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*Report*

# LIHEAP Under Heat

## Assessing Policy Reforms and Funding Needs to Address State Energy Burdens

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# CONTENTS

Summary	1
Introduction	1
The State of LIHEAP: Trends in Funding and Coverage	2
The LIHEAP Allocation Formula	4
State Low-Income Home Energy Burdens	5
Does LIHEAP Address Relative Burdens Across States?	7
Evaluating Potential Policy Reforms	9
Conclusion	11
References	13
Appendix A. Methodology	15
Data	15
Modeling a Pathway to LIHEAP Parity	15
Appendix B. Supplemental Figures	17



## SUMMARY

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The Low Income Home Energy Assistance Program (LIHEAP)—the federal government’s primary tool for addressing energy affordability—distributes billions of dollars each year across the United States. Despite its scale and longevity, the efficiency, adequacy, and fairness of LIHEAP funding have been the subject of criticism since its inception in 1981. These concerns have heightened in recent years as energy burdens have intensified.

This report provides an up-to-date analysis of LIHEAP with a particular focus on assessing the extent to which state-level funding allocations are aligned with low-income home energy expenditure (LIHEE) burdens. Analysis of previously unreleased administrative data reveals that warm-weather states have systematically received less funding relative to their LIHEE burdens than cold-weather states, which have received more than their proportional share. As a result of this regional imbalance as well as inadequacy in total funding levels, fewer than 20% of income-eligible households receive assistance each year, leaving the vast majority of energy-burdened families without support during increasingly frequent and severe extreme heat events.

Amending the LIHEAP statute by removing outdated provisions such as the “hold-harmless” provision and fully linking allocations to each state’s share of national LIHEE would correct longstanding imbalances and better connect funding with need. Modeling indicates that total appropriations of approximately \$10.7 billion per year, just a 3% increase above FY2021 levels, would allow this reform to proceed without reducing any state’s current funding level. Given current average benefits, this increase in total program funding would serve an additional 9.7 million households, increasing the share of income-eligible households served from 18% to 48%. Modernizing and bolstering LIHEAP in this way would position it as a cornerstone of federal efforts to safeguard public health, promote economic well-being, and enhance community readiness in an era of rising temperatures.

## INTRODUCTION

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The Low Income Home Energy Assistance Program (LIHEAP) was established in 1981 with the objective of reducing the energy burden of low-income households and promoting safe and healthy living conditions. LIHEAP is statutorily authorized to “assist low-income households, particularly those with the lowest incomes, that pay a high proportion of household income for home energy, primarily in meeting their immediate home energy needs” (ACF 2020). To this day, LIHEAP remains the largest federal government program designed to address energy affordability, serving an average of 5.9 million households each year over the past decade (ACF n.d.).

LIHEAP is federally funded via appropriations to the US Department of Health and Human Services (HHS), which then allocates funds to states, tribal areas, and territories (“grantees”) in the form of block grants or emergency contingency funds. Grantees are typically state departments of health and human services that design and implement programs to direct monetary assistance to eligible households. These grantees are given a high degree of flexibility in designing their programs, which include conducting outreach to encourage eligible households to apply for assistance, administering an application process, allocating funds across types of assistance (cooling, heating, and weatherization), establishing eligibility criteria, and determining which household applicants will receive assistance—and how

much. Most states adopt the federally mandated minimum income eligibility criteria established in the LIHEAP statute,<sup>1</sup> but there is significant variation in other eligibility criteria.

While LIHEAP plays a critically important role in alleviating energy poverty in the United States, it has faced criticism for chronic underfunding and administrative failures that have left most energy-poor households underserved or without assistance of any kind (Adams et al. 2024). In FY2024, just 18% of income-eligible households received assistance (ACF n.d.). Furthermore, the distribution and efficiency of the funding process (both from HHS to states and from states to households) has been called into question (Carrión and Hernández 2024).

In this report, we assess the extent to which LIHEAP addresses relative low-income home energy expenditure (LIHEE) burdens across states. Our analysis focuses on a critical decision point in the flow of funds under LIHEAP: the allocation formula used to distribute appropriated funds to states. The sections that follow summarize trends in program funding and coverage, evaluate how state allocations compare to state LIHEE burdens, and analyze the potential effects of a policy reform currently before Congress.

## THE STATE OF LIHEAP: TRENDS IN FUNDING AND COVERAGE

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Funding for LIHEAP has been on a slight upward trend since 2001, with an average annual growth rate of 2% in real (inflation-adjusted) terms (Figure 1a, blue line).<sup>2</sup> As is evident from the figure, year-to-year changes have not been consistent—funding surged following periods of widespread economic distress, including the 2008 financial crisis and the COVID-19 pandemic, and returned to more modest levels thereafter (Bechler 2021). Outside of these outlier years, there has been no notable change in program funding, particularly over the past decade. This stagnation is notable because one of the common, recurring criticisms of the program is that it is chronically underfunded. In every year on record, fewer than 20% of all income-eligible households have received assistance (Figure 1a).

Similarly, the total number of households served by the program has not changed significantly over time despite increases in the overall population (Figure 1b). While the number of assisted households peaked after the 2008 financial crisis, there was no spike during the COVID-19 pandemic and its aftermath. Likewise, for each year between fiscal years 2011 and 2024, an average of 67,000 fewer households have been served by LIHEAP each year, corresponding to an average annual loss rate of 1.1%.<sup>3</sup> Over this period, the US population experienced an annual growth rate of approximately 1% (FRED 2026).

Combining data on total program funding and number of households served, average annual funding per household has fluctuated between \$700 and \$1,928 since 2011, generally mirroring trends in total funding with spikes after periods of economic distress.

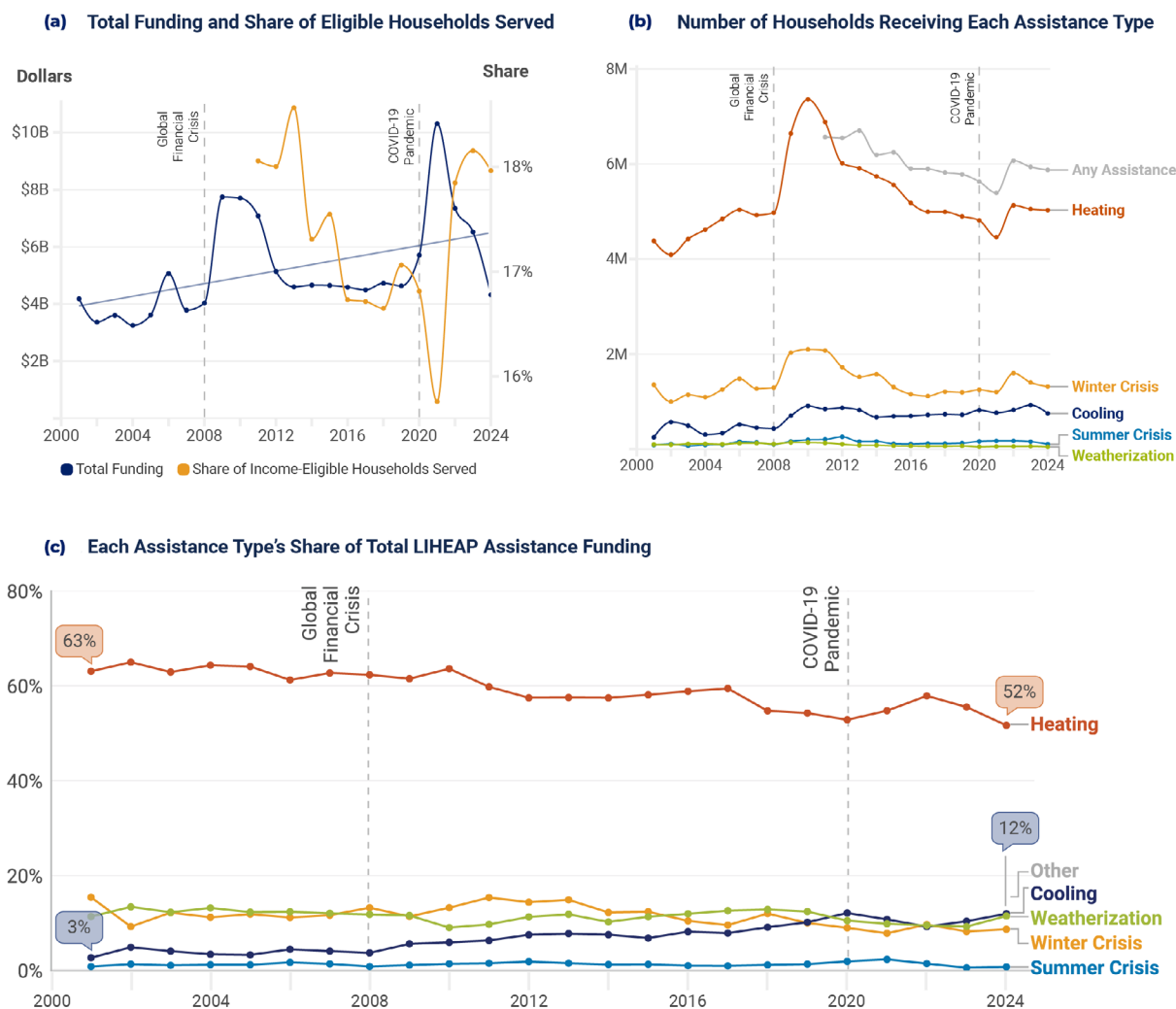
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1 The LIHEAP statute requires that recipient households' income be no more than 150% of the federal poverty guideline or 60% of state median income, whichever is greater (ACF 2020).

2 The growth rate in total LIHEAP funding was estimated by linear regression of the log of total program funding on the fiscal year. This growth rate is net of inflation.

3 Data on the number of households receiving any assistance is only available beginning in 2011. Prior to 2011, LIHEAP reports to Congress only included the number of households receiving each type of assistance (heating, cooling, etc.), but because households can receive more than one type of assistance, we were not able to construct a reliable measure of households receiving any form of assistance.

**Figure 1. National trends in LIHEAP funding and coverage**



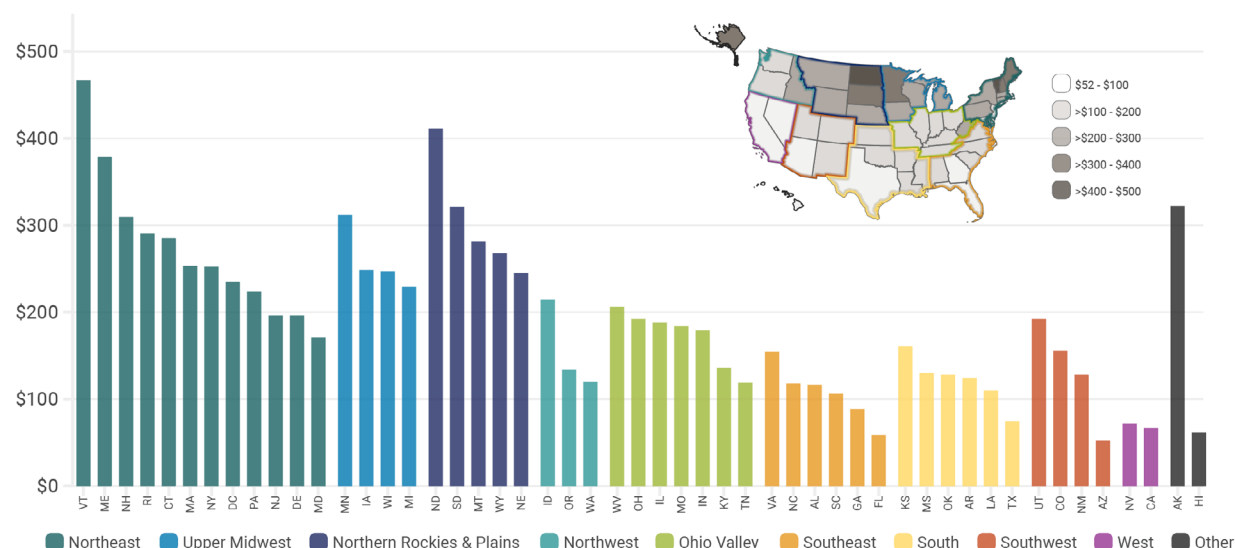
In terms of the type of assistance provided, the most notable trend is an increase in the share of funds allocated toward cooling assistance and a corresponding decrease in the share of funds allocated toward heating assistance (Figure 1c).<sup>4</sup> Between fiscal years 2011 and 2024, the share of funds allocated toward cooling assistance increased from 3% to 12% of funding, while the share allocated toward heating assistance decreased from 63% to 52% of funding.

In sum, outside of periods of widespread economic distress, there has been no significant change in total LIHEAP funding, number of households served, or funding per household over the past two decades. Meanwhile, the share of eligible households that receive assistance has remained under 20% and reached as low as 15.8% in 2021. Among types of assistance, heating assistance dominates—receiving nearly half of all funding and more than

<sup>4</sup> The allocation of funds across types of assistance is determined by grantee programs (states, tribal areas, and territories), not by HHS at the federal level.



**Figure 2. Average annual state funding per income-eligible household**



Source: LIHEAP Data Warehouse (ACF n.d.)

four times the funding as cooling assistance—while cooling assistance has seen a gradual increase in its share of funding over the past two decades.

## THE LIHEAP ALLOCATION FORMULA

Once LIHEAP appropriations for a fiscal year are authorized, HHS uses an allocation formula to determine how much funding to direct to each state. As laid out in the LIHEAP statute, allocations are principally based on states' relative LIHEE burdens. Specifically, the LIHEAP statute stipulates that “a State's allotment percentage is the percentage which expenditures for home energy by low-income households in that State bears to such expenditures in all States.”<sup>5</sup>

For example, if low-income households in State X spent \$10 million on home energy, and total national expenditures on home energy by low-income households were \$100 million, State X would receive 10% of total funding.

However, additional criteria in the LIHEAP statute have skewed the allocation formula away from directly targeting relative home energy burdens. The original allocation formula enacted in 1981 explicitly prioritized heating over cooling needs, and while a 1984 amendment to LIHEAP introduced a more data-driven “new” allocation formula that removed this prioritization for heating, it also introduced provisions that maintained the legacy of disproportionate funding to cold-weather states. Notably, this includes (1) a “hold harmless” provision intended to prevent cold-weather states from losing significant amounts of funding when the 1984 amendment was enacted, and (2) a decision to only implement this new allocation rule on the portion of regular program funds in excess of \$1.975 billion.

5 Omnibus Budget Reconciliation Act of 1981, Pub. L. No. 97–35 (1981). <https://www.congress.gov/bill/97th-congress/house-bill/3982/text>.

Furthermore, language in annual appropriation bills has also played an important role in shaping how LIHEAP funds are allocated. For example, the FY2024 appropriation bill stipulated that “all but \$897,348,000 of the [\$4,025,000,000] appropriated under this heading shall be allocated as though the total appropriation for such payments for fiscal year 2024 was less than \$1,975,000,000.” That is, of the approximately \$4 billion total appropriation in FY2024, roughly \$3.1 billion was to be allocated using the “old” allocation formula.<sup>6,7</sup>

As a result of these additional statutory criteria and ad hoc decisions made in annual appropriation bills, state allotments do not directly target relative LIHEE burdens across states. Furthermore, state allotments disproportionately benefit cold-weather states. This point is made clear when examining state funding per income-eligible household (Figure 2). States with the highest funding per income-eligible household tend to be located in cold-weather regions like the Northeast and Upper Midwest, while states with the lowest funding per eligible household tend to be located in warm-weather regions like the South and Southeast. (See Appendix B for average heating and cooling degree days by state.)

## STATE LOW-INCOME HOME ENERGY BURDENS

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As introduced in the previous section, LIHEAP is principally designed to address a specific type or subset of energy burden: LIHEE. This is a distinct concept from the standard measure of energy burden, which is typically defined as the share of household income that goes toward any and all energy expenditures. The measure of LIHEE used in the LIHEAP allocation formula, on the other hand, is restricted to energy expenditures related to home heating, cooling, and weatherization. The program is not intended to assist with other household energy expenditures, including the expenditures needed to power electronic devices or home appliances like refrigerators, dishwashers, dryers, and washers.

Since there are no national or state-level representative surveys that collect data specifically on the component of household energy expenditures that go toward heating, cooling, and weatherization, HHS uses a modeling approach to estimate LIHEE. However, the exact details of this modeling approach are not readily available to the public. While high-level descriptions of the modeling approach are given in public documents (e.g., statements that estimates of LIHEE are adjusted using data on heating degree days, cooling degree days, and fuel prices), the details of the methodology needed to reproduce estimates (e.g., including details on how exactly these adjustments were conducted) have not been publicly disclosed.

For this report, we obtained data on LIHEE as estimated by HHS for FY2021, separated by heating and cooling expenditures, via a public information request. To the best of our knowledge, HHS has not publicly reported more recent data on state-level LIHEE. While the estimates of LIHEE presented here are specifically for FY2021, they are nonetheless informative about the current and past state of LIHEAP, as states’ relative shares of total LIHEE likely remain largely consistent over time.

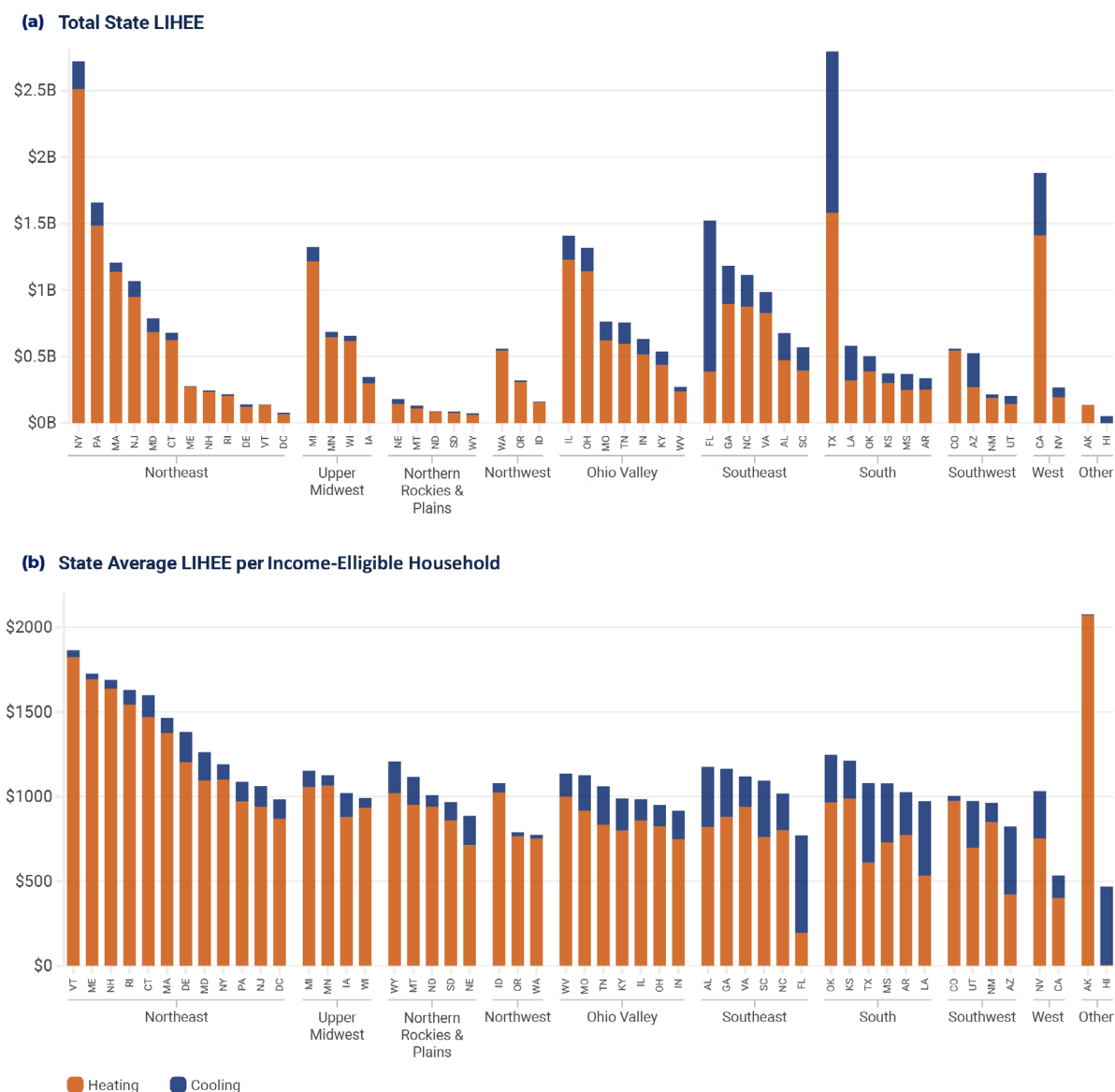
Total state LIHEE reflects a combination of state total population and climate, with Texas and New York estimated as having the highest LIHEE of \$2.8 billion and \$2.7 billion, re-

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6 Further Consolidated Appropriations Act, Pub. L. No. 118–47 (2024). <https://www.congress.gov/118/plaws/publ47/PLAW-118publ47.pdf>.

7 For a comprehensive review of the history of the LIHEAP allocation rule and relevant legislation, see the works by HHS (2020) and Perl (2019).

**Figure 3. Low-income home energy expenditures in FY21**



spectively (Figure 3a). Differences in LIHEE across climates can be illustrated by comparing California and Pennsylvania: despite a population roughly three times the size of Pennsylvania, California had just 13% higher total LIHEE, likely due to its relatively mild climate. Variation in weather is also reflected in the share of total LIHEE attributed to heating or cooling. Hawaii and Florida have the highest shares of LIHEE attributed to cooling (99% and 75%, respectively) while Alaska and Maine have the highest shares attributed to heating (nearly 100% and 98%, respectively). On average across all states, heating accounts for 80% of LIHEE while cooling accounts for 20%.

On a per-income-eligible household basis, estimates of annual LIHEE range from \$456 in Hawaii to \$2,037 in Alaska (Figure 3b). This reflects factors that can vary substantially across states such as climate, the types of heating and cooling technologies used, and the type of fuel used.



## DOES LIHEAP ADDRESS RELATIVE BURDENS ACROSS STATES?

The previous sections have documented that (1) heating assistance has received four times the funding as cooling assistance and (2) the portion of LIHEE attributed to heating expenditures is four times that attributed to cooling expenditures at the national level. From this national perspective, LIHEAP resources appear to be allocated in a manner that reflects relative LIHEE burdens across types of assistance provided. However, as becomes evident when comparing shares of total funding and shares of LIHEE at the state level, LIHEAP resources are not being allocated in a manner that reflects relative LIHEE energy burdens across states or regions.

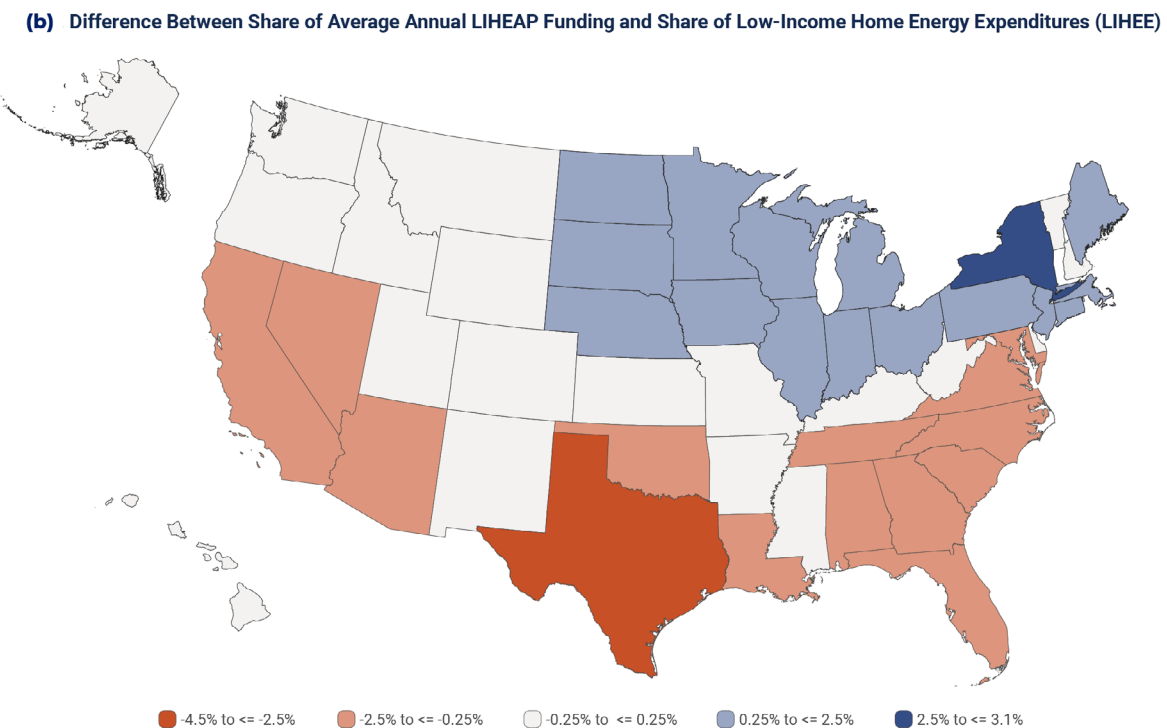
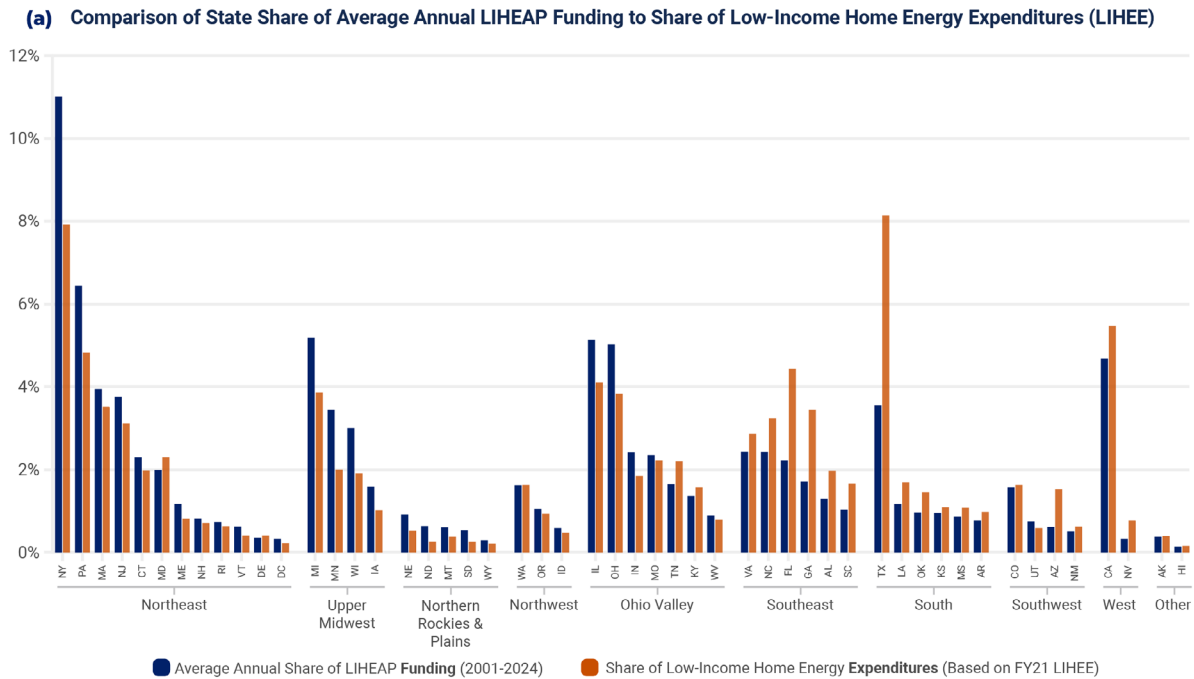
**Figure 4a** presents each state's average annual share of total LIHEAP funding along with its share of total LIHEE. States with a blue bar higher than an orange bar received more funding than they would have received if allocations directly reflected relative LIHEE burdens across states. Conversely, those with an orange bar higher than their blue bar received less funding than they would have if allocations directly reflected relative LIHEE burdens across states.

Notable discrepancies arise, particularly when comparing cold-weather states with warm-weather states. For example, while New York and Texas had approximately the same share of total LIHEE (roughly 8%), New York received more than three times the share of national LIHEE funding (11% for New York versus 3.6% for Texas). Similarly, while Florida and Connecticut received approximately the same share of national funding (2.2%), Florida had more than twice as much LIHEE (4.4% for Florida versus 2.0% for Connecticut).

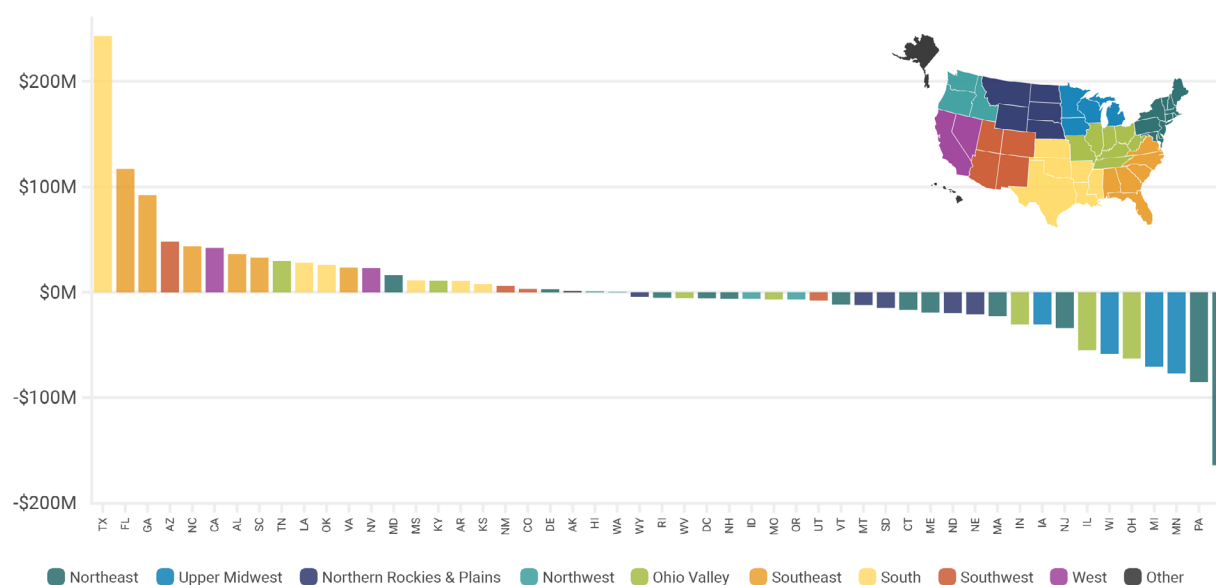
The difference between each state's share of average annual funding and its share of LIHEE is represented by the difference between the blue bar and orange bar in **Figure 4a** or, alternatively, in map form in **Figure 4b**. This indicates, for example, that Texas received 4.6 percentage points less of total program funding than it would have if state allocations reflected relative LIHEE burdens. New York, on the other extreme, received 3.1 percentage points more in total program funding than under a counterfactual LIHEE-targeting allocation formula. The relationship between these differences and state climates, as expressed by average heating and cooling degree days, is visualized in **Figures B1** and **B2** of Appendix B.

These discrepancies call into question the fairness and efficiency of LIHEAP allocations and highlight the consequences of the additional criteria included in the LIHEAP statute (i.e., the “hold harmless” provision and decision not to fully implement the new allocation formula) and ad hoc decisions made in annual appropriation bills that arbitrarily benefit cold-weather states at the expense of warm-weather states.

**Figure 4. Change in LIHEAP funding with amended allocation formula**



**Figure 5. Change in average annual state LIHEAP funding under a LIHEE-proportionate allocation formula**



## EVALUATING POTENTIAL POLICY REFORMS

With extreme heat known to be a major driver of record energy expenditures among low-income households, the limitations of LIHEAP’s current allocation system are becoming increasingly consequential (Carley and Konisky 2025; Doremus et al. 2022; Li et al. 2024; Yu and Kittner 2024). States facing the highest heat exposure remain structurally disadvantaged under current rules, creating an urgent case for reform.

Our analysis demonstrates that the current LIHEAP allocation formula systematically underfunds warm-weather states relative to their LIHEE burdens, primarily as a result of legacy provisions designed to protect historical funding levels in cold-weather states. As extreme heat intensifies and household energy expenditures shift toward cooling, these distortions will become increasingly problematic. Reforming the allocation mechanism to more accurately reflect relative LIHEE burdens across states represents a critical first step toward modernizing LIHEAP.

In March 2025, Senators Ruben Gallego (D-AZ) and Mark Kelly (D-AZ) introduced the LIHEAP Parity Act that would simplify language in the LIHEAP statute such that allocations are directly tied to relative energy burdens. Under the proposed amended formula, each state’s allocation would be directly tied to its share of national low-income home energy expenditures, aligning program funding with the statute’s original intent to target relative LIHEE burdens.

Figure 5 illustrates the expected redistribution of funds under the proposed formula relative to average annual funding levels. Warm-weather states, such as Texas and Florida, would have received a substantial increase in average annual funding (e.g. +\$243 million for Texas), while cold-weather states, such as New York and Pennsylvania, would have received less (e.g., −\$164 million for New York). Although these changes would correct long-standing structural imbalances in funding, they would likely face resistance from states that have historically benefited from the current allocation rules.



To address these political and fiscal concerns while advancing the goal of equitable reform, one option is to increase the total program funding such that no state experiences a nominal reduction in its LIHEAP allocation under the revised formula. Modeling indicates that total program funding would need to increase to approximately \$10.7 billion to achieve both objectives: aligning allocations with relative LIHEE burdens and ensuring that no state would receive less funding than under current levels (see Appendix A for methodological details). Such an increase in total program funding would serve an additional 9.7 million households (given current average benefit levels), increasing the share of income-eligible households served from 18% to 48%. Importantly, total program funding has nearly reached this amount during previous emergency appropriations following the COVID-19 pandemic—in FY2021 total appropriations reached \$10.4 billion—indicating that such an increase is fiscally feasible within historical precedent.

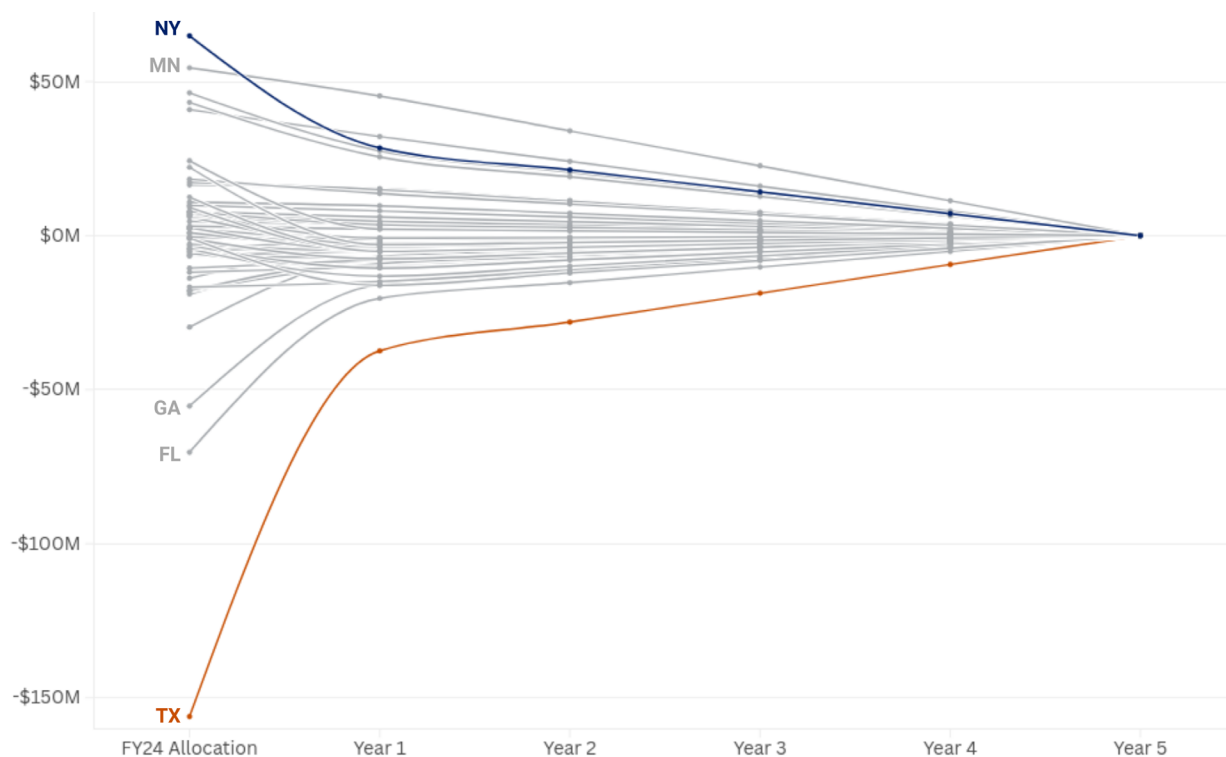
Even modest policy adjustments to allocation formulas can generate significant political contention. A pragmatic approach to implementing LIHEE-proportionate funding without reducing any state’s allocation could include a phased transition period, gradually adjusting program funding over a three-to-five-year period. **Table 1** outlines a hypothetical five-year funding plan to establish LIHEAP parity, using FY2024 program funding as a baseline. In this scenario, Year 1 funds would be distributed such that each state would receive either the same amount they received in FY2024 or their LIHEE-proportionate share of national FY2024 LIHEAP funds, whichever is greater. After that first year, national LIHEAP funding could be increased at a consistent rate over the following four years until the target \$10.7 billion program funding is reached and all states receive a share that is proportionate to their population’s LIHEE burden (**Figure 6**).

Even if it is not feasible to increase national LIHEAP funding to \$10.7 billion, the proposed \$459 million Year 1 increase alone would result in a funding distribution that comes much closer to achieving LIHEAP parity. The LIHEAP Parity Act could be implemented by combining that initial funding increase with a temporary hold-harmless clause to cushion short-term funding reductions for currently advantaged states over the rest of the transition period. Alternatively, performance-based incentives could reward states that increase partic-

**Table 1. Hypothetical Funding Plan to Achieve LIHEAP Parity over a Five-Year Timeframe**

	Total Program Funding	Increase from Prior Year
FY2024 Baseline	\$4,417,192,370	—
Year 1	\$4,876,464,007	\$459,271,637
Year 2	\$6,336,948,163	\$1,460,484,156
Year 3	\$7,797,432,319	\$1,460,484,156
Year 4	\$9,257,916,475	\$1,460,484,156
Year 5	\$10,718,400,631	\$1,460,484,156

**Figure 6. Difference between LIHEAP funding under a hypothetical, phased-in plan and funding based on a LIHEE-proportionate allocation formula**



ipation rates among eligible households, ensuring that federal dollars more effectively reach those most affected by high LIHEE burdens.<sup>8</sup>

Taken together, these reforms would modernize LIHEAP into a more responsive program capable of addressing challenges in federal energy assistance and the growing threats posed by extreme heat.

## CONCLUSION

Modernizing LIHEAP represents more than an administrative adjustment; it is a necessary adaptation of a decades-old federal program to the energy realities that communities face today. By aligning allocations with actual LIHEE burdens, LIHEAP could serve as a model for updating many legacy programs to meet contemporary challenges.

This report has assessed the current status of LIHEAP and evaluated the extent to which it addresses relative LIHEE burdens across states. Program funding has remained largely stagnant—particularly over the past decade and aside from temporary periods of econom-

<sup>8</sup> Recent research provides insights on state-level policies that may be effective at increasing LIHEAP program participation: Anthony and Graff (2025) find that active, rather than passive, outreach strategies and coordination across social safety net programs are most effective at increasing participation in LIHEAP. Graff and Pirog (2019) find that asset tests reduce LIHEAP participation in a regressive manner. Finally, Graff (2025) finds that categorical eligibility is associated with increased participation and reduced administrative costs.

ic distress—and continues at levels insufficient to reach more than 20% of income-eligible households.

While the distribution of funds across types of assistance generally mirrors corresponding energy needs, with heating receiving four times more funding and accounting for four times the amount of home energy expenditures as cooling, the distribution of funds across states does not align with relative LIHEE burdens. Cold-weather states have received a greater share of funding than would be expected based on their LIHEE burden, while warm-weather states have received comparatively less. These findings raise fundamental questions about both the fairness and efficiency of LIHEAP as currently designed.

A straightforward amendment to the LIHEAP allocation that links state funding directly to relative LIHEE burdens would correct this imbalance. The LIHEAP Parity Act, introduced in the 119th Congress, proposes such a change. While this amended formula would reduce allocations for some states, an increase in total program funding could ensure that no state would receive less than its current level while expanding overall program reach. The funding necessary to achieve these two goals would be approximately \$10.7 billion per year, just a 3% increase above FY2021 levels.

These findings are particularly relevant given growing concern about the impacts of rising temperatures and extreme heat events on low-income households. Modernizing LIHEAP to better reflect LIHEE burden is essential to protecting at-risk populations and ensuring that federal assistance keeps pace with need. This report also highlights the importance of transparency and publicly accessible data that sheds light onto the operations of vital government programs such as LIHEAP. The insights gained here were made possible only through the release of detailed state-level data that, while technically public, are not readily accessible. Improving data availability would strengthen future assessments and enhance accountability for programs central to household well-being and community readiness.



## REFERENCES

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- ACF. 2020. "LIHEAP Statute and Regulations." *Office of Community Services*, August 21. <https://acf.gov/ocs/law-regulation/liheap-statute-and-regulations>.
- ACF. n.d. "LIHEAP Data Warehouse." <https://liheappm.acf.gov/datawarehouse>.
- Adams, J. A., S. Carley, and D. M. Konisky. 2024. "Utility Assistance and Pricing Structures for Energy Impoverished Households: A Review of the Literature." *The Electricity Journal* 37 (2): 107368. <https://doi.org/10.1016/j.tej.2024.107368>.
- Anthony, R., and M. Graff. 2025. "Administering Energy Aid: State Approaches to Low Income Home Energy Assistance Program Implementation." *The Electricity Journal* 38 (4): 107521. <https://doi.org/10.1016/j.tej.2025.107521>.
- Bechler, S. 2021. *How a Decades-Old Federal Energy Assistance Program Functions in Practice: A Deep Dive into LIHEAP*. Policy Brief NI PB 21-01. Nicholas Institute for Energy, Environment & Sustainability. <https://nicholasinstitute.duke.edu/publications/how-decades-old-federal-energy-assistance-program-functions-practice-deep-dive-liheap>.
- Carley, S., and D. M. Konisky. 2025. "It Is Time to Modernize Energy Insecurity Policies to Account for Extreme Heat." *Joule* 9 (3): 101876. <https://doi.org/10.1016/j.joule.2025.101876>.
- Carrión, D., and D. Hernández. 2024. "Heatwaves and Hardship: Shortcomings and Solutions for Enhancing the Low Income Home Energy Assistance Program to Mitigate Extreme Heat and Energy Insecurity." *The Electricity Journal* 37 (7–10): 107440. <https://doi.org/10.1016/j.tej.2024.107440>.
- Doremus, J. M., I. Jacqz, and S. Johnston. 2022. "Sweating the Energy Bill: Extreme Weather, Poor Households, and the Energy Spending Gap." *Journal of Environmental Economics and Management* 112 (March): 102609. <https://doi.org/10.1016/j.jeem.2022.102609>.
- FRED. 2025. "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average." Federal Reserve Bank of St. Louis, July. <https://fred.stlouisfed.org/series/CPIAUCSL>.
- FRED. 2026. "Population, Total for United States." Federal Reserve Bank of St. Louis, January 26. <https://fred.stlouisfed.org/series/POPTOTUSA647NWDB>.
- Graff, M. 2025. "Reducing Administrative Burdens in an Energy Bill Assistance Program." *Public Management Review* 27 (10): 2336–61. <https://doi.org/10.1080/14719037.2024.2335556>.
- Graff, M., and M. Pirog. 2019. "Red Tape Is Not so Hot: Asset Tests Impact Participation in the Low-Income Home Energy Assistance Program." *Energy Policy* 129 (June): 749–64. <https://doi.org/10.1016/j.enpol.2019.02.042>.
- HHS. 2020. *An Assessment of the Program's Formula and Allocations of Funding Among States*. Report to Congress. US Department of Health and Human Services. [https://acf.gov/sites/default/files/documents/ocs/rpt\\_liheap\\_congressional\\_request\\_for\\_formula\\_analysis\\_fy2020\\_final.pdf](https://acf.gov/sites/default/files/documents/ocs/rpt_liheap_congressional_request_for_formula_analysis_fy2020_final.pdf).
- HHS. 2022. *Reducing the Volatility in Annual State LIHEAP Allocations as a Result of the Statutory Formula*. Report to Congress. US Department of Health and Human Services. [https://acf.gov/sites/default/files/documents/ocs/RPT\\_LIHEAP\\_1984FormulaAnalysisRptBody\\_FY2021\\_042122.pdf](https://acf.gov/sites/default/files/documents/ocs/RPT_LIHEAP_1984FormulaAnalysisRptBody_FY2021_042122.pdf)

- Li, A., M. Toll, and R. Bentley. 2024. "The Risk of Energy Hardship Increases with Extreme Heat and Cold in Australia." *Communications Earth & Environment* 5 (1): 595. <https://doi.org/10.1038/s43247-024-01729-5>.
- NWS. 2025. "Degree Days Statistics." National Weather Service. [https://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/cdus/degree\\_days/](https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/cdus/degree_days/).
- Perl, L. 2019. *The LIHEAP Formula*. CRS Report No. RL33275. Congressional Research Service. <https://www.congress.gov/crs-product/RL33275>.
- Yu, Y., and N. Kittner. 2024. "Hot or Cold Temperature Disproportionately Impacts U.S. Energy Burdens." *Environmental Research Letters* 19 (1): 014079. <https://doi.org/10.1088/1748-9326/ad1724>.

## APPENDIX A. METHODOLOGY

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This analysis compares recent LIHEAP funding data to HHS estimates of LIHEE to assess the extent to which the current funding allocation addresses every state's low-income home energy burden. We also modeled the changes necessary to allow for national LIHEAP funding and state allocation distributions proportional to low-income energy burdens.

### Data

All LIHEAP funding data used in this analysis were downloaded from the LIHEAP Data Warehouse (ACF n.d.). Downloaded variables included total federal income-eligible households, total state income-eligible households, total program funds, funding by type of assistance, number and percent of eligible households served, and number of households assisted by assistance type. All data were downloaded at the state level for all available years, typically 2001 through 2024. However, data on the number of households receiving any assistance and percent of eligible households served were only available beginning in FY2011.

At the time of download, FY2023 and FY2024 data were marked as “preliminary pending final data validation.” Additionally, FY2024 fundings totals for Hawaii were not yet available through the LIHEAP Data Warehouse and were instead obtained from the HHS FY2024 LIHEAP Dashboard.

Many LIHEAP metrics in the report are presented as originally downloaded, but some required additional processing. To allow for consistent comparison across years, all raw funding amounts were adjusted for inflation to January 2025 values using the Consumer Price Index for All Urban Consumers (FRED 2025). All data presented about the share of eligible households relied on the assumption that the number of eligible households for any given state and year was equal to the greater of the state or federal income-eligible total, in line with LIHEAP statute requirements (ACF 2020). Unless specified otherwise, all average funding statistics presented in this report represent averages from FY2001 through FY2024.

The statewide LIHEE estimates used in this analysis were acquired via a public information request. These estimates represent FY2021 LIHEE burdens as calculated by HHS. Although states' relative LIHEE shares can vary over time, the report calculations use the FY2021 numbers to represent current LIHEE burden because they are the most recent available estimates and were largely in line with FY2016–FY2020 shares previously published by HHS (HHS 2022).

### Modeling a Pathway to LIHEAP Parity

The level of national funding required for all states to receive funding in proportion with their LIHEE burden without reducing funds for any state was calculated by dividing each state's total FY2024 program funding by its proportion of national LIHEE. The maximum value of this quotient across all states (\$10.7 billion, for North Dakota) represented the minimum amount needed to ensure that no state received a funding decrease relative to the model's 2024 baseline.

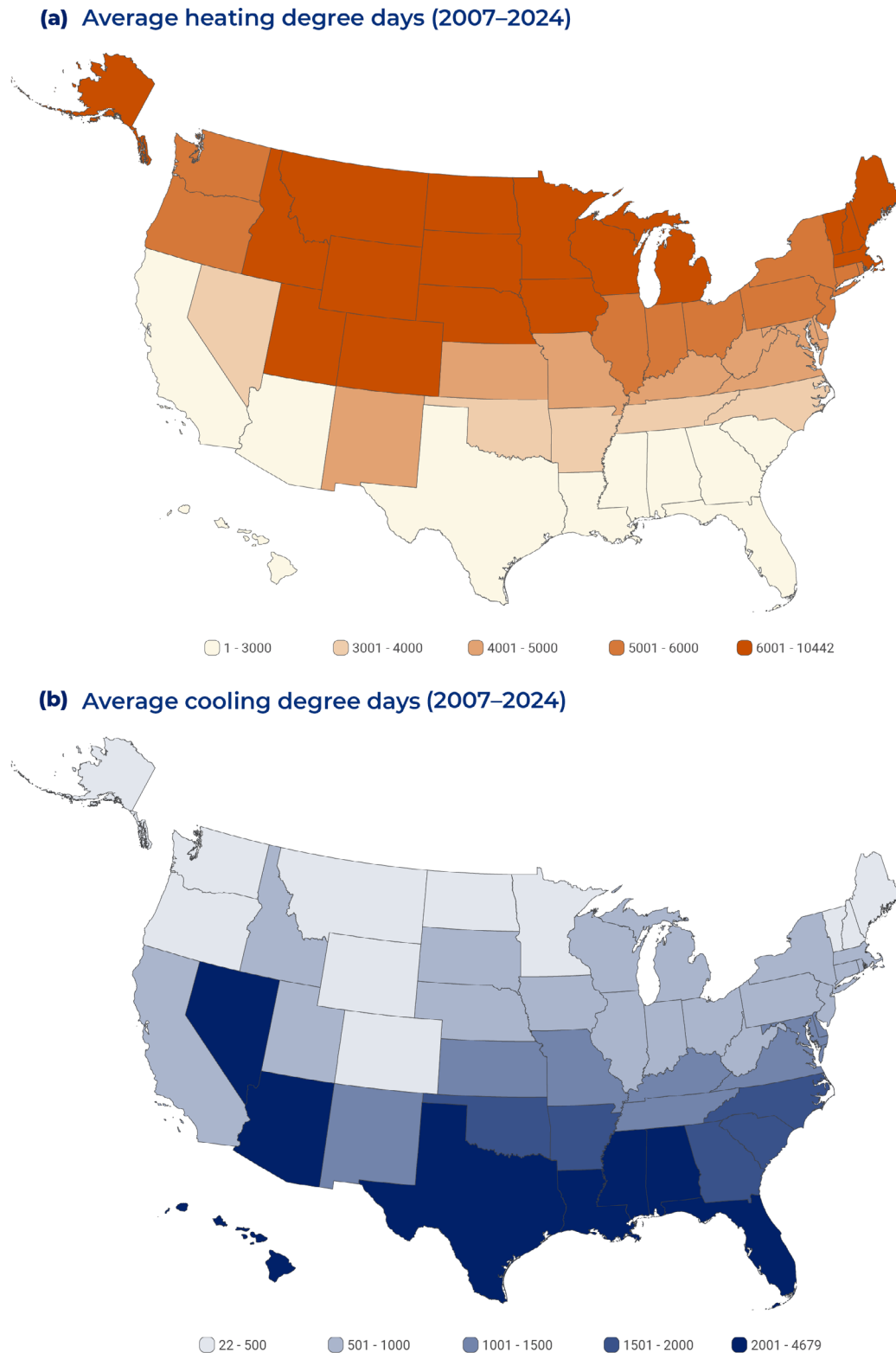
Using FY2024 funding allocation as a starting point, we developed a pathway to reach LIHEAP parity over a five-year period while steadily decreasing the disparity between states. A Year 5 target funding amount was calculated for each state by multiplying that state's

FY2021 LIHEE share by the level of national funding needed to establish LIHEAP parity (\$10.7 billion).

Each state's Year 1 funding was set to be either their actual 2024 program funding or their proposed funding under a LIHEE-proportionate allocation formula, whichever was greater, assuming that FY2024 national LIHEAP funding remained constant. This approach was chosen to quickly narrow the gap between states that receive more than their LIHEE-proportional share and states that receive less than their LIHEE-proportional share. However, the net increase in national LIHEAP funding after Year 1 accounted for just 7% of the necessary five-year funding increase to reach LIHEAP parity. To avoid a scenario in which any single year national increase would be too exorbitant, the distributions for the following four years were allocated evenly. Each state's annual increase for Year 2 through 5 was calculated by calculating the difference between its Year 1 funding and target Year 5 funding and dividing it by four.

## APPENDIX B. SUPPLEMENTAL FIGURES

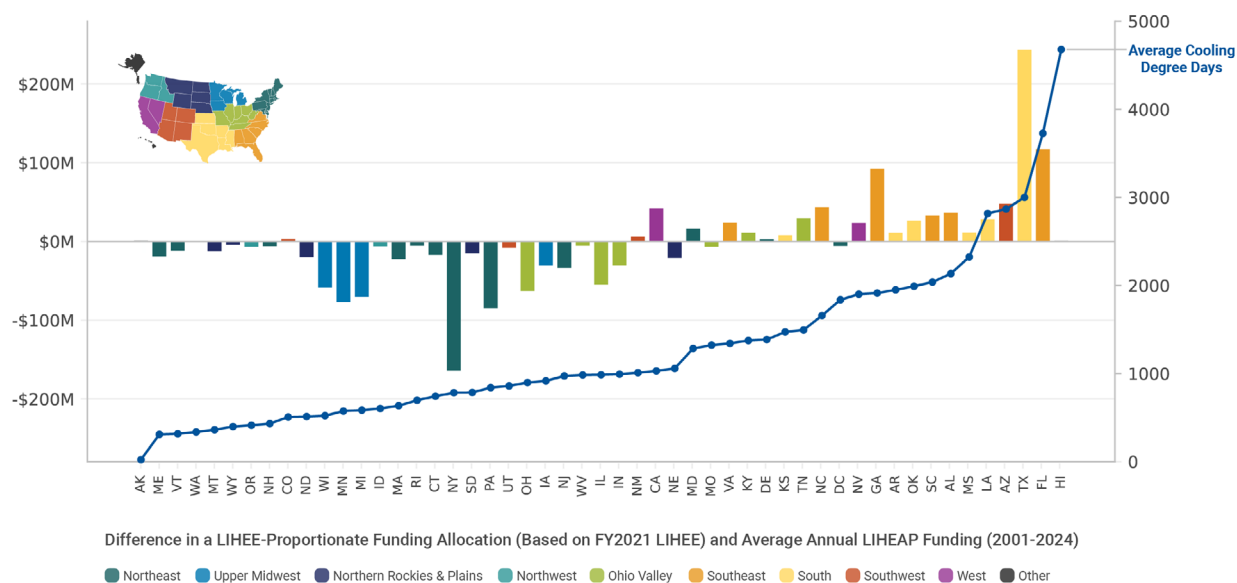
Figure B1. Comparison of heating degree days and cooling degree days



Source: NWS 2025



**Figure B2. Difference in annual state LIHEAP funding under a LIHEE-proportionate allocation formula compared to average cooling degree days**



Source: NWS 2025

