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Customer and Utility Benefits of Energy Affordability Programs

Synapse Energy Economics for National Consumer Law Center

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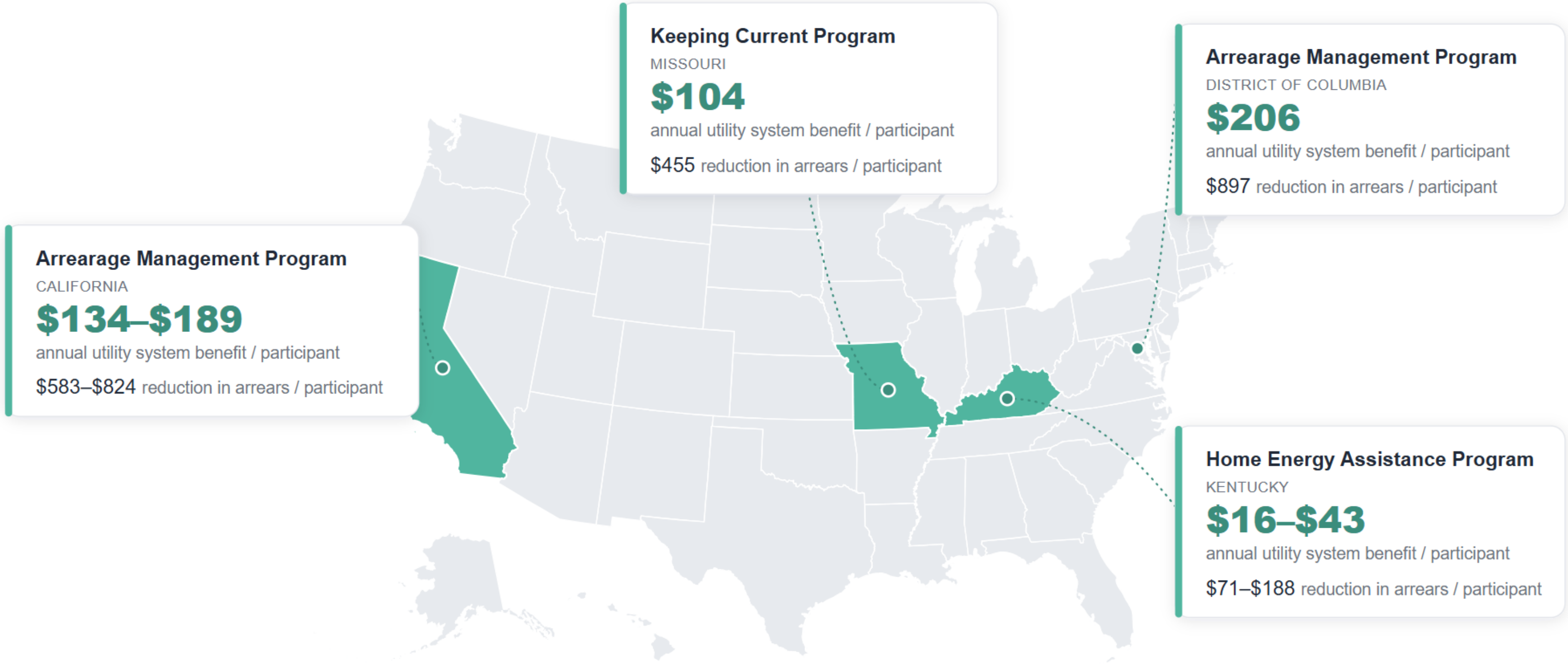
Executive Summary

Energy affordability programs, such as discount rates and arrearage management plans, provide benefits not only to participants but also to all utility customers, through reduced bad debt, avoided financing costs, and fewer collection actions. However, these savings are often not factored into cost estimates of energy affordability programs or fully quantified in program evaluations.

The cost savings associated with reduced bad debt and avoided financing costs are estimated as about 20 percent of the reduction in customers' past-due balances resulting from the affordability program.

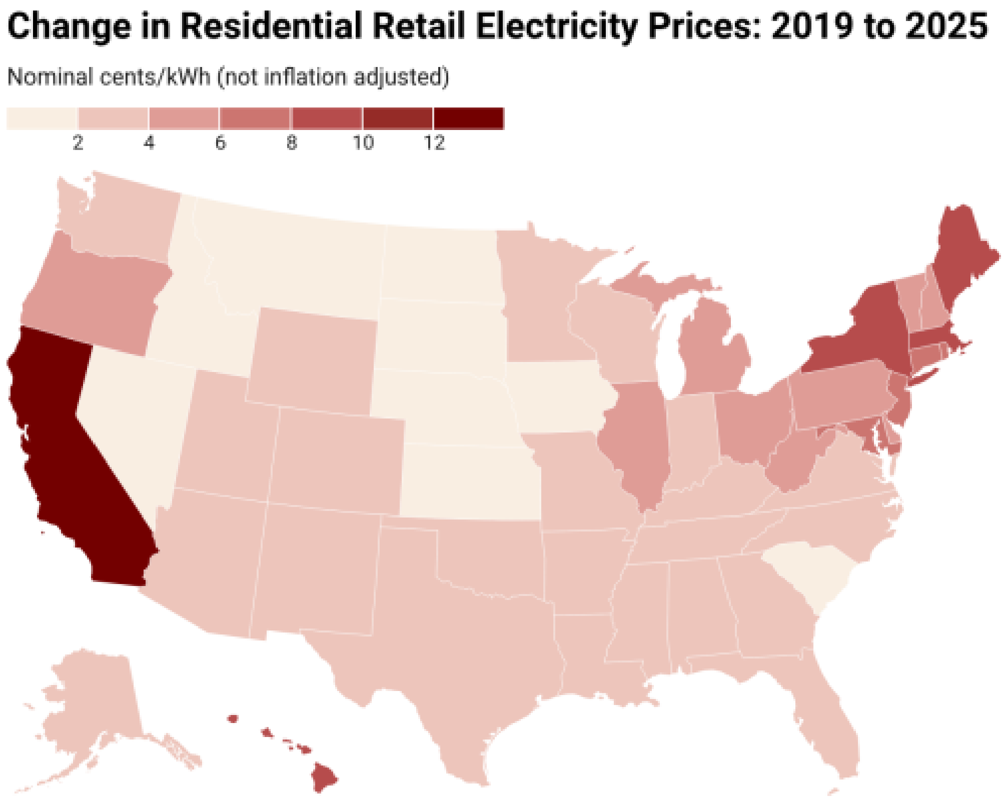


Electric utility customers are facing increasing affordability pressures

Residential electricity prices have been increasing.

Customers in California and the Northeast have experienced the greatest price increases.

Energy burden (the percentage of income spent on energy bills) is higher among low-income households and communities of color. (ACEEE, 2024)



Source: Lawrence Berkeley National Laboratory, 2026

Electric utility customers are facing increasing affordability pressures

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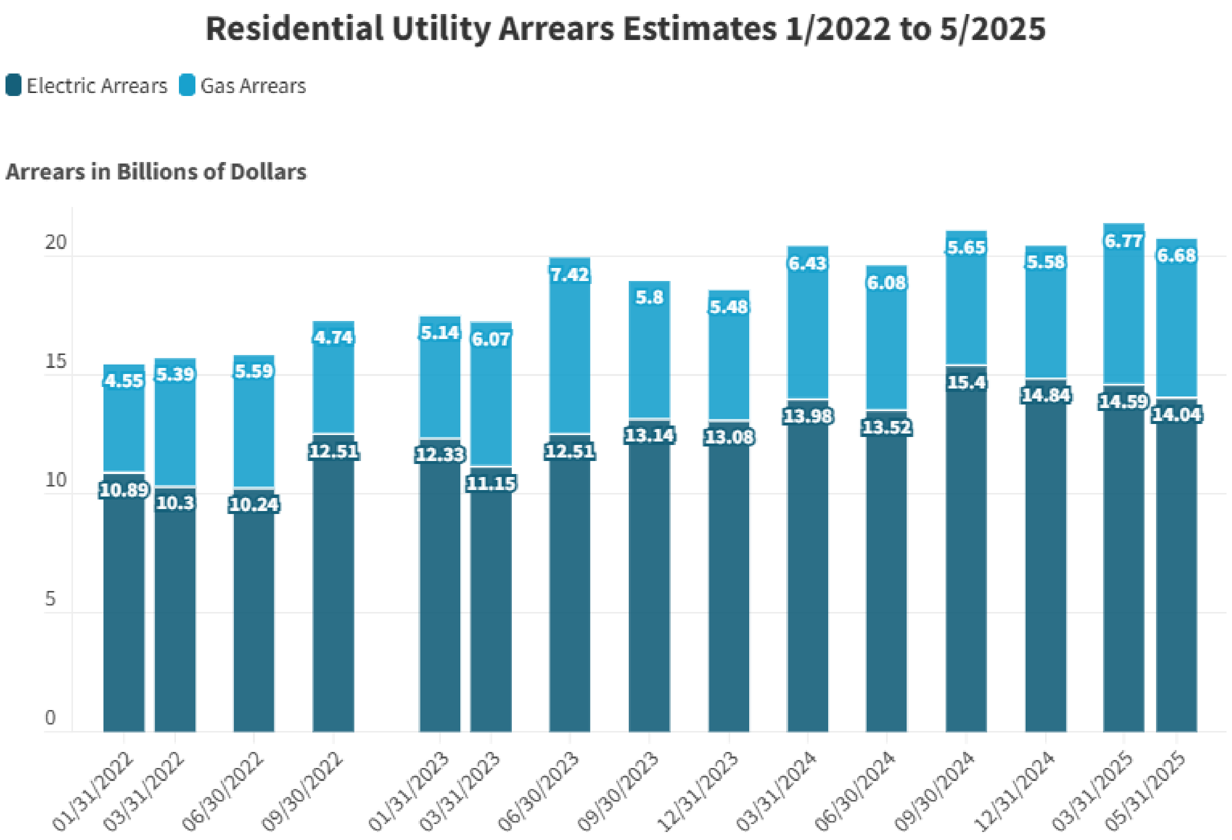
High utility bills are causing increases in utility debt and shutoffs.

Outstanding electric utility debt increased from approximately $10.89 billion in January 2022 to $14.4 billion in May 2025.

In 2024, electric utilities sent 94.9 million final notices to residential customers and disconnected residential customers 13.4 million times. (EIA, 2026)



Source: National Energy Assistance Directors Association, 2026

Unaffordable utility bills impact all utility customers

When some utility customers cannot pay their bills and accrue debt (arrears), the following costs are recovered from all customers:

1. **Uncollectible expense:** the amount that the utility cannot recover from customers in arrears and is written off as bad debt;
2. **Carrying costs:** the costs the utility incurs to finance the gap in cash flow resulting from unpaid bills;
3. **Collections costs:** the operational costs of the utility's debt collection efforts (e.g., staffing, notices, field visits, disconnections, reconnections).

When utility bills are affordable and customers accrue less debt, the utility incurs lower costs, and ratepayers benefit from the resulting cost savings. **However, these savings are often not factored into cost estimates of bill assistance and other energy affordability programs.**

Expanding energy affordability programs, such as discount rates and arrearage management plans, can provide meaningful immediate relief for low-income households, while also benefitting other utility customers by reducing utility costs associated with high levels of arrears.

Benefits of Discount Rates

Benefits of Discount Rates

Discount rates directly reduce the amount that qualified low-income customers pay for energy each month. There are three primary types of discount rates:

1. **Flat discount rates**, which provide the same percentage discount to all income-qualified customers;
2. **Tiered discount rates**, which divides income-qualified customers into different income tiers, and provide greater percentage discounts to customers in lower income tiers;
3. **Percentage of Income Payment Plans (PIPP),** which limit each participant's utility bill payments to a specific percentage of their income.

By making utility bills more affordable, discount rates can help prevent customers from falling behind on their bills, thereby reducing customer arrears and the need for utility collection activities.

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New Jersey's Universal Service Fund (USF) improves energy affordability with limited impacts on non-participants

New Jersey's Universal Service Fund (USF) provides bill discounts based on household income and energy costs, capping annual electricity and natural gas bills at 2% of income, or 4% for households using electricity for heating.

Benefits for participants

Brattle's 2024 assessment found that USF reduced electricity and gas energy burden to target levels for 90% of participating households and is highly effective at achieving the program's affordability targets.

Bill reductions

The discount received by participants was a maximum benefit of $185 per month.

Reduction in energy burden

USF reduced median total energy burden from 6.9% to 3.3%, including reducing median electricity burden from 4.2% to 2.0%.

Benefits for utilities and non-participants

Brattle found that even substantial increases in program participation would result in relatively modest bill impacts for the average New Jersey household.

Limited bill impact on non-participants

Brattle estimates that even if USF participation increased from 20% to 100% of eligible households, the average New Jersey household's USF contribution would not exceed 3.5% of its average energy bill.

Source: The Brattle Group, 2024.

Kentucky's Home Energy Assistance (HEA) program reduces energy burden, arrearages, and collection actions

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Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU) offer a Home Energy Assistance (HEA) program that provide fixed monthly credits to qualified low-income households.

Benefits for participants

HEA participants benefit from lower energy burden.

Reduction in energy burden

LG&E customers participating in HEA saw an average decline in energy burden of approximately 8 percentage points, while customers saw an average decline of approximately 3 percentage points, with lower income customers seeing greater energy burden reductions.

Benefits for utilities and non-participants

The HEA program helped reduce customer arrears as well as collection costs.

Arrearage balance reductions

The average net decrease in arrearage balance per year was $143-$188 for LG&E customers and $71-$110 for KU customers.

Reduction in shutoffs

LG&E customers participating in HEA had an 18 percentage points reduction in shutoffs, and KU customers had a 10 percentage points reduction.

Source: APPRISE, 2014.

Pennsylvania's Customer Assistance Programs (CAPs) improve energy affordability and bill payment performance

The Pennsylvania Public Utility Commission (PUC) implemented Customer Assistance Programs (CAPs) in 1990 to provide affordable utility bills based on a set energy burden standard. CAPs includes bill discounts, percentage-of-income payment plans, and debt forgiveness for eligible low-income customers.

Benefits for participants

CAPs benefits participants by improving the percentage of bills paid and timeliness and ease of payment.

Ease and timeliness of payment

Across Pennsylvania CAPs between 2012 and 2020, participants reported greater ease in paying their utility bills after enrollment. The number of program participants who reported that it was "very easy" or "somewhat easy" to make bill payments increased by 35 and 44 percent, respectively.

Benefits for utilities and non-participants

CAPs benefits nonparticipants by improving collection rates and increasing streams of revenue to the utility.

Increased percent of bills paid

Across Pennsylvania CAPs between 2012 and 2020, participants increased their bill payment coverage ratios from pre-enrollment levels of 60–85% to 91–123 percent during program participation, with improvements of 15–39 percentage points depending on the utility.

Source: Fisher Sheehan and Colton, Public Finance & General Economics, 2024.

Colorado's Percentage of Income Payment Plan (PIPP) increases the ease of payment utility bills and delivers non-energy benefits

Colorado requires electric and utilities to offer PIPPs, which provide bill and arrearage credits to income-qualified customers so that the cost of energy does not exceed an affordable percentage of participants income.

Benefits for participants

The PIPP benefits participants by reducing bills and providing non-energy benefits.

Participant non-energy benefits	85 percent of Black Hills Electric customers and 70 percent of Public Service Electric customers agreed that the program improved home comfort. 86 percent and 75 percent agreed that it was easier to pay other expenses.
Reduction in bills	Black Hills Electric provided a total of \$3.7 million in fixed bill credits and Public Service Electric provided a total of \$25.9 million in bill credits across the 2019-2022 program years.

Benefits for utilities and non-participants

The PIPP benefits non-participants by making it easier for participants to pay and remain current on utility bills.

Increase in bill payment	93 percent of surveyed participants reported that they felt the PIPP makes it easier to pay their monthly utility bills.

Source: Colorado Energy Office, 2024.

New York’s Energy Affordability Program (EAP) reduces customer arrears

The PSC established New York’s EAP in 2016, which provides income-eligible households with monthly discounts on their utility bills to keep household energy burdens at or below 6 percent of income.

Benefits for participants

The EAP benefits participants by reducing arrearages

Reduced arrearages

From 2020 – 2022, total arrearages for low-income customers enrolled in EAP increased by 50 percent, compared to 89 percent for customers not enrolled in EAP.

Benefits for utilities and non-participants

The EAP benefits non-participants by reducing costs of providing arrears relief.

Reduction in arrears relief costs

Analysis estimated that the EAP avoided $89 million in costs to residential ratepayers from providing arrears relief.

Source: Public Utility Law Project of New York, 2025.

Benefits of Arrearage Management Plans (AMPs)

Benefits of arrearage management plans (AMPs)

AMPs are designed to help customers reduce or eliminate utility debt. AMP participants are usually placed in a payment plan, under which a portion of their past due balances are forgiven for every on-time payment.

- Many AMPs forgive one-twelfth of participants' arrearages for each bill paid on time, meaning that participants can eliminate their debt after one year of successful participation.
- Some AMPs are combined with discount rates and/or include disconnection protections.

By enabling customers to lower their utility debt, AMPs directly reduce the costs associated with arrears (uncollectible expense, financing, collection costs) and support customers' ability to make timely bill payments.

California's AMP reduces debt, shutoffs while increasing payments

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California's AMP provides arrearage forgiveness up to $8,000 for eligible low-income customers who make on-time bill payments.

Benefits for participants

The AMP benefits participants by reducing arrearage balances and disconnections

Reduction in arrearage balance

Participants received an average arrearage forgiveness amount of $537 (2022 enrollees) and $876 for 2023 enrollees.

Reduction in disconnections

Estimated that AMP participants were 2 to 3 percentage points less likely to experience disconnection in the year after AMP enrollment.

Benefits for utilities and non-participants

The AMP benefits non-participants by improving the timeliness and amount of bills paid

Increase in on-time bill payment

AMP participants increased the number of on-time payments by 4.1-4.5 payments in the year after AMP enrollment.

Increase in percent of bill paid

2022 AMP enrollees increased the percent of bills paid by 14 percentage points in the 12 months after AMP enrollment, and 8 percentage points 13 to 24 months after AMP enrollment.

Source: APPRISE, 2025.

Pepco's AMP reduces debt while increasing payments

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In D.C., Pepco's AMP provides arrearage cancelation for eligible low-income customers enrolled in the Residential Aid Discount program who make on-time bill payments.

Benefits for participants

The AMP benefits participants by reducing arrearage balances

Reduction in arrearage balance

The average participant reduced their arrears by $897 (63%) after 12 months.

Benefits for utilities and non-participants

The AMP benefits non-participants by improving the timeliness and amount of bills paid

Increase in on-time bill payment

83% of surveyed participants reported that they felt it is now easier to pay their monthly bills and 90% reported that they make a greater effort now to pay their bills than before they participated in AMP.

Increase in percent of bill paid

Bill coverage rates increased by 16 percentage points compared to the comparison group.

Source: APPRISE, 2025

Missouri's Keeping Current program improves bill affordability and provides broader ratepayer benefits

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Ameren Missouri's Keeping Current program provides monthly bill discounts and arrearage reduction for customers who consistently make their bill payments.

Benefits for participants

A 2019 evaluation found that participants benefited from improved energy affordability and reduced energy burden.

Bill reductions

The Keeping Current program provided total average bill credits of $642 for electric heat participants and $285 for participants using alternative heat.

Reduction in energy burden

Electric Heat participants' average energy burden declined from 27% before enrollment to 22% after enrollment, while Alternative Heat participants experienced a mean energy burden decline from 22% to 19 percent.

Benefits for utilities and non-participants

The evaluation found that Keeping Current improved bill payment consistency and reduced utility disconnections.

Reduction in service terminations

In March 2019, the percentage of participants with service terminations declined by 24 points for Electric Heat participants, while Alternative Heat participants saw an increase of 6 points.

Increased bill payments

The percentage of Electric Heat participants paying at least 90 percent of their full bill rose from 56 percent before enrollment to 68 percent afterward, an increase of 12 percentage points. Additionally, Alternative Heat participants increased from 43 percent paying their full bill prior to enrollment to 70 percent afterward.

Source: APPRISE. 2019.

Monetized Utility System Benefits of Affordability Programs

Few states have estimated the monetized benefits of affordability programs

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- The program evaluations reviewed do not include a quantification of utility system and customer savings resulting from reduced arrears and collection actions, while relevant metrics are reported inconsistently:
  - 0 out of 8 programs have quantified the monetary value of utility system benefits;
  - 6 out of 8 programs have reported data related to participant payment behavior;
  - 6 out of 8 programs have reported data related to the reductions of arrearages;
  - 4 out of 8 programs have reported data related to collection actions experienced by program participants.
- The reported metrics are not consistent between programs.
- Better data collection is necessary to enable estimates of the benefits of affordability programs.

Few states have estimated the monetized benefits of affordability programs

Program	Data on Participant Payment Behavior?	Data on Arrearage Reductions?	Data on Collection Action Reductions?	Data on Utility System Benefits?
Discount Rates				
New Jersey USF	No	No	No	No
Kentucky HEA	Yes	Yes	Yes	No
Pennsylvania CAPs	Yes	No	No	No
Colorado PIPP	Yes	Yes	Yes	No
New York EAP	No	Yes	No	No
Arrearage Management Plans				
California AMP	Yes	Yes	Yes	No
District of Columbia AMP	Yes	Yes	No	No
Missouri Keeping Current	Yes	Yes	Yes	No

New York has estimated the cost of *not* providing bill assistance

- In 2022, the New York Department of Public Service (DPS) found that providing bill relief would be more cost effective than letting arrearages continue to accumulate and risking widespread disconnections:
  - ***"Adopting the bill relief program is less than the estimated $1 billion to $1.3 billion cost of doing nothing and allowing large numbers of service terminations statewide."***
- Based on this finding, the DPS approved over $1.1 billion in arrears credits for residential and small commercial customers.

New York Costs of Inaction Methodology

Incremental uncollectible expenses (largest impact)	Estimated as 40% to 60% of incremental COVID-era arrears
Incremental financing costs	Utility-specific financing costs
Incremental O&M costs	Estimated as 10% to 15% increase in pre-pandemic O&M costs for call center representatives, collections and field agencies, payment assistance functions, deferred payment agreement management, enhanced customer outreach and education activities

Sources: New York Department of Public Service, 2023; New York Energy Affordability Policy Working Group, 2022.

Pennsylvania study on energy efficiency programs provides useful data points

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- In 2024, the Pennsylvania Public Utility Commission (PUC) directed a study quantifying and monetizing the financial savings resulting from energy efficiency programs offered by the state's electric utilities.
- The analysis framework and data can be used to estimate the benefits of energy affordability programs.

Monetized Impacts Calculations

Reduced arrearage carrying cost	• Reduction in net arrears per participant ($) x interest rate on short-term debt (%) • 2025 Federal Funds rate projection of 3.10%
Reduced bad debt write-off (largest impact)	• Reduction in net arrears per participant ($) x arrears written off (%) • Average 19.30% of arrears written off
Reduced collection notices	• Reduction in number of collection notices per participant x cost per notice ($) • Average $0.71 per notice
Reduced collection calls	• Reduction in number of collection calls per participant x cost per call ($) • Average $0.28 per call
Reduced shutoffs	• Reduction in number of shutoffs per participant x cost per shutoff ($) • Average $18.10 per shutoff

Source: PA Act 129 Statewide Evaluator, 2024.

Estimated benefits of arrears reductions under affordability programs

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Applying the methodology from the PA study to arrearage reductions under affordability programs in other states yields the following estimated benefits:

Program	Annual Reduction in Arrears per Participant	Annual Monetized Utility System Benefits per Participant (incl. reduced uncollectible & financing)
California AMP	\$583 - \$824	\$134 - \$189
District of Columbia AMP	\$897	\$206
Missouri Keeping Current	\$455	\$104
Kentucky HEA	\$71 - \$188	\$16 - \$43

Assumptions:

- 19% of arrears get written off and become uncollectible expenses (based on average across PA utilities)
- Financing costs are based on an interest on short-term debt of 3.63% (equal to 2026 Federal Funds rate)

Improving Collection and Disconnection Practices

Ratepayers engage in dangerous behaviors to avoid disconnection

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People engage in risky borrowing to avoid disconnection.

69 percent of first-time borrowers of payday loans used these funds for recurring expenses such utility bills or rent. (Pew Charitable Trusts, 2023)

39 percent of borrowers who have used "buy now pay later offerings" (e.g., Klarna, Zip, Afterpay) did so to pay utility bills. (Data for Progress & Protect Borrowers, 2026)

Rationing energy can lead to death.

23 percent of the 138 heat-related deaths in Maricopa County, Arizona, in 2024 occurred indoors.

Some of these deaths imply energy rationing: 61 percent of indoor deaths occurred with AC present but not functioning, 16 percent occurred with AC present but not in use, and another 8 percent occurred with disconnected electricity. (Maricopa County Public Health, 2025)

Disconnections can cause death.

Disconnections have caused death in households with life-sustaining medical equipment. Linda Daniels of Newark, New Jersey, passed away the day her electricity was shut off. She relied on an oxygen tank, registered with her utility, to live. (New Jersey Legislature, 2018)

While "buy now pay later" products don't typically impose high interest rates the way payday loans do, the loans can be unaffordable and carry late fees and other fees. 47 percent of the borrowers have missed a payment in the last year and two-thirds have subprime credit.

New Jersey later passed "Linda's Law" prohibiting utilities from disconnecting customers in these situations.

Benefits of disconnection protections are also well-documented

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- **Reduced rates of COVID and death:** Electric and water shutoff moratoria **reduced rates of COVID-19 infection by 4.4 percent and death by 7.4 percent** nationwide. (NBER, 2021)
- **Reduction in tradeoffs with other expenses:** Disconnection protections **reduced the share of households forgoing food and healthcare expenses by 24 percent**,[2] with even greater benefits for people of color and households with young children. (Memmott et al, 2023)
- **Fewer eviction filings:** Winter disconnection protection **reduced the eviction filing rate by 4 percent**[4] in Census tracts with high energy burdens nationwide. (Lodermeier, 2024)

Data from LADWP suggest shutoff protections do not harm utility

- Since 2022, the **Los Angeles Department of Water and Power (LADWP) does not disconnect discount customers for nonpayment**. (LADWP, 2022)
- **Low-income LADWP customers paid their bills at the same rate or at higher rates** than all other customers before, during, and after the shutoff moratorium, even though the moratorium eliminated the threat of disconnection. (LA Times, 2022)
- LADWP data shows that protecting these customers from shutoffs would have only a modest impact on utility revenue, since **discount customers account for less than 8 percent of residential energy revenue** alone. (LADWP Board of Commissioners Meeting, 2022)

The fact that these customers —when they have the opportunity, when they can –do pay, really does remove, from my perspective, the power of [the free rider argument], and tells us that their lack of payment isn't a lack of responsibility…

It's a result of their actual inability to pay the bill."

\- LADWP Commission President Cynthia McClain-Hill (LA Times, 2022)

Banning late fees does not hurt utility revenues

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What are late fees? In many states, a utility may assess a late payment charge, or late fee, on the unpaid past due portion of a customer balance. Historically, utilities have argued that late fees help mitigate the losses associated with unpaid bills and motivate customers to pay on time.

- **Late fees do not encourage timely payment of outstanding bills**
  - After the 2020 moratorium on late fees, the Kentucky PSC concluded that "late fees have little discernible effect on the timeliness of residential customer payments for utility service." (Kentucky PSC, 2020)
- **Late fees do not contribute much to utility revenues**
  - One study found that late fees account on average for **0.24 percent** of a major energy company's revenue. (Seattle Times, 2022)

Conclusion

Findings

- Energy affordability programs, including discount rates and AMPs, provide benefits for both participants and non-participants:
  - Participant benefits include more affordable utility bills, lower debt, and fewer disconnections.
  - Utility system and non-participant benefits result from more consistent bill payments from participants, reduced bad debt, and avoided collection costs.
- However, none of the 8 program evaluations reviewed quantified the full range of the monetized utility system impacts of these programs.
- Estimates of avoided uncollectible costs from New York and Pennsylvania suggest that the cost savings from reduced bad debt can account for between 20 percent to 60 percent of the reduction in arrears resulting from affordability programs.
- Better data on the potential utility cost savings and benefits to non-participating customers from affordability programs would provide a fuller picture of (and likely mitigate concerns about) the impacts of these programs on non-participants.
- Experience suggests that removing disconnections and late fees does not significantly impact customer bill payment behavior and utility financial health.

Recommendations for policymakers

- Require utilities to track and report data on the costs of unaffordable bills.
- Expand energy affordability programs to provide near-term bill reductions to low-income customers, while also working on long-term measures to optimize utility investments and control costs.
- Ensure that considerations of program costs also account for savings resulting from reduced uncollectible expense, collection actions, and financing costs.
- Conduct program evaluations to quantify the impacts of energy affordability programs on both participants and non-participants.
- Establish disconnection protections for vulnerable households.
- Eliminate utility late fees and other junk fees.

Regulators being educated about poverty leads to better policy

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Testimonies about unaffordability for low-income customers are typically data-driven, but there are other ways to motivate regulators on this issue. One example is a poverty simulator that has been used at NARUC and other conferences.

About the NARUC Poverty Simulator

- **Goal**: Enlighten decision makers about the experience of poverty to improve service for utility customers
- **What it is**: A 3-hour live program created by the Missouri Community Action Network and licensed by NARUC. Participants are assigned roles (e.g., a person living in poverty, a utility employee, a social services office employee) and navigate a few months of simulated daily life.
- **In action:** NARUC summer policy summit 2019 & 2022.
- **Opportunity:** Could be used as part of training for new regulators and Commission staff

Testimonials

"We expected it to be fabulous, but it exceeded our expectations" - *Commissioner Maida Coleman, Missouri Public Service Commission*

"We had people who said that even to this day they think about the experience they had that one afternoon and it impacts the decisions they make even today" - *Commissioner Odogwu Obi Linton, Maryland Public Service Commission*

Sources: "The Poverty Simulation: Part One" & "The Poverty Simulation: Part Two," *The Power Walk: A NARUC Podcast by Regina Davis,* 2022.