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Reallocating the Residential California Climate Credit to Low-Income Customers

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December 13, 2024

Key Points

- Electric bill affordability is felt most acutely by low- and moderate-income Californians living in hot climate zones who face high bills during summer months because of increased cooling needs.
- This brief presents a method for reallocating the residential California Climate Credit to help low-income customers in the hottest parts of California reduce their electric bills in their highest-bill months.
- The proposed Climate Credit reallocation method can reduce the annual electric bills of low-income customers living in warm climate zones by over twenty percent.
- Strategically timing the distribution of reallocated Climate Credit payouts can reduce customers' highest electric bills during summer months and reduce month-to-month bill volatility, both of which can provide important customer affordability and public health benefits.
- Utilities possess limited information about customer income, so we focus on low-income customers enrolled in existing utility-administered discount programs (e.g., CARE, FERA). We also examine scenarios that provide bill relief to customers falling outside those classifications.

Context

Over the past decade, California's electricity prices have become some of the most expensive in the country. While recent inflation has undoubtedly contributed, growth in customer-facing electricity prices has far outpaced inflation, due in large part to high costs for wildfire

This work was supported by the Bits & Watts Initiative of Stanford University's Precourt Institute for Energy.

hardening and grid modernization entering rates, as well as costs inflicted by net energy metering (NEM) and various public purpose programs.[1,2,3,4] Though increased electricity prices adversely affect all customers, low-income customers are hit especially hard, impacting their ability to pay energy bills and raising the potential for heightened bill arrearages.[5] In (generally inland) areas that experience extreme heat (or cold), climate conditions can drive electric bills high above those in milder coastal areas and can lead some customers to keep their homes at unsafe temperatures to reduce costs.[6] Such considerations have driven a heightened focus on energy affordability in California. In October 2024, Governor Gavin Newsom issued an executive order directing multiple state agencies to assess ways that their regulations, policies, and programs may be adjusted to provide customers with electric bill relief. Governor Newsom's executive order specifically calls for a reevaluation of the residential California Climate Credit, a biannual credit distributed by investor-owned utilities (IOUs) to their customers from the proceeds of the state's Cap-and-Trade Program, to maximize its effectiveness "particularly for low-income Californians."[7]

Refocusing the California Climate Credit on Energy Affordability

Aligned with Governor Newsom's executive order, we evaluate a method for reallocating the residential California Climate Credit to better support low-income customers most impacted by extreme temperatures. The California Climate Credit is currently distributed equally to all residential customers in an IOU service territory, regardless of income level and location.[8] Through the method we examine, customers not participating in NEM and enrolled in one of the IOUs' income-based discount programs receive Climate Credit payouts that vary depending on the Baseline Territory (or climate zone)[9] in which the customer resides. These low-income customers, enrolled in either the California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) programs, are allotted Climate

[1]S. Borenstein, M. Fowlie, and J. Sallee, "Designing Electricity Rates for An Equitable Energy Transition," Energy Institute at Haas, University of California, Berkeley, CA, 2021.

[2]S. Borenstein, M. Fowlie, and J. Sallee, "Paying for Electricity in California: How Residential Rate Design Impacts Equity and Electrification," Energy Institute at Haas, University of California, Berkeley, CA, 2022.

[3]B. Pierpont, "Clean Energy Isn't Driving Power Price Spikes," Energy Innovation Policy & Technology LLC, San Francisco, CA, 2024.

[4]California Public Advocates Office, "Rooftop solar incentive to cost customers without solar an estimated $8.5 billion by the end of 2024," San Francisco, CA, 2024.

[5]M. Wolfe, C. Lovejoy, and S. Moradi, "Energy Hardship Report, August 2024," National Energy Assistance Directors Association, Washington, D.C., 2024.

[6]S. Cong, D. Nock, Y. Qiu, and B. Xing, "Unveiling hidden energy poverty using the energy equity gap," *Nature Communications*, vol. 13, pp. 1-12, 2022.

[7]*California Executive Order N-5-24*, October 30, 2024.

[8]Climate Credit distributions vary by IOU and year. In 2024, households in PG&E receive $110.34 annually, households in SCE receive $172.00 annually, and households in SDG&E receive $156.44 annually.

[9]Note that throughout this policy brief we use the terms "baseline territory" and "climate zone" interchangeably. Both refer to geographic regions characterized by different climates, though the former specifically characterizes different territories used in calculating the IOUs' baseline allowances in tiered rates, while the latter has multiple formal designations in California, though is typically used more colloquially.

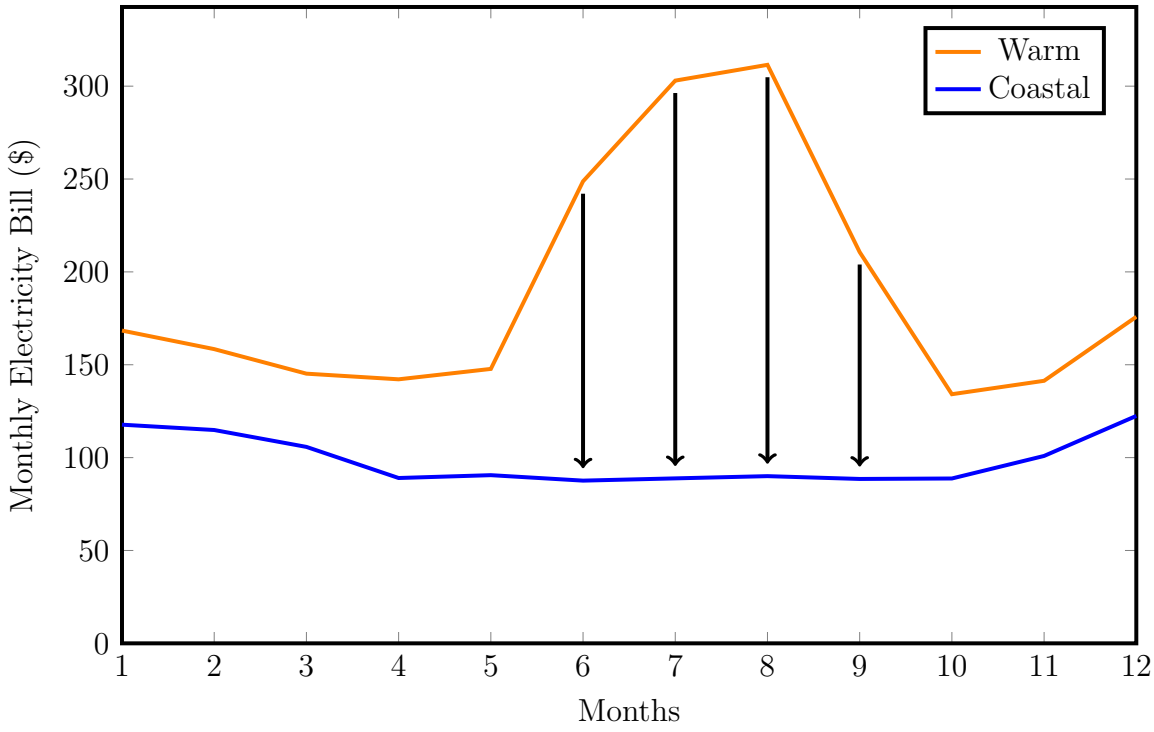


Figure 1: Example of how reallocating the residential Climate Credit aims to reduce the monthly electric bills for a discounted customer in a warm climate zone (e.g., average of PG&E's Baseline Territories P, R, S, and W) to be closer to those of a discounted customer in a coastal climate zone (e.g., PG&E's Baseline Territory T).

Credit payouts commensurate with the magnitude of the highest monthly electric bills for an average customer enrolled in a discount program, not participating in NEM, and located in their climate zone. As such, customers in climate zones producing higher monthly electric bills receive larger Climate Credit distributions. This process is depicted in Figure 1,[10] which compares the monthly bills of an average non-NEM discounted customer in a warm climate zone and an average non-NEM discounted customer in a milder coastal climate zone.[11] The arrows represent the targeted bill reduction that a reallocated Climate Credit will aim to achieve for the customer in the warm climate zone.

One challenge with this approach is that enrollment in the CARE and FERA programs offers only a limited basis for identifying customers in need of bill relief; there are many customers who do not qualify for either program who are struggling to pay their electric bills. Recognizing this, we consider scenarios in which other customers in climate zones with

[10] We use electricity consumption data provided by the IOUs to Energy and Environmental Economics, Inc. (E3) for the creation of the Fixed Charge Design Tool, which was commissioned by the California Public Utilities Commission.

[11] Average bills and reallocated Climate Credit distributions in the warm climate zone represent the average CARE and FERA customer across PG&E's Baseline Territories P, R, S, and W, which comprise much of California's Central Valley. Average bills and reallocated Climate Credit distributions in the coastal climate zone represent the average CARE and FERA customer in PG&E's Baseline Territory T.

high electric bills receive the current Climate Credit distribution. Figure 2 reveals the way the available Climate Credit pool is distributed to different residential customers under our considered reallocation scheme. In each scenario, some portion of the Climate Credit pool is distributed to three distinct groups:

- Customers enrolled in a discount program and not participating in NEM,
- Customers not enrolled in a discount program and not participating in NEM, and
- Customers participating in NEM.

To understand the impact of distributing the available Climate Credit pool, we evaluate the following scenarios:

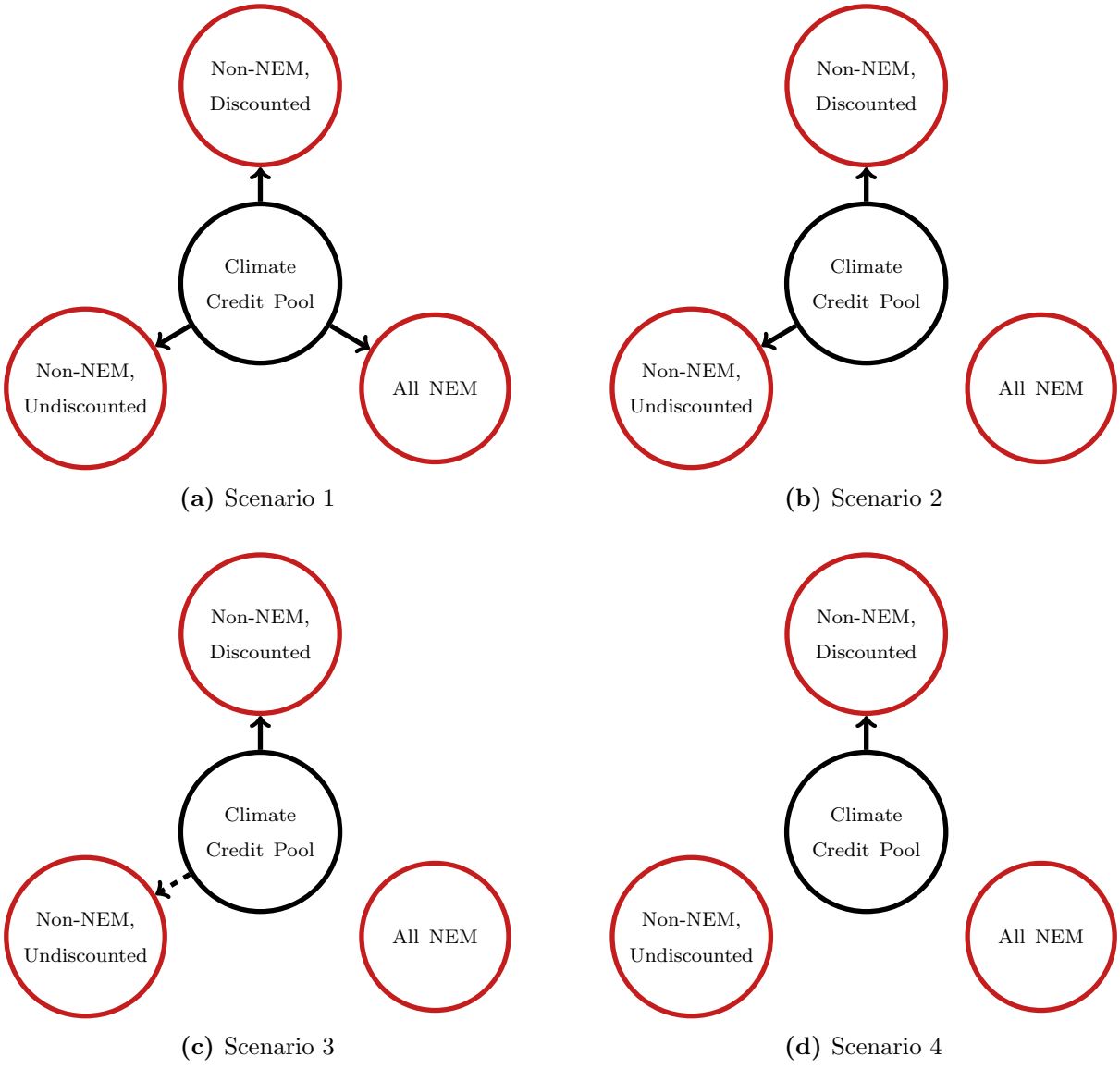
- **Scenario 1**: All customers receive the current (equal) Climate Credit distribution. This scenario is intended to show the business-as-usual case and provide a baseline for comparison with the other scenarios.
- **Scenario 2**: All non-NEM customers receive Climate Credit distributions. Undiscounted non-NEM customers receive the current Climate Credit distribution, regardless of the climate zone in which they reside. All remaining funds in the Climate Credit pool are distributed to discounted non-NEM customers using the reallocation methodology described above.
- **Scenario 3**: All discounted non-NEM customers and some undiscounted non-NEM customers receive Climate Credit distributions. Undiscounted non-NEM customers that reside in one of an IOU's highest-bill climate zones[12] receive the current Climate Credit distribution. All remaining funds in the Climate Credit pool are distributed to discounted non-NEM customers using the reallocation methodology described above.
- **Scenario 4**: The entire available Climate Credit pool is distributed to discounted non-NEM customers using the reallocation methodology described above.

Benefits for Low-Income Californians

Our proposed Climate Credit reallocation method can create real bill savings for low-income customers living in climate zones with high electric bills. Figure 3 shows the annual electric bills under the four described scenarios for average CARE and FERA customers not participating in NEM and living in a coastal climate zone (PG&E's Baseline Territory T) and in a warm climate zone (average of PG&E's Baseline Territories P, R, S, and W).[13] So

[12]The highest-bill climate zones vary by IOU. For PG&E, we consider five such climate zones: Baseline Territories P, Q, R, S, and W. For SCE, we consider four: Baseline Territories 10, 13, 14, and 15.

[13]Though results are presented for PG&E, similar analysis has been conducted for SCE. For brevity, we only included PG&E results in this brief, though the Climate Credit reallocation methodology yielded similar annual and monthly cost reduction results for the average customers considered in the SCE service territory under a similar set of scenarios.



(a) Scenario 1 **(b)** Scenario 2

(c) Scenario 3 **(d)** Scenario 4

Figure 2: Depiction of how the available residential Climate Credit pool is allocated in each of the four considered scenarios to different classes of customers: customers enrolled in a discount program and not participating in NEM, customers not enrolled in a discount program and not participating in NEM, and customers participating in NEM.

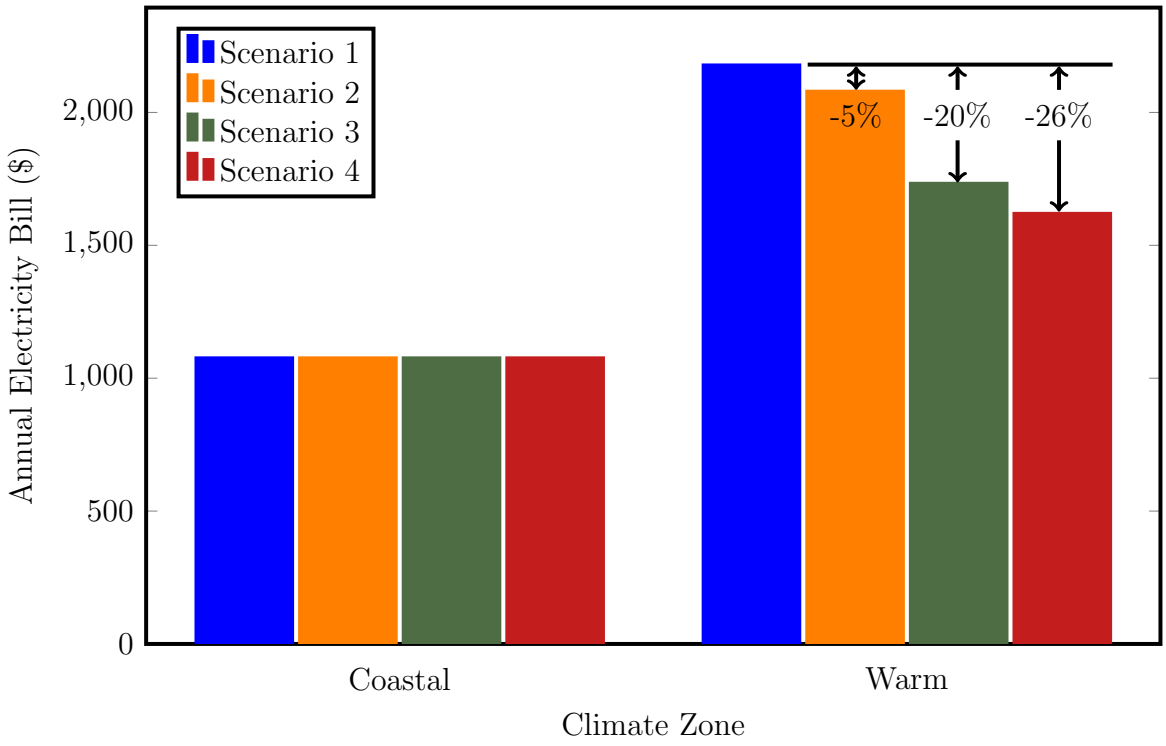


Figure 3: Annual electric bills under different Climate Credit reallocation scenarios for average PG&E customers enrolled in CARE or FERA and not participating in NEM. Results are presented for average customers in a coastal climate zone (i.e., PG&E's Baseline Territory T) and a warm climate zone (i.e., average of PG&E's Baseline Territories P, R, S, and W).

as to not reduce support for our targeted low-income customers in any climate zone, the customer living in the coastal climate zone continues to receive the current Climate Credit distribution; by design, our Climate Credit reallocation method ensures that no targeted low-income customer receives an annual Climate Credit distribution that is less than they currently receive. The customer living in the warm climate zone realizes bill reductions relative to the business-as-usual case (Scenario 1), with the magnitude of that bill reduction dependent on the considered scenario and the size of the available Climate Credit pool. Scenarios 3 and 4 provide the greatest bill reductions, with the customer seeing their annual bill reduced an additional $445 (20 percent) and $558 (26 percent), respectively, relative to the current Climate Credit distribution. Although some funds in the Climate Credit pool are retained in Scenario 3 to assist undiscounted customers in high-bill climate zones, the targeted low-income customers are still able to attain meaningful bill decreases compared to those presented in Scenario 4. While Scenario 2 does provide additional annual bill reductions for low-income customers relative to the business-as-usual case, they are modest.

In addition to total annual bill reductions, a reallocated Climate Credit pool can also provide vital targeted monthly bill relief. Figure 4 shows the monthly bills for an average discounted customer in a warm climate zone under two Climate Credit distributions: (1) the business-as-usual case (i.e., Scenario 1), with the existing biannual distributions in April

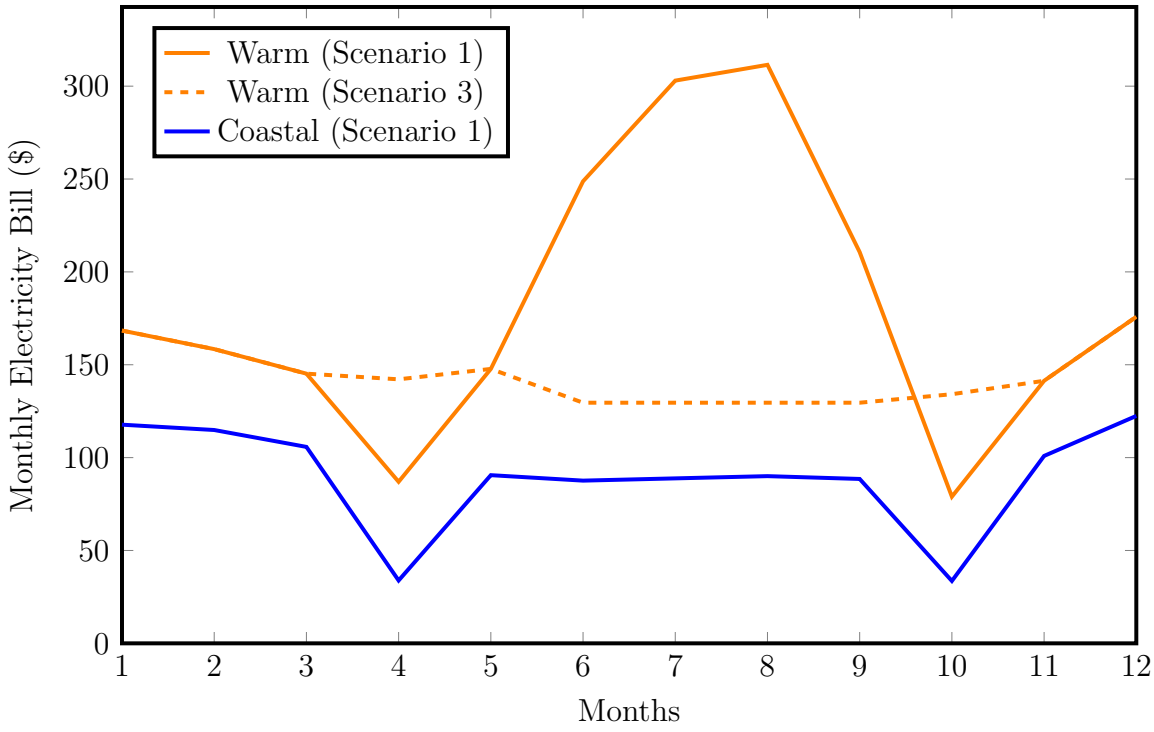


Figure 4: Monthly bills with business-as-usual Climate Credit distributions (from Scenario 1) and reallocated Climate Credit distributions (from Scenario 3) for an average discounted customer in a warm climate zone (i.e., average of PG&E's Baseline Territories P, R, S, and W). Monthly bills with business-as-usual Climate Credit distributions (from Scenario 1) for an average discounted customer in a coastal climate zone (i.e., PG&E's Baseline Territory T) are shown as a reference.

and October, and (2) the reallocated Climate Credit from Scenario 3, with distributions applied during the four highest-bill months. For comparison, the monthly bills for an average discounted customer in a coastal climate zone with the business-as-usual Climate Credit distribution are also included. As can be seen, the current Climate Credit payments are provided during lower-bill months, which was originally done by design to preserve customers' signal to conserve during high-demand summer months.[14] However, with high electricity prices posing an affordability and public health threat to low-income Californians and other mechanisms now in place to provide customers with conservation-signaling prices (e.g., time-of-use rates, tiered rates), it is prudent to rethink the timing of these distributions. Figure 4 shows that targeting the Climate Credit payouts to reduce a customer's highest electric bills can help flatten their monthly bill trajectory. For this average customer living in a warm climate zone, some monthly bills can be reduced by more than fifty percent, resulting in summer electric bills under $150, down from over $300. Such a reduction would not only prove vital as bill relief, but could also be critical for public health, empowering low-income customers to cool their homes during hot summer months.

[14]California Public Utilities Commission, *Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Implementation Plans*, 2013.

Concluding Remarks

Reallocating the current residential Climate Credit pool has important implications for electricity affordability and public health. Based on the currently available data and the scenarios we evaluate, average discounted customers living in a warm climate zone and not participating in NEM could have their annual electric bills reduced by at least twenty percent if the available Climate Credit pool was reallocated to provide targeted support. Updating the current distribution strategy to ensure Climate Credit payouts are provided in the highest-bill months could also provide meaningful benefits, especially when paired with the proposed reallocation towards warm climate zones. By both lowering and stabilizing the monthly electric bills of low-income customers, we find that the highest monthly bills can be reduced by over fifty percent.

Though this brief largely focuses on the bill reductions that can be achieved for low-income customers receiving reallocated Climate Credit distributions, we believe there could be broader bill reduction benefits from this policy change. Especially as electricity prices continue to increase, we hypothesize that bill arrearages will be disproportionately created by low-income customers in warm climate zones, where average bills and bill volatility are both higher. If so, then a solution for helping those same types of customers reduce their monthly bills, such as the method for reallocating the Climate Credit presented in this brief, could also help reduce the magnitude of arrearage. Not only would this be beneficial for the low-income customers, who would avoid accruing debt and potentially being disconnected, but it could also be beneficial for the entire customer base, as it would reduce arrearage expenses recovered in rates. Our thoughts regarding arrearages are currently speculative and are left for future work. Improved data availability would enable greater understanding of this important issue in the electricity affordability space.

Finally, we would like to note the potential impact of expanding the available Climate Credit allowance pool. Additional customer savings could be achieved by growing the Climate Credit allowance pool, either through additional allocations of Cap-and-Trade allowances to electric utilities or through reconsideration of the utility allowance auction revenue distribution among residential, small business, and emissions-intensive trade-exposed retail customers. A larger Climate Credit pool would not only allow greater savings to be passed to low-income customers through targeted Climate Credit allotments, but could also allow bill relief to be spread to the broader customer base. Though not presented in this brief, we find in some scenarios that IOUs with larger residential Climate Credit pools, such as SCE, were able to provide low-income customers with the targeted bill reductions and still have leftover funds in their Climate Credit pool. These leftover funds could be used to target bill reductions for low-income customers that are even more ambitious, or they could be used to provide bill relief to customers who are not currently slated to receive the same magnitude of support. Regardless of the approach, a larger Climate Credit pool could allow more residential customers to be helped. Of course, this policy change would reduce allowances available for other purposes, such as the Greenhouse Gas Reduction Fund and free allocation to covered trade-exposed entities.