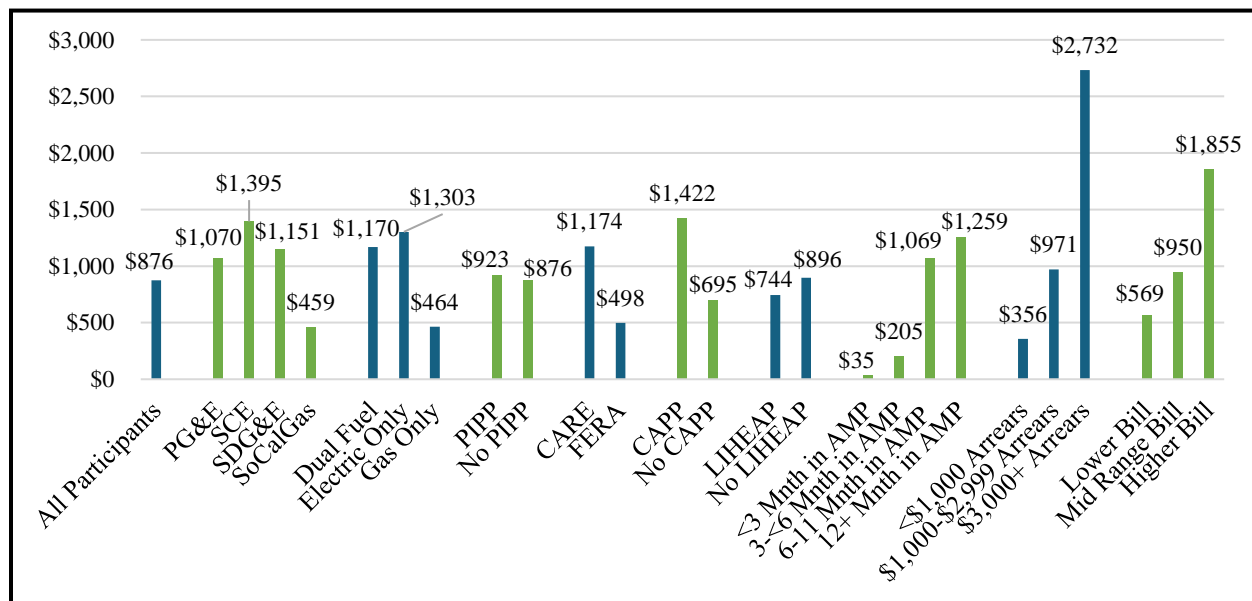
- 2022 AMP enrollees were estimated to receive an average of \$537 in arrearage forgiveness in the 12 months after enrollment
- 2023 AMP enrollees were estimated to receive an average of \$876 in arrearage forgiveness in the 12 months after enrollment.
- The charts also show differences in the average estimated arrearage forgiveness received by subgroup, with the following key differences found.
 - IOU: SCE AMP participants received the most forgiveness.
 - Fuel Type: Electric only customers received the most forgiveness, driven by SCE electric only customers.
 - PIPP: Customers on PIPP received more forgiveness than customers not on PIPP.
 - CARE/FERA: CARE participants received more forgiveness credits than FERA participants.
 - CAPP: Customers who received CAPP assistance received more AMP forgiveness than customers who did not receive CAPP assistance.
 - LIHEAP: Customers who did not receive LIHEAP grants received more forgiveness credits than customers who did receive LIHEAP grants.
 - Enrollment Length: Customers enrolled in the program for six or more months received more arrearage forgiveness than customers enrolled for fewer than six months.
 - Starting Arrearages: Customers with larger arrearages just before AMP enrollment received more arrearage forgiveness than customers with smaller starting arrearages.
 - Bill Amount: Customers with higher bill amounts received more arrearage forgiveness than customers with lower bill amounts.

Chart IV-7
Mean Arrearage Forgiveness Received in the Year After Enrollment
2022 AMP Enrollees



N = 30,384

Chart IV-8
Mean Arrearage Forgiveness Received in the Year After Enrollment
2023 AMP Enrollees



N = 34,307

Table IV-21 examines the percentage of arrearages forgiven through AMP. Starting arrearages were capped at \$8,000, as this is the maximum that can be forgiven through AMP (unless the customer waits a year and then re-enrolls). The table displays the distribution of the percentage forgiven in the 12 months after enrollment (Post 1) and 24 months after enrollment (Total). Some IOUs permitted AMP participants to extend AMP participation past 12 months to make up missed payments, so the Total column displays the percentage of 2022 enrollees at different levels of arrearage forgiveness, including all AMP forgiveness received until disenrollment. **The table shows that 20 percent of 2022 AMP enrollees and 15 percent of 2023 AMP enrollees were estimated to complete AMP by having all of their arrearages forgiven. For the 2022 enrollees this includes arrearages forgiven in months 13 to 24 after enrollment, but for the 2023 enrollees, only the first 12 months after enrollment were available for analysis.**

- 37 percent of the 2022 AMP enrollees and 46 percent of the 2023 AMP enrollees had more than 75 percent of their arrearages forgiven.
- 40 percent of both the 2022 AMP enrollees and the 2023 AMP enrollees had less than half of their arrearages forgiven.

Table IV-21
Percent of Arrearages Forgiven
2022 and 2023 AMP Enrollees

Percent of Arrearages	2022 AMP Enrollees		2023 AMP Enrollees
Obs.	30,384		34,307
	Post 1 (Months 1-12)	Total (Months 1-24)	Post 1 (Months 1-12)
<50%	48%	40%	40%
51%-75%	21%	23%	14%
76%-99%	24%	17%	31%
100%	6%	20%	15%
Total	100%	100%	100%
Mean Percentage Forgiven	49%	58%	57%

Table IV-22 displays the percentage of arrears forgiven by AMP participants based on the AMP program data. The table excludes customers who were missing program data.¹⁷

- The table shows that on average the 2022 enrollees had 56 percent of eligible arrearages forgiven and 2023 enrollees had 54 percent of their eligible arrearages forgiven.
- Of the customers with sufficient data to be included in the analysis, the table shows that 2022 enrollees had an average of 61 percent of their arrearages forgiven and the 2023 AMP enrollees had an average of 58 percent of their arrearages forgiven.

¹⁷ 142 customers were removed from the 2022 selected sample and 46 participants were removed from the 2022 analysis group because they were missing program data. 2,335 customers were removed from the 2023 selected sample and 2,016 participants were removed from the 2023 analysis group because they were missing program data.

Table IV-22
Percent of Arrearage Forgiveness Received – Program Data
2022 and 2023 AMP Enrollees

IOU	2022 AMP Enrollees				2023 AMP Enrollees			
	Selected Sample		Analysis Group		Selected Sample		Analysis Group	
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
PG&E	13,850	52%	11,758	52%	13,713	54%	11,541	55%
SCE	9,869	57%	5,230	68%	9,433	51%	6,144	62%
SDG&E	9,998	53%	6,552	62%	9,064	53%	6,649	61%
SoCalGas	9,998	60%	6,838	68%	9,612	54%	7,957	58%
All IOUs	43,715	56%	30,338	61%	41,822	54%	32,291	58%

A series of multivariate regression models were used to jointly analyze how the percentage of AMP arrearages forgiven varies by the duration of enrollment, post period bill amount, AMP arrearage amount, and participation in PIPP, CAPP, FERA, and LIHEAP. The reference groups – customers enrolled for less than three months, those with a low post period bill amount, and those with less than \$1,000 AMP arrearages – are not included in the equation below. Additional versions of the regression are shown that include IOUs (with SoCalGas as the reference group) and without the duration of AMP enrollment.

The four versions of the regression shown in the table are as follows.

- (1) All controls except IOUs.
- (2) All controls except IOUs and length of time on AMP.
- (3) All controls, including IOUs.
- (4) All controls, including IOUs, but excluding length of time on AMP.

The model specification is shown below.

$$Y = \beta_0 + \beta_1 PIPP + \beta_2 CAPP + \beta_3 FERA + \beta_4 LIHEAP + \sum_{i=2}^4 \beta_{5i} Time_i + \sum_{j=2}^3 \beta_{6j} BillAmt_j + \sum_{k=2}^3 \beta_{7k} AMPArr_k + \varepsilon$$

The variables are defined as follows.

- Y = percent of AMP arrearages forgiven
- $PIPP$ = 1 if on PIPP in any period, 0 otherwise
- $CAPP$ = 1 if on CAPP in any period, 0 otherwise
- $FERA$ = 1 if on FERA in any period, 0 otherwise
- $LIHEAP$ = 1 if on LIHEAP in any period, 0 otherwise
- $TIME_2$ = 1 if customer was enrolled in AMP for 3 to less than 6 months, 0 otherwise

- $TIME_3 = 1$ if customer was enrolled in AMP for 6 to less than 12 months, 0 otherwise
- $TIME_4 = 1$ if customer was enrolled in AMP for 12 or more months, 0 otherwise
- $BillAmt_2 = 1$ if customer had a mid bill amount in year after enrollment, 0 otherwise
- $BillAmt_3 = 1$ if customer had a high bill amount in year after enrollment, 0 otherwise
- $AMPArr_2 = 1$ if customer had \$1,000 - \$2,999 in arrears, 0 otherwise
- $AMPArr_3 = 1$ if customer had \$3,000 or more in arrears, 0 otherwise

Table IV-23 displays the results of the multivariate regression with the percentage of AMP arrearages forgiven in the year after enrollment as the outcome. **The table shows that longer enrollment in AMP, higher bill amounts after enrollment, and PIPP participation were associated with a higher percentage of AMP arrearages forgiven. In contrast, participation in the other assistance programs (CAPP, FERA, or LIHEAP) or having higher arrearages were associated with a lower percentage of AMP arrearages forgiven. Participation in CAPP may lead to a lower percentage of arrearages forgiven through AMP if CAPP resolved the remaining arrearages and the customer was then removed from the program.**

Table IV-23
Multivariate Analysis of the Percentage of AMP Arrearages Forgiven

Regression Results								
Regression Term	2022 Enrollees ¹				2023 Enrollees ²			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Constant Term	14%**	60%**	-2%**	40%**	5%**	61%**	-7%**	53%**
PIPP	2%**	3%**	2%**	3%**	2%**	7%**	2%**	7%**
CAPP	-4%**	-8%**	-5%**	-8%**	-1%**	-5%**	> -1%	-6%**
FERA	-12%**	-18%**	1%*	2%*	-8%**	-6%**	< 1%	2%**
LIHEAP	-3%**	-13%**	-3%**	-12%**	-1%**	-12%**	-2%**	-11%**
Time on AMP								
3 to < 6 Months	10%**	--	12%**	--	13%**	--	15%**	--
6 to < 12 Months	53%**	--	54%**	--	61%**	--	63%**	--
12+ Months	76%**	--	80%**	--	87%**	--	92%**	--
Bill Amount								
Mid Bill	1%**	3%**	1%**	3%**	1%**	2%**	1%**	2%**
High Bill	2%**	3%**	2%**	3%**	3%**	3%**	3%**	3%**
AMP Arrearages								
\$1,000 - \$2,999	-2%**	-2%**	-2%**	-4%**	-1%**	1%	> -1%	< 1%
\$3,000+	-7%**	-10%**	-8%**	-12%**	-6%**	-1%	-5%**	-2%*
IOU								
PG&E	--	--	15%**	19%**	--	--	15%**	6%**
SCE	--	--	6%**	31%**	--	--	> -1%	15%**
SDG&E	--	--	19%**	17%**	--	--	7%**	5%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

¹ The number of observations for all regressions for 2022 Enrollees is 30,384.

² The number of observations for all regressions for 2023 Enrollees is 34,307.

C. Arrearages

The evaluation was directed to assess whether AMP was effective in reducing and/or eliminating participants' arrearages.

Table IV-24 displays the average arrearages (past due balances 30 days or more past due) for 2022 AMP enrollees and comparison customers in the month before enrollment (Pre), the 12th month after enrollment (Post 1), and 24th month after enrollment (Post 2), as well as the net change in arrears. **The table shows that the selected sample of AMP participants were estimated to reduce their arrearages by nearly \$600 more than the comparison group. This is somewhat more than mean AMP arrearage forgiveness received by the 2022 enrollees (\$537).**

- 2022 AMP enrollees reduced their arrearages from an average of \$1,181 in the month before AMP enrollment to \$622 in month 12 after enrollment, with a small increase to \$647 in month 24 after enrollment.
- The matched comparison group increased their arrearages from \$663 in the month before the matched AMP enrollment to \$686 in month 12 after the matched enrollment, and to \$726 in month 24 after the matched enrollment.
- The net change for Post 1 is defined as:
[(AMP participants' arrearages in month 12 after AMP enrollment) - (AMP participants' arrearages in the month before AMP enrollment)] –

[(AMP nonparticipants' arrearages in month 12 after matched AMP enrollment) - (AMP nonparticipants' arrearages in the month before matched AMP enrollment)]
- The estimated net change for Post 1 was a reduction of \$583 (rounded) [(\$1,181 - \$622) - (\$663 - \$686)], meaning that 2022 AMP enrollees reduced their past due balances by \$583 more than the matched nonparticipants.
- The net change for Post 2 is defined as:
[(AMP participants' arrearages in month 24 after AMP enrollment) - (AMP participants' arrearages in the month before AMP enrollment)] –

[(AMP nonparticipants' arrearages in month 24 after matched AMP enrollment) - (AMP nonparticipants' arrearages in the month before matched AMP enrollment)]
- The estimated net change for Post 2 was a reduction of \$597, meaning that 2022 AMP enrollees reduced their past due balances by \$597 more than the matched nonparticipants.
- **The evaluation plan proposed that the program would be deemed effective if there were statistically significant net reductions in arrearages of at least \$200 or 20 percent. The estimated percentage reduction was 49 percent (\$583/\$1181) in months one to 12 after enrollment and 51 percent in months 13 to 24 after enrollment (\$597/\$1181). Based on these measures, the program was successful in reducing arrearages in the first and second year after AMP enrollment.**

Table IV-24
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

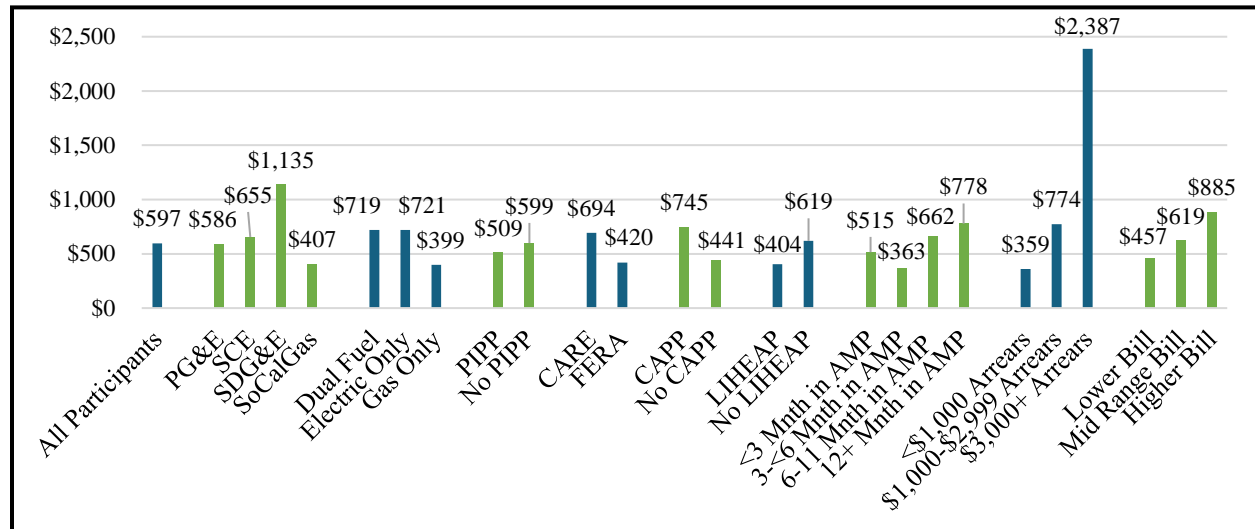
IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	\$1,632	\$826	\$830	\$951	\$802	\$735	-\$657**	-\$586**
SCE	5,234	\$1,355	\$235	\$660	\$472	\$426	\$432	-\$1,073**	-\$655**
SDG&E	6,554	\$1,196	\$741	\$932	\$794	\$1,269	\$1,665	-\$930**	-\$1,135**
SoCalGas	6,838	\$568	\$488	\$328	\$349	\$454	\$516	-\$185**	-\$407**
All IOUs	30,384	\$1,181	\$622	\$647	\$663	\$686	\$726	-\$583**	-\$597**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-9 displays the estimated net reduction in arrearages for 2022 AMP enrollees in the month before enrollment compared to the 24th month after enrollment. The net reduction shows the change for the AMP participants as compared to their matched comparison group. The chart shows differences in the estimated net reductions in arrearages by subgroup, with the following key differences found.

- IOU: SDG&E AMP participants had the greatest reduction in arrearages.
- Fuel Type: Dual fuel and electric only customers had similar large reductions in arrearages compared to gas only customers.
- PIPP: Customers not on PIPP had greater reductions in arrearages than customers on PIPP
- CARE/FERA: CARE participants had greater reductions in arrearages than FERA participants.
- LIHEAP: Customers who did not receive LIHEAP grants had greater reductions in arrearages than customers who did receive LIHEAP grants. While this may be counter to expectations, it may result from the fact that only those customers with the greatest bill payment problems apply for LIHEAP assistance.
- Enrollment Length: Customers who remained enrolled in AMP for six or more months had greater reductions in arrearages than customers enrolled for fewer than six months. Customers who enrolled for fewer than three months were eligible for reenrollment after 12 months following disenrollment and could receive more AMP credits than other partial participants, explaining the significant reduction in arrearages.
- Arrearages: Customers with higher starting arrearages had greater net reductions in arrearages.
- Bill Amount: Customers with higher bill amounts had a greater reduction in arrearages than customers with lower bill amounts.

Chart IV-9
Net Reduction in Mean Arrearages from AMP Enrollment to 24 Months Later
2022 AMP Enrollees



N = 30,304

Table IV-25 displays the distribution of arrearages at AMP enrollment and two years after AMP enrollment. **While the research estimated that 22 percent of the 2022 AMP enrollees had no arrearages 24 months after AMP enrollment, 16 percent of the comparison group had no arrearages at that time.**

Table IV-25
Distribution of Arrearages
At AMP Enrollment and 2 Years After AMP Enrollment
2022 Enrollees, All IOUs

Level of Arrears	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
<= \$0	< 1%	19%	22%	10%	13%	16%	16%**	17%**
\$1-\$500	22%	40%	40%	44%	43%	44%	19%**	18%**
\$501-\$1,000	37%	19%	16%	26%	22%	18%	-13%**	-12%**
> \$1,000	41%	22%	21%	20%	22%	23%	-22%**	-23%**
Total	100%	100%	100%	100%	100%	100%	--	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-26 displays the average arrearages for 2023 AMP enrollees and comparison customers in the month before enrollment (Pre) and the 12th month after enrollment (Post 1), as well as the estimated net change in arrears. **The table shows that the selected**

sample of 2023 AMP participants were estimated to reduce their arrearages by \$824 more than the comparison group. This is somewhat less than mean AMP arrearage forgiveness received by the 2023 enrollees (\$876).

- 2023 AMP enrollees reduced their arrearages from \$1,580 in the month before AMP enrollment to \$647 in month 12 after enrollment.
- The matched comparison group reduced their arrearages from \$701 in the month before AMP enrollment to \$593 in month 12 after enrollment.
- The estimated net change from the month before enrollment to the 12th month after enrollment was a reduction of \$824, meaning that 2023 AMP enrollees reduced their past due balances by \$824 more than the matched nonparticipants.
- **The evaluation plan proposed that the assessment would conclude that the program was effective if there were statistically significant net reductions in arrearages of at least \$200 or 20 percent. The estimated percentage reduction was 52 percent (\$824/\$1,580) in the first year after enrollment. Based on these measures, the program was successful in reducing arrearages.**

Table IV-26
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	\$2,006	\$966	-\$1,040**	\$928	\$747	-\$182**	-\$858**
SCE	6,559	\$2,195	\$739	-\$1,456**	\$756	\$575	-\$181**	-\$1,275**
SDG&E	7,516	\$2,470	\$860	-\$1,610**	\$1,316	\$1,602	\$286**	-\$1,896**
SoCalGas	8,311	\$850	\$334	-\$516**	\$411	\$327	-\$84**	-\$431**
All IOUs	34,307	\$1,580	\$647	-\$933**	\$701	\$593	-\$109**	-\$824**

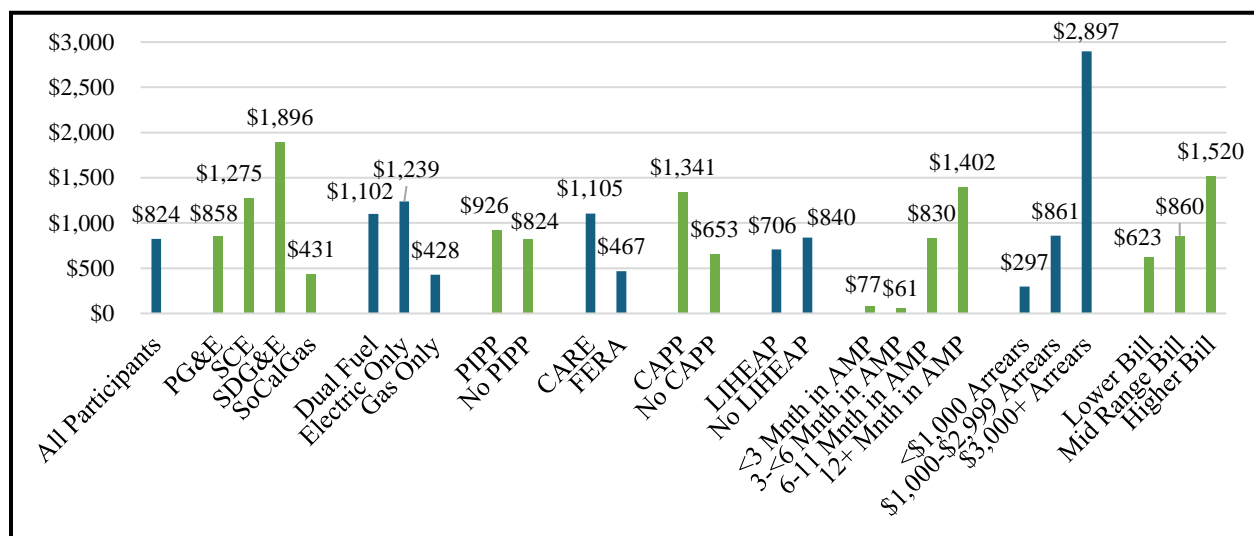
** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-10 displays the net reduction arrearages for 2023 AMP enrollees in the month before enrollment compared to the 12th month after enrollment. The net reduction shows the change for the AMP participants as compared to their matched comparison group. The chart shows differences in the net reductions in arrearages by subgroup, with the following key differences found.

- IOU: SDG&E AMP participants had the largest reduction in arrearages.
- Fuel Type: Electric only customers had the largest reductions in arrearages.
- PIPP: Customers on PIPP had greater reductions in arrearages than customers not on PIPP.
- CARE/FERA: CARE participants had greater reductions in arrearages than FERA participants.
- CAPP: Customers who received CAPP had greater reductions in arrearages than those who did not.

- **LIHEAP:** Customers who did not receive LIHEAP grants had greater reductions in arrearages than customers who did receive LIHEAP grants.
- **Enrollment Length:** Customers who enrolled in AMP for six or more months had greater reductions in arrearages than customers enrolled for fewer than six months.
- **Arrearages:** Customers with larger starting arrearages had larger reductions in arrearages.
- **Bill Amount:** Customers with higher bill amounts had a greater reduction in arrearages than customers with lower bill amounts.

Chart IV-10
Net Reduction in Mean Arrearages from Pre to Post
2023 AMP Enrollees



$N = 34,307$

Table IV-27 displays the distribution of arrearages at AMP enrollment and one year after AMP enrollment. **While the research estimated that 33 percent of 2023 AMP enrollees had no arrearages 12 months after AMP enrollment, 21 percent of the comparison group had no arrearages at this point.**

Table IV-27
Distribution of Arrearages
Year Before and Year After AMP Enrollment
2023 Enrollees, All IOUs

Level of Arrears	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
Obs.	34,307			34,307			--
<= \$0	<1%	33%	33%**	12%	21%	9%**	24%**
\$1-\$500	15%	32%	17%**	45%	46%	1%	17%**

Level of Arrears	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
\$501-\$1,000	33%	14%	-19%**	21%	15%	-6%**	-13%**
> \$1,000	53%	21%	-32%**	22%	17%	-4%**	-27%**
Total	100%	100%	100%	100%	100%	100%	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Tables IV-28 and IV-29 display the estimated average reduction in arrearages by poverty level for AMP participants and comparison customers in the month before enrollment (Pre), the 12th month after enrollment (Post 1), and the 24th month after enrollment (Post 2), as well as the net change in arrearages. Customers missing household size or income data are excluded from these tables.¹⁸ **The tables show that higher poverty level participants had greater estimated net reductions in their arrearages.**

- 2022 AMP enrollees with poverty level over 200 percent had the largest average estimated net reduction in arrearages of \$777 in the 12th month after enrollment among the poverty level groups.
- In the 24th month after enrollment, this group of 2022 enrollees also had the largest average estimated net reduction in arrearages of \$765.
- 2023 AMP enrollees with poverty level over 200 percent had the largest average estimated net reduction in past due balances of \$1,203 in the 12th month after enrollment among the poverty level groups.

Table IV-28
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	\$966	\$574	\$548	\$518	\$595	\$645	-\$468**	-\$544**
101%-200%	3,213	\$1,172	\$553	\$604	\$678	\$728	\$736	-\$669**	-\$625**
>200%	1,648	\$1,688	\$818	\$839	\$818	\$726	\$735	-\$777**	-\$765**
Total	6,928	\$1,204	\$614	\$632	\$665	\$684	\$706	-\$609**	-\$613**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

¹⁸ 23,456 accounts were removed from Table IV-26 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues. 25,252 accounts were removed from Table IV-27 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues.

Table IV-29
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	\$1,157	\$475	-\$682**	\$552	\$448	-\$104**	-\$577**
101%-200%	3,174	\$1,659	\$704	-\$955**	\$718	\$600	-\$118**	-\$837**
>200%	3,193	\$2,265	\$879	-\$1,386**	\$961	\$779	-\$183**	-\$1,203**
Total	9,055	\$1,624	\$660	-\$964**	\$702	\$575	-\$126**	-\$838**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Tables IV-30 and IV-31 display the average estimated reduction in arrearages by energy burden for AMP participants and comparison customers in the month before enrollment (Pre), the 12th month after enrollment (Post 1), and the 24th month after enrollment (Post 2), as well as the estimated net change in arrearages. Customers missing household size or income data are excluded from these tables.¹⁹ **The tables show that customers with higher energy burdens had the highest starting arrearages and the largest estimated reductions in arrearages.**

- 2022 AMP enrollees with an energy burden over eight percent had the largest average estimated net reduction in arrearages of \$1,007 in the 12th month after enrollment. Their mean arrearages just prior to AMP enrollment averaged \$2,093.
- In the 24th month after enrollment, this group of 2022 enrollees also had the largest estimated net reduction in arrearages of \$809.
- 2023 AMP enrollees with an energy burden over eight percent had the largest average estimated net reduction in arrearages of \$1,190 in the 12th month after enrollment. Their mean arrearages just prior to AMP enrollment averaged \$2,584.

Table IV-30
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	\$712	\$435	\$386	\$425	\$464	\$517	-\$315**	-\$418**
5%-8%	3,085	\$1,364	\$694	\$729	\$867	\$881	\$908	-\$685**	-\$677**
>8%	1,598	\$2,093	\$985	\$1,114	\$1,347	\$1,245	\$1,177	-\$1,007**	-\$809**

¹⁹ 19,652 accounts were removed from Table IV-28 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues. 21,564 accounts were removed from Table IV-29 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues.

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Total	10,732	\$1,209	\$633	\$648	\$676	\$689	\$718	-\$589**	-\$603**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-31
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	\$1,185	\$428	-\$758**	\$457	\$372	-\$84**	-\$673**
5%-8%	4,298	\$1,556	\$666	-\$890**	\$702	\$583	-\$119**	-\$771**
>8%	2,528	\$2,584	\$1,183	-\$1,402**	\$1,240	\$1,028	-\$212**	-\$1,190**
Total	12,743	\$1,617	\$673	-\$944**	\$695	\$574	-\$122**	-\$823**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

A series of multivariate difference-in-differences regression models were used to jointly analyze differences in AMP impacts on arrearages by the duration of AMP enrollment, post period bill amount, AMP arrearage amount, and participation in PIPP, CAPP, FERA, and LIHEAP. The reference groups – customers enrolled for less than three months, those with a low post period bill amount, and those with less than \$1,000 AMP arrearages – are not included in the equation below. Additional versions of the regression are shown that include IOUs (with SoCalGas as the reference group) and without the duration of AMP enrollment.

The four versions of the regression shown in the table are as follows.

- (1) All controls except IOUs.
- (2) All controls except IOUs and length of time on AMP.
- (3) All controls, including IOUs.
- (4) All controls, including IOUs, but excluding length of time on AMP.

The model specification is shown below.

$$\begin{aligned}
 Y = & \beta_0 + \beta_1 Treat + \beta_2 Post + \beta_3 Treat \times Post \\
 & + \delta_1 PIPP + \delta_2 PIPP \times Post + \delta_3 PIPP \times Treat + \delta_4 PIPP \times Treat \times Post \\
 & + \theta_1 CAPP + \theta_2 CAPP \times Post + \theta_3 CAPP \times Treat + \theta_4 CAPP \times Treat \times Post \\
 & + \gamma_1 FERA + \gamma_2 FERA \times Post + \gamma_3 FERA \times Treat + \gamma_4 FERA \times Treat \times Post \\
 & + \alpha_1 LIHEAP + \alpha_2 LIHEAP \times Post + \alpha_3 LIHEAP \times Treat \\
 & \quad + \alpha_4 LIHEAP \times Treat \times Post \\
 & + \sum_{i=2}^4 [\varphi_{1i} Time_i + \varphi_{2i} Time_i \times Post + \varphi_{3i} Time_i \times Treat \\
 & \quad + \varphi_{4i} Time_i \times Treat \times Post] \\
 & + \sum_{j=2}^3 [\mu_{1j} BillAmt_j + \mu_{2j} BillAmt_j \times Post + \mu_{3j} BillAmt_j \times Treat \\
 & \quad + \mu_{4j} BillAmt_j \times Treat \times Post] \\
 & + \sum_{k=2}^3 [\omega_{1k} AMPArr_k + \omega_{2k} AMPArr_k \times Post + \omega_{3k} AMPArr_k \times Treat \\
 & \quad + \omega_{4k} AMPArr_k \times Treat \times Post] + \varepsilon
 \end{aligned}$$

The variables are defined as follows.

- Y = arrearages
- $Treat$ = 1 if enrolled in AMP, 0 otherwise
- $Post$ = 1 if in the year after enrollment, 0 otherwise
- $PIPP$ = 1 if on PIPP in any period, 0 otherwise
- $CAPP$ = 1 if on CAPP in any period, 0 otherwise
- $FERA$ = 1 if on FERA in any period, 0 otherwise
- $LIHEAP$ = 1 if on LIHEAP in any period, 0 otherwise
- $TIME_2$ = 1 if customer was enrolled in AMP for 3 to less than 6 months, 0 otherwise
- $TIME_3$ = 1 if customer was enrolled in AMP for 6 to less than 12 months, 0 otherwise
- $TIME_4$ = 1 if customer was enrolled in AMP for 12 or more months, 0 otherwise
- $BillAmt_2$ = 1 if customer had a mid bill amount in year after enrollment, 0 otherwise
- $BillAmt_3$ = 1 if customer had a high bill amount in year after enrollment, 0 otherwise
- $AMPArr_2$ = 1 if customer had \$1,000 - \$2,999 in arrears, 0 otherwise
- $AMPArr_3$ = 1 if customer had \$3,000 or more in arrears, 0 otherwise

Table IV-32 displays the results of the multivariate difference-in-differences regression with arrearages as the outcome. **The findings indicate that longer enrollment in the AMP program, particularly six months or more, and having higher arrearages led to a larger reduction in arrearages. Participating in CAPP also led to a greater estimated reduction in arrears. In contrast, AMP participants that had higher bills after enrollment and AMP participants that also participated in PIPP or FERA had relative increases in arrearages. Participation in LIHEAP had mixed impacts.**

Table IV-32
Multivariate Analysis of Arrearages at 12 Months After AMP Enrollment

Regression Results								
Regression Term ¹	2022 Enrollees ²				2023 Enrollees ³			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Constant Term	\$393**	\$306**	-\$248**	-\$288**	\$388**	\$370**	\$16	\$26
Treatment	\$362**	\$338**	\$597**	\$545**	\$410**	\$361**	\$396**	\$366**
Post Period	\$26	\$5	\$214**	\$206**	-\$36	-\$57**	-\$11	-\$21
Treatment X Post Period	\$130**	-\$420**	\$158**	-\$291**	\$319**	-\$430**	\$654**	\$221**
PIPP X Treatment X Post Period	\$208**	\$188**	\$211**	\$206**	\$72	-\$31	\$63	-\$24
CAPP X Treatment X Post Period	-\$123**	-\$59**	-\$35	\$25	-\$7	\$46	-\$20	\$65**
FERA X Treatment X Post Period	\$149**	\$242**	\$105	\$97	\$174**	\$98**	-\$65	-\$96
LIHEAP X Treatment X Post Period	\$161**	\$299**	\$123**	\$234**	-\$73**	\$106**	-\$81**	\$60*
Time on AMP X Treatment X Post Period								
3 to < 6 Months	-\$40	--	-\$39	--	-\$86*	--	-\$151**	--
6 to < 12 Months	-\$554**	--	-\$554**	--	-\$675**	--	-\$742**	--
12+ Months	-\$1,028**	--	-\$1,034**	--	-\$1,394**	--	-\$1,487**	--
Bill Amount X Treatment X Post Period								
Mid Bill	\$43**	\$15	\$26	\$2	\$144**	\$135**	\$123**	\$106**
High Bill	\$51	\$29	\$20	\$6	\$226**	\$238**	\$169**	\$174**
AMP Arrearages X Treatment X Post Period								
\$1,000 - \$2,999	-\$529**	-\$523**	-\$544**	-\$519**	-\$563**	-\$591**	-\$574**	-\$575**
\$3,000+	-\$2,338**	-\$2,299**	-\$2,387**	-\$2,347**	-\$2,594**	-\$2,674**	-\$2,556**	-\$2,608**
IOU X Treatment X Post Period								
PG&E	--	--	\$85	\$30	--	--	-\$229**	-\$30
SCE	--	--	-\$44	-\$415**	--	--	-\$28	-\$266**
SDG&E	--	--	-\$406**	-\$379**	--	--	-\$940**	-\$886**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

¹ Covariates (indicators for PIPP, CAPP, FERA, LIHEAP, Time on AMP, Bill Amount, and AMP Arrearages), each of their interactions with Treatment, and each of their interactions with Post Period were included in the regression. This table does not report the coefficients of those regression terms.

² The number of observations for all regressions for 2022 Enrollees is 30,384.

³ The number of observations for all regressions for 2023 Enrollees is 34,307.

D. Collections and Disconnections

The evaluation was directed to assess the effectiveness of AMP in reducing the risk of disconnection. This section provides an analysis of the impact of AMP on collections actions and disconnections.

The impact of AMP on collections actions and disconnections is influenced by the following changes in CPUC policies and requirements.

- **COVID-19 Disconnection Moratorium:** Due to the pandemic, disconnections were halted beginning in March 2020, and several extensions to the moratorium prevented disconnections until September 30, 2021. Because of additional protection from disconnection for three months following utility application of California Arrearage Payment Program (CAPP) to customers' accounts, IOUs did not ramp up disconnections until May 2023. Each IOU had a different date for re-starting disconnections following the end of the pandemic.
- **Disconnection Caps and Limitations:** The CPUC placed IOU-specific caps on the number of disconnections that each IOU can implement, further impacting the disconnection rate. Vulnerable customers are prevented from being disconnected while on a payment plan, which includes AMP.
- **Collections Actions:** The IOUs have different policies regarding the implementation of collections actions and apply different types of collections actions. Some of the collections actions are more indicative of the risk of disconnection than others. However, data were not available at the level of specificity needed to make such distinctions between different collections activities.

The inclusion of a comparison group in the analysis can control for IOU specific dates in re-starting disconnections and collections actions, as well as other IOU factors that impacted collections and disconnections activities.

Table IV-33 displays the estimated percentage of 2022 AMP enrollees and comparison customers with one or more collections actions in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net change in this percentage. **The table shows that AMP resulted in an estimated net reduction in the percentage of customers that experienced one or more collections actions compared to the matched comparison group.**

- The percentage of 2022 AMP enrollees with one or more collections actions increased from five percent in the 12 months before AMP enrollment to 24 percent in months one to 12 after enrollment, and to 61 percent in months 13 to 24 after enrollment.
- The percentage of matched comparison customers with one or more collections actions increased from three percent in the 12 months before the matched AMP enrollment to 33 percent in months one to 12 after the matched AMP enrollment, and to 64 percent in months 13 to 24 after the matched AMP enrollment.

- The net change for Post 1 is defined as:

$$[(\% \text{ of AMP participants with 1+ collections actions in months 1-12 after AMP enrollment}) - (\% \text{ of AMP participants with 1+ collections actions in the 12 months before AMP enrollment})] -$$

$$[(\% \text{ of AMP nonparticipants with 1+ collections actions in months 1-12 after matched AMP enrollment}) - (\% \text{ of AMP nonparticipants with 1+ collections actions in the 12 months before matched AMP enrollment})]$$
- The estimated net change for Post 1 was a reduction of 11 percentage points, meaning that the percentage of 2022 AMP enrollees with one or more collections actions declined by 11 percentage points more than the matched nonparticipants.
- The net change for Post 2 is defined as:

$$[(\% \text{ of AMP participants with 1+ collections actions in months 13-24 after AMP enrollment}) - (\% \text{ of AMP participants with 1+ collections actions in the 12 months before AMP enrollment})] -$$

$$[(\% \text{ of AMP nonparticipants with 1+ collections actions in months 13-24 after matched AMP enrollment}) - (\% \text{ of AMP nonparticipants with 1+ collections actions in the 12 months before matched AMP enrollment})]$$
- The estimated net change for Post 2 was a reduction of five percentage points, meaning that the percentage of 2022 AMP enrollees with one or more collections actions declined by five percentage points more than the matched nonparticipants.
- **The evaluation plan proposed that statistically significant net reductions of at least five percentage points (in the risk of disconnection) will be assessed to conclude that the program was effective. Based on this metric, the program is assessed to be effective.**

Table IV-33
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	13%	50%	86%	8%	72%	91%	-26% ^{**}	-10% ^{**}
SCE	5,234	0%	8%	27%	0%	14%	20%	-6% ^{**}	7% ^{**}
SDG&E	6,554	< 1%	2%	44%	< 1%	4%	63%	-2% ^{**}	-19% ^{**}
SoCalGas	6,838	0%	6%	51%	0%	5%	49%	1% ^{**}	2% ^{**}
All IOUs	30,384	5%	24%	61%	3%	33%	64%	-11%^{**}	-5%^{**}

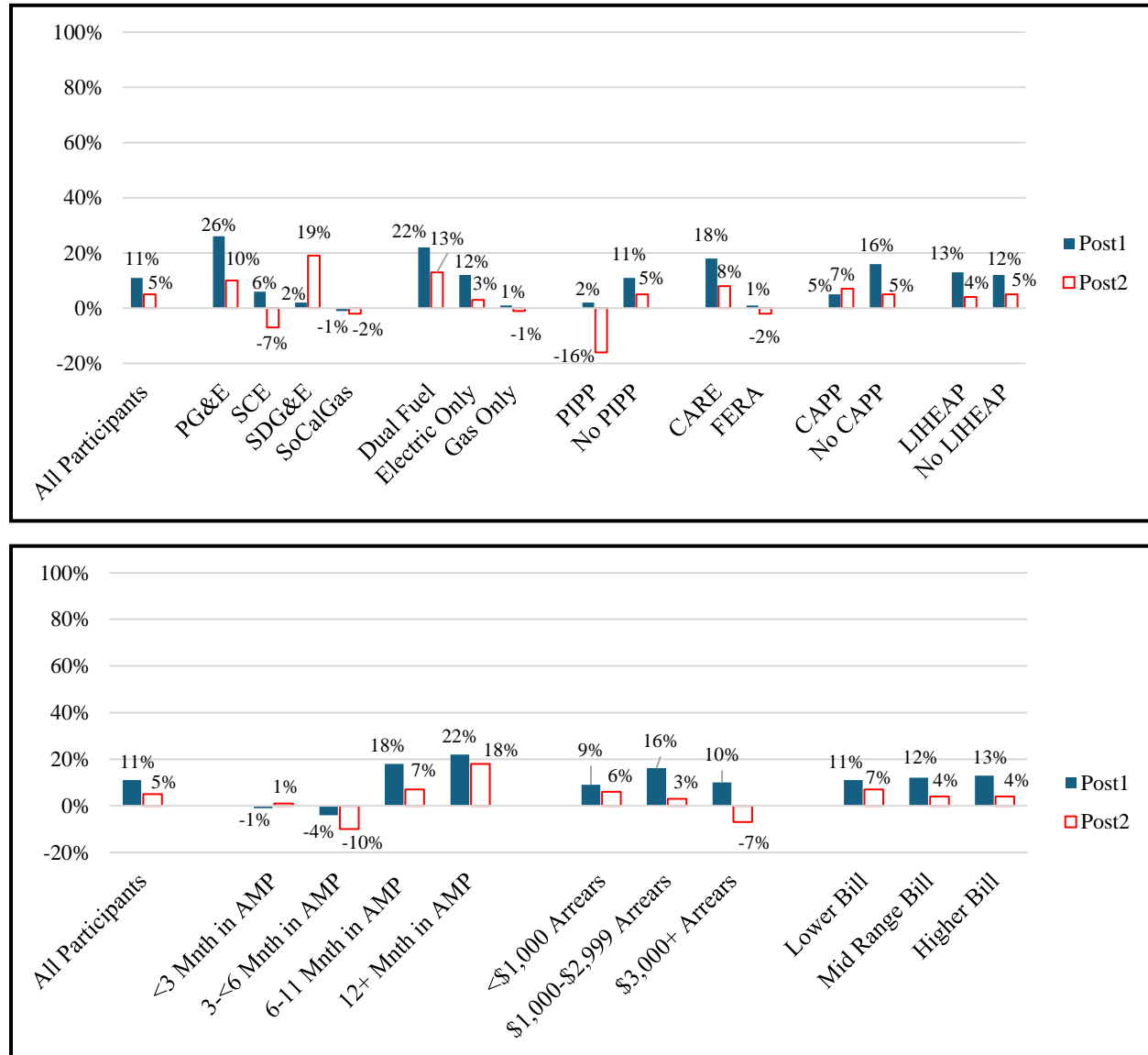
^{**} Denotes significance at the 95% level. ^{*} Denotes significance at the 90% level.

Chart IV-11 displays the estimated net reduction in the percentage of 2022 AMP enrollees with one or more collections actions in the 12 months before AMP enrollment compared to months one to 12 and months 13 to 24 after AMP enrollment. The net reduction shows the change for AMP participants as compared to their matched comparison group. A negative net reduction means that the percentage of participants with one or more

collections actions increased when compared to the matched comparison group. The chart shows differences in the estimated net reductions in the percentage with one or more collections actions by subgroup, with the following key differences found.

- IOU: PG&E AMP participants had the greatest reduction in the percentage with one or more collections actions in the 12 months following AMP enrollment. SDG&E AMP participants had the greatest reduction in the percentage with one or more collections actions in months 13 to 24 following enrollment.
- Fuel Type: Dual fuel customers had the largest reductions in the percentage with one or more collections actions.
- PIPP: Customers not on PIPP had greater reductions in the percentage with one or more collections actions than customers on PIPP
- CARE/FERA: CARE participants had greater reductions in the percentage with one or more collections actions than FERA participants.
- CAPP: Customers who did not receive CAPP had greater reductions in collections actions.
- Enrollment Length: Customers who enrolled in AMP for six or more months had greater reductions in the percentage with one or more collections actions than customers enrolled for fewer than six months.

Chart IV-11
Net Reduction in Percent with One or More Collections Actions
2022 AMP Enrollees



N = 30,384

Table IV-34 displays the percentage of 2023 AMP enrollees and comparison customers with one or more collections actions in the 12 months before enrollment (Pre) and 12 months after enrollment (Post), as well as the estimated net change in this percentage. **The table shows that AMP participants with active accounts over the evaluation period had a large estimated net reduction in collections actions as compared to the matched nonparticipants.**

- The percentage of 2023 AMP enrollees with one or more collections actions increased from 39 percent in the 12 months before AMP enrollment to 43 percent in months one to 12 after enrollment.
- The percentage of matched comparison customers with one or more collections actions increased from 27 percent in the 12 months before AMP enrollment to 56 percent in months one to 12 after enrollment.
- The estimated net change from the 12 months before enrollment to the 12 months after enrollment was a reduction of 26 percentage points, meaning that the percentage of 2023 AMP enrollees with one or more collections actions declined by 26 percentage points more than the matched nonparticipants.
- **The evaluation plan proposed that statistically significant net reductions of at least five percentage points (in the risk of disconnection) will be assessed to conclude that the program was effective. Based on this metric, the program is assessed to be effective. (Collections actions increase for AMP participants and the comparison group because of changes in IOU collections practices.)**

Table IV-34
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	77%	66%	-11% **	65%	93%	27% **	-38% **
SCE	6,559	45%	16%	-30% **	19%	22%	3% **	-33% **
SDG&E	7,516	10%	40%	30% **	5%	79%	73% **	-44% **
SoCalGas	8,311	13%	38%	24% **	5%	39%	35% **	-10% **
All IOUs	34,307	39%	43%	3% **	27%	56%	29% **	-26% **

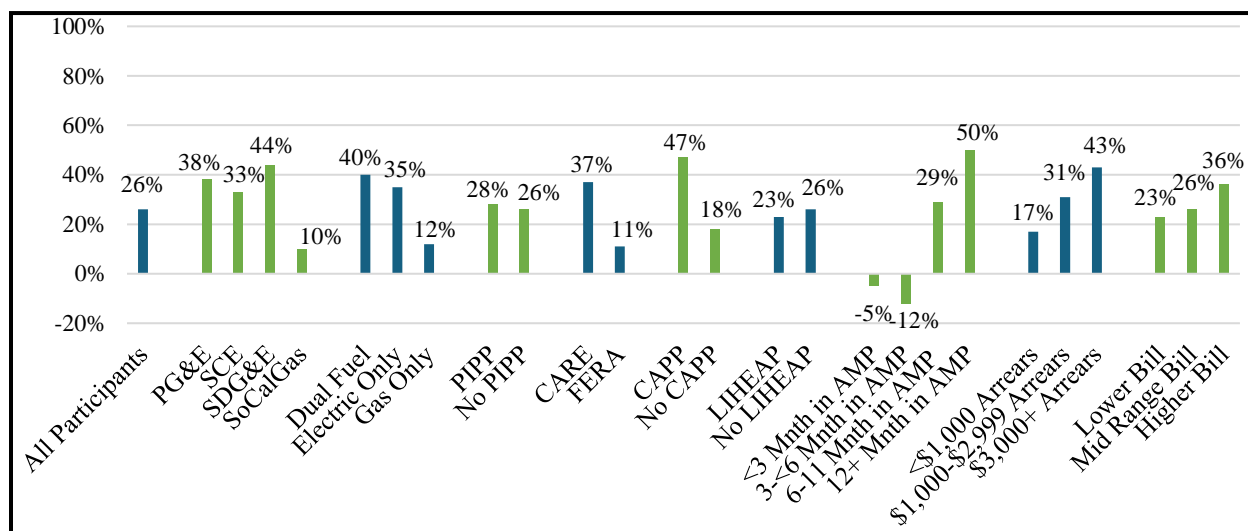
** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-11 displays the estimated net reduction in the percentage of 2022 AMP enrollees with one or more collections actions in the 12 months before AMP enrollment compared to months one to 12 and months 13 to 24 after AMP enrollment. The net reduction shows the change for the AMP participants as compared to their matched comparison group. A negative net reduction means that the percentage of participants with one or more collections actions increased when compared to the matched comparison group. The chart shows differences in the percentage with one or more collections actions by subgroup, with the following key differences found.

- IOU: SDG&E AMP participants had the greatest reduction in the percentage with one or more collections actions.
- Fuel Type: Dual fuel and electric only customers had the largest reductions in the percentage with one or more collections actions.

- CARE/FERA: CARE participants had greater reductions in the percentage with one or more collections actions than FERA participants.
- CAPP: CAPP recipients had larger reductions in the percentage with one or more collections actions.
- Enrollment Length: Customers who enrolled in AMP for six or more months had greater reductions in the percentage with one or more collections actions than customers enrolled for fewer than six months.
- Starting Arrearage: Customers with larger arrearages just before enrollment had greater improvements in the percentage with one or more collections actions than customers with smaller starting arrearages.
- Bill Amount: Customers with higher bill amounts had a greater reduction in the percentage with one or more collections actions than customers with lower bill amounts.

Chart IV-12
Net Reduction in Percent with One or More Collections Actions
2023 AMP Enrollees



N = 34,307

Tables IV-35 and IV-36 display the estimated reduction in the percentage of AMP participants and comparison customers with one or more collections actions by poverty level in the 12 months before enrollment (Pre), the 12 months after enrollment (Post 1), and months 13 to 24 after enrollment (Post 2), as well as the estimated net change in this percentage. Customers missing household size or income data are excluded from these tables.²⁰ **The tables show that customers at higher poverty levels were estimated to**

²⁰ 23,456 accounts were removed from Table IV-33 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues. 25,252 accounts were removed from Table IV-34 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues.

have greater reductions in the percentage with one or more collections actions in the first year after enrollment.

- 2022 AMP enrollees with a poverty level over 200 percent experienced the largest estimated net reduction in collections actions (12 percentage points).
- 2022 AMP enrollees with a poverty level over 200 percent did not experience a statistically significant change in the second year after enrollment.
- 2023 AMP enrollees with a poverty level over 200 percent experienced the largest estimated net reduction (44 percentage points) in collections actions.

Table IV-35
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	3%	16%	55%	1%	20%	58%	-5% **	-4% **
101%-200%	3,213	4%	21%	54%	3%	29%	61%	-10% **	-9% **
>200%	1,648	10%	46%	78%	4%	52%	71%	-12% **	1%
Total	6,928	5%	24%	59%	3%	32%	63%	-10% **	-6% **

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-36
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Poverty Level

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	27%	41%	14% **	15%	45%	30% **	-16% **
101%-200%	3,174	37%	44%	7% **	25%	54%	29% **	-22% **
>200%	3,193	63%	41%	-22% **	51%	73%	22% **	-44% **
Total	9,055	40%	42%	2% **	26%	54%	28% **	-26% **

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Tables IV-37 and IV-38 display the reduction in the estimated percentage of AMP participants and comparison customers with one or more collections actions by energy burden in the 12 months before enrollment (Pre), the 12 months after enrollment (Post 1), and months 13 to 24 after enrollment (Post 2), as well as the estimated net change in this

percentage. Customers missing income data are excluded from these tables.²¹ **The table shows that 2022 AMP enrollees with higher energy burdens were estimated to have larger reductions in collections actions, but the relationship was not clear for 2023 AMP enrollees.**

Table IV-37
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	2%	15%	53%	1%	21%	54%	-7%**	-2%**
5%-8%	3,085	5%	29%	64%	4%	45%	73%	-17%**	-9%**
>8%	1,598	10%	40%	73%	5%	59%	83%	-24%**	-15%
Total	10,732	5%	24%	61%	3%	33%	64%	-11%**	-5%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-38
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, by Energy Burden

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	33%	37%	4%**	18%	48%	30%**	-26%**
5%-8%	4,298	38%	44%	6%**	28%	56%	28%**	-22%**
>8%	2,528	58%	54%	-4%**	43%	65%	22%**	-26%**
Total	12,743	40%	43%	3%**	26%	54%	28%**	-25%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-39 displays the estimated percentage of 2022 AMP enrollees and comparison customers with one or more disconnections in the 12 months before enrollment (Pre), 12 months after enrollment (Post 1), and 13 to 24 months after enrollment (Post 2), as well as the net change in this percentage. **The table shows that the AMP participants had a greater estimated reduction in disconnections than the comparison group. However, while on AMP customers cannot be disconnected, so this influences the disconnection**

²¹ 19,652 accounts were removed from Table IV-35 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues. 21,654 accounts were removed from Table IV-36 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues.

rate. (Disconnections increase for AMP participants and the comparison group because of changes in IOU collections practices.)

- The percentage of 2022 AMP enrollees with one or more disconnections increased from less than one percent in the 12 months before AMP enrollment to two percent in months one to 12 after enrollment, and to five percent in months 13 to 24 after enrollment.
- The percentage of matched comparison customers with one or more disconnections increased from less than one percent in the 12 months before the matched AMP enrollment to four percent in months one to 12 after the matched enrollment, and to eight percent in months 13 to 24 after the matched enrollment.
- The estimated net change in disconnections for the 12 months after enrollment was a reduction of two percentage points.
- The estimated net change in disconnections for the 13 to 24 months after enrollment was a reduction of three percentage points.
- **The evaluation plan proposed that statistically significant net reductions of at least five percentage points will be assessed to conclude that the program was effective. Based on this metric, the program is not assessed to be effective. However, the smaller reduction is also due to the low percentage of customers with disconnections due to moratoriums and limits on disconnections and, for this reason, the evaluation plan stated that other measures of the risk of disconnection would also be assessed.**

Table IV-39
Percent with One or More Disconnections
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	< 1%	5%	12%	< 1%	10%	16%	-4% **	-5% **
SCE	5,234	0%	< 1%	2%	0%	3%	4%	-2% **	-2% **
SDG&E	6,554	0%	< 1%	2%	0%	0%	7%	< 1%	-5% **
SoCalGas	6,838	0%	0%	< 1%	0%	0%	< 1%	0%	< 1%
All IOUs	30,384	< 1%	2%	5%	< 1%	4%	8%	-2% **	-3% **

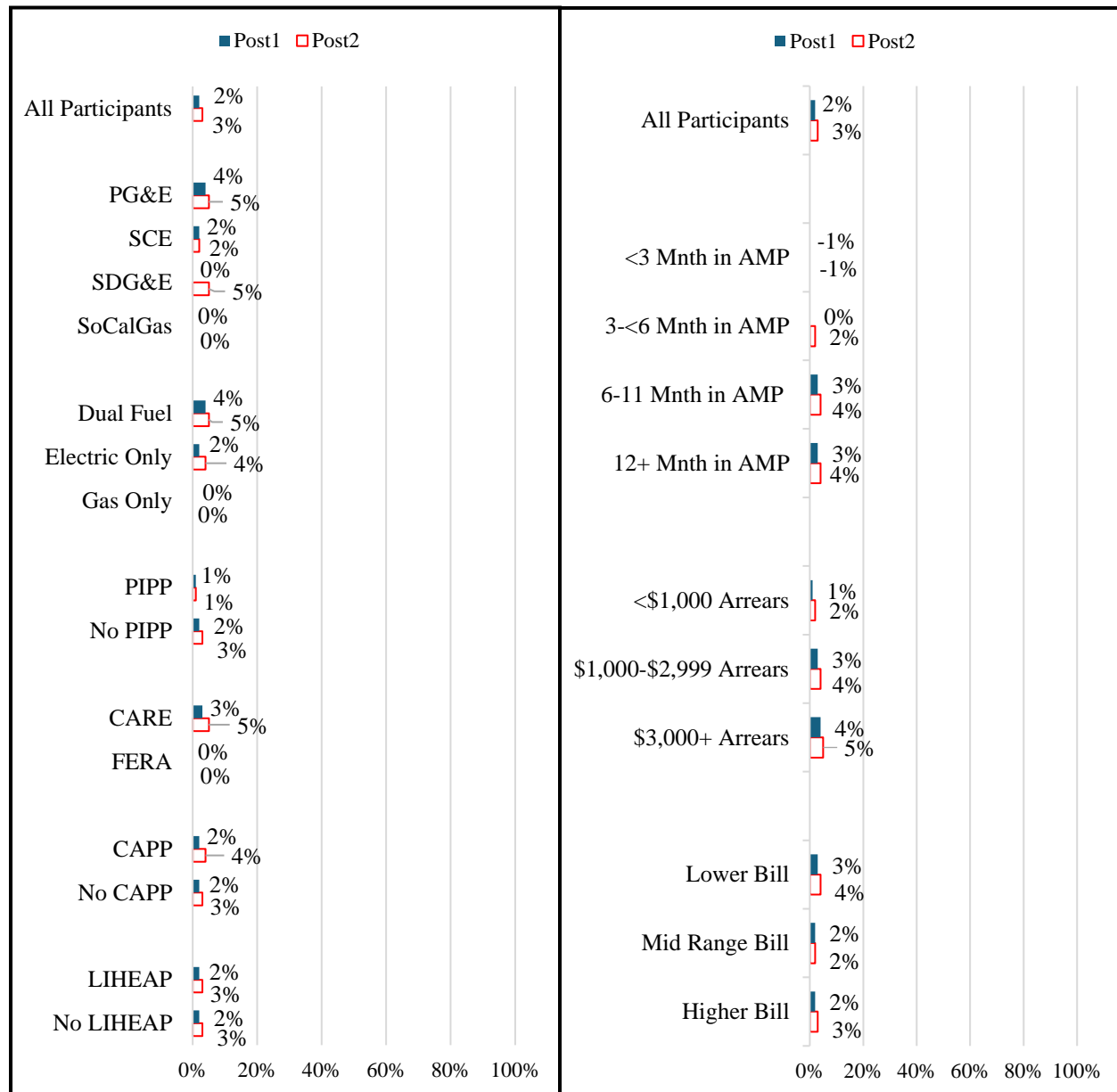
** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-13 displays the estimated net reduction in the percentage of 2022 AMP enrollees with one or more disconnections in the 12 months before AMP enrollment compared to months one to 12 and months 13 to 24 after AMP enrollment. The net reduction shows the change for the AMP participants as compared to their matched comparison group. A negative net reduction means that the percentage of participants with one or more disconnections increased when compared to the matched comparison group. The chart shows differences in the estimated net reductions in the percentage with one or more disconnections by subgroup, with the following key differences found.

- IOU: PG&E AMP participants had the greatest reduction in the percentage with one or more disconnections in the 12 months following enrollment. Both PG&E and SDG&E AMP participants had the greatest reduction in the percentage with one or more disconnections in the 13 to 24 months after enrollment.
- Fuel Type: Dual fuel customers had the largest reductions in the percentage with one or more disconnections.
- CARE/FERA: CARE participants had greater reductions in the percentage with one or more disconnections than FERA participants.
- Enrollment Length: Customers who enrolled in AMP for six or more months had greater reductions in the percentage with one or more disconnections than customers enrolled for fewer than six months.²²
- Starting Arrearage: Customers with larger arrearages just before enrollment had greater improvements in the percentage with one or more disconnections than customers with smaller starting arrearages.
- Bill Amount: Customers with lower bill amounts had a greater reduction in the percentage with one or more disconnections than customers with higher bill amounts.

²² No customers who remain on AMP for 12 or more months should be disconnected in the 12 months following AMP enrollment because customers cannot be disconnected while they were on AMP. Only a few of these customers were marked as disconnected because they were disconnected shortly after they were removed from AMP.

Chart IV-13
Net Reduction in Percent with One or More Disconnections
2022 AMP Enrollees



N = 30,384

Table IV-40 displays the estimated percentage of customers with one or more disconnections for 2023 AMP enrollees and the comparison customers in the 12 months before enrollment (Pre) and the 12 months after enrollment (Post 1), as well as the net change in this percentage. **The table shows that AMP participants who remained active over the evaluation period had an estimated reduction in disconnections as compared to the comparison group.**

- The percentage of 2023 AMP enrollees with one or more disconnections increased was about three percent in the 12 months before AMP enrollment and in months one to 12 after enrollment, but the small increase of less than one percentage point was statistically significant.
- The percentage of matched comparison customers with one or more disconnections increased from three percent in the 12 months before the matched AMP enrollment to six percent in months one to 12 after the matched AMP enrollment.
- The estimated net change for the 12 months after enrollment was a reduction of three percentage points, meaning that the percentage of 2023 AMP enrollees with one or more disconnections declined by three percentage points more than the matched nonparticipants.
- **The evaluation plan proposed that statistically significant net reductions of at least five percentage points will be assessed to conclude that the program was effective. Based on this metric, the program is not assessed to be effective. However, the smaller reduction is also due to the low percentage of customers with disconnections due to moratoriums and limits on disconnections and, for this reason, the evaluation plan stated that other measures of the risk of disconnection would also be assessed.**

Table IV-40
Percent with One or More Disconnections
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

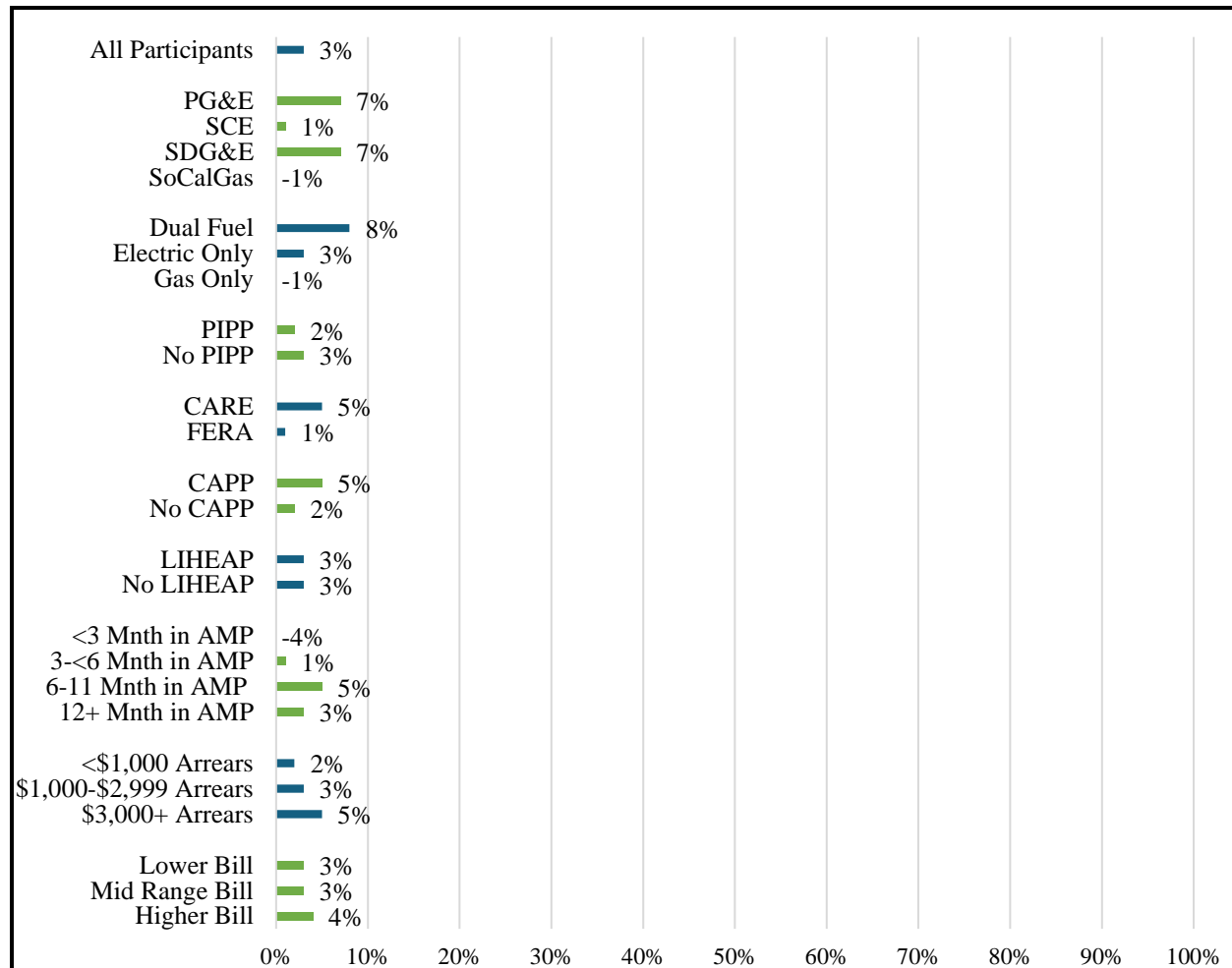
IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	8%	9%	2% **	8%	17%	8% **	-7% **
SCE	6,559	2%	1%	-1% **	2%	2%	>-1%	-1% **
SDG&E	7,516	<1%	2%	2% **	<1%	9%	9% **	-7% **
SoCalGas	8,311	0%	<1%	<1% **	0%	<1%	<1%	<1%
All IOUs	34,307	3%	3%	<1% **	3%	6%	3% **	-3% **

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-14 displays the estimated net reduction in the percentage of 2023 AMP enrollees with one or more disconnections in the 12 months before AMP enrollment compared to months one to 12 after AMP enrollment. The net reduction shows the change for the AMP participants as compared to their matched comparison group. A negative net reduction means that the percentage of participants with one or more disconnections increased when compared to the matched comparison group. The chart shows differences in the estimated net reductions in the percentage with one or more disconnections by subgroup, with the following key differences found.

- IOU: Both PG&E and SDG&E AMP participants had the greatest reduction in the percentage with one or more disconnections.
- Fuel Type: Dual fuel customers had the largest reductions in the percentage with one or more disconnections.
- CARE/FERA: CARE participants had greater reductions in the percentage with one or more disconnections than FERA participants.
- Enrollment Length: Customers who enrolled in AMP for six or more months had greater reductions in the percentage with one or more disconnections than customers enrolled for fewer than six months.
- Starting Arrearage: Customers with larger arrearages just before enrollment had greater improvements in the percentage with one or more disconnections than customers with smaller starting arrearages.

Chart IV-14
Net Reduction in Percent with One or More Disconnections
2023 AMP Enrollees



N = 34,307

Respondents to the AMP participant survey were asked whether they received help or encouragement such as letters, after enrolling in the program. **Table IV-41 shows that 2023 survey respondents who recalled receiving help or encouragement, such as a letter from their IOU had greater estimated improvements in some outcomes than those who did not recall receipt of encouragement.**

- 2023 respondents who recalled receiving a letter also experienced a significant reduction in the percentage with one or more collections actions after AMP enrollment, while respondents who did not recall receiving encouragement did not have significant reductions.
- The percent with one or more collections actions was the only metric where there was a statistically significant difference between the reduction for those who recalled letter receipt and for those who did not recall letter receipt. This difference was significant at the 95 percent level.

Table IV-41
AMP Success Metrics
By Recalled Receipt of IOU Encouragement
2023 Survey Respondents

Metric	2023 AMP Enrollees Who Completed Survey					
	Recalled Letter Receipt			Did not Recall Letter Receipt		
	Pre	Post	Change	Pre	Post	Change
Observations	266			344		
Number of On-time Bills	0.5	6.0	5.5**	0.6	5.5	4.9**
Coverage Rate	53%	86%	33%**	54%	89%	35%**
Mean Arrearages	\$1,494	\$513	-\$980**	\$1,448	\$686	-\$762**
% with 1+ Collection Actions	58%	34%	-23%**	54%	48%	-6%
% with 1+ Disconnections	6%	4%	-2%	4%	4%	> -1%

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

AMP survey respondents were asked whether it was easy or difficult to pay their energy bills on time and in full while they were on AMP. Those customers who reported that it was very or somewhat difficult to pay their energy bills on time or who reported that it was very or somewhat difficult to pay their energy bills in full were considered to report challenges about bill payment. **Table IV-42 shows that 2023 survey respondents who reported challenges paying their bills while on AMP had smaller estimated improvements in the number of on-time payments, arrearage reduction, and reductions in collections actions.**

- 2023 respondents who reported that they faced challenges in bill payment while on AMP made 1.4 fewer on-time payments than those who did not report challenges paying their bills while on AMP. The difference between these two groups is statistically significant at the 95 percent level.
- 2023 respondents who did not report challenges in bill payment had a significant reduction in the percentage with one or more collections actions after AMP enrollment, while respondents who did report challenges did not have significant reductions. The difference between these two groups is statistically significant at the 95 percent level.
- For the rest of the metrics presented in the table, the differences between those who did and did not report bill payment challenges were not statistically significant.

Table IV-42
AMP Success Metrics
By Reported Bill Payment Challenges
2023 Survey Respondents

Metric	2023 AMP Enrollees Who Completed Survey					
	Reported Challenges Paying Bills While on AMP			Did not Report Challenges Paying Bills While on AMP		
	Pre	Post	Change	Pre	Post	Change
Observations	286			324		
Number of On-time Bills	0.5	5.0	4.5**	0.5	6.4	5.9**
Coverage Rate	49%	82%	33%**	58%	93%	35%**
Mean Arrearages	\$1,474	\$688	-\$787**	\$1,464	\$526	-\$938**
% with 1+ Collection Actions	53%	47%	-5%	59%	36%	-23%**
% with 1+ Disconnections	5%	4%	-1%	6%	4%	-2%

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

E. Energy Usage

The evaluation assessed whether AMP enrollment impacted energy usage. While AMP does not reduce the customer's bill for current energy usage, it may reduce monthly costs if the customer no longer has a payment plan to repay past arrearages, and AMP may also reduce the perceived pressure from a customer's financial responsibilities. Such changes could potentially result in an increase in energy usage. However, a reduction in energy usage could result if the opportunity to get caught up on past arrearages encourages customers to conserve energy in an attempt to remain current on new charges, make payments on time, and receive arrearage forgiveness.

The research estimated changes in weather-normalized electric and gas usage from the 12 months before enrollment in AMP to the 12 months after enrollment in AMP, as compared to changes for the comparison group. The weather normalization adjusts usage to a 20-year average weather pattern in both years that are compared.²³ As a result, the data assesses the change in usage that is due to factors other than the weather. While the weather normalization adjusts for changes in usage that are related to differences in weather between the pre and the post AMP enrollment years, the use of a comparison group controls for other changes that may impact usage during that time period, such as a change in rates.

The evaluation found that there were no statistically significant changes in mean weather-normalized electric or gas usage from the year before AMP enrollment to the year after AMP enrollment for 2022 AMP enrollees overall (but there were estimated reductions for some IOUs), and small, statistically significant, estimated net reductions in usage for 2023 AMP enrollees.

²³ The source of the weather data is the National Oceanic and Atmospheric Administration (noaa.gov).

Table IV-43 displays the average weather normalized electric usage for 2022 AMP participants and comparison customers in the 12 months before enrollment (Pre) and 12 months after enrollment (Post), as well as the net changes in the electric usage.

- SCE enrollees experienced an estimated net reduction in electric usage of 175 kWh, or two percent of pre-enrollment levels.
- SDG&E enrollees experienced an estimated net reduction in electric usage of 45 kWh, or one percent of pre-enrollment levels.
- Across all IOUs, the estimated net reduction in electric usage was not statistically significant.

Table IV-43
Mean Weather Normalized Electric Usage (kWh)
Year Before and Year After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change kWh
		Pre kWh	Post kWh	Change kWh	Pre kWh	Post kWh	Change kWh	
PG&E	8,728	8,476	8,275	-202**	8,008	7,766	-242**	41
SCE	4,663	9,672	9,318	-354**	7,008	6,829	-180**	-175**
SDG&E	5,908	6,255	6,117	-138**	5,886	5,794	-92**	-45**
All IOUs	19,299	8,321	8,099	-223**	7,395	7,194	-201**	-22

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-44 displays the average weather normalized gas usage for 2022 AMP participants and comparison customers in the 12 months before enrollment (Pre) and 12 months after enrollment (Post), as well as the estimated net changes in gas usage.

- PG&E enrollees were estimated to reduce their usage by three therms, or less than one percent of their pre-enrollment usage, compared to the comparison group.
- SDG&E and SoCalGas AMP enrollees did not experience a statistically significant estimated net change in gas usage.
- Across all IOUs, the estimated net reduction in gas usage was not statistically significant.

Table IV-44
Mean Weather Normalized Gas Usage (Therms)
Year Before and Year After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Therms
		Pre Therms	Post Therms	Change Therms	Pre Therms	Post Therms	Change Therms	
PG&E	7,765	450	450	> -1	425	428	3**	-3**
SDG&E	3,697	319	306	-13**	297	286	-12**	-1
SoCalGas	6,286	501	467	-35**	472	434	-38**	3
All IOUs	17,748	460	443	-17**	433	416	-17**	> -1

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-45 displays the average weather normalized electric usage for 2023 AMP participants and comparison customers in the 12 months before enrollment (Pre) and 12 months after enrollment (Post), as well as the estimated net changes in electric usage.

- PG&E AMP participants experienced an estimated net reduction of 97 kWh.
- SCE AMP participants experienced an estimated net reduction of 138 kWh.
- SDG&E AMP participants experienced an estimated net reduction of 83 kWh.
- Across all IOUs, 2023 AMP enrollees had an estimated net reduction of 110 kWh, or more than one percent of pre-enrollment electric usage, compared to the comparison group.

Table IV-45
Mean Weather Normalized Electric Usage (kWh)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change kWh
		Pre kWh	Post kWh	Change kWh	Pre kWh	Post kWh	Change kWh	
PG&E	8,498	8,183	7,979	-204**	7,589	7,482	-107**	-97**
SCE	5,863	9,857	9,573	-284**	6,616	6,470	-146**	-138**
SDG&E	6,861	6,019	5,895	-124**	5,535	5,494	-41**	-83**
All IOUs	21,222	8,502	8,280	-222**	6,985	6,873	-112**	-110**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table IV-46 displays the average weather normalized gas usage for the 2023 AMP participants and comparison customers in the 12 months before enrollment (Pre) and 12 months after enrollment (Post), as well as the estimated net changes in gas usage.

- PG&E AMP 2023 enrollees were estimated to reduce their gas usage by three therms, or less than one percent, compared to the comparison group.

- SoCalGas AMP enrollees were estimated to reduce their gas usage by five therms, or one percent, compared to the comparison group.
- Across IOUs, the estimated net reduction in gas usage was significant at one percent of pre-treatment usage.

Table IV-46
Mean Weather Normalized Gas Usage (Therms)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

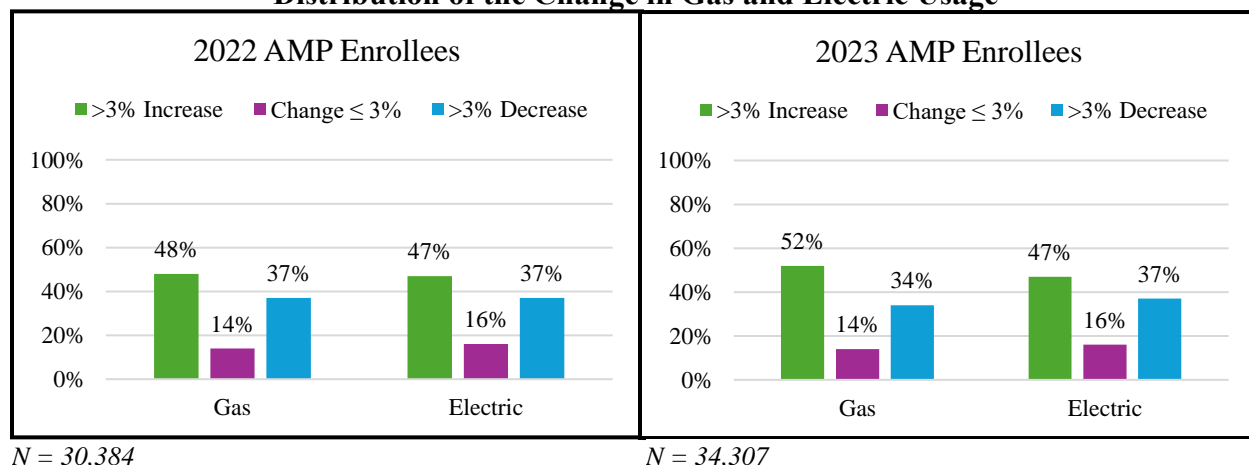
IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change Therms
		Pre Therms	Post Therms	Change Therms	Pre Therms	Post Therms	Change Therms	
PG&E	7,545	446	424	-22**	422	403	-19**	-3**
SDG&E	4,089	311	310	-1	283	283	> -1	> -1
SoCalGas	7,449	478	451	-27**	448	426	-21**	-5**
All IOUs	19,083	457	433	-24**	429	410	-19**	-4**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Chart IV-15 displays the distribution of the change in annual weather normalized gas and electric usage for 2022 and 2023 AMP enrollees in the year after AMP enrollment, compared to the year prior to enrollment.

- 48 percent of 2022 AMP enrollees and 52 percent of 2023 AMP enrollees were estimated to increase their annual gas usage by more than three percent.
- 37 percent of 2022 AMP enrollees and 34 percent of 2023 AMP enrollees were estimated to reduce their annual gas usage by more than three percent.
- 47 percent of 2022 AMP participants were estimated to increase their annual electric usage by more than three percent, and 37 percent were estimated to reduce their annual electric usage by more than three percent, the same as the 2023 AMP participants.

Chart IV-15
Distribution of the Change in Gas and Electric Usage



F. AMP Costs and Benefits

The evaluation was directed to analyze the costs and benefits of the AMP program. This section presents the costs reported by the IOUs, followed by the AMP benefits experienced by customers.

IOUs provided AMP cost data that generally included start-up costs plus costs from program inception in February 2021 through February 2025, with some cost categories including one to two months of additional costs for some IOUs.²⁴ While the costs generally covered this same time period, approximately four years, **it is important to note some challenges in developing a very precise estimate of the costs and a comparison between IOUs.**

- The analysis developed AMP costs based on a backward-looking approach. AMP costs could change in the future based on many possible factors including participation, rates, weather, and the economic climate.
- It is challenging for the IOUs to provide a fully accurate accounting of costs, because some staff time is allocated to many different activities, and not specifically tracked for AMP.

Table IV-47 presents a summary of the costs reported by the IOUs. There are some differences between the IOUs because of differences in the way AMP was implemented and the way that costs are tracked.

- AMP Design: PG&E's costs are higher than the other IOUs because they include system changes to automate AMP in this category. SCE reported that their costs may be underestimated because some labor hours that cover work for multiple uses may be charged to other accounts.
- Information Technology: Costs differ by IOU based on the degree to which new systems were developed for AMP as well as how costs were allocated to design or information technology. SCE had lower costs because they tracked AMP in a separate system rather than integrating with their other IT systems (because they were undergoing an IT upgrade at the time that AMP was implemented).
- IOU CSR Time: SDG&E did not track these costs.
- IOU Marketing and Outreach: SDG&E did not have a budget for this task, so they mainly utilized no-cost tactics and used another budget for the email costs. SCE's costs were high because of extensive direct mailing efforts to potentially eligible customers.

²⁴ PG&E cost data is on a cash, not accrual basis. Since arrearage forgiveness for CCA customer portion is not paid to CCAs until 13 months after forgiveness, any unpaid CCA forgiveness is not reflected in program costs.

**Table IV-47
AMP Cost Summary
IOU-Reported Data**

Category	PG&E	SCE	SDG&E	SoCalGas
AMP Design	\$6,435,689	\$22,563	\$43,399	\$92,505
Information Technology	\$2,817,834	\$168,124	\$6,181,300	\$478,571
IOU Management (post design)	\$328,427	\$359,814	\$713,607	\$841,408
IOU CSR Time	\$10,854,924	\$4,598,583		\$2,826,035
IOU Marketing & Outreach	\$146,703	\$1,573,771	\$811	\$26,434
EM&V (APPRISE)	\$150,670	\$150,670	\$75,335	\$125,558
EM&V (IOU Time)	\$12,936	\$73,501	\$4,000	\$45,000
Arrearages Forgiven	\$376,063,411	\$171,996,729	\$74,500,000	\$142,792,434
Total Costs	\$396,810,594	\$178,943,755	\$81,518,452	\$147,227,945

Table IV-48 presents metrics derived from the data presented above.

- Average Arrearage Forgiveness per Enrollment: The average amount of forgiveness per enrollment ranged from \$353 for SoCalGas to \$735 for SDG&E.
- Percent of Costs for Forgiven Arrearages: The percentage of total AMP costs attributable to arrearage forgiveness provided to AMP participants ranged from 91 percent to 97 percent. The percentage is lower for SDG&E than for the other IOUs, because they had the same types of fixed costs, but fewer program participants.

**Table IV-48
AMP Cost Metrics**

Category	PG&E	SCE	SDG&E	SoCalGas
# AMP Enrollments AMP Start Through February 2025*	532,198	242,057	101,331	404,741
Arrearage Forgiveness per Enrollment	\$707	\$711	\$735	\$353
TOTAL Cost per Enrollment	\$746	\$739	\$804	\$364
Percent of Costs for Arrearage Forgiveness	95%	96%	91%	97%

Table IV-49 displays the annual costs of AMP, as one fourth of the total costs estimated above, as those costs were incurred over a four-year period. The table also estimates the annual subsidy costs per customer, using the total number of residential and non-residential customers reported by each IOU. The table shows that average annual ratepayer costs range from \$5.31 to \$6.16 for gas customers, from \$8.34 to \$13.13 for electric customers, and from \$13.65 to 19.29 for both fuels.

Table IV-49
AMP Cost Subsidy per Ratepayer

	PG&E		SCE	SDG&E	SoCalGas
	Electric	Gas	Electric	All Customers	Gas
Annual AMP Costs	\$74,507,959	\$24,694,689	\$44,735,939	\$20,379,613	\$36,806,986
Total Customers	5,673,544	4,649,814	5,365,890	1,696,688	5,979,615
Annual AMP Subsidy Cost per Customer	\$13.13	\$5.31	\$8.34	\$12.01	\$6.16

SoCalGas also developed a cost estimate based upon natural gas consumption, as shown in Table IV-50. The cost per customer at \$7.66 is close to the estimate above of \$6.16.

Table IV-50
SoCalGas Usage Based AMP Ratepayer Subsidy Cost Calculation

	SoCalGas
Total AMP Cost	\$147,227,945
Total MTherm	8,307,883
Cost per Therm	\$0.02
Average Annual Therm Usage	432
Annual Customer Cost	\$7.66

Table IV-51 displays a summary of the AMP costs and benefits. The table presents the following information. The estimate of benefits exclude accounts that became inactive over the evaluation period, so this may represent an upward bias in the benefits across all AMP participants.

- **AMP Costs:** The table below provides the following summary of AMP costs.
 - **Annual AMP Costs:** Total AMP costs over four years across the four IOUs are summed and divided by four to develop an estimate of the total annual AMP cost. This cost may decline if the program continues, and all systems would be developed and operating more efficiently.²⁵
 - **Annual Ratepayer Subsidy:** The table also presents the annual subsidy that would be borne by ratepayers, assuming that all AMP costs are borne by the ratepayers.
 - **Bill Payment Disincentive:** We consider the potential disincentive caused by the AMP as a cost of the program. Changes to AMP design could reduce this cost.
- **AMP Benefits:** The table below presents the following summary of estimated AMP benefits for AMP participants whose accounts remained active through the evaluation period. These benefits are the range experienced by the sampled 2022 and 2023 AMP enrollees in the first 12 months after enrollment, as estimated in the impact analysis.

²⁵ SCE would see an increase in cost initially if it were to incorporate AMP into its billing system.

The analysis found that many of these benefits declined in months 13 to 24 after AMP enrollment.

- On-Time Payments: The selected samples of AMP participants were estimated to increase the number of on-time payments made by 4.1 to 4.5 payments in the 12 months following AMP enrollment.
- Arrearages: The selected samples of AMP participants had an estimated mean reduction in arrearages of \$583 to \$824 in the 12 months following AMP enrollment. Most of this reduction was due to the arrearage forgiveness that these participants received.
- Collections Actions: The selected samples of AMP participants were estimated to be 11 to 26 percentage points less likely to experience one or more collections actions in the 12 months following AMP enrollment.
- Disconnections: The selected samples of AMP participants were estimated to be two to three percentage points less likely to experience one or more disconnections in the 12 months following AMP enrollment.
- LIHEAP Receipt: The selected samples of AMP participants were estimated to be less than one to two percentage points more likely to receive LIHEAP in the 12 months following AMP enrollment. These results were not presented in the previous section, as this is not considered a significant program impact.
- Survey Findings: The AMP participant survey found that the selected samples AMP participants had reduced energy insecurity, reduced financial stress, and an improved financial position.

Table IV-51
AMP Cost and Benefit Summary

Costs		Benefits	
Annual AMP Costs	\$201 Million	On-Time Payments	4.1 - 4.5 Payments
Annual AMP Ratepayer Subsidy		Arrearages	-\$583 - -\$824
PG&E Electric	\$13.13	Collections Actions	-11% - -26%
PG&E Gas	\$5.31	Disconnections	-2% - -3%
SCE	\$8.34	LIHEAP Receipt	<1% - 2%
SDG&E (all customers)	\$12.01	Reduced Energy Insecurity	NA
SoCalGas	\$6.16	Reduced Financial Stress	NA
Bill Payment Disincentives	NA	Improved Financial Position	NA

These findings will be factored into recommendations for program continuation and modification.

G. Analysis Summary

This provides a summary of the findings from the AMP Analysis. All findings include customers who had active utility accounts at the time of sample selection. The evaluation results are not representative of **all** AMP enrollees, but of AMP enrollees who maintained

their utility service for at least 12 months following enrollment for the 2023 enrollees and at least 24 months following enrollment for the 2022 enrollees. This may overestimate the benefits of AMP across all participants.

- **Bill Payment: The selected sample of AMP participants were estimated to improve their on-time bill payment and the percent of the bill amount paid as compared to the comparison group, but the improvements drop off significantly in months 13 to 24 after AMP enrollment.**
 - The selected AMP participants were estimated to increase the average number of on-time payments, defined as payments made by the due date with no past due balance, by 4.1 payments (2022 enrollees) and by 4.5 payments (2023 enrollees) in months one to 12 after AMP enrollment and by 1.4 payments in months 13 to 24 after AMP enrollment (2022 enrollees).
 - The selected AMP participants were estimated to have a 22 percentage point net increase (2022 enrollees) and a 27 percentage point net increase (2023 enrollees) in the percentage who made ten or more on-time payments in the 12 months after AMP enrollment and a seven percentage point net increase in months 13 to 24 after AMP enrollment (2022 enrollees).
 - The selected AMP participants were estimated to increase the percent of their bills paid by 14 percentage points (2022 enrollees) and three percentage points (2023 enrollees) in months one to 12 after AMP enrollment and by eight percentage points in months 13 to 24 after AMP enrollment (2022 enrollees).
 - For the selected sample of program participants with active accounts in 2022 and 2023, AMP was estimated to have greater impacts on bill payment for SCE customers, customers not on PIPP, CARE participants, customers who remained on AMP longer, customers with higher starting arrearages, and customers with income at higher poverty levels. While there were some differences for other subgroups, these differences were not consistent across all of the bill payment metrics that were analyzed.
- **Arrearage Forgiveness: The selected sample of AMP participants were estimated to receive a significant amount of arrearage forgiveness, averaging \$537 for all 2022 AMP enrollees and \$876 for 2023 AMP enrollees. Customers enrolled for longer received significantly higher amounts of forgiveness. The research estimated that 20 percent of 2022 AMP enrollees and 15 percent of 2023 AMP enrollees completed AMP by having all of their arrearages forgiven.**
 - AMP forgives 1/12 of arrearages each month that participants pay their bill on time and in full (or when they make up missed payments). The 2022 AMP enrollees with active accounts over the analysis period were estimated to receive an average of 6.2 arrearage forgiveness credits in the 12 months after enrollment and 2023 AMP enrollees were estimated to receive an average of 7.0 credits.
 - For the selected sample of program participants with active accounts in 2022 and 2023, SCE customers, PIPP participants, CARE participants, CAPP recipients, customers who did not receive LIHEAP, customers enrolled in AMP for longer, customers with larger starting arrearages, and customers with higher bills were estimated to receive more arrearage forgiveness.
 - Longer enrollment in AMP, higher bill amounts after enrollment, and PIPP participation were associated with a higher percentage of AMP arrearages forgiven. In contrast,

participation in the other assistance programs (CAPP, FERA, or LIHEAP) or having higher arrearages were associated with a lower percentage of AMP arrearages forgiven.

- **Arrearages:** The 2022 AMP participants who maintained active accounts for the evaluation period were estimated to reduce their arrearages by nearly \$600 more than the comparison group, somewhat more than mean AMP arrearage forgiveness received (\$537). Participants who are successful on the program are expected to reduce their arrearages by more than the nonparticipants. While the research estimated that 22 percent of the 2022 AMP enrollees had no arrearages 24 months after AMP enrollment, 16 percent of the comparison group had no arrearages at that time.

The selected sample of 2023 AMP participants were estimated to reduce their arrearages by \$824 more than the comparison group, somewhat less than mean AMP arrearage forgiveness received (\$876). While the research estimated that 33 percent of 2023 AMP enrollees had no arrearages 12 months after AMP enrollment, nine percent of the comparison group had no arrearages at this point.

- For the selected sample of program participants with active accounts in 2022 and 2023, SDG&E participants, customers enrolled in AMP for longer, customers with higher starting arrearages, and customers at higher poverty levels were estimated to have the greatest net reductions in arrearages. Customers with higher energy burdens had the highest starting arrearages and the largest reductions in arrearages.
- **The evaluation plan proposed that the program would be deemed effective in reducing arrearages if there were statistically significant net reductions in arrearages of at least \$200 or 20 percent. The percentage reduction for 2022 enrollees was estimated to be 49 percent (\$583/\$1181) in the first year after enrollment and 51 percent in the second year after enrollment (\$597/\$1181). The percentage reduction for 2023 enrollees was estimated at 52 percent (\$824/\$1,580). Based on these measures, the program was successful in reducing arrearages in the first and second year after AMP enrollment.**
- **Collections Actions:** AMP was estimated to reduce the percentage of customers that experienced one or more collections actions, for customers with active accounts over the evaluation period.
 - The selected sample of AMP participants were estimated to have an 11 percentage point net reduction (2022 enrollees) and a 26 percentage point net reduction (2023 enrollees) in the percentage who had one or more collections actions in the 12 months after AMP enrollment and a five percentage point net reduction in months 13 to 24 after AMP enrollment (2022 enrollees).
 - **The evaluation plan proposed that statistically significant net reductions of at least five percentage points (in the risk of disconnection) will be assessed to conclude that the program was effective. Based on this metric regarding collections actions, the program is assessed to be effective.**
 - For the selected sample of program participants with active accounts in 2022 and 2023, PG&E and SDG&E customers, customers not on PIPP, CARE participants, customers enrolled in AMP for longer, and customers at higher poverty levels were estimated to have the largest net reductions in the percentage with one or more collections actions.

- **Disconnections:** Based on the selected sample of program participants, AMP was estimated to result in a net reduction in the percentage of customers that experienced one or more disconnections (however, while on AMP customers cannot be disconnected, so this influences the disconnection rate).
 - The selected sample of AMP participants were estimated to have a two percentage point net reduction (2022 enrollees) and a three percentage point net reduction (2023 enrollees) in the percentage who had one or more disconnections in the 12 months after AMP enrollment and a three percentage point net reduction in months 13 to 24 after AMP enrollment (2022 enrollees).
 - **The evaluation plan proposed that statistically significant net reductions of at least five percentage points (in the risk of disconnection) will be assessed to conclude that the program was effective. Based on this metric regarding disconnections, the program is not assessed to be effective. However, the smaller reduction in disconnections is also due to the low percentage of customers with disconnections prior to enrolling in AMP due to moratoriums and limits on disconnections and, for this reason, the evaluation plan stated that other measures of the risk of disconnection would also be assessed.**
 - For the selected sample of program participants with active accounts in 2022 and 2023, PG&E and SDG&E customers, customers not on PIPP, CARE participants, customers enrolled in AMP for longer, and customers at higher poverty levels were estimated to have the largest net reductions in the percentage with one or more disconnections.
- **Energy Usage:** There were no statistically significant changes in mean weather-normalized electric or gas usage from the year before AMP enrollment to the year after AMP enrollment for 2022 AMP enrollees overall (but there were some estimated reductions in electric usage for SCE and SDG&E customers), and small, statistically significant, estimated net reductions in usage for 2023 AMP enrollees.
- **Differential Impacts:** For the selected sample of program participants with active accounts in 2022 and 2023, some groups of participants were estimated to have greater impacts from AMP participation. Potential reasons for these differences are discussed below.
 - SCE Customers: AMP was estimated to have greater impacts on improved bill payment for SCE customers than for customers of other IOUs. Part of this difference is due to the fact that the SCE comparison group had less improvement in the post AMP enrollment period than the other comparison groups, so the net impact for SCE was a larger improvement. This means that the SCE customers were estimated to have done far worse in terms of bill payment if they had not enrolled in AMP. Additionally, SCE was more likely to disconnect customers than the other IOUs, so these customers may have placed more importance on receiving arrearage forgiveness.
 - PG&E and SDG&E participants were estimated to have larger reductions in the percentage with collections actions and disconnections than the other IOUs. Their comparison groups were estimated to have larger increases in these indicators, so their net reduction was greater. These IOUs may have been more active in implementing these collections practices.
 - PIPP Nonparticipants: AMP was estimated to have greater impacts on improved bill payment, and greater reductions in the percentage with collections actions and

disconnections for PIPP nonparticipants as compared to PIPP participants. This is also because of relatively poorer performance of comparison group customers who were not enrolled in PIPP, compared to those who were enrolled in PIPP.

PIPP nonparticipants were estimated to have greater reductions in the percent with collections actions and disconnections. This is also because customers not on PIPP had large increases in the percentage with collections actions and disconnections, so the net reduction for PIPP nonparticipants was greater.

- PIPP Participants: These customers received more arrearage forgiveness and have a higher percentage of their arrearages forgiven. This is related to their PIPP discounts which enabled them to pay more of their bills and receive more arrearage forgiveness.
- CARE Participants: AMP was estimated to have greater impacts on improved bill payment, reductions in the percentage with collections actions, and reductions in the percentage with disconnections for CARE participants as compared to FERA participants. CARE participants were also estimated to receive more arrearage forgiveness and a higher percentage of their arrearages forgiven than FERA participants. This is likely related to the greater discounts that CARE participants receive on their energy bills.
- CAPP Participants: These customers were estimated to receive more arrearage forgiveness than non-CAPP participants because some utilities credited the CAPP payments toward the monthly payment obligation, and that made the customers eligible for arrearage forgiveness. CAPP participants were estimated to have a lower percentage of their arrearages forgiven because they had arrearages removed through CAPP instead of AMP, and because they had higher starting arrearages.
- LIHEAP non-recipients: These customers were estimated to receive more arrearage forgiveness than LIHEAP recipients and a higher percentage of their arrearages forgiven. This may be because the more payment-troubled customers were more likely to apply for LIHEAP as they needed additional bill payment assistance.
- Higher Starting Arrearages: AMP was estimated to have greater impacts on improved bill payment for customers with higher starting arrearages. This is because these customers had worse bill payment prior to AMP enrollment.
- Customers with higher starting arrearages were estimated to receive more arrearage forgiveness because each arrearage forgiveness credit received was larger.
- Higher Bills: These customers were estimated to receive more arrearage forgiveness and have a higher percentage of their arrearages forgiven. They received more arrearage forgiveness because they started out with higher arrearages.
- Higher Poverty Levels: AMP was estimated to have greater impacts on improved bill payment, and greater reductions in the percentage with collections actions and disconnections for customers at higher poverty levels. This is likely because these customers with higher incomes had greater ability to pay their utility bills.
- Customers at higher poverty levels had the greatest net reductions in arrearages because they started with the highest levels of arrearages.

V. Findings and Recommendations

This section provides a summary of key findings and recommendations from the AMP evaluation.

AMP had many positive benefits for program participants who maintained active accounts for the evaluation period as compared to the matched comparison group. These included the following.

- Improved Bill Payment Practices: AMP participants were estimated to increase the number of on-time payments and the percent of their annual bill that they paid.
- Reduced Arrearages: AMP participants were estimated to reduce their arrearages.
- Collections Actions: AMP participants were estimated to be less likely to have one or more collections actions.
- Disconnections: AMP participants were estimated to be less likely to be disconnected.

However, many of these benefits declined in months 13 to 24 after AMP enrollment. Additionally, the majority of AMP participants were not successful in completing the AMP program. Only about 15 percent of participants were estimated to have all their arrearages forgiven, and 40 to 50 percent were estimated to have less than half of their arrearages forgiven.

Other challenges included the extensive efforts that the utilities undertook to educate and enroll customers in the program and the high costs for developing new systems to enroll, track, bill, and report on the program.

While the research does not provide findings for all AMP participants, it does show that customers who participate in AMP and retain energy services have better outcomes than those who do not participate in AMP. As with all programs, not all participants are successful. However, given the findings of this research and other studies of low-income energy issues, we make the following recommendations for how to best serve low-income customers.

- Affordability: Provide a monthly bill that is targeted to an affordable energy burden (percent of income spent on energy).
- Arrearage Forgiveness: Forgive arrearages that were incurred prior to provision of an affordable bill and prior to implementation of robust collection practices (following through with disconnections of customers who do not pay their bills).
- Collections Practices: Adhere to documented and consistent collections practices so customers understand that there are consequences for failure to pay their energy bills.

The following specific AMP recommendations are made. **We recommend that the CPUC require these changes to AMP and that the IOUs implement these changes as soon as possible.**

1. AMP Continuation – For customers who remained active through the evaluation period, the program was estimated to have positive impacts on bill payment, collections actions, and arrearages. However, impacts in months 13 to 24 after AMP enrollment were much smaller than those in months one to 12 after enrollment.

Customers who are not able to pay their bill and build up arrearages will not be able to pay off those arrearages that they accrued. If the arrearages keep increasing and there are strict limits on disconnections, the customer has no incentive to pay the bill. The customer will continue to

build up arrearages to the level that they will not be able to pay them off. Therefore, it is important that low-income customers have affordable bills and a method to pay off the arrearages that they accrued.

Recommendation: The CPUC should require that AMP continues as a permanent program with some modifications.

These modifications should be implemented by the IOUs as soon as possible.

2. **Eligibility – CARE/FERA Participation:** Customers are permitted to enroll in AMP if they self-certify that they are eligible for CARE or FERA. They may be found to be ineligible for CARE/FERA but the IOUs are required to keep the customers enrolled in AMP. There is a concern that customers will sign up for CARE even if they are not eligible, because of the large arrearage forgiveness that becomes available to them through AMP enrollment. Therefore, it is important to ensure that new CARE enrollees with arrearages are eligible for the program.
Recommendation: The CPUC should require that customers complete CARE post enrollment verification prior to enrolling in AMP.
3. **Eligibility – Bill Payment:** Customers are eligible to enroll in AMP if they made one payment in the previous 24 months. This does not show a commitment or ability to pay the energy bill, which is needed for the customer to be successful on AMP.
Recommendation: The CPUC should require that customers must make at least one payment in the past six months to enroll in AMP.
4. **AMP Removal – Late and Missed Payments:** Customers are removed from AMP if they miss two consecutive current bill payments (or make them late or less than in full) or if they miss three non-consecutive payments (or make them late or less than in full). With these rules, some customers who are making a good faith effort to make their utility payments and are bringing their account current during the year will be removed from AMP.
Recommendation: The CPUC should require disconnection of AMP participants who become past due instead of requiring that they are removed from AMP for missed payments. Disconnections should align with the IOU's current disconnection threshold. AMP participants should be unenrolled at the time of disconnection.
5. **AMP Removal – Assistance:** Customers who are involuntarily removed from AMP need additional assistance with their utility bills.
Recommendation: The CPUC should require that prior to removing customers from AMP, the IOUs send the customer a letter, email, or text, with information on a local CBO that they can reach out to for energy assistance from LIHEAP or other available resources. These communications should only be made to the extent permitted by law and if customers have opted into these communications methods.
6. **AMP Re-Enrollment:** Customers are permitted to re-enroll in AMP after a 12-month stay-out period. This allows customers to receive arrearage forgiveness, build up additional arrearages, and then re-enroll in AMP. A stay out provision of five years (with a new disconnection policy)

will ensure that customers have re-established good payment patterns for some time and are only re-entering AMP after facing additional hardship.

Recommendation: The CPUC should place limits on re-enrollment and additional arrearage forgiveness because the current approach provides disincentives for bill payment. The CPUC should require that customers are limited to participating in AMP one time and only participate again after at least five years have elapsed.

7. IOU Bills: Some IOUs include no AMP information on the monthly bills and some IOUs are developing the capability to add AMP progress on monthly bills. Information on AMP forgiveness is important for customers to understand their status in the program and their progress toward having all of their arrearages forgiven. While this information is currently included on quarterly updates sent by the IOUs, it is important for customers to have this reinforcement each month and to have a more recent understanding of their status in the program.

Recommendation: The CPUC should require that IOUs provide bill inserts with customer monthly bills that include the original AMP arrearage, the amount forgiven each month if they pay their bill, the amount forgiven to date, and the amount remaining.

8. IOU Communication: Many AMP customers miss bill payment due dates and do not fully understand the requirement to pay their bill on time and in full each month.

Recommendation: IOUs should remind AMP participants one week before the bill due date about the upcoming due date via methods that the customers have agreed to (including text, email, and automated phone call). IOUs should also contact customers via these methods if they miss a bill due date. These communications should only be made to the extent permitted by law and if customers have opted into these communications methods.

Recommendation: IOUs should review communication methods that customers have agreed to at the time of AMP enrollment to help ensure that customers receive messages about upcoming and missed bill dates.

9. Disconnections: The CPUC places limits on the number of customers who can have their services disconnected. This provides disincentives for bill payment and increases costs for ratepayers who pay their bills.

Recommendation: The CPUC should require that the IOUs disconnect all customers in alignment with the IOU's current disconnection threshold if they do not have a documented medical condition. Prior to implementing this revised policy, there should be a broad education campaign to inform customers about available assistance and when the new policy will take effect. The new policy should be phased in to start with customers with the highest levels of arrearages and then work down to customers who just meet the IOU disconnection threshold.

Appendices

The following appendices are included.²⁶

- A. Detailed Analysis Findings - On-Time Payment
- B. Detailed Analysis Findings - Charges, Credits, Shortfalls, and Bill Payment Percentage
- C. Detailed Analysis Findings - Length of Time on AMP
- D. Detailed Analysis Findings - Number of Credits Received
- E. Detailed Analysis Findings - Percent of Arrearages Forgiven
- F. Detailed Analysis Findings - Arrearages
- G. Detailed Analysis Findings - Collections and Disconnections
- H. Detailed Analysis Findings - Energy Usage
- I. Detailed Analysis Findings - Program Data
- J. Participant Survey Instrument
- K. Participant Survey Findings
- L. IOU Report Data

²⁶ 23,456 accounts were removed from Tables A-7, B-9, D-4 (for 2022), F-5, G-5, and G-13 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues. 25,252 accounts were removed from Tables A-8, B-10, D-4 (for 2023), F-6, G-6, and G-14 because they had \$0 income, were missing income data, were missing household size data, or were matched to a comparison account with these issues. 19,652 accounts were removed from Tables A-9, B-11, D-5 (for 2022), F-7, G-7, and G-15 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues. 21,564 accounts were removed from Tables A-10, B-12, D-5 (for 2023), F-8, G-8, and G-16 because they had \$0 income, were missing income data, or were matched to a comparison account with these issues. In Tables C-1, C-2, E-2, I-1, I-2, I-3, and I-4 the following customers were removed because they were missing program data: 2022 Selected Sample-142 participants, 2023 Selected Sample-2,335 participants, 2022 Analysis Group-46 participants, 2023 Analysis Group-2,016 participants were missing program data. 170 accounts were removed from Table D-8 because the survey respondents did not provide data to calculate their poverty level.

A. Detailed Analysis Findings - On-Time Payment

Table A-1
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	1.1	5.9	3.7	1.4	1.9	3.1	4.3**	0.9**
SCE	5,234	0.1	5.4	2.4	3.1	2.3	2.4	6.0**	3.0**
SDG&E	6,554	< 0.1	3.8	1.9	0.8	0.3	0.7	4.2**	2.0**
SoCalGas	6,838	0.7	4.0	2.8	1.0	1.2	1.7	3.0**	1.3**
All IOUs	30,384	0.7	4.9	3.0	1.4	1.5	2.2	4.1**	1.4**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-2
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Dual Fuel	10,794	0.9	5.4	3.3	1.2	1.5	2.5	4.3**	1.1**
Electric Only	10,476	0.5	5.5	2.8	2.2	1.9	2.4	5.3**	2.2**
Gas Only	9,114	0.8	4.1	2.9	1.0	1.3	1.9	3.1**	1.3**
PIPP	1,071	0.8	4.6	3.1	1.5	2.1	3.4	3.2**	0.4**
No PIPP	29,313	0.7	4.9	3.0	1.4	1.5	2.2	4.1**	1.5**
CARE	21,641	0.7	5.4	3.1	1.6	1.7	2.5	4.6**	1.5**
FERA	8,743	0.7	4.1	2.8	1.0	1.2	1.7	3.1**	1.3**
CAPP	16,442	0.3	4.9	3.0	0.3	1.0	1.6	4.0**	1.4**
No CAPP	13,942	1.1	4.9	3.0	2.0	1.9	2.6	3.9**	1.3**
LIHEAP	5,022	1.0	4.1	2.5	1.5	1.9	2.4	2.7**	0.7**
No LIHEAP	25,362	0.7	5.1	3.1	1.4	1.5	2.2	4.3**	1.6**
Time on AMP									
< 3 Months	3,482	0.6	1.1	2.4	0.8	1.3	2.0	<0.1	0.6**
3-6 Months	7,411	0.6	1.6	2.1	1.2	1.4	2.1	0.8**	0.6**
6-11 Months	12,418	0.8	6.1	2.9	1.4	1.5	2.3	5.2**	1.2**

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
12+ Months	7,073	0.9	8.3	4.6	2.0	1.9	2.5	7.5**	3.2**
AMP Arrearages									
<\$1,000	17,864	0.9	4.8	3.1	1.4	1.5	2.2	3.7**	1.4**
\$1,000-\$2,999	10,811	0.5	5.2	3.0	1.5	1.6	2.4	4.6**	1.5**
\$3,000+	1,709	0.2	5.2	2.7	1.1	1.5	2.3	4.6**	1.4**
Bill Amount									
Lower	11,271	0.5	4.8	3.1	1.2	1.5	2.1	4.1**	1.7**
Mid	13,843	0.9	5.0	3.0	1.5	1.7	2.4	4.1**	1.3**
Higher	5,270	0.9	4.9	2.9	1.6	1.5	2.3	4.0**	1.2**
Total	30,384	0.7	4.9	3.0	1.4	1.6	2.2	4.1**	1.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-3
Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, All IOUs

Number of On-Time Payments	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
0-3	93%	47%	67%	85%	83%	74%	-43%**	-16%**
4-6	6%	16%	15%	9%	10%	13%	10%**	5%**
7-9	2%	15%	9%	4%	5%	7%	12%**	4%**
10-12	<1%	22%	10%	2%	3%	6%	22%**	7%**
Total	100%	100%	100%	100%	100%	100%	--	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-4
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	0.7	5.9	5.2**	1.1	2.3	1.2**	3.9**
SCE	6,559	0.1	6.7	6.6**	1.9	1.9	> -0.1	6.6**
SDG&E	7,516	< 0.1	4.8	4.8**	0.6	0.4	-0.2**	5.0**
SoCalGas	8,311	1.1	5.4	4.3**	1.4	1.7	0.3**	4.0**
All IOUs	34,307	0.7	5.8	5.0**	1.4	1.9	0.5**	4.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-5
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
Dual Fuel	11,118	0.6	5.6	5.0**	1.0	1.9	0.9**	4.1**
Electric Only	12,308	0.2	6.5	6.3**	1.6	1.9	0.3**	6.0**
Gas Only	10,811	1.1	5.4	4.3**	1.4	1.8	0.4**	3.9**
PIPP	1,341	0.8	5.8	5.0**	1.3	1.9	0.6**	4.4**
No PIPP	32,966	0.7	5.8	5.0**	1.4	1.9	0.5**	4.5**
CARE	23,346	0.4	6.0	5.6**	1.3	1.9	0.6**	4.9**
FERA	10,961	1.1	5.4	4.3**	1.4	1.7	0.3**	4.0**
CAPP	10,355	0.1	5.6	5.6**	0.3	1.2	0.9**	4.7**
No CAPP	23,952	1.0	5.8	4.8**	1.7	2.1	0.4**	4.5**
LIHEAP	4,655	0.9	4.8	4.0**	1.5	2.1	0.5**	3.4**
No LIHEAP	29,652	0.7	5.9	5.2**	1.3	1.8	0.5**	4.7**
Time on AMP								
< 3 Months	3,294	0.5	0.8	0.2**	1.0	1.8	0.9**	-0.6**
3-6 Months	6,742	0.6	1.5	0.9**	1.2	1.7	0.5**	0.4**
6-11 Months	12,013	0.7	6.0	5.3**	1.3	1.9	0.6**	4.7**
12+ Months	12,258	0.9	9.0	8.0**	1.6	1.9	0.3**	7.8**
AMP Arrearages								
<\$1,000	14,675	1.2	5.5	4.4**	1.4	1.8	0.4**	4.0**

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
\$1,000-\$2,999	14,085	0.4	5.9	5.5**	1.3	1.9	0.6**	4.9**
\$3,000+	5,547	< 0.1	6.3	6.2**	1.1	1.8	0.7**	5.5**
Bill Amount								
Lower	16,316	0.7	5.5	4.8**	1.2	1.6	0.5**	4.3**
Mid	13,134	0.8	6.0	5.1**	1.6	2.2	0.5**	4.6**
Higher	4,857	0.7	6.1	5.5**	1.5	2.0	0.5**	5.0**
Total	34,307	0.7	5.8	5.0**	1.4	1.9	0.5**	4.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-6
Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, All IOUs

Number of On-Time Payments	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
Obs.	34,307			34,307			--
0-3	92%	39%	-52%**	85%	79%	-6%**	-46%**
4-6	6%	16%	10%**	9%	12%	3%**	7%**
7-9	2%	16%	14%**	4%	6%	2%**	12%**
10-12	< 1%	29%	29%**	1%	3%	2%**	27%**
Total	100%	100%	100%	100%	100%	100%	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-7
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	0.7	4.8	3.0	1.1	1.3	1.9	3.9**	1.6**
101%-200%	3,213	0.7	5.2	3.2	1.5	1.5	2.4	4.5**	1.6**
>200%	1,648	0.9	5.6	3.4	1.8	2.0	2.9	4.6**	1.5**
Total	6,928	0.7	5.1	3.2	1.5	1.6	2.4	4.3**	1.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-8
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	1.1	5.7	4.6**	1.5	1.8	0.3**	4.3**
101%-200%	3,174	0.8	5.8	5.0**	1.5	1.9	0.5**	4.5**
>200%	3,193	0.4	6.3	5.9**	1.3	2.0	0.7**	5.2**
Total	9,055	0.8	5.9	5.1**	1.4	1.9	0.4**	4.6**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-9
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	0.6	4.6	2.9	1.4	1.5	2.2	3.8**	1.6**
5%-8%	3,085	0.8	5.3	3.1	1.4	1.6	2.5	4.3**	1.2**
>8%	1,598	1.0	5.5	3.2	1.5	1.5	2.6	4.6**	1.1**
Total	10,732	0.7	5.0	3.0	1.4	1.5	2.3	4.1**	1.4**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table A-10
Mean Number of On-Time Bill Payments
With No Past Due Balance
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	0.6	5.6	5.0**	1.2	1.5	0.4**	4.7**
5%-8%	4,298	0.9	5.9	4.9**	1.6	2.1	0.5**	4.4**
>8%	2,528	0.9	5.9	5.1**	1.6	2.2	0.6**	4.5**
Total	12,743	0.7	5.8	5.0**	1.4	1.9	0.5**	4.5**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

B. Detailed Analysis Findings - Charges, Credits, Shortfall, and Bill Payment Percentage

Table B-1
Mean Bills and Payments
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees, All IOUs

	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
Total Charges	\$1,598	\$1,768	\$1,794	\$1,397	\$1,651	\$1,697	-\$84**	-\$104**
Total Credits	\$957	\$1,486	\$1,604	\$1,183	\$1,515	\$1,749	\$197**	\$80**
Shortfall	\$641	\$283	\$190	\$214	\$136	-\$52	-\$281**	-\$185**
Coverage Rate	52%	79%	89%	76%	88%	104%	14%**	8%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-2
Mean Bills and Payments
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, All IOUs

	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
Total Charges	34,307	\$1,812	\$1,515	-\$297**	\$1,509	\$1,356	-\$153**	-\$144**
Total Credits	34,307	\$1,008	\$1,482	\$474**	\$1,306	\$1,559	\$254**	\$220**
Shortfall	34,307	\$804	\$33	-\$771**	\$203	-\$203	-\$407**	-364**
Coverage Rate	34,307	51%	95%	44%**	82%	123%	41%**	3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-3
Mean Percent of Bill Paid
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	61%	94%	97%	83%	104%	109%	12%**	9%**
SCE	5,234	60%	102%	109%	118%	118%	122%	42%**	45%**
SDG&E	6,554	61%	80%	80%	71%	56%	91%	34%**	-1%
SoCalGas	6,838	35%	50%	74%	53%	68%	96%	-1%	-5%**

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
All IOUs	30,384	52%	79%	89%	76%	88%	104%	14%**	8%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-4
Mean Percent of Bill Paid
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Dual Fuel	10,794	63%	91%	93%	82%	94%	105%	15%**	7%**
Electric Only	10,476	60%	96%	100%	99%	104%	113%	31%**	27%**
Gas Only	9,114	37%	55%	77%	55%	71%	98%	1%	-3%**
PIPP	1,071	59%	79%	110%	81%	112%	131%	-11%**	1%
No PIPP	29,313	52%	79%	89%	76%	88%	104%	14%**	8%**
CARE	21,641	61%	93%	97%	88%	98%	108%	22%**	15%**
FERA	8,743	37%	52%	75%	55%	70%	97%	< 1%	-4%**
CAPP	16,442	44%	82%	91%	51%	79%	109%	10%**	-11%**
No CAPP	13,942	59%	75%	87%	89%	93%	102%	12%**	15%**
LIHEAP	5,022	63%	84%	96%	80%	100%	109%	< 1%	4%**
No LIHEAP	25,362	50%	78%	88%	75%	87%	104%	16%**	9%**
Time on AMP									
< 3 Months	3,482	49%	78%	84%	69%	86%	101%	12%**	4%**
3-6 Months	7,411	46%	60%	81%	68%	81%	102%	-1%	< 1%
6-11 Months	12,418	54%	80%	90%	76%	87%	103%	15%**	9%**
12+ Months	7,073	58%	97%	98%	88%	98%	112%	30%**	17%**
AMP Arrearages									
<\$1,000	17,864	54%	72%	87%	70%	82%	103%	6%**	1%
\$1,000-\$2,999	10,811	53%	89%	93%	85%	96%	107%	25%**	18%**
\$3,000+	1,709	33%	95%	90%	83%	104%	107%	41%**	32%**
Bill Amount									
Lower	11,271	47%	84%	91%	72%	90%	105%	18%**	11%**
Mid	13,843	55%	77%	88%	79%	88%	103%	13%**	8%**
Higher	5,270	55%	72%	87%	78%	83%	106%	12%**	4%**
Total	30,384	52%	79%	89%	76%	88%	104%	14%**	8%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-5
Percent of Bill Paid
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Percent of Bill Paid	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
	Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Obs.	30,384			30,384			--	--
<50%	44%	24%	20%	28%	23%	16%	-15%**	-13%**
51%-75%	28%	12%	14%	15%	10%	6%	-10%**	-5%**
76%-99%	21%	30%	23%	25%	19%	18%	15%**	8%**
100% or More	6%	33%	43%	32%	48%	60%	11%**	9%**
Total	100%	100%	100%	100%	100%	100%	--	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-6
Mean Percent of Bill Paid
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	58%	109%	51%**	90%	119%	29%**	22%**
SCE	6,559	64%	115%	51%**	113%	137%	25%**	26%**
SDG&E	7,516	49%	97%	48%**	59%	95%	36%**	11%**
SoCalGas	8,311	40%	75%	35%**	66%	124%	58%**	-23%**
All IOUs	34,307	51%	95%	44%**	82%	123%	41%**	3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-7
Mean Percent of Bill Paid
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
Dual Fuel	11,188	58%	106%	48%**	87%	114%	28%**	21%**
Electric Only	12,308	61%	112%	51%**	103%	129%	26%**	25%**
Gas Only	10,811	41%	79%	38%**	67%	124%	57%**	-20%**
PIPP	1,341	52%	103%	51%**	90%	140%	50%**	1%
No PIPP	32,966	51%	95%	44%**	82%	123%	41%**	3%**

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
CARE	23,346	59%	110%	51%**	94%	122%	29%**	22%**
FERA	10,961	41%	76%	35%**	67%	124%	57%**	-21%**
CAPP	10,355	46%	109%	63%**	68%	129%	61%**	2%
No CAPP	23,952	53%	90%	38%**	87%	121%	34%**	3%**
LIHEAP	4,655	69%	104%	52%**	97%	123%	27%**	9%**
No LIHEAP	29,652	48%	94%	45%**	80%	123%	43%**	3%**
Time on AMP								
< 3 Months	3,294	48%	96%	48%**	78%	117%	38%**	10%**
3-6 Months	6,742	47%	76%	29%**	77%	120%	43%**	-14%**
6-11 Months	12,013	55%	94%	39%**	85%	123%	38%**	1%
12+ Months	12,258	51%	106%	55%**	83%	126%	43%**	12%**
AMP Arrearages								
<\$1,000	14,675	56%	88%	32%**	76%	122%	46%**	-14%**
\$1,000-\$2,999	14,085	49%	100%	51%**	87%	124%	37%**	14%**
\$3,000+	5,547	36%	107%	71%**	91%	126%	35%**	36%**
Bill Amount								
Lower	16,316	45%	98%	53%**	79%	130%	50%**	3%**
Mid	13,134	55%	92%	37%**	85%	116%	31%**	5%**
Higher	4,857	59%	92%	33%**	86%	108%	22%**	11%**
Total	34,307	51%	95%	44%**	82%	123%	41%**	3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-8
Percent of Bill Paid
Year Before and Year After AMP Enrollment
2023 AMP Enrollees, All IOUs

Percent of Bill Paid	2023 AMP Enrollees			Comparison Group			Net Change
	Pre	Post	Change	Pre	Post	Change	
Obs.	34,307			34,307			--
<50%	49%	15%	-34%**	25%	12%	-13%**	-21%**
51%-75%	26%	11%	-15%**	15%	5%	-10%**	-5%**
76%-99%	18%	22%	5%**	22%	14%	-9%**	13%**
100% or More	8%	52%	44%**	37%	69%	32%**	12%**
Total	100%	100%	100%	100%	100%	100%	--

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-9
Mean Percent of Bill Paid
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	47%	70%	88%	65%	79%	99%	9%**	7%**
101%-200%	3,213	53%	81%	92%	76%	86%	107%	17%**	8%**
>200%	1,648	61%	93%	97%	91%	104%	107%	20%**	20%**
Total	6,928	53%	79%	92%	76%	89%	104%	15%**	11%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-10
Mean Percent of Bill Paid
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	45%	84%	39%**	73%	125%	52%**	-12%**
101%-200%	3,174	51%	95%	45%**	86%	126%	41%**	4%**
>200%	3,193	60%	111%	50%**	95%	124%	29%**	22%**
Total	9,055	51%	95%	44%**	82%	125%	43%**	2%

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-11
Mean Percent of Bill Paid
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	44%	70%	86%	71%	84%	103%	13%**	11%**
5%-8%	3,085	59%	84%	92%	82%	91%	104%	16%**	11%**
>8%	1,598	63%	92%	94%	84%	98%	107%	15%**	7%**
Total	10,732	53%	79%	90%	76%	88%	104%	14%**	9%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table B-12
Mean Percent of Bill Paid
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	49%	96%	47%**	80%	125%	45%**	2%
5%-8%	4,298	52%	91%	40%**	85%	123%	38%**	2%
>8%	2,528	55%	97%	42%**	88%	122%	34%**	8%**
Total	12,743	51%	95%	44%**	83%	124%	40%**	3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

C. Detailed Analysis Findings - Length of Time on AMP

Tables C-1 and C-2 do not include AMP participants who had missing program data. These customers were missing total arrearage forgiveness, maximum arrearage forgiveness, and/or disenrollment data.

- 142 participants from the Selected Sample of 2022 Enrollees were missing program data.
- 2,335 participants from the Selected Sample of 2023 Enrollees were missing program data.
- 46 participants from the Analysis Group of 2022 Enrollees were missing program data.
- 2,016 participants from the Analysis Group of 2023 Enrollees were missing program data.

Table C-1
Number of Months Enrolled in AMP
2022 AMP Enrollees

Length of AMP Enrollment	2022 AMP Enrollees							
	Selected Sample				Analysis Group			
	PG&E	SCE	SDG&E	SCG	PG&E	SCE	SDG&E	SCG
Observations	13,850	9,869	9,998	9,998	11,718	5,230	6,552	6,838
< 3 Months	15%	7%	22%	10%	15%	< 1%	19%	7%
3 - < 6 Months	21%	20%	25%	38%	21%	15%	25%	36%
6 - 11 Months	48%	23%	47%	25%	48%	24%	50%	26%
12+ Months	17%	50%	6%	27%	17%	61%	7%	32%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Mean # Months	7.6	10.0	5.8	6.8	7.6	11.5	6.0	7.4

Table C-2
Number of Months Enrolled in AMP
2023 AMP Enrollees

Length of AMP Enrollment	2023 AMP Enrollees							
	Selected Sample				Analysis Group			
	PG&E	SCE	SDG&E	SCG	PG&E	SCE	SDG&E	SCG
Observations	13,713	9,433	9,064	9,612	11,541	6,144	6,649	7,957
< 3 Months	16%	5%	21%	9%	15%	< 1%	16%	6%
3 - < 6 Months	23%	23%	22%	27%	23%	14%	20%	25%
6 - 11 Months	46%	28%	34%	21%	47%	32%	37%	21%
12+ Months	15%	44%	23%	43%	15%	54%	28%	47%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Mean # Months	7.5	9.0	7.1	8.0	7.6	10.2	7.8	8.5

D. Detailed Analysis Findings – Number and Amount of Credits Received

Table D-1
Mean Arrearage Forgiveness Credits Received
Year and Two Years After AMP Enrollment

IOU	2022 AMP Enrollees					2023 AMP Enrollees		
	Obs.	# of Credits		Credit \$		Obs.	# of Credits	Credit \$
		Post 1	Post 2	Post 1	Post 2		Post 1	Post 1
PG&E	11,758	6.6	0.6	\$698	\$93	11,921	6.7	\$1,070
SCE	5,234	8.2	0.4	\$843	\$42	6,559	8.2	\$1,395
SDG&E	6,554	6.5	0.8	\$545	\$127	7,516	7.6	\$1,151
SoCalGas	6,838	4.8	1.0	\$222	\$81	8,311	6.6	\$459
All IOUs	30,384	6.2	0.7	\$537	\$86	34,307	7.0	\$876

Table D-2
Mean Arrearage Forgiveness Credits Received
Year and Two Years After AMP Enrollment

Group	2022 AMP Enrollees					2023 AMP Enrollees		
	Obs.	# of Credits		Credit \$		Obs.	# of Credits	Credit \$
		Post 1	Post 2	Post 1	Post 2		Post 1	Post 1
Dual Fuel	10,794	6.7	0.6	\$710	\$106	11,118	6.9	\$1,170
Electric Only	10,476	7.4	0.5	\$752	\$70	12,308	7.8	\$1,303
Gas Only	9,114	4.9	1.0	\$229	\$78	10,811	6.5	\$464
PIPP	1,071	6.6	1.0	\$615	\$113	1,341	7.8	\$923
No PIPP	29,313	6.2	0.7	\$536	\$86	32,966	7.0	\$876
CARE	21,641	6.9	0.6	\$695	\$87	23,346	7.3	\$1,174
FERA	8,743	4.9	1.0	\$252	\$83	10,961	6.6	\$498
CAPP	16,442	6.3	0.6	\$620	\$92	10,355	6.9	\$1,422
No CAPP	13,942	6.1	0.8	\$460	\$81	23,952	7.0	\$695
LIHEAP	5,022	5.1	0.7	\$462	\$95	4,655	5.9	\$744
No LIHEAP	25,362	6.4	0.7	\$552	\$84	29,652	7.2	\$896
Time on AMP								
< 3 Months	3,482	1.1	1.1	\$99	\$192	3,294	0.3	\$35
3-6 Months	7,411	2.0	1.1	\$171	\$145	6,742	1.6	\$205
7-11 Months	12,418	7.6	0.3	\$688	\$30	12,013	7.6	\$1,069
12+ Months	7,073	10.6	1.0	\$872	\$70	12,258	10.8	\$1,259

Group	2022 AMP Enrollees					2023 AMP Enrollees		
	Obs.	# of Credits		Credit \$		Obs.	# of Credits	Credit \$
		Post 1	Post 2	Post 1	Post 2		Post 1	Post 1
AMP Arrearages								
<\$1,000	17,864	5.9	0.8	\$291	\$62	14,675	6.7	\$356
\$1,000-\$2,999	10,811	6.7	0.6	\$808	\$112	14,085	7.1	\$971
\$3,000+	1,709	6.5	0.6	\$1,829	\$214	5,547	7.6	\$2,732
Bill Amount								
Lower	11,271	6.2	0.6	\$380	\$44	16,316	6.8	\$569
Mid	13,843	6.3	0.8	\$552	\$90	13,134	7.1	\$950
Higher	5,270	6.0	0.9	\$825	\$166	4,857	7.2	\$1,855
Total	30,384	6.2	0.7	\$537	\$86	34,307	7.0	\$876

Table D-3
Number of Arrearage Forgiveness Credits Received

Number of Credits Received	2022 AMP Enrollees ¹			2023 AMP Enrollees
	Post 1	Post 2	Total	Post 1
Obs.	30,384			34,307
<3	29%	91%	22%	25%
3-6	21%	7%	24%	17%
7-11	38%	1%	26%	39%
12+	12%	<1%	27%	18%
Total	100%	100%	100%	100%

¹ 5,712 AMP participants from the 2022 Enrollees received 1 or more reenrollment credits. These participants received 5.3 credits on average in Post 1 and Post 2 combined.

Table D-4
Mean Arrearage Forgiveness Credits Received
Year Before and Two Years After AMP Enrollment

Poverty Level	2022 AMP Enrollees					2023 AMP Enrollees		
	Obs.	# of Credits		Credit \$		Obs.	# of Credits	Credit \$
		Post 1	Post 2	Post 1	Post 2		Post 1	Post 1
≤100%	2,067	5.8	0.8	\$423	\$83	2,688	6.9	\$641
101%-200%	3,213	6.6	0.8	\$560	\$83	3,174	7.0	\$903
>200%	1,648	6.5	0.6	\$736	\$95	3,193	7.6	\$1,342
Total	6,928	6.3	0.7	\$547	\$85	9,055	7.1	\$919

Table D-5
Mean Arrearage Forgiveness Credits Received
Year Before and Two Years After AMP Enrollment

Energy Burden	2022 AMP Enrollees					2023 AMP Enrollees		
	Obs.	# of Credits		Credit \$		Obs.	# of Credits	Credit \$
		Post 1	Post 2	Post 1	Post 2		Post 1	Post 1
≤4%	6,049	5.7	0.8	\$309	\$64	5,917	6.9	\$663
5%-8%	3,085	6.6	0.7	\$617	\$93	4,298	7.1	\$860
>8%	1,598	6.7	0.6	\$950	\$122	2,528	7.2	\$1,458
Total	10,732	6.2	0.7	\$542	\$85	12,743	7.0	\$904

Table D-6
Arrearage Credits and AMP Forgiveness – Recalled Letter Receipt
2023 Survey Respondents

Metric	2023 AMP Enrollees Who Completed Survey	
	Recalled Letter Receipt	Did not Recall Letter Receipt
Observations	266	344
Number of Arrearage Credits	7.4	6.8
Amount of Forgiveness	\$961	\$777

Table D-7
Arrearage Credits and AMP Forgiveness – Reported Challenges
2023 Survey Respondents

Metric	2023 AMP Enrollees Who Completed Survey	
	Reported Challenges Paying Bills While on AMP	Did not Report Challenges Paying Bills While on AMP
Observations	286	324
Number of Arrearage Credits	6.2	7.9
Amount of Forgiveness	\$785	\$938

Table D-8
Arrearage Credits and AMP Forgiveness – Poverty Level
2023 Survey Respondents

Metric	2023 Enrollees Who Completed Survey	
	Poverty Level $\leq 100\%$	Poverty Level $> 100\%$
Observations	250	190
Number of Arrearage Credits	6.7	7.4
Amount of Forgiveness	\$791	\$879

E. Detailed Analysis Findings - Percent of Arrearages Forgiven

Table E-1
Percent of Arrearages Forgiven

Percent of Arrearages	2022 AMP Enrollees		2023 AMP Enrollees
Obs.	30,384		34,307
	Post 1 (Months 1-12)	Total (Months 1-24)	Post 1 (Months 1-12)
<50%	48%	40%	40%
51%-75%	21%	23%	14%
76%-99%	24%	17%	31%
100%	6%	20%	15%
Total	100%	100%	100%
Mean Percentage Forgiven	49%	58%	57%

Some AMP participants from the SCE 2022 and 2023 Selected Sample had a reported monthly forgiveness amount of \$0. The max forgiveness is calculated as the monthly amount multiplied by 12, so these customers are counted as having a maximum arrearage forgiveness of \$0 and had 0% of their arrearage forgiveness received.

- 1,520 participants from the SCE Selected Sample of 2022 Enrollees had monthly forgiveness of \$0.
- 1,584 participants from the SCE Selected Sample of 2023 Enrollees had monthly forgiveness of \$0.

Table E-2
Percent of Arrearage Forgiveness Received
2022 and 2023 AMP Enrollees

IOU	2022 AMP Enrollees				2023 AMP Enrollees			
	Selected Sample		Analysis Group		Selected Sample		Analysis Group	
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
PG&E	13,850	52%	11,758	52%	13,713	54%	11,541	55%
SCE	9,869	57%	5,230	68%	9,433	51%	6,144	62%
SDG&E	9,998	53%	6,552	62%	9,064	53%	6,649	61%
SoCalGas	9,998	60%	6,838	68%	9,612	54%	7,957	58%
All IOUs	43,715	56%	30,338	61%	41,822	54%	32,291	58%

F. Detailed Analysis Findings - Arrearages

Table F-1
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	\$1,632	\$826	\$830	\$951	\$802	\$735	-\$657**	-\$586**
SCE	5,234	\$1,355	\$235	\$660	\$472	\$426	\$432	-\$1,073**	-\$655**
SDG&E	6,554	\$1,196	\$741	\$932	\$794	\$1,269	\$1,665	-\$930**	-\$1,135**
SoCalGas	6,838	\$568	\$488	\$328	\$349	\$454	\$516	-\$185**	-\$407**
All IOUs	30,384	\$1,181	\$622	\$647	\$663	\$686	\$726	-\$583**	-\$597**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-2
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Dual Fuel	10,794	\$1,628	\$852	\$907	\$978	\$956	\$976	-\$754**	-\$719**
Electric Only	10,476	\$1,428	\$496	\$753	\$662	\$650	\$708	-\$920**	-\$721**
Gas Only	9,114	\$592	\$488	\$331	\$365	\$456	\$503	-\$194**	-\$399**
PIPP	1,071	\$1,275	\$612	\$308	\$670	\$431	\$211	-\$425**	-\$509**
No PIPP	29,313	\$1,180	\$622	\$651	\$663	\$689	\$732	-\$585**	-\$599**
CARE	21,641	\$1,487	\$685	\$808	\$815	\$800	\$830	-\$787**	-\$694**
FERA	8,743	\$628	\$507	\$357	\$394	\$486	\$543	-\$213**	-\$420**
CAPP	16,442	\$1,481	\$672	\$740	\$925	\$923	\$930	-\$806**	-\$745**
No CAPP	13,942	\$907	\$575	\$562	\$521	\$559	\$616	-\$370**	-\$441**
LIHEAP	5,022	\$1,271	\$820	\$727	\$723	\$644	\$583	-\$372**	-\$404**
No LIHEAP	25,362	\$1,162	\$581	\$631	\$656	\$691	\$743	-\$617**	-\$619**
Time on AMP									
< 3 Months	3,482	\$1,492	\$1,281	\$1,046	\$876	\$896	\$946	-\$231**	-\$515**
3-6 Months	7,411	\$1,062	\$1,019	\$774	\$616	\$642	\$691	-\$69**	-\$363**
6-11 Months	12,418	\$1,210	\$554	\$632	\$698	\$733	\$782	-\$692**	-\$662**
12+ Months	7,073	\$1,121	\$11	\$357	\$558	\$561	\$573	-\$1,113**	-\$778**

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
AMP Arrearages									
<\$1,000	17,864	\$628	\$429	\$383	\$463	\$529	\$577	-\$265**	-\$359**
\$1,000-\$2,999	10,811	\$1,708	\$822	\$945	\$897	\$883	\$907	-\$872**	-\$774**
\$3,000+	1,709	\$4,604	\$1,709	\$1,999	\$1,629	\$1,374	\$1,411	-\$2,640**	-\$2,387**
Bill Amount									
Lower	11,271	\$839	\$343	\$373	\$523	\$490	\$514	-\$463**	-\$457**
Mid	13,843	\$1,199	\$636	\$660	\$661	\$686	\$742	-\$587**	-\$619**
Higher	5,270	\$1,856	\$1,175	\$1,193	\$1,068	\$1,251	\$1,289	-\$864**	-\$885**
Total	30,384	\$1,181	\$622	\$647	\$663	\$686	\$726	-\$583**	-\$597**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-3
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	\$2,006	\$966	-\$1,040**	\$928	\$747	-\$182**	-\$858**
SCE	6,559	\$2,195	\$739	-\$1,456**	\$756	\$575	-\$181**	-\$1,275**
SDG&E	7,516	\$2,470	\$860	-\$1,610**	\$1,316	\$1,602	\$286**	-\$1,896**
SoCalGas	8,311	\$850	\$334	-\$516**	\$411	\$327	-\$84**	-\$431**
All IOUs	34,307	\$1,580	\$647	-\$933**	\$701	\$593	-\$109**	-\$824**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-4
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
Dual Fuel	11,188	\$2,240	\$1,019	-\$1,221**	\$1,078	\$959	-\$119**	-\$1,102**
Electric Only	12,308	\$2,174	\$807	-\$1,367**	\$820	\$692	-\$128**	-\$1,239**
Gas Only	10,811	\$868	\$348	-\$520**	\$425	\$334	-\$91**	-\$428**
PIPP	1,341	\$1,554	\$423	-\$1,131**	\$520	\$315	-\$205**	-\$926**
No PIPP	32,966	\$1,580	\$648	-\$932**	\$703	\$595	-\$108**	-\$824**
CARE	23,346	\$2,103	\$872	-\$1,231**	\$908	\$782	-\$126**	-\$1,105**

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
FERA	10,961	\$915	\$361	-\$554**	\$442	\$355	-\$87**	-\$467**
CAPP	10,355	\$2,549	\$1,028	-\$1,520**	\$1,181	\$1,002	-\$179**	-\$1,341**
No CAPP	23,952	\$1,258	\$520	-\$738**	\$539	\$454	-\$85**	-\$653**
LIHEAP	4,655	\$1,601	\$740	-\$862**	\$763	\$607	-\$156**	-\$706**
No LIHEAP	29,652	\$1,577	\$633	-\$944**	\$695	\$591	-\$104**	-\$840**
Time on AMP								
< 3 Months	3,294	\$1,659	\$1,486	-\$172**	\$809	\$714	-\$95**	-\$77**
3-6 Months	6,742	\$1,416	\$1,274	-\$142**	\$670	\$589	-\$81**	-\$61**
6-11 Months	12,013	\$1,729	\$773	-\$956**	\$772	\$647	-\$126**	-\$830**
12+ Months	12,258	\$1,523	\$9	-\$1,514**	\$633	\$521	-\$112**	-\$1,402**
AMP Arrearages								
<\$1,000	14,675	\$653	\$283	-\$369**	\$446	\$374	-\$72**	-\$297**
\$1,000-\$2,999	14,085	\$1,717	\$734	-\$983**	\$810	\$688	-\$122**	-\$861**
\$3,000+	5,547	\$4,987	\$1,874	-\$3,113**	\$1,411	\$1,195	-\$216**	-\$2,897**
Bill Amount								
Lower	16,316	\$1,073	\$335	-\$737**	\$506	\$392	-\$114**	-\$623**
Mid	13,134	\$1,704	\$727	-\$977**	\$773	\$656	-\$117**	-\$860**
Higher	4,857	\$3,188	\$1,620	-\$1,568**	\$1,571	\$1,523	-\$48	-\$1,520**
Total	34,307	\$1,580	\$647	-\$933**	\$701	\$593	-\$109**	-\$824**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-5
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	\$966	\$574	\$548	\$518	\$595	\$645	-\$468**	-\$544**
101%-200%	3,213	\$1,172	\$553	\$604	\$678	\$728	\$736	-\$669**	-\$625**
>200%	1,648	\$1,688	\$818	\$839	\$818	\$726	\$735	-\$777**	-\$765**
Total	6,928	\$1,204	\$614	\$632	\$665	\$684	\$706	-\$609**	-\$613**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-6
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	\$1,157	\$475	-\$682**	\$552	\$448	-\$104**	-\$577**
101%-200%	3,174	\$1,659	\$704	-\$955**	\$718	\$600	-\$118**	-\$837**
>200%	3,193	\$2,265	\$879	-\$1,386**	\$961	\$779	-\$183**	-\$1,203**
Total	9,055	\$1,624	\$660	-\$964**	\$702	\$575	-\$126**	-\$838**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-7
Mean Arrearages
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	\$712	\$435	\$386	\$425	\$464	\$517	-\$315**	-\$418**
5%-8%	3,085	\$1,364	\$694	\$729	\$867	\$881	\$908	-\$685**	-\$677**
>8%	1,598	\$2,093	\$985	\$1,114	\$1,347	\$1,245	\$1,177	-\$1,007**	-\$809**
Total	10,732	\$1,209	\$633	\$648	\$676	\$689	\$718	-\$589**	-\$603**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table F-8
Mean Arrearages
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	\$1,185	\$428	-\$758**	\$457	\$372	-\$84**	-\$673**
5%-8%	4,298	\$1,556	\$666	-\$890**	\$702	\$583	-\$119**	-\$771**
>8%	2,528	\$2,584	\$1,183	-\$1,402**	\$1,240	\$1,028	-\$212**	-\$1,190**
Total	12,743	\$1,617	\$673	-\$944**	\$695	\$574	-\$122**	-\$823**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

G. Detailed Analysis Findings - Collections and Disconnections

Table G-1
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	13%	50%	86%	8%	72%	91%	-26%**	-10%**
SCE	5,234	0%	8%	27%	0%	14%	20%	-6%**	7%**
SDG&E	6,554	< 1%	2%	44%	< 1%	4%	63%	-2%**	-19%**
SoCalGas	6,838	0%	6%	51%	0%	5%	49%	1%**	2%**
All IOUs	30,384	5%	24%	61%	3%	33%	64%	-11%**	-5%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-2
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Dual Fuel	10,794	10%	39%	77%	6%	57%	84%	-22%**	-12%**
Electric Only	10,476	5%	22%	50%	3%	32%	51%	-12%**	-3%**
Gas Only	9,114	< 1%	11%	54%	< 1%	11%	53%	-1%	1%
PIPP	1,071	6%	25%	51%	7%	28%	37%	-2%	16%**
No PIPP	29,313	5%	24%	61%	3%	33%	64%	-11%**	-5%**
CARE	21,641	8%	33%	66%	5%	48%	71%	-18%**	-8%**
FERA	8,743	< 1%	7%	52%	< 1%	7%	50%	>-1%	2%**
CAPP	16,442	2%	23%	60%	1%	28%	66%	-5%**	-7%**
No CAPP	13,942	9%	25%	62%	5%	36%	62%	-16%**	-5%**
LIHEAP	5,022	12%	39%	75%	5%	46%	72%	-13%**	-4%**
No LIHEAP	25,362	4%	21%	58%	3%	32%	63%	-12%**	-5%**
Time on AMP									
< 3 Months	3,482	9%	52%	80%	6%	49%	79%	< 1%	-1%
3-6 Months	7,411	4%	35%	76%	3%	29%	64%	4%**	10%**
6-11 Months	12,418	6%	20%	64%	4%	36%	68%	-18%**	-7%**
12+ Months	7,073	3%	6%	32%	2%	27%	49%	-22%**	-18%**

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
AMP Arrearages									
<\$1,000	17,864	5%	18%	55%	2%	25%	59%	-9%**	-6%**
\$1,000-\$2,999	10,811	7%	33%	69%	5%	46%	70%	-16%**	-3%**
\$3,000+	1,709	3%	46%	81%	6%	60%	78%	-10%**	7%**
Bill Amount									
Lower	11,271	5%	19%	54%	3%	28%	59%	-11%**	-7%**
Mid	13,843	6%	26%	63%	4%	36%	65%	-12%**	-4%**
Higher	5,270	5%	30%	71%	3%	41%	73%	-13%**	-4%**
Total	30,384	5%	24%	61%	3%	33%	64%	-11%**	-5%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-3
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	77%	66%	-11%**	65%	93%	27%**	-38%**
SCE	6,559	45%	16%	-30%**	19%	22%	3%**	-33%**
SDG&E	7,516	10%	40%	30%**	5%	79%	73%**	-44%**
SoCalGas	8,311	13%	38%	24%**	5%	39%	35%**	-10%**
All IOUs	34,307	39%	43%	3%**	27%	56%	29%**	-26%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-4
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
Dual Fuel	11,188	65%	62%	-4%**	55%	91%	36%**	-40%**
Electric Only	12,308	50%	30%	-21%**	29%	43%	15%**	-35%**
Gas Only	10,811	19%	40%	21%**	10%	44%	34%**	-12%**
PIPP	1,341	34%	30%	-3%**	21%	46%	25%**	-28%**
No PIPP	32,966	40%	43%	3%**	27%	56%	29%**	-26%**
CARE	23,346	59%	47%	-12%**	43%	68%	25%**	-37%**
FERA	10,961	15%	38%	23%**	6%	41%	34%**	-11%**
CAPP	10,355	57%	48%	-9%**	35%	74%	39%**	-47%**
No CAPP	23,952	34%	41%	7%**	24%	49%	26%**	-18%**
LIHEAP	4,655	51%	56%	5%**	37%	64%	27%**	-23%**
No LIHEAP	29,652	38%	41%	3%**	26%	55%	29%**	-26%**
Time on AMP								
< 3 Months	3,294	54%	92%	38%**	42%	75%	33%**	5%**
3-6 Months	6,742	39%	84%	46%**	26%	60%	34%**	12%**
6-11 Months	12,013	48%	47%	-1%	34%	62%	28%**	-29%**
12+ Months	12,258	29%	5%	-24%**	17%	43%	26%**	-50%**
AMP Arrearages								
<\$1,000	14,675	25%	38%	14%**	18%	49%	31%**	-17%**
\$1,000-\$2,999	14,085	50%	47%	-3%**	33%	61%	28%**	-31%**
\$3,000+	5,547	68%	49%	-19%**	43%	67%	24%**	-43%**
Bill Amount								
Lower	16,316	33%	39%	6%**	19%	48%	29%**	-23%**
Mid	13,134	43%	45%	3%**	33%	62%	29%**	-26%**
Higher	4,857	56%	50%	-6%**	48%	78%	30%**	-36%**
Total	34,307	39%	43%	3%**	27%	56%	29%**	-26%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-5
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	3%	16%	55%	1%	20%	58%	-5%**	-4%**
101%-200%	3,213	4%	21%	54%	3%	29%	61%	-10%**	-9%**
>200%	1,648	10%	46%	78%	4%	52%	71%	-12%**	1%
Total	6,928	5%	24%	59%	3%	32%	63%	-10%**	-6%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-6
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	27%	41%	14%**	15%	45%	30%**	-16%**
101%-200%	3,174	37%	44%	7%**	25%	54%	29%**	-22%**
>200%	3,193	63%	41%	-22%**	51%	73%	22%**	-44%**
Total	9,055	40%	42%	2%**	26%	54%	28%**	-26%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-7
Percent with One or More Collections Actions
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	2%	15%	53%	1%	21%	54%	-7%**	-2%**
5%-8%	3,085	5%	29%	64%	4%	45%	73%	-17%**	-9%**
>8%	1,598	10%	40%	73%	5%	59%	83%	-24%**	-15%
Total	10,732	5%	24%	61%	3%	33%	64%	-11%**	-5%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-8
Percent with One or More Collections Actions
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Energy Burden	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	33%	37%	4%**	18%	48%	30%**	-26%**
5%-8%	4,298	38%	44%	6%**	28%	56%	28%**	-22%**
>8%	2,528	58%	54%	-4%**	43%	65%	22%**	-26%**
Total	12,743	40%	43%	3%**	26%	54%	28%**	-25%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-9
Percent with One or More Disconnections
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
PG&E	11,758	< 1%	5%	12%	< 1%	10%	16%	-4%**	-5%**
SCE	5,234	0%	< 1%	2%	0%	3%	4%	-2%**	-2%**
SDG&E	6,554	0%	< 1%	2%	0%	0%	7%	< 1%	-5%**
SoCalGas	6,838	0%	0%	< 1%	0%	0%	< 1%	0%	< 1%
All IOUs	30,384	< 1%	2%	5%	< 1%	4%	8%	-2%**	-3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-10
Percent with One or More Disconnections
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
Dual Fuel	10,794	< 1%	4%	10%	< 1%	8%	15%	-4%**	-5%**
Electric Only	10,476	< 1%	3%	6%	< 1%	5%	10%	-2%**	-4%**
Gas Only	9,114	0%	< 1%	< 1%	0%	0%	< 1%	< 1%	> -1%**
PIPP	1,071	0%	3%	3%	0%	3%	4%	-1%	-1%
No PIPP	29,313	< 1%	2%	5%	< 1%	4%	8%	-2%**	-3%**
CARE	21,641	< 1%	4%	8%	< 1%	7%	12%	-3%**	-5%**
FERA	8,743	< 1%	< 1%	< 1%	0%	< 1%	< 1%	> -1%**	> -1%**

Group	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
CAPP	16,442	< 1%	2%	7%	< 1%	5%	11%	-2%**	-4%**
No CAPP	13,942	< 1%	2%	4%	< 1%	4%	6%	-2%**	-3%**
LIHEAP	5,022	< 1%	5%	9%	< 1%	7%	11%	-2%**	-3%**
No LIHEAP	25,362	< 1%	2%	4%	< 1%	4%	8%	-2%**	-3%**
Time on AMP									
< 3 Months	3,482	< 1%	9%	12%	< 1%	8%	12%	1%*	< 1%
3-6 Months	7,411	< 1%	4%	5%	< 1%	4%	7%	> -1%	-2%**
6-11 Months	12,418	< 1%	1%	5%	< 1%	4%	9%	-3%**	-4%**
12+ Months	7,073	< 1%	0%	2%	< 1%	3%	6%	-3%**	-4%**
AMP Arrearages									
<\$1,000	17,864	< 1%	2%	4%	< 1%	3%	6%	-1%**	-2%**
\$1,000-\$2,999	10,811	< 1%	3%	8%	< 1%	6%	12%	-3%**	-4%**
\$3,000+	1,709	0%	4%	9%	0%	8%	13%	-4%**	-5%**
Bill Amount									
Lower	11,271	< 1%	3%	6%	< 1%	5%	10%	-3%**	-4%**
Mid	13,843	< 1%	2%	5%	< 1%	4%	7%	-2%**	-2%**
Higher	5,270	< 1%	2%	4%	< 1%	3%	6%	-2%**	-3%**
Total	30,384	< 1%	2%	5%	< 1%	4%	8%	-2%**	-3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-11
Percent with One or More Disconnections
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	11,921	8%	9%	2%**	8%	17%	8%**	-7%**
SCE	6,559	2%	1%	-1%**	2%	2%	>-1%	-1%**
SDG&E	7,516	<1%	2%	2%**	<1%	9%	9%**	-7%**
SoCalGas	8,311	0%	<1%	<1%**	0%	<1%	<1%	<1%
All IOUs	34,307	3%	3%	<1%**	3%	6%	3%**	-3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-12
Percent with One or More Disconnections
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Group	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
Dual Fuel	11,188	7%	8%	1%**	8%	16%	9%**	-8%**
Electric Only	12,308	4%	3%	-1%**	3%	6%	3%**	-3%**
Gas Only	10,811	0%	1%	1%**	0%	1%	1%**	< 1%**
PIPP	1,341	2%	2%	<1%	4%	6%	2%*	-2%
No PIPP	32,966	3%	3%	<1%**	3%	6%	3%**	-3%**
CARE	23,346	5%	6%	1%**	5%	11%	6%**	-5%**
FERA	10,961	<1%	<1%	<1%	<1%	<1%	<1%**	> -1%**
CAPP	10,355	3%	6%	3%**	2%	10%	8%**	-5%**
No CAPP	23,952	3%	2%	>-1%**	3%	5%	2%**	-2%**
LIHEAP	4,655	6%	7%	< 1%	6%	9%	4%**	-3%**
No LIHEAP	29,652	2%	3%	< 1%	3%	6%	3%**	-3%**
Time on AMP								
< 3 Months	3,294	6%	17%	11%**	6%	13%	7%**	4%**
3-6 Months	6,742	3%	6%	3%**	3%	7%	4%**	-1%
6-11 Months	12,013	3%	2%	-2%**	3%	7%	4%**	-5%**
12+ Months	12,258	2%	<1%	-1%**	2%	3%	2%**	-3%**
AMP Arrearages								
<\$1,000	14,675	2%	2%	> -1%	3%	5%	2%**	-2%**
\$1,000-\$2,999	14,085	3%	4%	1%**	3%	7%	4%**	-3%**
\$3,000+	5,547	4%	5%	1%**	3%	9%	6%**	-5%**
Bill Amount								
Lower	16,316	2%	3%	1%**	2%	6%	3%**	-3%**
Mid	13,134	3%	3%	<1%	3%	6%	3%**	-3%**
Higher	4,857	4%	4%	>-1%	4%	8%	4%**	-4%**
Total	34,307	3%	3%	<1%**	3%	6%	3%**	-3%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-13
Percent with One or More Disconnections
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Poverty Level	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤100%	2,067	0%	2%	3%	<1%	3%	4%	-1%**	-1%*
101%-200%	3,213	<1%	1%	3%	<1%	2%	6%	-1%*	-3%**
>200%	1,648	<1%	4%	9%	0%	6%	10%	-2%*	-1%
Total	6,928	<1%	2%	4%	<1%	3%	6%	-1%**	-2%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-14
Percent with One or More Disconnections
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Poverty Level	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤100%	2,688	1%	2%	< 1%	1%	3%	1%**	-1%**
101%-200%	3,174	2%	3%	1%**	2%	5%	3%**	-2%**
>200%	3,193	4%	4%	< 1%	5%	11%	6%**	-5%**
Total	9,055	2%	3%	1%**	3%	5%	3%**	-2%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-15
Percent with One or More Disconnections
Year Before and Two Years After AMP Enrollment
2022 AMP Enrollees

Energy Burden	Obs.	2022 AMP Enrollees			Comparison Group			Net Change Pre to Post 1	Net Change Pre to Post 2
		Pre	Post 1	Post 2	Pre	Post 1	Post 2		
≤4%	6,049	<1%	1%	3%	0%	2%	5%	-2%**	-2%**
5%-8%	3,085	<1%	3%	6%	<1%	3%	7%	-1%	-2%*
>8%	1,598	0%	3%	7%	<1%	7%	12%	-3%**	-5%**
Total	10,732	<1%	2%	4%	<1%	3%	6%	-1%**	-2%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-16
Percent with One or More Disconnections
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

Energy Burden	Obs.	AMP Participants			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
≤4%	5,917	1%	3%	1%**	2%	4%	2%**	-1%**
5%-8%	4,298	2%	3%	1%**	3%	6%	3%**	-2%**
>8%	2,528	4%	4%	> -1%	4%	8%	4%**	-4%**
Total	12,743	2%	3%	1%**	3%	5%	3%**	-2%**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-17
Metrics of Success – Recalled Letter Receipt
2023 Survey Respondents

Metric	2023 Enrollees Who Completed Survey					
	Recalled Letter Receipt			Did not Recall Letter Receipt		
	Pre	Post	Change	Pre	Post	Change
Observations	266			344		
Number of Ontime Bills	0.5	6.0	5.5**	0.6	5.5	4.9**
Coverage Rate	53%	86%	33%**	54%	89%	35%**
Mean Arrearages	\$1,494	\$513	-\$980**	\$1,448	\$686	-\$762**
% with 1+ Collection Actions	58%	34%	-23%**	54%	48%	-6%
% with 1+ Disconnections	6%	4%	-2%	4%	4%	> -1%

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-18
Metrics of Success – Reported Challenges
2023 Survey Respondents

Metric	2023 Enrollees Who Completed Survey					
	Reported Challenges Paying Bills While on AMP			Did not Report Challenges Paying Bills While on AMP		
	Pre	Post	Change	Pre	Post	Change
Observations	286			324		
Number of Ontime Bills	0.5	5.0	4.5**	0.5	6.4	5.9**
Coverage Rate	49%	82%	33%**	58%	93%	35%**
Mean Arrearages	\$1,474	\$688	-\$787**	\$1,464	\$526	-\$938**
% with 1+ Collection Actions	53%	47%	-5%	59%	36%	-23%**

Metric	2023 Enrollees Who Completed Survey					
	Reported Challenges Paying Bills While on AMP			Did not Report Challenges Paying Bills While on AMP		
	Pre	Post	Change	Pre	Post	Change
Observations	286			324		
% with 1+ Disconnections	5%	4%	-1%	6%	4%	-2%

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table G-19
Metrics of Success – Poverty Level
2023 Survey Respondents

Metric	2023 Enrollees Who Completed Survey					
	Poverty Level ≤100%			Poverty Level >100%		
	Pre	Post	Change	Pre	Post	Change
Observations ¹	250			190		
Number of Ontime Bills	0.5	5.5	4.9**	0.6	5.9	5.2**
Coverage Rate	56%	89%	33%**	54%	86%	32%**
Mean Arrearages	\$1,529	\$704	-\$825**	\$1,331	\$528	-\$803**
% with 1+ Collection Actions	58%	45%	-13%**	51%	40%	-11%*
% with 1+ Disconnections	5%	5%	< 1%	2%	3%	1%

¹ 170 of the 2023 Enrollees who completed the Participant Survey did not report income or household size data.

** Denotes significance at the 95% level. * Denotes significance at the 90% level

H. Detailed Analysis Findings - Energy Usage

Table H-1
Mean Weather Normalized Electric Usage (kWh)
Year Before and Year After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	8,728	8,476	8,275	-202**	8,008	7,766	-242**	41
SCE	4,663	9,672	9,318	-354**	7,008	6,829	-180**	-175**
SDG&E	5,908	6,255	6,117	-138**	5,886	5,794	-92**	-45**
All IOUs	19,299	8,321	8,099	-223**	7,395	7,194	-201**	-22

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table H-2
Mean Weather Normalized Gas Usage (Therms)
Year Before and Year After AMP Enrollment
2022 AMP Enrollees

IOU	Obs.	2022 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	7,765	450	450	> -1	425	428	3**	-3**
SDG&E	3,697	319	306	-13**	297	286	-12**	-1
SoCalGas	6,286	501	467	-35**	472	434	-38**	3
All IOUs	17,748	460	443	-17**	433	416	-17**	> -1

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table H-3
Mean Weather Normalized Electric Usage (kWh)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	8,498	8,183	7,979	-204**	7,589	7,482	-107**	-97**
SCE	5,863	9,857	9,573	-284**	6,616	6,470	-146**	-138**
SDG&E	6,861	6,019	5,895	-124**	5,535	5,494	-41**	-83**
All IOUs	21,222	8,502	8,280	-222**	6,985	6,873	-112**	-110**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table H-4
Mean Weather Normalized Gas Usage (Therms)
Year Before and Year After AMP Enrollment
2023 AMP Enrollees

IOU	Obs.	2023 AMP Enrollees			Comparison Group			Net Change
		Pre	Post	Change	Pre	Post	Change	
PG&E	7,545	446	424	-22**	422	403	-19**	-3**
SDG&E	4,089	311	310	-1	283	283	> -1	> -1
SoCalGas	7,449	478	451	-27**	448	426	-21**	-5**
All IOUs	19,083	457	433	-24**	429	410	-19**	-4**

** Denotes significance at the 95% level. * Denotes significance at the 90% level.

Table H-5
Change in Electric Usage (kWh)
2022 AMP Enrollees

Change in Electric Usage	PG&E	SCE	SDG&E	Total
	%	%	%	%
>3% Usage Increase	46%	50%	46%	47%
Change ≤3%	17%	16%	15%	16%
>3% Usage Decrease	37%	34%	40%	37%
Total	100%	100%	100%	100%

Table H-6
Change in Gas Usage (Therms)
2022 AMP Enrollees

Change in Gas Usage	PG&E	SoCalGas	SDG&E	Total
	%	%	%	%
>3% Usage Increase	40%	56%	50%	48%
Change ≤3%	15%	14%	14%	14%
>3% Usage Decrease	45%	30%	36%	37%
Total	100%	100%	100%	100%

Table H-7
Change in Electric Usage (kWh)
2023 AMP Enrollees

Change in Electric Usage	PG&E	SCE	SDG&E	Total
	%	%	%	%
>3% Usage Increase	47%	48%	46%	47%
Change ≤3%	16%	16%	15%	16%
>3% Usage Decrease	37%	36%	39%	37%
Total	100%	100%	100%	100%

Table H-8
Change in Gas Usage (Therms)
2023 AMP Enrollees

Change in Gas Usage	PG&E	SDG&E	SoCalGas	Total
	%	%	%	%
>3% Usage Increase	52%	53%	40%	52%
Change ≤3%	14%	14%	14%	14%
>3% Usage Decrease	34%	33%	46%	34%
Total	100%	100%	100%	100%

I. Detailed Analysis Findings - Program Data

The following program data tables do not include AMP participants who had missing program data. These customers were missing total arrearage forgiveness, maximum arrearage forgiveness, and/or disenrollment data.

- 142 participants from the Selected Sample of 2022 Enrollees were missing program data.
- 2,335 participants from the Selected Sample of 2023 Enrollees were missing program data.
- 46 participants from the Analysis Group of 2022 Enrollees were missing program data.
- 2,016 participants from the Analysis Group of 2023 Enrollees were missing program data.

Table I-1
Mean Total Arrearage Forgiveness Received
2022 and 2023 AMP Enrollees

IOU	2022 AMP Enrollees				2023 AMP Enrollees			
	Selected Sample		Analysis Group		Selected Sample		Analysis Group	
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
PG&E	13,850	\$725	11,758	\$714	13,713	\$1,057	11,541	\$1,072
SCE	9,869	\$732	5,230	\$896	9,433	\$1,061	6,144	\$1,301
SDG&E	9,998	\$716	6,552	\$809	9,064	\$915	6,649	\$1,054
SoCalGas	9,998	\$402	6,838	\$456	9,612	\$450	7,957	\$478
All IOUs	43,715	\$614	30,338	\$661	41,822	\$789	32,291	\$861

Table I-2
Mean Maximum Arrearage Forgiveness
2022 and 2023 AMP Enrollees

IOU	2022 AMP Enrollees				2023 AMP Enrollees			
	Selected Sample		Analysis Group		Selected Sample		Analysis Group	
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
PG&E	13,850	\$1,485	11,758	\$1,471	13,713	\$1,856	11,541	\$1,872
SCE	9,869	\$1,119	5,230	\$1,354	9,433	\$1,819	6,144	\$2,207
SDG&E	9,998	\$1,255	6,552	\$1,194	9,064	\$1,746	6,649	\$1,768
SoCalGas	9,998	\$573	6,838	\$565	9,612	\$845	7,957	\$841
All IOUs	43,715	\$1,097	30,338	\$1,114	41,822	\$1,410	32,291	\$1,488

Table I-3
AMP Disenrollment Reason
2022 AMP Enrollees

Disenrollment Reason	2022 AMP Enrollees									
	Selected Sample					Analysis Group				
	PG&E	SCE	SDG&E	SCG	All IOUs	PG&E	SCE	SDG&E	SCG	All IOUs
Observations	13,850	9,869	9,998	9,998	43,715	11,718	5,230	6,552	6,838	30,338
Completed AMP	35%	40%	7%	23%	28%	35%	49%	7%	27%	31%
Non-Payment	64%	54%	42%	68%	62%	64%	47%	42%	68%	61%
CAPP Deactivation	0%	4%	42%	0%	5%	0%	3%	49%	0%	6%
No Balance or Balance too Low	0%	< 1%	0%	0%	< 1%	0%	< 1%	0%	0%	< 1%
Customer Request	< 1%	< 1%	2%	5%	2%	< 1%	< 1%	2%	4%	2%
No Service	0%	0%	7%	4%	2%	0%	0%	< 1%	< 1%	< 1%
Not Eligible	< 1%	2%	0%	0%	< 1%	< 1%	1%	0%	0%	< 1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table I-4
AMP Disenrollment Reason
2023 AMP Enrollees

Disenrollment Reason	2023 AMP Enrollees									
	Selected Sample					Analysis Group				
	PG&E	SCE	SDG&E	SCG	All IOUs	PG&E	SCE	SDG&E	SCG	All IOUs
Observations	13,713	9,433	9,064	9,612	41,822	11,541	6,144	6,649	7,957	32,291
Completed AMP	34%	39%	31%	39%	37%	35%	48%	37%	43%	41%
Non-Payment	65%	59%	56%	55%	59%	65%	50%	59%	55%	58%
CAPP Deactivation	0%	0%	2%	0%	< 1%	0%	0%	2%	0%	< 1%
No Balance or Balance too Low	0%	< 1%	0%	0%	< 1%	0%	< 1%	0%	0%	< 1%
Customer Request	< 1%	< 1%	1%	< 1%	< 1%	< 1%	< 1%	1%	< 1%	< 1%
No Service	0%	0%	11%	5%	3%	0%	0%	1%	1%	< 1%
Not Eligible	< 1%	1%	0%	0%	< 1%	< 1%	1%	0%	0%	< 1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

J. Participant Survey Instrument

**SCE AMP
Draft Participant Survey
WEB VERSION**

This survey is about your participation in the **[IOU]** Arrearage Management Payment Plan, or AMP. This program provides debt forgiveness for utility bills that are past due. Your answers will help us better understand how the AMP program has helped you and how it can be improved.

During this survey we may collect personal information.

- IF IOU=SOCALGAS

For more details including SoCalGas policy on how they use personal information please visit: www.socalgas.com/privacy-center.

The information you provide will only be used to improve programs and services for California residents. All survey responses will remain confidential, will not be shared with **[IOU]**, and will not affect your energy assistance benefits in any way. The survey should take about 15 minutes.

Screenener

S3. Are you currently enrolled in the Arrearage Management Payment Plan through **[IOU]**?

01. YES

02. NO

96. DON'T KNOW

97. PREFER NOT TO SAY

[If NO OR DON'T KNOW, DISPLAY BELOW QUESTION: "Each month this program provides debt forgiveness for utility bills that are past due."]

[TERMINATE IF S3 = 97]

S4. **[SKIP IF S3 = 1]** Have you ever been enrolled in the Arrearage Management Payment Plan?

01. YES

02. NO

96. DON'T KNOW

97. PREFER NOT TO SAY

[TERMINATE IF S4 = 2 | 96 | 97]

Section A: Reason for Participation

A1. How did you learn about the Arrearage Management Payment Plan or AMP?

01. FILL IN ANSWER BELOW: _____

96. DON'T KNOW

97. PREFER NOT TO SAY

A2. Why did you enroll in the AMP?

01. FILL IN ANSWER BELOW: _____

96. DON'T KNOW

97. PREFER NOT TO SAY

Section B: Energy Bill Payment Before AMP**B. In the YEAR BEFORE enrolling in AMP, how often ...**

	01.	02.	03.	04.	05.	96.	97.
	Every Month	Most Months	Some Months	Few Months	Never	DON'T KNOW	PREFER NOT TO SAY
	12 Months	9-11 Months	4-8 Months	1-3 Months	No Months		
B1... did you pay less than your full [IOU] bill?							
B2... did you miss a [IOU] bill payment?							
B3... was your past due [IOU] bill more than \$500?							
B4... did you receive a notice of late [IOU] bill payment?							
B5... did you receive a notice threatening disconnection of your [IOU] service?							

Section C: AMP Understanding

C. How well do you understand each of the following about AMP? Would you say very well, somewhat well, or not at all?

Each month this program provides debt forgiveness for utility bills that are past due

	01.	02.	03.	96.	97.
	Very Well	Somewhat Well	Not at All	DON'T KNOW	PREFER NOT TO SAY
C1. How to apply for AMP					
C2. The amount your past due [IOU] debt is reduced by AMP					
C3. The rules to remain on AMP					
C4. The longest amount of time you can be on AMP					
C5. What happens if you miss making a [IOU] payment on time while on AMP					
C6. What happens if you miss making more than 1 [IOU] payment on time while on AMP					
C7. What happens if you don't pay the full monthly [IOU] bill while on AMP					
C8. Rules about re-enrolling in AMP					

C9. Did you receive help or encouragement from [IOU], such as letters about your AMP progress, after enrolling in the program?

- 01. YES
- 02. NO
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

C10. During the COVID period, were you aware that [IOU] was not allowed to disconnect your [IOU] services?

- 01. YES
- 02. NO
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

Section D: Energy Bill Payment and Usage After AMP Enrollment**D. WHILE you were enrolled in AMP, how often ...**

	01.	02.	03.	04.	05.	96.	97.
	Every Month	Most Months	Some Months	Few Months	Never	DON'T KNOW	PREFER NOT TO SAY
	12 Months	9-11 Months	4-8 Months	1-3 Months	No Months		
D1... did you pay less than your full [IOU] bill?							
D2... did you miss a [IOU] bill payment?							
D3... was your past due [IOU] bill more than \$500?							
D4... did you receive a notice of late [IOU] bill payment?							
D5... did you receive a notice threatening disconnection of your [IOU] service?							

D6. [ASK IF D1>B1 AND B1!=96 & B1!=97 & D1!=96 & D1!=97] Why did you pay **more** energy bills while you were enrolled in AMP?

PLEASE SELECT ALL THAT APPLY.

- 01. PAY OFF THE AMOUNT OWED FOR PAST UNPAID [IOU] BILLS
- 02. TO AVOID DISCONNECTION
- 03. INCOME IS HIGHER
- 04. BILL IS EASIER TO PAY
- 05. FEWER PEOPLE IN HOME SO BILLS ARE LOWER
- 06. DID NOT PAY MORE ENERGY BILLS
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

D7. [ASK IF D1<B1 AND B1!=96 & B1!=97 & D1!=96 & D1!=97] Why did you pay **fewer** energy bills while you were enrolled in AMP?

PLEASE SELECT ALL THAT APPLY.

- 01. INCOME HAS DECREASED
- 02. BILL IS HIGH AND HARDER TO PAY
- 03. MORE PEOPLE IN HOME SO BILLS ARE HIGHER
- 04. HAD OTHER EXPENSES TO PAY
- 05. DID NOT PAY FEWER ENERGY BILLS
- 96. DON'T KNOW

97. PREFER NOT TO SAY

D8. **While on AMP**, how easy or difficult was it to pay your energy bills **on time**?

- 01. VERY EASY
- 02. SOMEWHAT EASY
- 03. SOMEWHAT DIFFICULT
- 04. VERY DIFFICULT
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

D9. **While on AMP**, how easy or difficult was it to pay your energy bills **in full**?

- 01. VERY EASY
- 02. SOMEWHAT EASY
- 03. SOMEWHAT DIFFICULT
- 04. VERY DIFFICULT
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

Section E: AMP EXPERIENCE

E1. **[ASK IF S4 = 01]** You said earlier that you are not currently enrolled in AMP. Why are you no longer enrolled in AMP?

PLEASE SELECT ALL THAT APPLY.

- 01. FINISHED THE PROGRAM
- 02. ASKED TO BE TAKEN OFF AMP
- 03. DID NOT PAY **[IOU]** BILLS IN FULL
- 04. MISSED SOME **[IOU]** BILLS
- 05. PAID OFF MY **[IOU]** BILL
- 06. DON'T KNOW/DON'T KNOW WHY I WAS TAKEN OFF
- 95. OTHER (PLEASE DESCRIBE) _____
- 97. PREFER NOT TO SAY

E2. **[ASK IF E1 = 2 | E1 = 3 | E1 = 4 | E1 = 95]** How many months were you enrolled in AMP?

- 01. 0 MONTHS
- 02. 1-3 MONTHS
- 03. 4-6 MONTHS
- 04. 7-10 MONTHS
- 05. 11+ MONTHS
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

[ASK IF E1 = 2 | E1 = 3 | E1 = 4 | E1 = 95] Please describe why you left AMP before 12 months on the plan...

Number Code	01.	02.	96.	97.
Response Description	YES	NO	DON'T KNOW	PREFER NOT TO SAY
E3 We were not able to pay the full [IOU] bill.				
E4 We did not understand the rules to stay on AMP.				
E5 We could not pay some [IOU] bills on time.				
E6 We accidentally missed a [IOU] payment.				
E7 Our [IOU] bill was higher because of the weather.				
E8 Someone in our home lost their job.				
E9 Our other expenses were higher.				
E10 We have more people living in our home.				

E11. Have you ever re-enrolled in AMP after leaving or completing the program?

- 01. YES – WHEN I WAS UNABLE TO COMPLETE 12 MONTHS
- 02. YES – AFTER COMPLETING THE PROGRAM AND THE 12 MONTH WAITING PERIOD
- 03. NO
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

E12. **[ASK IF E11 = 1 OR E11=2]** Why did you re-enroll in AMP?

- 01. FILL IN ANSWER BELOW: _____
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

E13. **[ASK IF E11 = 3]** Why didn't you re-enroll in AMP?

- 01. FILL IN ANSWER BELOW: _____
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

E14. How do you think AMP can be changed to help customers more?

- 01. FILL IN ANSWER BELOW: _____
- 97. PREFER NOT TO SAY

E15. Is there anything else you would like to tell **[IOU]** about your experience in the AMP?

- 01. FILL IN ANSWER BELOW: _____
- 02. NO

Section F: Demographics

F1. Does anyone in your household have additional energy-related needs, such as the following?

PLEASE SELECT ALL THAT APPLY.

- 01. NEED TO KEEP HOME COOL OR WARM BECAUSE OF ELDERLY HOUSEHOLD MEMBER
- 02. NEED TO KEEP HOME COOL OR WARM BECAUSE OF INFANT IN THE HOME
- 03. MEDICAL EQUIPMENT (I.E., CPAP, VAPORIZER, MOBILITY AID)
- 04. TEMPERATURE-CONTROLLED MEDICATION (I.E., INSULIN, ASTHMA INHALER, EYE DROPS)
- 05. NEED TO KEEP HOME COOL OR WARM BECAUSE OF A MEDICAL CONDITION
- 06. NONE
- 96. OTHER (PLEASE SPECIFY) _____
- 97. DON'T KNOW
- 98. PREFER NOT TO SAY

F2. Do you rent or own your home?

- 01. RENT
- 02. OWN
- 95. OTHER (PLEASE DESCRIBE) _____
- 96. DON'T KNOW
- 97. PREFER NOT TO SAY

F3. What is your age?

- 01. UNDER 18 YEARS OLD
- 02. 18-24 YEARS OLD
- 03. 25-34 YEARS OLD
- 04. 35-44 YEARS OLD
- 05. 45-54 YEARS OLD
- 06. 55-64 YEARS OLD
- 07. 65-74 YEARS OLD
- 08. 75-85 YEARS OLD
- 09. 86 YEARS OLD OR OLDER
- 97. PREFER NOT TO SAY

F4. What is the primary language spoken in your home?

- 01. ENGLISH
- 02. SPANISH
- 03. CHINESE
- 04. ARABIC
- 05. KOREAN
- 06. VIETNAMESE

95. OTHER (PLEASE SPECIFY) _____

97. PREFER NOT TO SAY

F5. Including yourself, how many people are living in your household?

F1. RECORD ANSWER: _____

96. DON'T KNOW

97. PREFER NOT TO SAY

F6. Please select the range that best describes your household's total annual income.

01. LESS THAN \$10,000

02. \$10,000-\$20,000

03. \$20,001-\$30,000

04. \$30,001-\$40,000

05. \$40,001-\$50,000

06. \$50,001-\$60,000

07. \$60,001-\$70,000

08. \$70,001-\$80,000

09. \$80,001-\$90,000

10. \$90,001-\$100,000

11. OVER \$100,000

96. DON'T KNOW

97. PREFER NOT TO SAY

Your survey is complete. Thank you very much for your feedback.

K. Participant Survey Findings

APPRISE conducted a quantitative survey with a stratified random sample of AMP participants as part of a comprehensive evaluation of the program. This memo provides information on the survey methodology, findings, and recommendations based on this research. At the conclusion of the evaluation, these survey findings will be incorporated into the final report and re-interpreted in the context of all of the evaluation data.

I. Methodology

This section provides information on the survey sample, implementation, and response.

A. Sample Design

A sample of 1,600 AMP participants was selected to target for the participant survey based on the following criteria.

- Customers who first enrolled in AMP between 10/1/2023 and 12/31/2023 were eligible for selection.
- Because there were recent fires, customers in SoCalGas' service territory and in SCE's service territory who were impacted by evacuations were excluded.
- While AMP participation varied by IOU, 400 customers were selected for each IOU so that results could be presented by IOU.
- Within each IOU, the sample frame was stratified by participation in the Percentage of Income Payment Plan (PIPP), successful AMP completion, and annual energy bill, so that the survey could provide findings on various subpopulations of interest.
 - PIPP: Customers who had ever participated in PIPP were oversampled. (Note that customers were permitted to participate in PIPP and AMP at the same time.)
 - AMP Completion: Customers who successfully completed AMP were oversampled.
 - Annual Energy Bills: Customers were divided into higher and lower energy bills for each IOU so that about 30% to 40% of the customers were in the higher bill group.

Table I-2
Annual Energy Bill Stratification

	Annual Energy Bill Cutoff
PG&E	\$2,700
SCE	\$2,100
SDG&E	\$1,500
SoCalGas	\$600

Completed surveys were weighted in the analysis so that the distribution of respondents matched the overall population of AMP participants. This weighting by the survey stratum (IOU, PIPP participation, completed AMP, and bill level) corrected for both oversampling and differential response.

B. Implementation Procedures

The survey was conducted via a mixed-mode web/telephone approach in March and April 2025. Telephone outreach and interviews were conducted by GC Green.

Outreach to the sample was conducted in the following manner, summarized in Table II-2.

- Advance Letter: Customers were sent an advance letter on February 28, 2025 that included a \$5 bill, explained the purpose of the survey, provided the link to complete the web survey, notified them that they would be called to complete the survey, and provided the option to call a toll-free number to complete the survey at their convenience.
- Email #1: Customers were sent an email with the same information as the advance letter on March 6, 2025.
- Outbound Calling: Outbound calls were made to all selected customers who had not yet responded, beginning on March 10, 2025. Calls were made during the day, evening, and weekends.
- Emails: Customers who had not responded were sent five more emails between March 14 and April 18, 2025.

The survey was closed on April 21, 2025.

Table I-2
Survey Outreach

Contact Method	Date
First Advance Letter	02/28/2025
First Advance Email	03/06/2025
Survey Calling Implementation	03/10/2025
Second Email	03/14/2025
Third Email	03/21/2025
Fourth Email	03/28/2025
Fifth Email	04/11/2025
Final Email	04/18/2025
Survey Calling Terminated	04/18/2025
Survey Closed	04/21/2025

C. Response

Surveys were completed with 760 AMP participants, 48 percent of the selected sample. The response rate for the total sample was 58 percent, and 82 percent of customers who were reached by telephone completed the survey. Overall, 30 percent of the surveys were completed online, and 70 percent were completed by phone. Table I-3 furnishes information on the final disposition for each IOU and the entire sample.

Table I-3
Survey Response

Survey Response Status	PG&E		SCE		SDG&E		SoCalGas		All IOUs	
	#	%	#	%	#	%	#	%	#	%
Total	400	100%	400	100%	400	100%	400	100%	1,600	100%
Voicemail/No Answer/Busy	130	33%	104	26%	107	27%	83	21%	424	27%
Refusal	30	8%	26	7%	38	10%	54	14%	148	9%
Non-Working/Wrong Number	20	5%	55	14%	14	4%	20	5%	109	7%
Ineligible	23	6%	19	5%	28	7%	38	10%	108	7%
Said will complete Online	7	2%	2	1%	4	1%	8	2%	21	1%
Ill/Deceased/Not Available	3	1%	4	1%	3	1%	3	1%	13	1%
No Phone Number	3	1%	0	0%	5	1%	2	1%	10	1%
Asked to call back	0	0%	3	1%	1	<1%	3	1%	7	<1%
Complete	184	46%	187	47%	200	50%	189	47%	760	48%
Survey Method										
Phone	124	67%	143	76%	135	68%	128	68%	530	70%
Online	60	33%	44	24%	65	33%	61	32%	230	30%
Cooperation Rate	-	83%	-	87%	-	83%	-	75%	-	82%
Response Rate	-	55%	-	62%	-	58%	-	58%	-	58%

Surveys were offered in languages other than English as requested by the targeted respondents. Across all IOUs, 80 surveys were conducted in Spanish, and one survey was conducted in Arabic.

Table I-4
Foreign Language Response

Language	PG&E	SCE	SDG&E	SoCalGas	All IOUs
Spanish	34	25	17	4	80
Arabic	0	0	1	0	1
Total	34	25	18	4	81

Table I-5 displays the number of responses by IOU and Group.

Table I-5
Respondents by IOU and Group

IOU	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
PG&E	71	113	55	129	108	76
SCE	18	169	83	104	107	80
SDG&E	10	190	60	140	124	76
SoCalGas	47	142	86	103	109	80
Total	146	614	284	476	448	312

II. Participant Characteristics

This section provides information on the AMP participant characteristics based on the survey response.

Tables II-1A and II-1B display energy-related needs in respondent households. Table II-1A shows that more than half of the respondents reported that they had energy-related needs. The most common additional needs were elderly members and medical conditions. SCE customers were most likely to report that there was an energy need related to a household medical condition and SoCalGas customers were most likely to report that there was an energy need related to having elderly household members.

Table II-1A
Energy-Related Needs in Household
By IOU

Does anyone in your household have additional energy-related needs?					
Additional Energy-Related Needs	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Elderly Member	19%	21%	18%	35%	25%
Medical Condition	24%	32%	19%	21%	24%
Infant	21%	21%	16%	21%	21%
Temperature-Controlled Medication	23%	23%	19%	19%	21%
Medical Equipment	23%	24%	22%	13%	20%
Children	1%	1%	1%	0%	1%
Other	<1%	0%	0%	0%	<1%
None	43%	38%	50%	42%	43%
Don't Know	<1%	1%	1%	1%	1%

Does anyone in your household have additional energy-related needs?					
Additional Energy-Related Needs	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Refused	<1%	0%	0%	<1%	<1%

Note: Respondents could select more than one response.

Table II-1B displays energy-related needs by PIPP participation, successful AMP completion, and the relative size of their annual energy bills (lower or higher). There were some differences in energy-related needs by these characteristics.

- PIPP participants were more likely to report that there was a medical condition in the household and less likely to report that there were energy needs related to an infant in the household.
- Customers with higher bills were more likely to report that there were energy needs related to an elderly household member or an infant.

Table II-1B
Energy-Related Needs in Household
By PIPP Participation, AMP Completion, and Annual Bill

Does anyone in your household have additional energy-related needs?						
Additional Energy-Related Needs	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Elderly Member	21%	25%	22%	25%	22%	28%
Medical Condition	29%	23%	25%	22%	24%	23%
Infant	15%	21%	19%	21%	18%	24%
Temperature-Controlled Medication	24%	21%	21%	21%	21%	22%
Medical Equipment	19%	20%	18%	20%	21%	17%
Children	1%	1%	<1%	1%	1%	<1%
Other	2%	<1%	1%	1%	<1%	<1%
None	39%	43%	44%	44%	46%	39%
Don't Know	0%	1%	<1%	0%	1%	0%
Refused	3%	0%	0%	<1%	<1%	<1%

Note: Respondents could select more than one response.

Tables II-2A and II-2B display home ownership rates. Only 18 percent of all respondents indicated that they own their homes. SDG&E had the lowest home ownership rate, at only six percent, compared to 24 percent for SCE customers.

Table II-2A
Home Ownership
By IOU

Do you rent or own your home?					
Home Ownership	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Rent	78%	75%	89%	78%	78%
Own	17%	24%	6%	20%	18%
Don't Know	1%	0%	1%	1%	1%
Refused	4%	1%	4%	1%	3%

Table II-2B shows that there was no difference in home ownership rates by PIPP participation, however respondents who successfully completed AMP and respondents who had higher annual bills had higher home ownership rates.

Table II-2B
Home Ownership
By PIPP Participation, AMP Completion, and Annual Bill

Do you rent or own your home?						
Home Ownership	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Rent	76%	79%	76%	80%	82%	72%
Own	19%	18%	22%	17%	14%	25%
Don't Know	1%	1%	<1%	1%	1%	<1%
Refused	5%	2%	2%	2%	3%	3%

Tables II-3A and II-3B display the respondent's age. Most respondents were between 35 and 64 years old. SoCalGas customers were more likely to report that they were 65 or older.

Table II-3A
Respondent Age
By IOU

What is your age?					
Respondent Age	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
18-24 Years Old	0%	0%	1%	2%	1%
25-34 Years Old	14%	9%	12%	13%	12%
35-64 Years Old	77%	76%	73%	62%	71%
65 Years Old or Older	9%	12%	10%	21%	14%
Refused	<1%	3%	4%	3%	2%

Table II-3B shows that customers who did not complete AMP were more likely to be between 35 and 64 years old.

Table II-3B
Respondent Age
By PIPP Participation, AMP Completion, and Annual Bill

What is your age?						
Respondent Age	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
18-24 Years Old	0%	1%	1%	<1%	1%	<1%
25-34 Years Old	15%	12%	14%	12%	13%	12%
35-64 Years Old	73%	71%	66%	73%	70%	74%
65 Years Old or Older	10%	14%	16%	12%	14%	13%
Refused	2%	2%	2%	2%	3%	1%

Tables II-4A and II-4B display the primary language spoken at home. While 72 percent of all respondents speak English at home, 26 percent speak Spanish. Other languages spoken by no more than one percent of respondents are Chinese, Arabic, and Vietnamese. SoCalGas customers were most likely to speak English at home (76 percent) and PG&E customers were least likely to speak English at home (68 percent).

Table II-4A
Primary Language Spoken in the Home
By IOU

What is the primary language spoken in your home?					
Language	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
English	68%	72%	72%	76%	72%
Spanish	30%	28%	21%	22%	26%
Chinese	1%	0%	1%	0%	1%
Arabic	0%	0%	3%	1%	<1%
Vietnamese	0%	0%	1%	1%	<1%
Other	1%	0%	3%	0%	1%
Refused	<1%	0%	<1%	1%	<1%

Table II-4B shows that customers with higher bills were more likely to speak English at home (78 percent) than customers with lower bills (67 percent). Customers with lower bills were more likely to speak Spanish at home (30 percent) than customers with higher bills (21 percent).

Table II-4B
Primary Language Spoken in the Home
By PIPP Participation, AMP Completion, and Annual Bill

What is the primary language spoken in your home?						
Language	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
English	70%	72%	76%	71%	67%	78%
Spanish	26%	26%	23%	27%	30%	21%
Chinese	0%	1%	0%	1%	1%	0%
Arabic	3%	<1%	<1%	1%	<1%	1%
Vietnamese	0%	<1%	<1%	<1%	<1%	0%
Other	1%	1%	<1%	1%	1%	<1%
Refused	1%	<1%	<1%	<1%	<1%	<1%

Tables II-5A and II-5B display the number of people living in respondent households. Most respondents live in households with three or more people. SoCalGas customers were most likely to live in one- to two-person households, consistent with the elderly household members shown above.

Table II-5A
Number of People Living in Household
By IOU

Including yourself, how many people are living in your household?					
# of People in Household	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
1 Person	7%	6%	10%	10%	8%
2 People	10%	9%	6%	14%	11%
3-4 People	40%	45%	39%	33%	38%
More than 4 People	36%	37%	35%	36%	36%
Don't Know	0%	1%	1%	0%	<1%
Refused	7%	3%	8%	7%	6%

Table II-5B shows that, as expected, customers with lower bills were more likely to have the smaller one- to two-person households and customers with higher bills were more likely to have households with more than four people.

Table II-5B
Number of People Living in Household
By PIPP Participation, AMP Completion, and Annual Bill

Including yourself, how many people are living in your household?						
# of People in Household	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
1 Person	6%	8%	6%	9%	10%	5%
2 People	16%	11%	13%	10%	12%	9%
3-4 People	35%	38%	38%	39%	38%	40%
More than 4 People	35%	36%	34%	36%	32%	40%
Don't Know	3%	0%	1%	0%	0%	1%
Refused	5%	6%	7%	5%	7%	5%

Tables II-6A and II-6B display respondent-reported household incomes. Ten percent of respondents reported an income less than \$10,000, 42 percent reported household incomes between \$10,000 and \$40,000, and 26 percent of respondents reported an income more than \$40,000.

Table II-6A
Annual Household Income
By IOU

Please select the range that best describes your household's total annual income.					
Household Income	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Less than or equal to \$10,000	10%	12%	10%	9%	10%
\$10,001-\$40,000	42%	34%	33%	47%	42%
\$40,001-\$60,000	19%	12%	19%	21%	19%
Over \$60,000	6%	9%	9%	7%	7%
Don't Know	10%	21%	17%	11%	13%
Refused	12%	12%	13%	5%	10%

Table II-6B shows some expected trends in household income by PIPP participation, AMP Completion, and annual energy bills. PIPP participants were more likely to report income at or below \$40,000 (58 percent) than customers who did not participate in PIPP (51 percent). Customers who completed AMP were more likely to report income over \$60,000 (12 percent) than customers who did not complete AMP (five percent). Customers with lower bills were more likely to report income at or below \$40,000 (56 percent) than customers with higher bills (46 percent).

Table II-6B
Annual Household Income
By PIPP Participation, AMP Completion, and Annual Bill

Please select the range that best describes your household's total annual income.						
Household Income	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Less than or equal to \$10,000	13%	10%	10%	10%	10%	10%
\$10,001-\$40,000	45%	41%	41%	43%	46%	36%
\$40,001-\$60,000	12%	19%	15%	19%	16%	22%
Over \$60,000	7%	7%	12%	5%	5%	11%
Don't Know	14%	13%	12%	14%	12%	14%
Refused	10%	10%	11%	9%	10%	9%

Tables II-7A and II-7B display the poverty level distribution among respondents. Poverty level was calculated by using the midpoint of each respondent's reported household income range and comparing it to the 2025 Federal Poverty Level (FPL) threshold for their household size. Across all respondents, 15 percent reported income below 50 percent of the FPL, and eight percent reported income above 200 percent of the FPL. PG&E customers were most likely to report income below 50 percent of the FPL (18 percent) and SoCalGas customers were least likely to be in this lowest FPL group (12 percent). SDG&E and SCE customers were most likely to have income above 200 percent of the FPL.

Table II-7A
Household Poverty Level
By IOU

Household Income	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
<50%	18%	17%	13%	12%	15%
51%-100%	29%	26%	20%	31%	29%
101%-150%	15%	9%	15%	21%	16%
151%-200%	8%	5%	8%	9%	8%
>200%	7%	11%	12%	7%	8%
Unknown	23%	33%	32%	19%	24%

Table II-7B presents respondents' FPL by PIPP participation, AMP completion status, and annual energy bill level. As expected, PIPP participants were more likely to have income below the FPL (53 percent) than PIPP nonparticipants (43 percent). Customers with higher energy bills were more likely to have income above 200 percent of the FPL than customers with lower energy bills.

Table II-7B
Household Poverty Level
By PIPP Participation, AMP Completion, and Annual Bill

Household Income	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
<50%	18%	15%	18%	15%	17%	13%
51%-100%	35%	28%	25%	30%	27%	30%
101%-150%	9%	17%	12%	17%	16%	16%
151%-200%	7%	8%	10%	7%	9%	6%
>200%	5%	8%	10%	7%	7%	11%
Unknown	26%	24%	24%	24%	24%	24%

III. AMP Information Source and Reason for Participation

This section assesses AMP information source and motivation for participation in AMP.

Tables III-1A and III-1B display the participants' information source. The tables show that the most common source of information was calling in to the IOU, followed by the IOU website. SCE participants were most likely to report that they learned about the program by calling the IOU (68 percent) and SoCalGas customers were least likely (47 percent). SCE customers were more likely to report that they learned about the program by word of mouth (18 percent) and SoCalGas customers were least likely (six percent).

Table III-1A
AMP Information Source
By IOU

How did you learn about AMP?					
Information Source	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Called in to IOU	57%	68%	58%	47%	55%
IOU Website	20%	18%	24%	23%	21%
IOU Letter/Postcard/Bill	14%	12%	8%	12%	12%
Friend, Relative, Neighbor, etc.	14%	18%	9%	6%	11%
IOU Email	6%	2%	3%	7%	6%
CBO	3%	0%	4%	0%	2%
Utility Company	1%	4%	3%	2%	2%
Internet	2%	0%	1%	0%	1%

How did you learn about AMP?					
Information Source	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Store	0%	0%	2%	1%	<1%
Don't Know	2%	2%	5%	8%	4%
Refused	0%	0%	1%	1%	<1%

Note: Respondents could select more than one response.

There were some differences in AMP information source by subpopulations examined. PIPP nonparticipants (56 percent) were more likely to learn about AMP by calling the IOU than PIPP participants (47 percent). Customers who completed AMP (59 percent) were more likely to learn about the program by calling the IOU than customers who did not complete AMP (53 percent). Customer with lower energy bills (16 percent) were more likely to learn about AMP from an IOU mailing than customers with higher bills (seven percent).

Table III-1B
AMP Information Source
By PIPP Participation, AMP Completion, and Annual Bill

How did you learn about AMP?						
Information Source	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Called in to IOU	47%	56%	59%	53%	54%	57%
IOU Website	19%	21%	22%	22%	22%	20%
IOU Letter/Postcard/Bill	11%	12%	12%	12%	16%	7%
Friend, Relative, Neighbor, etc.	15%	11%	9%	11%	11%	12%
IOU Email	7%	6%	3%	6%	6%	5%
CBO	2%	2%	3%	2%	2%	1%
Utility Company	4%	2%	3%	2%	1%	2%
Internet	0%	1%	1%	1%	1%	<1%
Store	0%	1%	1%	<1%	<1%	1%
Don't Know	4%	4%	5%	5%	4%	6%
Refused	4%	<1%	<1%	<1%	1%	<1%

Note: Respondents could select more than one response.

Tables III-2A and III-2B display participants' responses when asked why they decided to enroll in AMP. Respondents were most likely to state that they enrolled to reduce arrearages, because of low or fixed incomes, or to reduce the chance of disconnection. SoCalGas customers were least likely to report that they joined AMP to reduce arrearages, which is consistent with the lower arrearages seen among these customers. SDG&E customers were more likely than the other IOU customers to report that they joined AMP because of their low or fixed income.

"I'd like to thank SCE for having a program like AMP. People sometimes fall on hard times and are unable to pay their bills on time and need a helping hand. A lot of companies don't understand that and choose to disconnect your service instead of trying to work with the individual."

Table III-2A
Reason for Enrolling in AMP
By IOU

Why did you enroll in AMP?					
Reason for Enrolling	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Reduce Arrearages	76%	81%	71%	59%	70%
Low or Fixed Income	47%	50%	56%	41%	46%
Reduce the Chance of Disconnection	22%	26%	29%	29%	26%
Someone Suggested I Enroll	10%	4%	13%	9%	9%
Unaffordable Bills	11%	6%	7%	7%	9%
Other	0%	<1%	1%	0%	<1%
Don't Know	2%	2%	3%	1%	2%
Refused	<1%	2%	<1%	5%	2%

Note: Respondents could select more than one response.

Table III-2B shows AMP enrollment reason by PIPP participation, AMP completion status, and annual energy bill level. Customers who were not PIPP participants (71 percent) were more likely to state that they enrolled to reduce arrearages than PIPP participants (63 percent) and were more likely to state that they enrolled to reduce the chance of disconnection, consistent with having higher bills than PIPP participants. Customers with lower energy bills (50 percent) were more likely than customers with higher energy bills (39 percent) to report that they enrolled because of a low or fixed income.

"Keep up the good work. Thank you for allowing me to get back on track and up to date with my monthly payments. GOD BLESS ALL FOR HELPING."

Table III-2B
Reason for Enrolling in AMP
By PIPP Participation, AMP Completion, and Annual Bill

Why did you enroll in AMP?						
Reason for Enrolling	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Reduce Arrearages	63%	71%	74%	69%	72%	68%
Low or Fixed Income	43%	46%	40%	48%	50%	39%
Reduce the Chance of Disconnection	19%	26%	22%	25%	25%	27%
Someone Suggested I Enroll	7%	9%	8%	9%	9%	9%
Unaffordable Bills	14%	8%	6%	10%	8%	10%
Other	0%	<1%	<1%	<1%	0%	<1%
Don't Know	3%	2%	1%	2%	1%	4%
Refused	3%	2%	4%	1%	2%	3%

Note: Respondents could select more than one response.

IV. AMP Understanding

This section addresses customers' reported understanding of AMP.

Tables IV-1A and IV-1B display respondents' understanding of how to apply for AMP. Table IV-1A shows that most respondents across all IOUs felt they understood how to apply for AMP, with 43 percent saying they understood "very well" and 44 percent "somewhat well." Only eight percent of respondents overall reported not understanding the application process at all.

Table IV-1A
Understanding of How to Apply for AMP
By IOU

How well do you understand how to apply for AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	41%	42%	44%	46%	43%
Somewhat Well	46%	50%	42%	39%	44%
Not at All	8%	6%	8%	9%	8%
Don't Know	5%	2%	6%	5%	5%
Refused	0%	0%	0%	1%	<1%

Table IV-1B shows that understanding of how to apply for AMP was generally similar across groups. However, respondents with higher bills (12 percent) were somewhat more likely to say they understood "not at all" how to apply for AMP than those with lower bills (six percent).

"It was a relief that it was so easy to apply, and you received an immediate answer."

Table IV-1B
Understanding of How to Apply for AMP
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand how to apply for AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	43%	43%	47%	42%	42%	45%
Somewhat Well	44%	44%	45%	43%	48%	37%
Not at All	7%	8%	6%	9%	6%	12%
Don't Know	5%	5%	2%	6%	4%	6%
Refused	1%	<1%	1%	0%	<1%	0%

Tables IV-2A and IV-2B displays respondents' understanding of the amount of arrearages reduced by AMP. Table IV-2A shows that understanding of the amount of arrearages reduced by AMP was relatively high across all IOUs, with 44 percent of respondents reporting they understood the amount "very well", ranging from 39 percent of SDG&E respondents to 49 percent of SCE respondents.

Table IV-2A
Understanding of the Amount of Arrearages Reduced by AMP
By IOU

How well do you understand the amount your past due debt is reduced by AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	42%	49%	39%	45%	44%
Somewhat Well	35%	34%	33%	31%	33%
Not at All	14%	10%	13%	12%	12%
Don't Know	9%	7%	15%	12%	10%
Refused	<1%	0%	0%	1%	<1%

Table IV-2B presents respondents' understanding of the amount of arrearages reduced by AMP, broken down by PIPP participation, AMP completion, and annual energy bill. Respondents who successfully completed AMP had a higher rate of understanding, with 54 percent reporting they understood "very well" compared to 41 percent of those who did not complete AMP. Forty-eight percent of respondents with higher bills reported understanding the amount of arrearages reduced by AMP "very well" compared to 42 percent of respondents with lower bills.

Table IV-2B
Understanding of the Amount of Arrearages Reduced by AMP
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand the amount your past due debt is reduced by AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	44%	44%	54%	41%	42%	48%
Somewhat Well	36%	33%	29%	34%	36%	29%
Not at All	11%	13%	11%	13%	12%	13%
Don't Know	8%	10%	5%	12%	10%	11%

How well do you understand the amount your past due debt is reduced by AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Refused	1%	<1%	1%	<1%	<1%	0%

Tables IV-3A and IV-3B display respondents' understanding of rules to remain on AMP. Table IV-3A shows that 49 percent of respondents reported understanding the rules to remain on AMP "very well." This ranged from 42 percent of SDG&E respondents to 54 percent of SCE respondents. About one-third of respondents reported understanding the rules "somewhat well." Only ten percent of respondents said they did not understand the rules at all.

Table IV-3A
Understanding of the Rules to Remain on AMP
By IOU

How well do you understand the rules to remain on AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	47%	54%	42%	52%	49%
Somewhat Well	36%	36%	37%	29%	34%
Not at All	11%	10%	15%	10%	10%
Don't Know	7%	1%	6%	9%	6%
Refused	0%	0%	0%	1%	<1%

Table IV-3B shows that 60 percent of respondents who successfully completed AMP reported understanding the rules to remain on the program "very well" compared to 46 percent of those who did not complete AMP. Understanding was also higher among respondents with higher energy bills (55 percent) than those with lower bills (46 percent).

Table IV-3B
Understanding of the Rules to Remain on AMP
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand the rules to remain on AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	47%	50%	60%	46%	46%	55%
Somewhat Well	39%	33%	29%	34%	38%	27%
Not at All	7%	11%	6%	12%	10%	12%
Don't Know	7%	6%	4%	8%	7%	7%
Refused	1%	<1%	1%	0%	<1%	0%

Tables IV-4A and IV-4B display respondents' understanding of how long they can remain on AMP. Table IV-4A shows that 41 percent of respondents reported understanding "very well" how long they can remain on AMP. SCE respondents reported the highest level of understanding (46 percent), while SDG&E respondents reported the lowest (36 percent).

Table IV-4A
Understanding of How Long Respondents Can be on AMP
By IOU

How well do you understand the longest amount of time you can be on AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	43%	46%	36%	37%	41%
Somewhat Well	34%	35%	27%	27%	31%
Not at All	14%	12%	16%	16%	14%
Don't Know	9%	7%	20%	19%	13%
Refused	0%	0%	1%	1%	1%

Table IV-4B shows that 48 percent of respondents who successfully completed AMP and 46 percent of respondents with higher annual energy bills reported understanding how long respondents can be on AMP "very well". Respondents who did not complete AMP or had lower bills were less likely to report strong understanding.

Table IV-4B
Understanding of How Long Respondents Can be on AMP
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand the longest amount of time you can be on AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	38%	41%	48%	39%	38%	46%
Somewhat Well	35%	31%	27%	32%	35%	25%
Not at All	16%	14%	12%	15%	13%	16%
Don't Know	10%	13%	12%	14%	13%	14%
Refused	1%	1%	1%	<1%	1%	<1%

Tables IV-5A and IV-5B display respondents' understanding of the consequences for missing one on-time payment while enrolled on AMP. Table IV-5A shows that 48 percent of respondents said they understood the consequences "very well." This rate was highest among SCE respondents at 54 percent and lowest among PG&E respondents at 46 percent.

"I had a great experience; I was just not aware you'll be taken off if you made a payment late."

Table IV-5A
Understanding of Consequences for Missing One On-Time Payment
By IOU

How well do you understand what happens if you miss making a payment on time while on AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	46%	54%	48%	49%	48%
Somewhat Well	41%	33%	28%	30%	35%
Not at All	10%	9%	14%	8%	9%
Don't Know	4%	4%	11%	12%	7%
Refused	0%	0%	0%	1%	<1%

Table IV-5B shows that 55 percent of respondents who successfully completed AMP understood the consequences for missing one on-time payment "very well," compared to 46 percent of respondents who were not able to complete AMP. Understanding was also higher among respondents with higher bills (53 percent) than those with lower bills (45 percent).

Table IV-5B
Understanding of Consequences for Missing One On-Time Payment
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand what happens if you miss making a payment on time while on AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	45%	49%	55%	46%	45%	53%
Somewhat Well	37%	35%	31%	36%	38%	29%
Not at All	8%	10%	8%	10%	9%	10%
Don't Know	8%	7%	6%	9%	7%	8%
Refused	2%	<1%	1%	<1%	1%	0%

Tables IV-6A and IV-6B display respondents' understanding of the consequences of missing multiple on-time payments while enrolled on AMP. Table IV-6A shows that 49 percent of respondents reported understanding the consequences of missing multiple on-time payments "very well," ranging from 44 percent of PG&E respondents to 54 percent of SCE respondents.

Table IV-6A
Understanding of Consequences for Missing Multiple On-Time Payments
By IOU

How well do you understand what happens if you miss making more than one payment on time while on AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	44%	54%	48%	52%	49%
Somewhat Well	43%	33%	28%	23%	33%
Not at All	10%	10%	13%	10%	10%
Don't Know	3%	2%	11%	14%	7%
Refused	0%	1%	1%	1%	1%

Table IV-6B shows that respondents who completed AMP reported a higher level of understanding, with 57 percent stating they understood the consequences "very well" compared to 46 percent of those who did not complete AMP.

Table IV-6B
Understanding of Consequences for Missing Multiple On-Time Payments
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand what happens if you miss making more than one payment on time while on AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	47%	49%	57%	46%	47%	52%
Somewhat Well	31%	33%	28%	33%	35%	29%
Not at All	12%	10%	9%	11%	10%	10%
Don't Know	8%	7%	6%	9%	7%	8%
Refused	3%	<1%	<1%	1%	1%	<1%

Tables IV-7A and IV-7B display respondents' understanding of the consequences of not paying the full monthly bill while on AMP. Table IV-7A shows that 48 percent of respondents reported understanding the consequences of not paying the full monthly bill "very well," ranging from 44 percent of PG&E respondents to 53 percent of SCE respondents.

Table IV-7A
Understanding of Consequences for Not Paying In-Full
By IOU

How well do you understand what happens if you don't pay the full monthly bill while on AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	44%	53%	46%	50%	48%
Somewhat Well	37%	32%	31%	23%	31%
Not at All	11%	12%	11%	8%	10%
Don't Know	8%	2%	12%	18%	11%
Refused	0%	1%	1%	1%	1%

Table IV-7B shows that among respondents who successfully completed AMP, 56 percent reported understanding the consequences of not paying the bill in full "very well" compared to 46 percent of those who did not complete AMP.

Table IV-7B
Understanding of Consequences for Not Paying In-Full
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand what happens if you don't pay the full monthly bill while on AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	45%	48%	56%	46%	47%	50%
Somewhat Well	30%	30%	27%	31%	32%	28%
Not at All	13%	10%	8%	11%	10%	10%
Don't Know	10%	11%	8%	12%	11%	11%
Refused	3%	<1%	<1%	1%	1%	<1%

Tables IV-8A and IV-8B display respondents' understanding of the rules about re-enrolling in AMP. Table IV-8A shows that overall, 37 percent of respondents reported understanding the rules "very well". While 68 percent of PG&E and SCE respondents stated that they understand AMP re-enrollment rules very or somewhat well, 57 percent of SDG&E respondents said they understood the rules very or somewhat well.

Table IV-8A
Understanding of Rules About Re-Enrolling in AMP
By IOU

How well do you understand rules about re-enrolling in AMP?					
Understanding	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Very Well	35%	37%	34%	39%	37%
Somewhat Well	33%	31%	23%	22%	28%
Not at All	21%	20%	22%	20%	21%
Don't Know	11%	11%	21%	19%	14%
Refused	0%	1%	0%	<1%	<1%

Table IV-8B shows respondents' reports on understanding the rules for re-enrolling in AMP by PIPP participation, AMP completion, and annual energy bill. The table shows that there was little reported difference in understanding across these groups.

Table IV-8B
Understanding of Rules About Re-Enrolling in AMP
By PIPP Participation, AMP Completion, and Annual Bill

How well do you understand rules about re-enrolling in AMP?						
Understanding	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Very Well	34%	37%	38%	36%	35%	38%
Somewhat Well	31%	28%	27%	28%	29%	27%
Not at All	21%	21%	20%	20%	20%	22%
Don't Know	14%	14%	15%	15%	15%	14%
Refused	1%	<1%	0%	<1%	<1%	0%

Participants were asked if they received help or encouragement from the IOU, such as letters about their AMP progress. Table IV-9A shows that 45 percent reported that they received a letter, ranging from 30 percent for SDG&E respondents to 54 percent for SoCalGas respondents.

"It was very easy to enroll. It took a lot of stress off me to get this assistance. It was nice to get updates and emails regarding payments and updates."

Table IV-9A
Receipt of IOU Encouragement
By IOU

Did you receive help or encouragement, such as letters about your AMP progress, after enrolling in the program?					
Received IOU Encouragement	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Yes	41%	43%	30%	54%	45%
No	44%	45%	47%	32%	40%
Don't Know	15%	12%	22%	14%	15%
Refused	0%	0%	0%	0%	0%

Table IV-9B displays responses about IOU encouragement by PIPP participation, AMP completion, and annual bill. While 51 percent of respondents who successfully completed AMP reported that they received encouragement, 42 percent of those who did not complete AMP reported that they received encouragement. Respondents with higher bills were more likely to report encouragement receipt than respondents with lower bills.

Table IV-9B
Receipt of IOU Encouragement
By PIPP Participation, AMP Completion, and Annual Bill

Did you receive help or encouragement, such as letters about your AMP progress, after enrolling in the program?						
Received IOU Encouragement	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Yes	48%	45%	51%	42%	42%	49%
No	40%	40%	36%	42%	42%	36%
Don't Know	11%	15%	13%	16%	15%	15%
Refused	0%	0%	0%	0%	0%	0%

Tables IV-10A and IV-10B present information on respondents' awareness of the COVID disconnection moratorium. Table IV-10A shows that overall, 42 percent of respondents reported that they were aware that IOUs were not allowed to disconnect their services during the COVID period. SoCalGas respondents had much higher awareness (57 percent) than all of the other IOUs (32 to 38 percent).

Table IV-10A
Awareness of COVID Disconnection Moratorium
By IOU

During the COVID period, were you aware that it was not allowed to disconnect your services?					
Aware of Memorandum	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Yes	32%	38%	33%	57%	42%
No	63%	53%	57%	37%	52%
Don't Know	5%	9%	10%	6%	6%
Refused	0%	0%	0%	<1%	<1%

Table IV-10B displays awareness of the disconnection moratorium by PIPP participation, AMP completion, and annual energy bills. The table shows that customers with higher bills (47 percent) were more likely than those with lower bills (39 percent) to report that they were aware of the moratorium.

Table IV-10B
Awareness of COVID Disconnection Moratorium
By PIPP Participation, AMP Completion, and Annual Bill

During the COVID period, were you aware that it was not allowed to disconnect your services?						
Aware of Moratorium	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Yes	42%	42%	46%	42%	39%	47%
No	51%	52%	49%	51%	54%	48%
Don't Know	7%	6%	6%	7%	7%	5%
Refused	1%	0%	<1%	0%	<1%	0%

V. Energy Bill Payment

This section provides information on reported energy bill payment behavior prior to and post AMP participation.

Tables V-1A and V-1B display the frequency of incomplete payments before and after AMP enrollment.

- Table V-1A shows that across all IOUs, the percentage of respondents who reported that they paid less than the full energy bill every month or most months declined from 30 percent before AMP to ten percent after.
- The share who reported never making a payment less than the full energy bill increased from seven percent before AMP to 41 percent after AMP.
- The improvement was greatest among SCE customers. While nine percent reported that they never made an incomplete payment before enrolling in AMP, 53 percent reported that they never made an incomplete payment after enrolling in AMP.

Table V-1A
Reported Frequency of Incomplete Payments
By IOU

In the year before/while enrolled in AMP how often did you pay less than your full bill?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	9%	5%	14%	4%	11%	6%	16%	5%	12%	5%
Most Months	17%	4%	14%	3%	18%	6%	20%	7%	18%	5%
Some Months	24%	4%	31%	7%	24%	11%	24%	10%	25%	7%

In the year before/while enrolled in AMP how often did you pay less than your full bill?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Few Months	31%	34%	26%	28%	21%	27%	21%	33%	26%	32%
Never	6%	45%	9%	53%	10%	39%	7%	33%	7%	41%
Don't Know	13%	7%	6%	7%	16%	11%	13%	11%	12%	9%
Refused	<1%	1%	1%	0%	<1%	0%	<1%	1%	<1%	1%

Table V-1B displays the reported frequency of incomplete payments before and after AMP enrollment, segmented by PIPP participation, AMP completion status, and annual energy bill level. There were some differences by these characteristics.

- Among PIPP participants, the share who reported making incomplete payments every or most months declined from 30 percent before AMP to 16 percent after. Among non-PIPP participants, this rate declined from 30 percent to ten percent.
- Among customers who completed AMP, the share who reported never making incomplete payments increased from ten percent before AMP to 54 percent after AMP. The change for those who did not complete AMP was an increase from six percent before AMP to 37 percent after AMP.
- While 27 percent of those with lower bills reported that they made incomplete payments every or most months before AMP, nine percent said they did so after enrolling in AMP. These rates were 34 percent before AMP and 12 percent after AMP for customers with higher bills.

Table V-1B
Reported Frequency of Incomplete Payments
By PIPP Participation, AMP Completion, and Annual Bill

In the year before/while enrolled in AMP how often did you pay less than your full bill?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	19%	11%	12%	5%	11%	5%	13%	5%	10%	5%	16%	6%
Most Months	11%	5%	18%	5%	15%	5%	17%	5%	17%	4%	18%	6%
Some Months	30%	6%	25%	7%	27%	2%	26%	9%	25%	6%	26%	9%
Few Months	27%	21%	26%	33%	28%	24%	24%	34%	30%	33%	20%	31%
Never	6%	45%	7%	41%	10%	54%	6%	37%	6%	43%	8%	39%
Don't Know	6%	8%	12%	9%	9%	9%	13%	8%	12%	8%	12%	9%

In the year before/while enrolled in AMP how often did you pay less than your full bill?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Refused	2%	3%	<1%	1%	<1%	<1%	<1%	1%	<1%	1%	<1%	1%

Tables V-2A and V-2B display the reported frequency of missed payments before and after AMP enrollment. Table V-2A shows that across all IOUs, the percentage of respondents who reported never missing a payment increased after AMP enrollment, from eight percent in the year before AMP to 51 percent while enrolled in AMP. While 58 percent of PG&E customers said they never missed a payment after enrolling in AMP, 41 percent of SoCalGas participants said they never missed a payment after enrolling in AMP.

Table V-2A
Reported Frequency of Missed Payments
By IOU

In the year before/while enrolled in AMP how often did you miss a bill payment?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	5%	2%	9%	2%	6%	3%	7%	3%	6%	3%
Most Months	7%	4%	14%	3%	12%	4%	19%	7%	13%	5%
Some Months	25%	4%	31%	7%	23%	9%	19%	7%	24%	6%
Few Months	47%	24%	32%	28%	40%	30%	43%	30%	43%	28%
Never	8%	58%	10%	55%	10%	44%	5%	41%	8%	51%
Don't Know	6%	6%	4%	5%	9%	10%	5%	10%	6%	8%
Refused	1%	<1%	0%	1%	0%	1%	2%	1%	1%	1%

Table V-2B shows the share of respondents who reported that they never missed a payment by subgroups. The greatest difference was between AMP completers and those who did not complete AMP. While 66 percent of customers who complete AMP said they never missed a payment while enrolled in AMP, 44 percent of those who did not complete AMP said they never missed a payment while enrolled in AMP. While some of these customers may have left AMP for reasons other than removal for non-payment, this shows that customers overstate their bill payment compliance.

Table V-2B
Reported Frequency of Missed Payments
By PIPP Participation, AMP Completion, and Annual Bill

In the year before/while enrolled in AMP how often did you miss a bill payment?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	3%	5%	6%	3%	5%	2%	6%	3%	6%	2%	7%	3%
Most Months	17%	6%	13%	5%	11%	2%	15%	6%	10%	4%	18%	5%
Some Months	23%	8%	24%	6%	24%	4%	24%	7%	25%	6%	22%	6%
Few Months	41%	22%	42%	28%	40%	19%	42%	30%	44%	28%	40%	26%
Never	8%	47%	8%	51%	13%	66%	6%	44%	7%	49%	8%	52%
Don't Know	5%	10%	6%	7%	6%	6%	6%	8%	6%	8%	5%	7%
Refused	2%	3%	1%	<1%	1%	<1%	1%	1%	2%	1%	<1%	<1%

Tables V-3A and V-3B present the reported frequency of past due bills over \$500 before and after AMP enrollment. Table V-3A shows that after enrolling in AMP, the share of respondents who reported that they never had a past due bill over \$500 doubled, from 24 percent to 50 percent overall. While 55 percent of PG&E respondents reported that they never had a past due balance over \$500 after joining AMP, 41 percent of SDG&E respondents said that they never had a past due balance over \$500 after joining AMP.

Table V-3A
Reported Frequency of Past Due Bills Over \$500
By IOU

In the year before/while enrolled in AMP how often was your past due bill more than \$500?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	9%	7%	10%	4%	13%	7%	10%	7%	10%	6%
Most Months	11%	7%	13%	5%	12%	4%	6%	6%	10%	6%
Some Months	19%	8%	34%	17%	22%	11%	18%	7%	21%	9%
Few Months	30%	10%	20%	21%	28%	16%	26%	14%	27%	14%
Never	24%	55%	16%	43%	14%	41%	30%	49%	24%	50%

In the year before/while enrolled in AMP how often was your past due bill more than \$500?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Don't Know	8%	12%	7%	9%	12%	21%	9%	17%	9%	14%
Refused	<1%	<1%	0%	1%	0%	1%	1%	1%	<1%	1%

Table V-3B shows that the share of respondents who reported that they never had past due bills over \$500 increased from 24 percent to 53 percent for those who successfully completed AMP, compared to an increase from 24 percent to 47 percent for those who did not complete AMP. Additionally, respondents with higher energy bills experienced a larger increase in the share reporting no past due bills over \$500, with a 31 percentage point increase, compared to a 23 percentage point increase for those with lower energy bills.

Table V-3B
Reported Frequency of Past Due Bills Over \$500
By PIPP Participation, AMP Completion, and Annual Bill

In the year before/while enrolled in AMP how often was your past due bill more than \$500?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	10%	7%	10%	6%	7%	3%	10%	7%	6%	4%	16%	10%
Most Months	11%	5%	9%	6%	10%	4%	10%	7%	9%	6%	11%	6%
Some Months	21%	8%	22%	9%	20%	8%	22%	10%	20%	9%	24%	9%
Few Months	26%	18%	27%	14%	27%	16%	25%	14%	26%	14%	28%	14%
Never	22%	49%	24%	50%	24%	53%	24%	47%	29%	52%	15%	46%
Don't Know	7%	10%	9%	14%	11%	14%	8%	15%	11%	14%	6%	14%
Refused	1%	3%	<1%	1%	1%	1%	<1%	<1%	<1%	1%	1%	0%

Tables V-4A and V-4B present the reported frequency of late bill payment notices before and after AMP enrollment. Table V-4A shows that across all IOUs, the share of respondents reporting no late bill payment notices increased from ten percent to 53 percent after AMP, with PG&E showing the most significant change, rising from 13 percent to 62 percent.

“It helped me get caught up on my bill and changed my mindset about paying the bill on time.”

Table V-4A
Reported Frequency of Late Bill Payment Notices
By IOU

In the year before/while enrolled in AMP how often did you receive a notice of late bill payment?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	6%	4%	14%	5%	14%	4%	10%	5%	9%	4%
Most Months	8%	5%	7%	3%	9%	4%	12%	5%	9%	5%
Some Months	22%	5%	18%	5%	17%	6%	22%	6%	21%	5%
Few Months	40%	14%	41%	22%	39%	21%	41%	20%	41%	18%
Never	13%	62%	11%	52%	10%	44%	7%	46%	10%	53%
Don't Know	10%	9%	8%	12%	11%	21%	8%	18%	9%	13%
Refused	1%	1%	0%	1%	1%	1%	2%	1%	1%	1%

Table V-4B shows that the share of respondents who reported no late bill payment notices increased more among those who completed AMP (from 14 percent to 67 percent) than those who did not (from 9 percent to 48 percent). The percent who reported no late bill payment notices increased more for customers who were not on PIPP (by 44 percentage points) than those who were on PIPP (by 35 percentage points).

Table V-4B
Reported Frequency of Late Bill Payment Notices
By PIPP Participation, AMP Completion, and Annual Bill

In the year before/while enrolled in AMP how often did you receive a notice of late bill payment?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	10%	10%	9%	4%	6%	2%	10%	5%	7%	5%	13%	4%
Most Months	15%	4%	9%	5%	8%	3%	9%	5%	6%	4%	13%	5%
Some Months	23%	8%	21%	5%	18%	3%	22%	6%	21%	6%	20%	4%
Few Months	35%	16%	41%	18%	45%	12%	39%	20%	42%	17%	37%	20%
Never	11%	46%	10%	54%	14%	67%	9%	48%	12%	54%	8%	51%
Don't Know	5%	14%	9%	13%	8%	13%	10%	15%	10%	13%	7%	14%

In the year before/while enrolled in AMP how often did you receive a notice of late bill payment?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Refused	1%	3%	1%	1%	1%	1%	1%	1%	1%	1%	2%	1%

Tables V-5A and V-5B display the reported frequency of disconnection notices before and after AMP enrollment. Across all IOUs, the share of respondents who reported that they never received a disconnection notice increased from 21 percent before AMP to 58 percent after AMP. The most notable improvement was among SCE customers, increasing by 41 percentage points.

“As a single mom, it was really helpful to not worry about disconnection.”

Table V-5A
Reported Frequency of Disconnection Notices
By IOU

In the year before/while enrolled in AMP how often did you receive a notice threatening disconnection of your service?										
Frequency	Investor-Owned Utility								All IOUs	
	PG&E		SCE		SDG&E		SoCalGas			
Respondents	184		187		200		189		760	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	2%	2%	10%	4%	7%	4%	9%	3%	6%	3%
Most Months	9%	5%	4%	4%	6%	1%	9%	4%	8%	4%
Some Months	13%	5%	16%	2%	13%	4%	11%	3%	13%	4%
Few Months	40%	13%	36%	15%	32%	16%	37%	18%	38%	15%
Never	23%	61%	22%	63%	21%	53%	19%	53%	21%	58%
Don't Know	12%	12%	12%	11%	21%	22%	14%	17%	14%	14%
Refused	1%	1%	1%	2%	<1%	0%	1%	2%	1%	2%

Table V-5B shows that the share of respondents who reported that they never received a disconnection notice rose across all groups after AMP enrollment. The most notable increase was among AMP completers, rising from 27 percent before AMP to 76 percent after AMP. Participants with higher annual bills also saw large improvements, with "never" responses increasing from 18 percent to 57 percent.

“Thank you so much for this great opportunity to pay & keep the service without worrying about disconnection.”

Table V-5B
Reported Frequency of Disconnection Notices
By PIPP Participation, AMP Completion, and Annual Bill

In the year before/while enrolled in AMP how often did you receive a notice threatening disconnection of your service?												
Frequency	PIPP Participation				AMP Completion				Annual Energy Bill			
	PIPP		Not PIPP		AMP Completed		AMP Not Completed		Lower Bills		Higher Bills	
Respondents	146		614		284		476		448		312	
	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP	Before AMP	After AMP
Every Month	7%	6%	6%	3%	4%	1%	7%	3%	4%	3%	9%	3%
Most Months	9%	1%	8%	4%	5%	3%	8%	4%	5%	4%	13%	5%
Some Months	17%	9%	12%	4%	11%	1%	14%	5%	12%	4%	14%	3%
Few Months	32%	14%	38%	15%	38%	8%	37%	17%	40%	15%	35%	17%
Never	22%	57%	21%	58%	27%	76%	20%	52%	23%	58%	18%	57%
Don't Know	10%	11%	14%	15%	14%	10%	14%	17%	15%	15%	11%	13%
Refused	2%	3%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%

Tables V-6A and V-6B display the reasons for paying more energy bills after AMP enrollment. These questions were asked of the customers who reported improved bill payment following enrollment. The most cited reasons across all IOUs were to pay off arrearages from past unpaid bills (22 percent), because the bill was easier to pay (19 percent), and to avoid disconnection (14 percent). SDG&E customers (30 percent) were most likely to report paying off arrearages and SoCalGas customers (15 percent) were least likely to report this reason.

Table V-6A
Reasons for Paying More Energy Bills After AMP
By IOU

Why did you pay more energy bills while you were enrolled in AMP?					
Reasons for Paying More Bills	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	110	125	103	100	438
Pay off Arrearages for Past Unpaid Bills	23%	26%	30%	15%	22%
Bill is Easier to Pay	20%	18%	14%	21%	19%
Avoid Disconnection	10%	22%	25%	11%	14%
Fewer People in Home So Bills are Lower	<1%	2%	2%	4%	2%
Income is Higher	1%	1%	0%	0%	1%

Why did you pay more energy bills while you were enrolled in AMP?					
Reasons for Paying More Bills	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	110	125	103	100	438
Did Not Pay More Energy Bills	41%	38%	39%	58%	46%
Don't Know	21%	11%	10%	6%	13%
Refused	<1%	1%	2%	0%	<1%

Note: Respondents could select more than one response.

¹Only respondents who reported paying more energy bills after AMP were asked this question.

Table V-6B shows that PIPP participants (23 percent) were more likely than nonparticipants (13 percent) and respondents who successfully completed AMP (19 percent) were more likely than those who did not complete AMP (12 percent) to state they improved their bill payment to avoid disconnection. AMP completers (27 percent) were more likely than AMP non-completers (17 percent) to state that they paid more energy bills after enrolling in AMP because the bill was easier to pay.

Table V-6B
Reasons for Paying More Energy Bills After AMP
By PIPP Participation, AMP Completion, and Annual Bill

Why did you pay more energy bills while you were enrolled in AMP?						
Reasons for Paying More Bills	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents¹	87	351	168	270	257	181
Pay off Arrearages for Past Unpaid Bills	21%	22%	20%	20%	25%	17%
Bill is Easier to Pay	22%	19%	27%	17%	22%	16%
Avoid Disconnection	23%	13%	19%	12%	13%	15%
Fewer People in Home So Bills are Lower	3%	2%	3%	1%	2%	2%
Income is Higher	0%	1%	3%	0%	1%	1%
Did Not Pay More Energy Bills	45%	46%	39%	49%	40%	54%
Don't Know	12%	14%	10%	15%	16%	9%
Refused	1%	<1%	0%	1%	1%	<1%

Note: Respondents could select more than one response.

¹Only respondents who reported paying more energy bills after AMP were asked this question.

Tables V-7A and V-7B display the reasons for paying fewer energy bills after AMP enrollment, for those customers who reported reduced bill payment after AMP. The most common reasons were that the bill was high and harder to pay (48 percent) and lower income (38 percent).

Table V-7A
Reasons for Paying Fewer Energy Bills After AMP
By IOU

Why did you pay fewer energy bills while you were enrolled in AMP?					
Reasons for Paying Fewer Bills	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	8	10	14	18	50
Bill is High and Harder to Pay	47%	55%	30%	49%	48%
Income Has Decreased	0%	45%	50%	48%	38%
Other Expenses to Pay	15%	7%	30%	26%	21%
More People in Home So Bills are Higher	0%	7%	0%	9%	6%
Did Not Pay Fewer Energy Bills	0%	22%	23%	7%	9%
Don't Know	40%	14%	20%	16%	21%
Refused	0%	0%	0%	0%	0%

Note: Respondents could select more than one response.

¹Only respondents who reported paying fewer energy bills after AMP were asked this question.

Table V-7B shows some differences across subgroups in reasons for paying fewer energy bills after AMP, but the sample sizes are small.

Table V-7B
Reasons for Paying Fewer Energy Bills After AMP
By PIPP Participation, AMP Completion, and Annual Bill

Why did you pay fewer energy bills while you were enrolled in AMP?						
Reasons for Paying Fewer Bills	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents¹	13	37	17	33	29	21
Bill is High and Harder to Pay	74%	46%	57%	41%	32%	69%
Income Has Decreased	21%	39%	52%	30%	37%	39%
Other Expenses to Pay	24%	20%	43%	16%	14%	30%
More People in Home So Bills are Higher	0%	7%	19%	0%	2%	11%
Did Not Pay Fewer Energy Bills	0%	10%	7%	11%	14%	3%
Don't Know	9%	22%	3%	27%	29%	8%
Refused	0%	0%	0%	0%	0%	0%

Note: Respondents could select more than one response.

¹Only respondents who reported paying fewer energy bills after AMP were asked this question.

Tables V-8A and V-8B provide information on challenges in paying energy bills on time and in full while on AMP. Overall, 40 percent of respondents reported that the bill was very or somewhat difficult to pay on time, and 46 percent reported that the bill was very or somewhat difficult to pay in full. SoCalGas customers were more likely than the other IOUs to report both issues.

“The PIPP program is the only reason I was able to be successful on the SoCalGas AMP.”

Table V-8A
Challenges with Paying Bills on Time, in Full
Percent of Respondents Reporting Aspect Was Very or Somewhat Difficult
By IOU

While on AMP, how easy or difficult was it to pay your energy bills on time? While on AMP, how easy or difficult was it to pay your energy bills in full? Would you say that it was very easy, somewhat easy, somewhat difficult, or very difficult?					
Challenges	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Paying Energy Bills on Time	39%	33%	37%	44%	40%
Paying Energy Bills in Full	41%	42%	45%	51%	46%

Table V-8B shows that PIPP nonparticipants were more likely to report difficulty paying energy bills on time and in full compared to PIPP participants. Similarly, respondents who were not able to complete AMP reported more difficulty paying energy bills on time and in full more than respondents who successfully completed AMP. There were smaller differences between customers with higher and lower energy bills.

Table V-8B
Challenges with Paying Bills on Time, in Full
Percent of Respondents Reporting Aspect Was Very or Somewhat Difficult
By PIPP Participation, AMP Completion, and Annual Bill

While on AMP, how easy or difficult was it to pay your energy bills on time? While on AMP, how easy or difficult was it to pay your energy bills in full? Would you say that it was very easy, somewhat easy, somewhat difficult, or very difficult?						
Challenges	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Paying Energy Bills on Time	34%	40%	24%	45%	38%	41%
Paying Energy Bills in Full	39%	47%	34%	51%	44%	49%

VI. AMP Experience

This section reports on respondents' experiences with AMP.

Tables VI-1A and VI-1B display the reasons respondents reported for no longer being enrolled in AMP. The most common reasons include finishing the program (41 percent) and missing some bills (28 percent). SCE respondents (49 percent) were most likely and SoCalGas respondents (30 percent) were least likely to report that they finished the program.

"It helped me, but sometimes I couldn't pay on time and that's why they discontinued helping me with my bill, over the 3 missed payments."

Table VI-1A
Reasons for No Longer being on AMP
By IOU

Why are you no longer enrolled in AMP?					
Reasons for No Longer being on AMP	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	87	94	94	85	360
Finished the Program	47%	49%	34%	30%	41%
Missed Some Bills	22%	32%	33%	31%	28%
Don't Know	22%	12%	18%	25%	21%
Did Not Pay Bills in Full	9%	14%	21%	17%	14%
Paid off Bill	9%	7%	7%	8%	8%
Moved	3%	1%	3%	0%	1%
Other	<1%	0%	0%	0%	<1%
Refused	0%	1%	2%	1%	1%

Note: Respondents could select more than one response.

¹Only respondents who reported that they were no longer on AMP were asked this question.

Table VI-1B displays reported reasons for no longer being on AMP, broken down by PIPP participation, AMP completion, and annual energy bill. Customers who were not on PIPP, who completed AMP, and with higher bills were more likely than their counterparts to report that they finished the program.

Table VI-1B
Reasons for No Longer being on AMP
By PIPP Participation, AMP Completion, and Annual Bill

Why are you no longer enrolled in AMP?						
Reasons for No Longer being on AMP	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents¹	55	305	156	204	202	158
Finished the Program	34%	41%	68%	30%	36%	46%
Missed Some Bills	29%	27%	10%	35%	28%	28%
Don't Know	23%	21%	14%	23%	25%	15%
Did Not Pay Bills in Full	15%	13%	8%	15%	12%	16%
Paid off Bill	11%	8%	10%	6%	8%	9%
Moved	2%	1%	<1%	2%	2%	0%
Other	1%	0%	0%	<1%	<1%	0%
Refused	0%	1%	0%	1%	1%	1%

Note: Respondents could select more than one response.

¹Only respondents who reported that they were no longer on AMP were asked this question.

Tables VI-2A and VI-2B display the number of months respondents reported that they were enrolled in AMP. Across IOUs, most respondents were still on AMP, and about a third had successfully completed the program. Respondents who reported that they were no longer on AMP and did not successfully complete the program were more likely to have been enrolled in AMP for less than six months. SoCalGas had the highest percentage of respondents who reported that they were enrolled in AMP for less than six months (12 percent), while PG&E had the lowest (3 percent).

Table VI-2A
Months Enrolled in AMP
By IOU

How many months were you enrolled in AMP?					
Months Enrolled in AMP	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
1-3 Months	1%	5%	5%	7%	4%
4-6 Months	2%	5%	6%	5%	4%
7-10 Months	1%	1%	1%	1%	1%
11+ Months	0%	1%	1%	1%	<1%
Don't Know	5%	5%	6%	6%	5%
Refused	<1%	0%	0%	0%	<1%

How many months were you enrolled in AMP?					
Months Enrolled in AMP	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Successfully Completed ¹	37%	37%	31%	26%	33%
Still on AMP ¹	53%	50%	53%	55%	53%

¹Only respondents who reported that they were no longer on AMP and did not successfully complete AMP were asked this question.

Table VI-2B displays the number of months respondents reported that they were enrolled in AMP, segmented by PIPP participation, AMP completion status, and annual energy bill level. The distribution of enrollment lengths was generally similar across subgroups. However, respondents who did not complete AMP were more likely to have been enrolled for less than six months (ten percent) compared to those who completed the program (four percent).

Table VI-2B
Months Enrolled in AMP
By PIPP Participation, AMP Completion, and Annual Bill

How many months were you enrolled in AMP?						
Months Enrolled in AMP	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
1-3 Months	4%	4%	3%	5%	5%	4%
4-6 Months	4%	4%	1%	5%	4%	4%
7-10 Months	0%	1%	1%	1%	<1%	2%
11+ Months	0%	<1%	0%	1%	<1%	1%
Don't Know	5%	5%	2%	7%	5%	5%
Refused	1%	0%	0%	<1%	<1%	<1%
Successfully Completed ¹	24%	35%	48%	23%	30%	36%
Still on AMP ¹	62%	50%	45%	57%	55%	49%

¹Only respondents who reported that they were no longer on AMP and did not successfully complete AMP were asked this question.

Tables VI-3A and VI-3B display the challenges that prevented respondents from staying on AMP for 12 months. The most common reasons were accidentally missing a payment (84 percent), being unable to pay some energy bills on time (82 percent), being unable to pay the full energy bill (75 percent), and higher other expenses (72 percent). SDG&E customers were more likely than the other IOU customers to report not understanding the rules to stay on AMP.

“Just disappointed that they were quick to cancel the program instead of working with me. The bill was extremely high and on top of that I’m still having difficulty paying the bill.”

Table VI-3A
Challenges Preventing Respondents from Staying on AMP for 12 Months
Percent of Respondents Reporting Aspect Was a Reason they Left AMP
By IOU

Please describe why you left AMP before 12 months on the plan...					
Challenges	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	19	25	33	36	113
Accidentally Missed a Payment	97%	76%	81%	80%	84%
Could Not Pay Some Energy Bills on Time	65%	83%	78%	93%	82%
Unable to Pay the Full Energy Bill	53%	88%	72%	84%	75%
Other Expenses Were Higher	83%	53%	66%	75%	72%
Someone in Home Lost Their Job	79%	25%	50%	48%	52%
Energy Bill Was Higher Because of the Weather	58%	40%	39%	31%	41%
Did Not Understand the Rules to Stay on AMP	33%	38%	53%	29%	34%
More People Living in Home	12%	15%	9%	33%	21%

¹Only respondents who reported that they were no longer on AMP and did not successfully complete AMP were asked these questions.

Table VI-3B shows some differences in challenges that prevented respondents from staying on AMP for 12 months, segmented by PIPP participation, AMP completion status, and annual energy bill level.

- PIPP nonparticipants were more likely than participants to report being unable to pay the full energy bill and having higher other expenses. On the other hand, PIPP participants were more likely to report not understanding the rules to stay on AMP.
- AMP completers were more likely than non-completers to report not being able to pay some energy bills on time and not being able to pay the full energy bill. AMP non-completers were more likely to report that someone in the household lost their job, higher energy bill due to the weather, and that they did not understand the rules to stay on AMP.
- Respondents with higher annual energy bills were more likely than those with lower bills to report accidentally missing a payment, being unable to pay energy bills on time, having higher other expenses, not understanding the AMP rules, and having more people living in the home.

Table VI-3B
Challenges Preventing Respondents from Staying on AMP for 12 Months
Percent of Respondents Reporting Aspect Was a Reason they Left AMP
By PIPP Participation, AMP Completion, and Annual Bill

Please describe why you left AMP before 12 months on the plan...						
Challenges	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents¹	20	93	20	93	66	47
Accidentally Missed a Payment	84%	84%	85%	83%	78%	91%
Could Not Pay Some Energy Bills on Time	81%	81%	93%	82%	76%	88%
Unable to Pay the Full Energy Bill	66%	75%	93%	73%	73%	76%
Other Expenses Were Higher	65%	72%	71%	70%	64%	82%
Someone in Home Lost Their Job	50%	53%	32%	53%	52%	52%
Energy Bill Was Higher Because of Weather	41%	42%	14%	46%	39%	44%
Did Not Understand Rules to Stay on AMP	53%	33%	11%	40%	24%	49%
More People Living in Home	29%	21%	22%	21%	14%	29%

¹Only respondents who reported that they were no longer on AMP and did not successfully complete AMP were asked these questions.

Tables VI-4A and VI-4B display reported AMP re-enrollment rates. Table VI-4A shows that 11 percent of respondents across all IOUs reported re-enrolling in AMP. SDG&E had the highest reported rate of re-enrollment (15 percent) and SCE had the lowest (eight percent).

Table VI-4A
Reported AMP Re-Enrollment
By IOU

Have you ever re-enrolled in AMP after leaving or completing the program?					
Re-Enrolled in AMP After Leaving or Completing 12 Months of Payments	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Yes – When Unable to Complete 12 Mos.	7%	5%	10%	6%	6%
Yes – After Completing 12 Mos.	6%	3%	5%	6%	5%
No	59%	73%	60%	65%	63%
Don't know	23%	14%	21%	19%	20%
Refused	5%	4%	5%	5%	5%

Table VI-4B shows that reported re-enrollment rates were similar across subgroups except AMP completers. Respondents who completed AMP had a higher re-enrollment rate (15 percent) compared to those who did not complete the program (4 percent), suggesting that customers may need more than one chance to successfully complete the program.

“I would like to re-enroll. It is a great option to get bills paid. Thank You!”

Table VI-4B
Reported AMP Re-Enrollment
By PIPP Participation, AMP Completion, and Annual Bill

Have you ever re-enrolled in AMP after leaving or completing the program?						
Re-Enrolled in AMP After Leaving or Completing 12 Months of Payments	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Yes – When Unable to Complete 12 Mos.	8%	6%	8%	1%	6%	6%
Yes – After Completing 12 Mos.	4%	6%	7%	3%	5%	6%
No	57%	64%	60%	76%	62%	65%
Don’t know	23%	20%	20%	17%	21%	19%
Refused	7%	5%	5%	4%	6%	4%

Tables VI-5A and VI-5B display reasons for re-enrolling in AMP. The most common reasons for re-enrolling were still owing a lot (30 percent) and missing some payments (24 percent). SCE respondents were more likely than the other IOU respondents to report still owing a lot and wanting to get back on the program. PG&E respondents were more likely than the other IOU respondents to report unaffordable bills.

Table VI-5A
Reasons for Re-Enrolling in AMP
By IOU

Why did you re-enroll in AMP?					
Reasons for Re-Enrolling in AMP	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	20	15	27	20	82
Still Owed a Lot	27%	67%	19%	26%	30%
Missed Some Payments	14%	25%	37%	31%	24%
Got Into More Debt	19%	0%	16%	15%	15%
Unaffordable Bills	18%	10%	3%	0%	9%
Financial Difficulties	4%	10%	5%	13%	8%

Why did you re-enroll in AMP?					
Reasons for Re-Enrolling in AMP	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Unsure Why Removed but Wanted to Get Back On	0%	1%	7%	6%	3%
Don't Know	8%	0%	3%	5%	6%
Refused	10%	1%	19%	13%	11%

Note: Respondents could select more than one response.

¹Only respondents who reported that they re-enrolled in AMP were asked this question.

Table VI-5B shows that PIPP participants (41 percent) were more likely than nonparticipants (22 percent) to report that they re-enrolled in AMP because they missed some payments, whereas PIPP nonparticipants were more likely to report still owing a lot. Respondents who completed AMP were more likely than non-completers to report that they still owed a lot, have missed some payments, and had gotten into more debt. Respondents with higher annual energy bills (20 percent) were more likely to report unaffordable bills than respondents with lower bills (two percent).

Table VI-5B
Reasons for Re-Enrolling in AMP
By PIPP Participation, AMP Completion, and Annual Bill

Why did you re-enroll in AMP?						
Reasons for Re-Enrolling in AMP	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents¹	17	65	10	72	45	37
Still Owed a Lot	9%	32%	38%	28%	34%	25%
Missed Some Payments	41%	22%	37%	25%	22%	24%
Got Into More Debt	12%	15%	28%	11%	14%	14%
Unaffordable Bills	5%	9%	4%	8%	2%	20%
Financial Difficulties	14%	7%	25%	8%	10%	6%
Unsure Why Removed but Wanted to Get Back On	9%	3%	0%	4%	5%	<1%
Don't Know	0%	6%	0%	6%	1%	14%
Refused	22%	10%	0%	12%	15%	5%

Note: Respondents could select more than one response.

¹Only respondents who reported that they re-enrolled in AMP were asked this question.

Tables VI-6A and VI-6B display reasons for not re-enrolling in AMP. The most common reasons for not re-enrolling were not needing to (29 percent) and not knowing they could re-enroll (28 percent). SoCalGas respondents were more likely than the other IOU respondents to report that they did not need to re-enroll in AMP. SCE respondents were more likely than the other IOU respondents to report that they did not know that they could re-enroll.

Table VI-6A
Reasons for Not Re-Enrolling in AMP
By IOU

Why didn't you re-enroll in AMP?					
Reasons for Not Re-Enrolling in AMP	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents¹	113	140	121	119	493
Did Not Need It	24%	29%	22%	34%	29%
Did Not Know They Could	35%	41%	32%	13%	28%
Can't Pay Full Amount/Can't Pay on Time	8%	12%	11%	9%	9%
Did Not Understand the Requirements	3%	4%	8%	7%	5%
Ineligible	8%	6%	5%	2%	5%
It was Too Difficult	2%	3%	6%	6%	4%
Moved	4%	1%	<1%	0%	2%
Don't Know	20%	14%	22%	32%	23%
Refused	3%	2%	5%	3%	3%

Note: Respondents could select more than one response.

¹Only respondents who reported that they did not re-enroll in AMP were asked this question.

Tables VI-6B shows that PIPP participants and respondents with lower bills were more likely to report not knowing they could re-enroll as their reason for not re-enrolling than their counterparts. AMP completers and respondents with higher bills were more likely to report not needing to re-enroll than their counterparts.

Table VI-6B
Reasons for Not Re-Enrolling in AMP
By PIPP Participation, AMP Completion, and Annual Bill

Why didn't you re-enroll in AMP?						
Reasons for Not Re-Enrolling in AMP	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents¹	84	409	211	282	285	208
Did Not Need It	26%	29%	44%	23%	24%	36%

Why didn't you re-enroll in AMP?						
Reasons for Not Re-Enrolling in AMP	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Did Not Know They Could	38%	27%	22%	30%	35%	19%
Can't Pay Full Amount/Can't Pay on Time	7%	10%	4%	11%	8%	12%
Did Not Understand the Requirements	3%	5%	5%	5%	4%	7%
Ineligible	7%	5%	3%	6%	5%	5%
It was Too Difficult	3%	4%	1%	6%	5%	3%
Moved	1%	2%	0%	2%	3%	0%
Don't Know	20%	24%	24%	23%	25%	21%
Refused	2%	3%	3%	3%	3%	4%

Note: Respondents could select more than one response.

¹Only respondents who reported that they did not re-enroll in AMP were asked this question.

Tables VI-7A and VI-7B display respondents' recommendations for AMP. The most common recommendations were to improve communication explaining the program rules (eight percent) and increased payment flexibility (six percent).

"It's a good program, but we wouldn't need it if the rates weren't so high."

Table VI-7A
Recommendations for AMP
By IOU

How do you think AMP can be changed to help customers more?					
AMP Recommendations	Investor-Owned Utility				All IOUs
	PG&E	SCE	SDG&E	SoCalGas	
Respondents	184	187	200	189	760
Improved Explanation of Program Rules	10%	8%	11%	5%	8%
Increased Payment Flexibility	5%	4%	7%	7%	6%
Lower Rates	4%	3%	2%	3%	3%
Allowing More Time to Pay	2%	0%	4%	1%	2%
Improve Re-Enrollment Information and Process	<1%	1%	2%	1%	1%
Home Checks	0%	0%	1%	1%	<1%
Make Application Process Easier	0%	<1%	1%	0%	<1%
Additional Payment Assistance Programs	0%	1%	1%	1%	<1%
No Recommendations	76%	82%	73%	77%	77%
Don't Know	4%	2%	0%	2%	2%
Refused	9%	6%	11%	13%	10%

Note: Respondents could select more than one response.

Table VI-7B shows that PIPP participants (seven percent) were more likely to recommend lower rates than PIPP nonparticipants (three percent). AMP non-completers and respondents with lower annual energy bills are more likely to recommend increased payment flexibility than their counterparts.

Table VI-7B
Recommendations for AMP
By PIPP Participation, AMP Completion, and Annual Bill

How do you think AMP can be changed to help customers more?						
AMP Recommendations	PIPP Participation		AMP Completion		Annual Energy Bill	
	PIPP	Not PIPP	AMP Completed	AMP Not Completed	Lower Bills	Higher Bills
Respondents	146	614	284	476	448	312
Improved Explanation of Program Rules	7%	8%	8%	7%	6%	10%
Increased Payment Flexibility	6%	6%	2%	8%	7%	3%
Lower Rates	7%	3%	5%	3%	3%	3%
Allowing More Time to Pay	2%	2%	1%	2%	1%	2%
Improve Re-Enrollment Information and Process	1%	1%	2%	<1%	1%	<1%
Home Checks	0%	<1%	0%	<1%	<1%	<1%
Make Application Process Easier	0%	<1%	<1%	<1%	<1%	<1%
Additional Payment Assistance Programs	1%	<1%	<1%	1%	<1%	1%
No Recommendations	75%	77%	82%	75%	78%	76%
Don't Know	0%	3%	<1%	3%	3%	2%
Refused	10%	10%	10%	10%	10%	11%

Note: Respondents could select more than one response.

Participants were asked if there was anything else they wanted the utility to know about their experience in AMP. About twenty percent of the respondents provided a comment. Many of the participants had positive remarks about the impact that AMP had on their families. Some of these responses are summarized below by type of response in the participants' words.

Positive Comments

- **Gratitude**
 - I just want to thank PG&E for the opportunity to catch up and get my bill down.
 - I want you to know this program saved me from going without and I truly from the bottom of my heart appreciate it. Thank you so much. I am forever grateful.
 - It was a relief that it was so easy to apply, and you received an immediate answer.
 - Keep up the good work. Thank you for allowing me to get back on track and up to date with my monthly payments. GOD BLESS ALL FOR HELPING.

- **Helped with worries about disconnection**

- I'd like to thank SCE for having a program like AMP. People sometimes fall on hard times and are unable to pay their bills on time and need a helping hand. A lot of companies don't understand that and choose to disconnect your service instead of trying to work with the individual.
- If it wasn't for this program, I honestly don't know how my children and I would be able to have electricity. Life is financially hard, and I am thankful for all the help I can get. So, with great respect, THANK YOU!!!
- As a single mom, it was really helpful to not worry about disconnection.
- I appreciate you having this program. It really helps out families and ensures they can keep the lights on.
- Thank you so much for this great opportunity to pay & keep the service without worrying about disconnection.

- **Improved finances**

- I was very grateful to be introduced to this program. I was able to pay the debt, and they helped me out by lowering the bill while I was enrolled in this program. It was a very nice program.
- Thank you one & all for this program! In a large way the AMP enrollment is the single most substantial month to month blessing that has allowed me to better pay off my credit debt. Interest alone besides the principal add up really fast.
- Thank you so much for helping me by waiving the \$900 bill and putting me on a 20% discount. It helped me a lot.
- It helped me get caught up on my bill and changed my mindset about paying the bill on time.

- **Reduced stress**

- Thank you so much for all your help. As a senior citizen I am on a limited income and don't have the ability to come up with extra money each month. My stress level was very high until I received your help.
- It helped me to stay current and reduced my stress levels, ultimately leading to a better outcome for my family.
- It was very easy to enroll. It took a lot of stress off me to get this assistance. It was nice to get updates and emails regarding payments and updates.

- **Other**

- I was very pleased since the program helped me climb out of a hole I dug for being unable to pay. I wish I knew about it sooner.
- I had a great experience; I was just not aware you'll be taken off if you made a payment late.
- It seems like a great program to help people that need assistance. I just wish I knew it sooner
- I would like to re-enroll. It is a great option to get bills paid. Thank You!
- The PIPP program is the only reason I was able to be successful on the SoCalGas AMP.

Negative Comments

- **Strict program rules**
 - If you miss one or two payments, they say you can't be on the payment plan and how is a person supposed to pay it off when they tell you to pay a certain amount. That's a lot to pay.
 - It wasn't a very good experience. The program was too strict on payments due, although I made up for payments due later on.
 - It helped me, but sometimes I couldn't pay on time and that's why they discontinued helping me with my bill, over the 3 missed payments.
 - Make it easier to reapply if there is a valid reason why a payment was missed.
 - Just disappointed that they were quick to cancel the program instead of working with me. The bill was extremely high and on top of that I'm still having difficulty paying the bill.
- **Request for better communication**
 - When I was taken off the AMP program early, it was a process to get put back on even though I was making my payments on-time as agreed. There needs to be better communication, and the program needs to be able to account for a negative balance when energy credits are applied to the account.
 - It was highly stressful, and I couldn't continue due to miscommunication and financial distress.
 - They take you off without notice, contradicting themselves on a previous letter that you are doing good with payment.
- **Lower rates**
 - Lower the energy rates! They are the exorbitant and most are unable to pay, hence the reason you have to create this ineffective program!
 - It's a good program, but we wouldn't need it if the rates weren't so high.
- **Other issues**
 - There are a lot of flaws in the program. At first it gave me a lot of relief because I thought I was getting help. But it ended up causing me so much grief it wasn't worth it!
 - Please better assist customers that are disabled and are on fixed income.
 - Very bad experience. SDGE made my life the worst when they took money that was supposed to be for my rent. I paid all my bills on time and never got the debt forgiven.

VII. Summary of Findings and Recommendations

This section provides a summary of findings and recommendations from the AMP survey with 760 participants in March and April 2025.

Participant Characteristics

The survey collected information on the characteristics of the participants and their homes.

- **Energy-Related Needs:** More than half of the respondents reported that they had additional energy-related needs in their households. The most common additional needs were elderly members (25 percent) and medical conditions (24 percent). Customers with higher bills were

more likely to report that there were energy needs related to an elderly household member or an infant.

- Annual Household Income: Ten percent of respondents reported an income less than \$10,000, 42 percent reported household incomes between \$10,000 and \$40,000, and 26 percent of respondents reported an income more than \$40,000. Customers who completed AMP were more likely to report income over \$60,000 (12 percent) than customers who did not complete AMP (five percent).
- Poverty Level: Across all respondents, 15 percent reported income below 50 percent of the FPL, and eight percent reported income above 200 percent of the FPL. PIPP participants were more likely than nonparticipants to have income below the FPL.

AMP Information Source and Reason for Participation

The survey collected data on the AMP information source and motivation for participation in AMP.

- Information Source: The most common source of information was calling in to the IOU, followed by the IOU website.
- Reasons for Enrolling: Respondents were most likely to state that they enrolled to reduce arrearages, because of low or fixed incomes, or to reduce the chance of disconnection. SoCalGas customers were least likely to report that they joined AMP to reduce arrearages, which is consistent with the lower arrearages seen among these customers. SDG&E customers were more likely than the other IOU customers to report that they joined AMP because of their low or fixed income. Customers with lower energy bills were more likely than customers with higher energy bills to report that they enrolled because of a low or fixed income.

AMP Understanding

Respondents were asked several questions about their understanding of AMP. These are the customers' perceptions of their understanding of the program.

- AMP Application: Most respondents felt they understood how to apply for AMP, with 77 percent saying they understood very or somewhat well.
- Amount of Arrearages Reduced by AMP: Participant understanding of the amount of arrearages reduced by AMP was relatively high, with 77 percent of respondents reporting they understood the amount very or somewhat well.
- Rules to Remain on AMP: Approximately, 83 percent of respondents reported that they understood the rules to remain on AMP very or somewhat well.
- AMP Length: Seventy-two percent of respondents reported that they understood very or somewhat well how long they can remain on AMP.

- **Missing or Incomplete Payments:** Approximately 79 to 83 percent of respondents reported that they understand the consequences of missing or incomplete payments while on AMP very or somewhat well.
- **Rules About Re-Enrolling in AMP:** Sixty-five percent of respondents reported understanding the rules for AMP re-enrollment very or somewhat well.
- **Differences in AMP Understanding across IOUs:** Based on responses to several questions about AMP understanding, SCE customers were most likely to understand AMP rules and SDG&E and PG&E customers were less likely to understand AMP rules.
- **Differences in AMP Understanding by AMP Completion:** Customers who completed AMP reported a greater understanding of AMP rules than those who did not complete AMP.
- **Receipt of IOU Encouragement:** Forty-five percent reported that they received an AMP encouragement letter from the IOU, ranging from 30 percent for SDG&E respondents to 54 percent for SoCalGas respondents. Successful AMP completers and were more likely than non-completers to report receipt of the letter.
- **Awareness of COVID Disconnection Moratorium:** Overall, 42 percent of respondents reported that they were aware that IOUs were not allowed to disconnect their services during the COVID period. SoCalGas respondents had much higher awareness than all other IOUs, and customers with higher bills had greater awareness than customers with lower bills.

Recommendation: Because SCE participants reported the greatest understanding of AMP rules, the other IOUs should review SCE’s AMP materials and education efforts and assess whether there are any best practices that they can incorporate in their outreach efforts.

Energy Bill Payment

The survey collected information on participants’ reported energy bill payment behavior prior to and post AMP participation.

- **Incomplete Payments:** Across all IOUs, the percentage of respondents who reported that they never made an incomplete payment increased from seven percent before AMP to 41 percent after AMP.
- **Missed Payments:** The percentage of respondents who reported never missing a payment increased from eight percent before AMP to 51 percent after.
- **Late Payment Notices:** The percent of respondents who reported that they received no late payment notices increased from ten percent before AMP to 53 percent after AMP.
- **Disconnection Notices:** Across all IOUs, the share of respondents who reported that they never received a disconnection notice increased from 21 percent before AMP to 58 percent after AMP.

- **Challenges:** Overall, 40 percent of respondents reported difficulty paying energy bills on time, and 46 percent reported difficulty paying energy bills in full while enrolled in AMP. SoCalGas customers were more likely than the other IOUs to report both issues. PIPP nonparticipants were more likely than PIPP participants and AMP non-completers were more likely than AMP completers to report these issues.

Recommendation: A large percentage of AMP participants reported that they faced challenges paying their bills when enrolled in AMP, and AMP non-completers reported lower income levels than AMP completers. While AMP can reduce bill payment challenges by removing payments related to arrearages, it does not reduce bills for current energy usage. Future assessment of program design should consider joint implementation of bill payment assistance (such as PIPP) and arrearage forgiveness programs.

AMP Experience

Respondents were asked several questions about their experiences with AMP.

- **Challenges Preventing AMP Completion:** The most common reasons cited by respondents for leaving AMP before 12 months on the program were accidentally missing a payment, being unable to pay some energy bills on time, being unable to pay the full energy bill, and higher other expenses.
- **AMP Re-Enrollment:** Eleven percent of respondents across all IOUs reported re-enrolling in AMP. SDG&E had the highest reported rate of re-enrollment and SCE had the lowest. AMP completers (15 percent) were more likely to report re-enrollment than AMP non-completers (four percent), suggesting that customers may need more than one chance to successfully complete the program.
- **Reasons for Not Re-Enrolling in AMP:** The most common reasons reported for not re-enrolling were not needing to (29 percent) and not knowing they could re-enroll (28 percent). SoCalGas respondents were more likely than the other IOU respondents to report that they did not need to re-enroll in AMP. SCE respondents were more likely than the other IOU respondents to report that they did not know that they could re-enroll.
- **Recommendations for AMP:** The most common recommendations made by participants were to improve the explanation of AMP rules (eight percent) and improved payment flexibility (six percent). AMP non-completers were more likely than AMP completers to recommend increased payment flexibility.

Recommendation: To support successful program completion, IOUs should consider introducing payment reminder tools such as automated texts, emails, or app notifications, to help participants improve payment behavior. Additionally, future program changes that allow for greater flexibility in making up missed payments may result in higher AMP success rates.

Appendix – Response Rate Calculation

The Response Rate excludes ineligible populations from the sample and includes an estimate of the proportion of cases of unknown eligibility that are eligible. This estimate is based on the proportion of eligible respondents in the sample for whom a definitive determination of status was obtained.

$$RR = I / (I + P) + (R + NC + O) + e(UH + UR + UO)$$

I = Complete interview

P = Partial interview

R = Refusal and break-off

NC = Non-contact

O = Other

UH = Unknown if household/occupied HU

UR = Unknown if sampled unit is eligible/housing unit contains an eligible respondent

UO = Unknown, other

e = Estimated proportion of cases of unknown eligibility that are eligible

L. IOU AMP Reporting

Table L-1
AMP Success Metrics from PG&E Annual Report¹

Metric	PG&E			
	2021 ²	2022	2023	2024
Number of New Customers Enrollments	111,255	103,824	170,706	118,454
Number of Active Customers	76,674	77,592	102,656	69,803
Cumulative Customer Success Rate in AMP	N/A	10%	13%	19%
Cumulative Percent of Customers Who Successfully Completed AMP and Made On-Time Payments for Next 6-Months	N/A	51%	57%	42%
Cumulative Percent of Customers Who Successfully Completed AMP and Accrued New Arrears in Next 6-Months	N/A	49%	43%	58%

¹AMP Information used to make this table comes from PG&E's Annual AMP report filed on May 1st, 2025: [R.18-07-005 PG&E AMP Annual Report, May 1, 2025](#)

²AMP was established on February 1, 2021 and no customers were able to complete all 12-months of payments within 2021.

Table L-2
AMP Removal Metrics from PG&E Annual Report¹

Metric	PG&E			
	2021	2022 ²	2023 ³	2024
Number of Customers Removed from AMP	34,581	57,184	111,577	102,379
Voluntary Removal	2,497	5,153	7,148	6,328
Involuntary Removal	32,084	52,031	104,429	95,842
Cumulative Percent of AMP Customers who were Removed from AMP Due to Missed Payments (Involuntary Removal)	29%	61%	61%	81%

¹AMP Information used to make this table comes from PG&E's Annual AMP report filed on May 1st, 2025: [R.18-07-005 PG&E AMP Annual Report, May 1, 2025](#)

²There were 22,920 customers unenrolled due to CAPP funds satisfying their AMP enrollment.

³There were 223 customers unenrolled due to CAPP funds satisfying their AMP enrollment.

Table L-3
AMP Success Metrics from SCE Annual Report¹

Metric	SCE			
	2021 ²	2022	2023	2024
Number of New Customers Enrollments	43,418	34,637	66,292	81,138
Number of Active Customers	21,119	23,841	54,015	60,382
Cumulative Customer Success Rate in AMP ³	N/A	6%	11%	21%
Cumulative Percent of Customers Who Successfully Completed AMP and Made On-Time Payments for Next 6-Months	N/A	67%	22%	25%
Cumulative Percent of Customers Who Successfully Completed AMP and Accrued New Arrears in Next 6-Months	N/A	33%	78%	75%

¹AMP Information used to make this table comes from SCE's Annual AMP report filed on April 30, 2025: [R1807005-SCE Annual Disconnection Cap Status Report and AMP Report](#)

²AMP was established on February 1, 2021 and no customers were able to complete all 12-months of payments within 2021.

³Calculation reflects taking cumulative completed count of customers by the total cumulative count of new enrollments less the current count of active customers.

Table L-4
AMP Removal Metrics from SCE Annual Report¹

Metric	SCE			
	2021	2022	2023	2024
Number of Customers Removed from AMP	22,299	28,480	29,828	49,508
Voluntary Removal	1,108	6,470	3,932	3,943
Involuntary Removal	21,191	22,010	25,896	45,565
Cumulative Percent of AMP Customers who were Removed from AMP Due to Missed Payments (Involuntary Removal)	49%	55%	46%	44%

¹AMP Information used to make this table comes from SCE's Annual AMP report filed on April 30, 2025: [R1807005-SCE Annual Disconnection Cap Status Report and AMP Report](#)

Table L-5
AMP Success Metrics from SDG&E Annual Report¹

Metric	SDG&E			
	2021 ²	2022	2023	2024
Number of New Customers Enrollments	15,486	18,931	31,135	30,847
Number of Active Customers	8,210	9,257	18,472	20,230
Cumulative Customer Success Rate in AMP	N/A	16%	16%	22%
Cumulative Percent of Customers Who Successfully Completed AMP and Made On-Time Payments for Next 6-Months	N/A	71%	68%	57%
Cumulative Percent of Customers Who Successfully Completed AMP and Accrued New Arrears in Next 6-Months	N/A	29%	32%	43%

¹AMP Information used to make this table comes from SDG&E's Annual AMP report filed on May 1st, 2025: [Microsoft Word - R.18-07-005 SDGE Disconnection Cap AMP Report.docx](#)

²AMP was established on February 1, 2021 and no customers were able to complete all 12-months of payments within 2021.

Table L-6
AMP Removal Metrics from SDG&E Annual Report

Metric	SDG&E			
	2021	2022	2023	2024
Number of Customers Removed from AMP	7,276	18,932	12,370	20,095
Voluntary Removal	1,383	1,379	1,240	3,431
Involuntary Removal	5,893	17,553	11,130	16,664
Cumulative Percent of AMP Customers who were Removed from AMP Due to Missed Payments (Involuntary Removal)	38%	68%	53%	53%

¹AMP Information used to make this table comes from SDG&E's Annual AMP report filed on May 1st, 2025: [Microsoft Word - R.18-07-005 SDGE Disconnection Cap AMP Report.docx](#)

Table L-7
AMP Success Metrics from SoCalGas Annual Report¹

Metric	SoCalGas			
	2021 ²	2022	2023	2024
Number of New Customers Enrollments	62,441	54,358	148,177	121,867
Number of Active Customers	40,649	27,797	112,084	82,373
Cumulative Customer Success Rate in AMP	N/A	30%	24%	29%
Cumulative Percent of Customers Who Successfully Completed AMP and Made On-Time Payments for Next 6-Months	N/A	75%	79%	85%
Cumulative Percent of Customers Who Successfully Completed AMP and Accrued New Arrears in Next 6-Months	N/A	56%	51%	45%

¹AMP Information used to make this table comes from SoCalGas' Annual AMP report filed on May 1st, 2025: [Microsoft Word - R.18-07-005 SCG Annual AMP Report and Annual Disconnection Cap Report - 2025.05.01 Final](#)

²AMP was established on February 1, 2021 and no customers were able to complete all 12-months of payments within 2021.

Table L-8
AMP Removal Metrics from SoCalGas Annual Report

Metric	SoCalGas			
	2021	2022	2023	2024
Number of Customers Removed from AMP	22,119	40,588	53,773	98,627
Voluntary Removal	1,993	4,688	5,426	7,872
Involuntary Removal	20,126	35,900	48,527	90,755
Cumulative Percent of AMP Customers who were Removed from AMP Due to Missed Payments (Involuntary Removal)	32%	48%	40%	51%

¹AMP Information used to make this table comes from SoCalGas' Annual AMP report filed on May 1st, 2025: [Microsoft Word - R.18-07-005 SCG Annual AMP Report and Annual Disconnection Cap Report - 2025.05.01 Final](#)