PROTECTING ACCESS TO ESSENTIAL UTILITY SERVICE

DURING EXTREME HEAT AND CLIMATE CHANGE

NCLC National Consumer Law Center
Fighting Together for Economic Justice

cepc Center for Energy Poverty and Climate

July 2024

ABOUT THE NATIONAL CONSUMER LAW CENTER

Since 1969, the nonprofit National Consumer Law Center® (NCLC®) has used its expertise in consumer law and energy policy to work for consumer justice and economic security for low-income and other disadvantaged people, in the United States. NCLC's expertise includes policy analysis and advocacy; consumer law and energy publications; litigation; expert witness services; and training and advice for advocates. NCLC works with nonprofit and legal services organizations, private attorneys, policymakers, and federal and state governments and courts across the nation to stop exploitive practices, help financially stressed families build and retain wealth, and advance economic fairness.

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ABOUT THE AUTHOR

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ABOUT THE CENTER FOR ENERGY POVERTY AND CLIMATE

The Center for Energy Poverty and Climate (CEPC) was founded on the belief that federal, state and local governments and utilities need to develop coordinated programs and strategies to help low-income families adapt to rising temperatures due to climate change. The current patchwork of programs and incentives is confusing, disjointed, and difficult to navigate. Many of them are targeted at market-rate solutions and do not address the needs of families who cannot afford to make expensive home upgrades on their own. CEPC is creating a platform for policymakers to engage directly with one another to share best practices and lessons learned, brainstorm solutions to difficult problems, and find innovative ways to braid funds and leverage programs to achieve net zero.

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The year 2023 brought record, punishing heat waves across the planet. 2024 data and forecasts point to a likely pattern of dangerously similar weather. Extreme heat and other climate change impacts are affecting communities throughout the United States, and non-white communities are at the highest risk for dangerous health impacts now and in the decades ahead. The phenomenon of extreme heat associated with climate change highlights the importance of uninterrupted access to essential utility service, particularly when increased electricity usage is needed to remain safe. The public health consequences of exposure to extreme heat require specific action by policymakers and regulators to address the unaffordability of, and need for continued access to essential utility service, particularly for vulnerable populations at increased risk of heat stroke and even death during intense heat.

As the planet continues to warm, recent data from the U.S. Energy Information Administration (EIA) confirms that unaffordability of essential utility service remains a problem for nearly 30 percent of the U.S. population.[1] The EIA reported that certain demographic groups, including lower income households, households with children, renters, and households where survey respondents self-identified as either Black or African American alone or as Hispanic or Latino, reported higher rates of energy insecurity. Low-income utility customers, who struggle to afford essential utility service throughout the year, face increasingly difficult decisions each month, particularly during extreme weather, as to what they will forgo to pay their energy bills, including food, medicine, and other life essentials. These financially struggling utility customers often engage in deprivation of needed energy usage, including essential cooling, out of fear of unaffordable monthly utility bills, particularly during extreme heat.

Unaffordability of essential utility service remains a problem for nearly 30% of the U.S. population.

At the same time that these impacts of climate change are felt across the country, utility customers are being asked to subsidize new state clean energy policies through increased rates and special surcharges in their monthly utility bills. State legislators and regulators have increasingly relied on new surcharges as the means of subsidizing the transition from fossil fuels to renewable energy sources and increased investment in energy efficiency, electrification, and other programs. These new clean energy policies have placed upward pressure on utility rates, increasing the need for both federal and state assistance. State regulators play a key role in approving new affordability programs to ensure that financially struggling customers are not routinely disconnected from electric service or left behind during the energy transition as the last remaining customers propping up legacy gas delivery systems.

The confluence of extreme weather and increased utility rates underscores the need for state regulators to order affordability programs to ensure affordability of essential utility service year-round.

How state and federal policymakers respond to the continuing threat of extreme heat and rising utility rates will have critical health and safety implications on financially struggling utility customers. Funding for the Low Income Home Energy Assistance Program (LIHEAP) remains subject to annual congressional prerogative amidst frequent threats of government funding shutdowns. As a result, utility customers in nearly half of U.S. states lack year-round access to increasingly needed LIHEAP summer cooling assistance. These funding shortages make clear that state utility regulators cannot rely on LIHEAP as the sole source of financial assistance for low-income customers.

The confluence of extreme weather and increased utility rates underscores the need for state regulators to order affordability programs, such as Percentage of Income Payment Plans (PIPPs) and tiered discount rates for financially struggling customers, to ensure affordability of essential utility service year-round. In addition, the 100-plus-year-old policies of disconnecting utility customers due to inability to pay must be replaced with enhanced, year-round protections from disconnection for vulnerable populations, including older adults, households with young children, and medically compromised customers.

Policy Recommendations

To improve the affordability of essential utility and protect vulnerable populations from disconnection, the following actions should be taken by policy makers and regulators in states across the country:

- **Prohibit electricity shutoffs for vulnerable families.** Identify and implement year-round disconnection prohibitions for financially struggling vulnerable populations, including older adults, households with children, and people with disabilities and medical conditions.
- **Protect access to electricity during weather extremes.** Implement calendar-based, weather-related moratoriums or, as a second-best alternative, temperature-related disconnection protections that include assessment of humidity to ensure continued access to utility service during extreme heat and cold.
- **Make electricity affordable for all.** Establish Percentage of Income Payment Plan and Tiered Discount Rate programs for low-income utility customers that reduce monthly energy burden to a maximum, combined electric and gas bills of 6% of monthly income.

- **Treat people fairly when they can't pay an electric bill.** Revise antiquated credit and collection practices that punish people for being poor through disconnection of essential utility service. These measures should include:
    - Longer deferred payment arrangements (DPAs) that reflect a customer's ability to pay (e.g., minimum of 24 months, with a right to re-negotiate a longer payment plan tailored to the customer's financial circumstances if default occurs);
    - A prohibition on late fees for all residential customers or, in the alternative, all customers whose income falls at or below 80% area median income (AMI);
    - A prohibition on security deposits for all residential customers or, at a minimum, all customers whose income falls at or below 80% AMI;
    - No reconnection fees, particularly when the utilities have AMI meters; and
    - Ending the use of customer risk-ranking that accelerates disconnections for payment troubled households, renters, and new customers.
- **Require clear data.** Increase transparency on the impact of utility credit and collection policies and the affordability of rates in general, by requiring utilities to file monthly arrearage, disconnection, and other data by zip code or census tract.
- **Increase, significantly, federal subsidization of LIHEAP** to ensure year-round access to critical energy assistance.
- **Fund weatherization programs.** Increase federal allocations for the Weatherization Assistance Program to the states for crucial weatherization services to address the immense need for retrofitting energy inefficient housing to help reduce low-income customers' energy burdens all year and to assist states in achieving building electrification goals. Implement Inflation Reduction Act programs with strong consumer protections.

As extreme heat intensifies, policy makers and regulators need to take immediate action to address the problem of unaffordable electric and gas utility rates and protect vulnerable households from the antiquated practice of disconnecting customers, which punishes people for being poor.

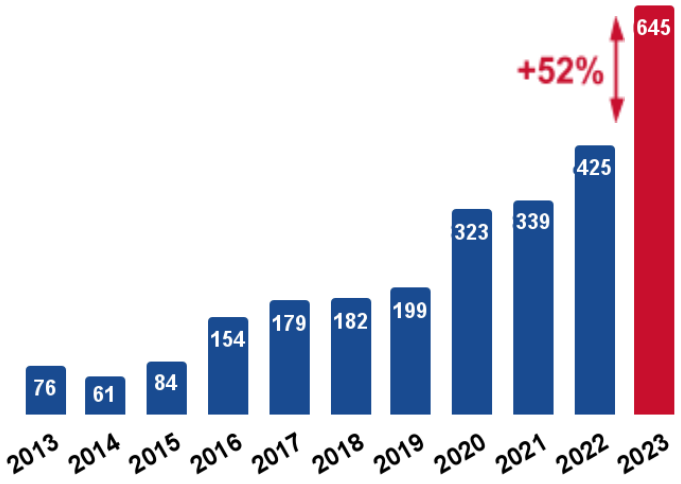
THE URGENT NEED FOR POLICYMAKERS TO SAFEGUARD UTILITY SERVICES AMID CLIMATE-INDUCED EXTREME WEATHER

The Impacts of Extreme Heat on Utility Customers

The National Oceanic Administration (NOAA) reported in January 2024 that 2023 was the hottest year in the history of the planet "by far."[2] 2024 data and forecasts point to a likely pattern of dangerously similar weather.[3] The Center for Disease Control and Prevention (CDC) defines extreme heat as "summertime temperatures that are much hotter and/or more humid than average."[4] National Weather Service data in 2023 revealed that, in the United States, intense heat waves, with record temperatures and heat index readings, were frequent and far-reaching. Maricopa County, Arizona, reported a total of 645 heat-related deaths during the summer of 2023, the region's deadliest year on record.[5] The Texas Department of State Health Services reported that 334 people died from heat-related causes in the state – more than double the number recorded in 2011.[6] In 2021, a weekend of extreme heat killed dozens in Oregon.[7]

Maricopa County identified a total of 645 heat-related deaths occurring in 2023.

This represents a **52% increase** from last year and the most heat-related deaths ever recorded.

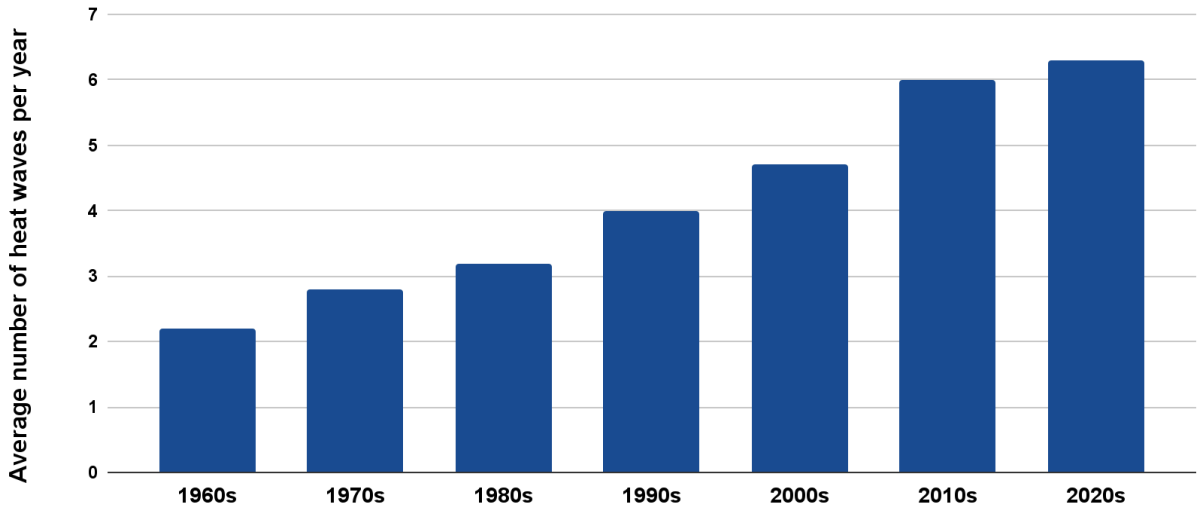


Extreme heat and humidity create challenges for the human body to cool itself down. When the skin sweats, evaporation of this water cools the body — as long as the surrounding humidity levels allow the evaporation to take place.[8] Severe heat stroke occurs when the core body temperature exceeds 103°F and leads to multiple organ dysfunction and the possibility of death within hours or permanent organ damage in survivors.[9]

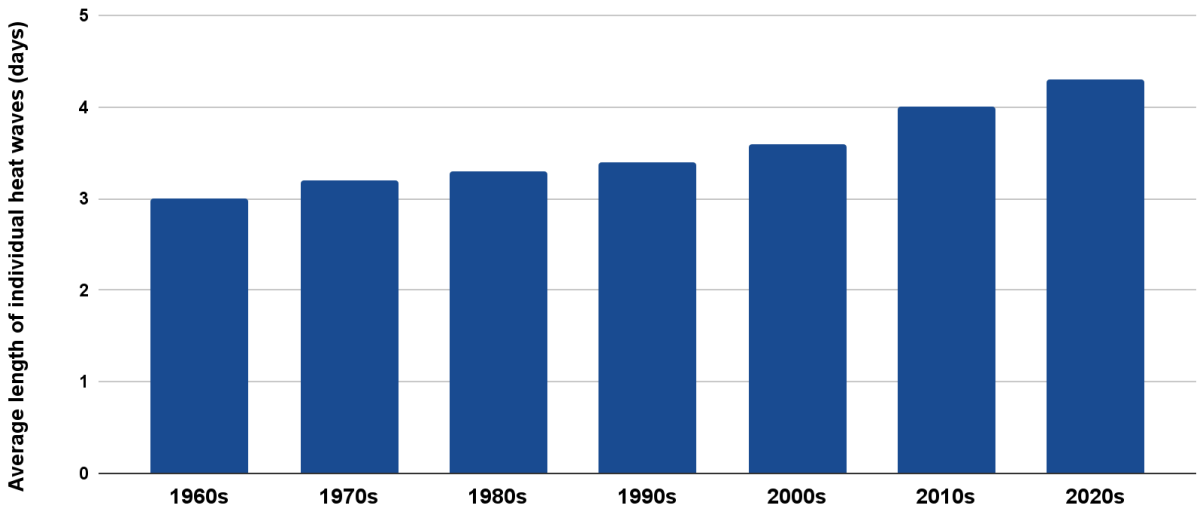
In fact, extreme heat[10] is the leading cause of weather-related deaths, according to the U.S. Environmental Protection Agency (USEPA).[11] The frequency, duration and intensity of extreme heat waves has significantly increased over the past several decades, as reported by the USEPA[12]:

Heat Wave Characteristics in the United States by Decade, 1961–2023

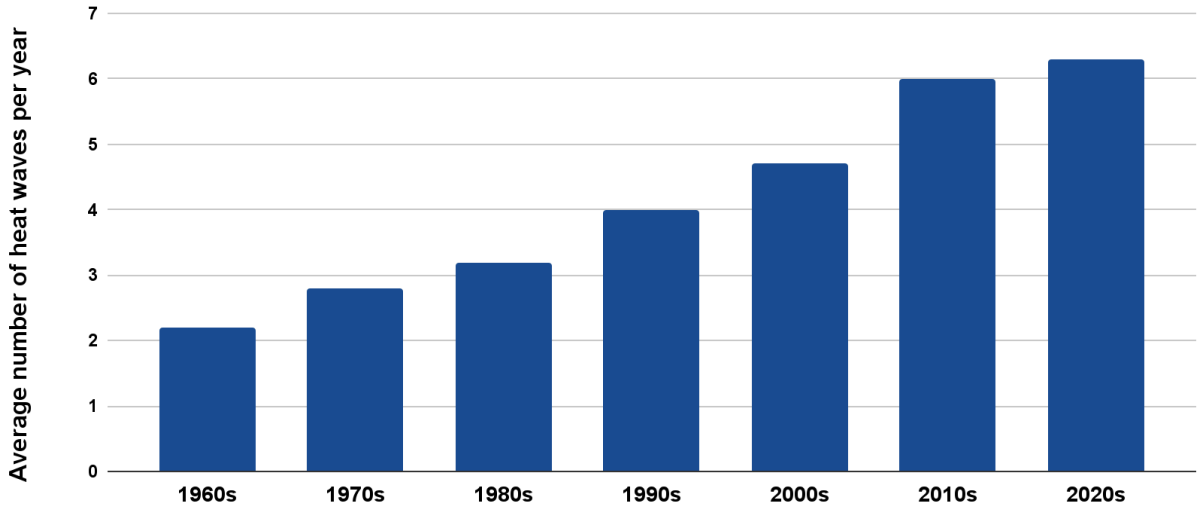
Heat Wave Frequency



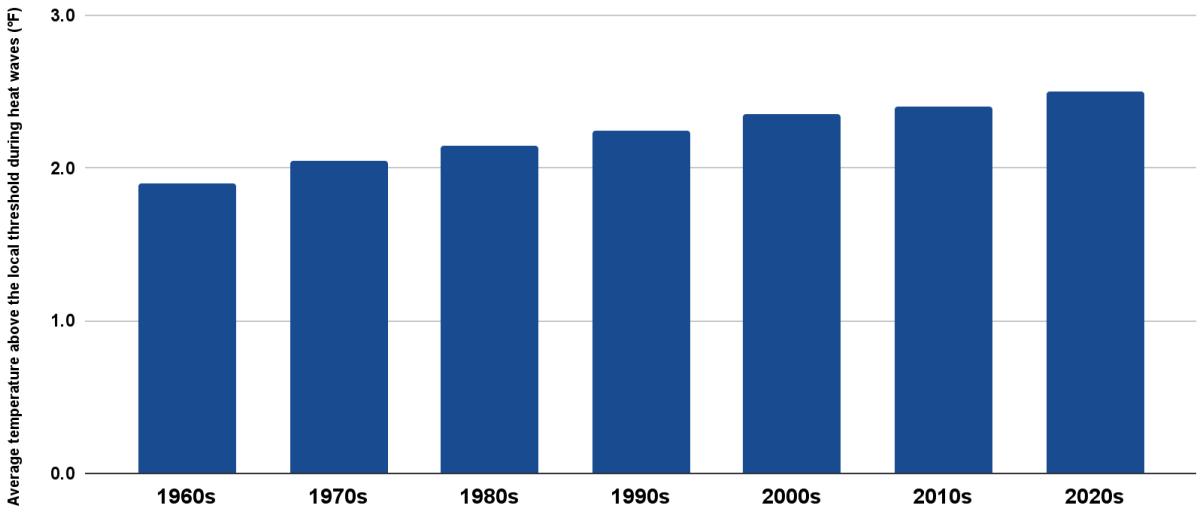
Heat Wave Duration



Heat Wave Season



Heat Wave Intensity



The CDC has identified certain populations as particularly vulnerable to the dangers and health risks of extreme heat and humidity, including older adults, households with children, low-income populations, outdoor workers, athletes, and people with disabilities and chronic illness.[13] According to the CDC, between 2018 and 2021, there were 4,681 heat-related deaths in the United States.[14] The threat of heat-related deaths continues to rise across the country. In July 2023, The Washington Post reported that "between 250 and 275 million Americans" were facing heat indexes of at least 90 degrees, and more than 130 million people were under heat alerts from southern California to Maine, including in Phoenix, Dallas, Oklahoma City, St. Louis, Louisville, Washington, New York, and Boston."[15]

The U.S. Global Change Research Program (USGCRP)[16] summarizes the public health threats from climate change:

> The impacts of human-induced climate change are increasing nationwide. Rising greenhouse gas concentrations result in increases in temperature, changes in precipitation, increases in the frequency and intensity of some extreme weather events, and rising sea levels. These climate change impacts endanger our health by affecting our food and water sources, the air we breathe, the weather we experience, and our interactions with the built and natural environments. As the climate continues to change, the risks to human health continue to grow.[17]

Moreover, "all of these threats are expected to worsen with continued climate change," according to the USGCRP.[18] Urban "heat islands," where structures are highly concentrated and greenery is limited, create pockets of higher temperatures compared to outlying areas that resist cooling overnight.[19] Heat islands trigger increased energy consumption, elevated emissions of air pollutants and greenhouse gasses, and compromised human health and comfort, among other impacts.[20]

The Unequal Impact of Extreme Heat on Communities of Color

Certain populations[21] face greater risk of serious harm due to extreme heat and climate change than other populations, making continued access to essential utility service a critical policy goal. According to the U.S. Environmental Protection Agency (EPA), "the most severe harms from climate change fall disproportionately upon underserved communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts."[22] The EPA analysis indicates that racial and ethnic minority communities are particularly vulnerable to the impacts of climate change.[23]

There is a documented correlation between race and who lives in heat islands and therefore experiences increased risk of the health impacts of extreme heat, according to a 2023 *Scientific American* analysis:

> A growing body of research shows that people of color and people living below poverty levels are stuck in these islands, much more so than their white and wealthier counterparts. The disparity is most pernicious during the summer, when extreme heat waves are becoming more common and lasting longer. …A new analysis of 481 U.S. cities showed that the typical Black resident lives in air that is 0.5 degree F warmer than the average for their city. In contrast, the typical white resident lives in air that is 0.4 degree cooler than the city average. These patterns also follow wealth and poverty levels.[24]

The author connects historic redlining and environmental racism to that phenomenon:

> In the 1930s the federal Home Owners' Loan Corporation began ranking a neighborhood's loan-worthiness based primarily on its racial composition and

> socioeconomic status. The policies reinforced segregation, exposed poor communities to industrial pollution, and limited investments in amenities such as trees and parks. A 2020 study of 108 cities in the U.S. found that 94 percent had elevated land-surface temperatures in formerly redlined areas compared with their nonredlined neighbors. The difference was as much as 12.6 degrees F.
>
> Although redlining may no longer be practiced legally, its legacy remains. In the neighborhoods it affected, there are far fewer parks, homes are less energy-efficient, and pollution rates are higher. Structures tend to be more densely packed, which limits air circulation and drives up temperatures.[25]

Other researchers cite a direct link between increased risk for heat-related health impacts associated with climate change and historical inequities, noting:

- As a result of structural and codified segregation in the U.S. housing supply, including redlining, people of color have a higher likelihood of living in a census tract with higher summer daytime surface urban heat island intensity compared to their white counterparts.
- Low income communities and communities of color also suffer from "tree inequity," or inequitably distributed tree cover, increasing the risk of exposure to extreme heat and subsequent heat-related illnesses.
- Communities that live in these historically zoned areas are also more likely to have higher rates of asthma and cardiovascular illnesses and other diseases that increase their risk of poor health outcomes associated with exposure to climate change-related extreme heat and air pollution.
- The Southern U.S. and some areas in the Northeast and Midwest have experienced the greatest increases in the number of heat wave days in the U.S., which may have equity implications because these affected areas include higher shares of people of color, and are therefore more likely to be exposed to longer and more intense heat waves.[26]

Diana Hernández, Associate Professor of Sociomedical Sciences at Columbia University, has documented the link between race and energy insecurity in her research:

> When considering racial disparities, the association between environmental hazard exposure and geographical location is stronger for Black and Latino communities than for other racial groups. The health impacts of energy insecurity are compounded for racial-minority households that live in areas with high rates of exposure to environmental hazards and energy inefficiencies. The disparity in the impacts of acute energy insecurity is especially apparent for minority racial groups. For example, a study by O'Neill et al. found that during heatwaves in four different cities across the U.S., the rate of air conditioning use was more than two times higher among the white population than the black population, suggesting that black residents did not have access to or could not afford to use air

> conditioning at the same rate as white residents. Additionally, the mortality rate of black residents was significantly higher than that of other racial groups across all four cities. This trend could be attributed to low income levels and unaffordable electricity, which disproportionately impact racial and ethnic minority households.[27]

Energy unaffordability is not just a factor exacerbating overall poverty. Some researchers argue that high energy burdens and unaffordability of energy utility services actually push people into poverty:

> Eviction, food insecurity, and other material hardships often associated with energy burdens could initiate or prolong a cycle of poverty. The inability to access affordable energy services can prevent participation in certain economic activities and serve as a barrier to upward mobility (Sovacool, Sidortsov, and Jones 2014). We suggest that energy burdens may be one of several triggering events preceding poverty entry (Bane and Ellwood 1986; DiPrete and McManus 2000).[28]

And according to an *E&E News* analysis of New York non-profit First Street Foundation's climate projections, disparities in extreme heat exposure will continue to persist 30 years from now.[29] These facts demand specific action from policy makers to ensure that all households – particularly financially and medically vulnerable ones – are protected as states grapple with extreme heat and climate change.

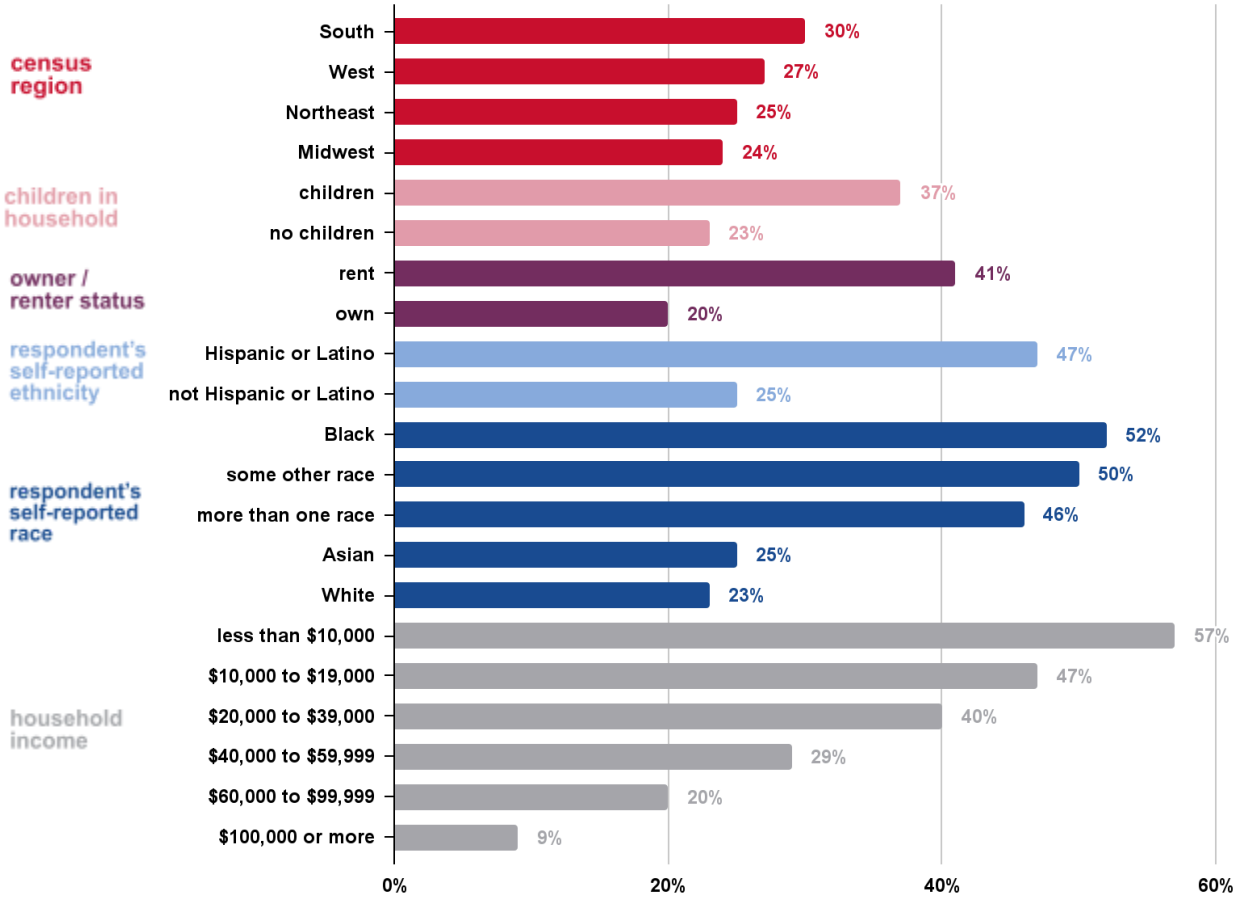
The Energy Affordability Crisis

Unaffordability of essential utility service remains a problem for nearly 30% of the U.S. population.

As the planet continues to warm, recent data from the U.S. Energy Information Administration confirms that unaffordability of essential utility service remains a problem for nearly 30 percent of the U.S. population.[30] The EIA reported that certain demographic groups, including lower income households, households with children, renters, and households where survey respondents self-identified as either Black or African American alone or as Hispanic or Latino, reported higher rates of energy insecurity. Low-income utility customers, who struggle to afford essential utility service throughout the year, face increasingly difficult decisions each month, particularly during extreme weather, as to what they will forgo to pay energy bills, including food, medicine and other life essentials.

U.S. households reporting some form of energy insecurity (2020)

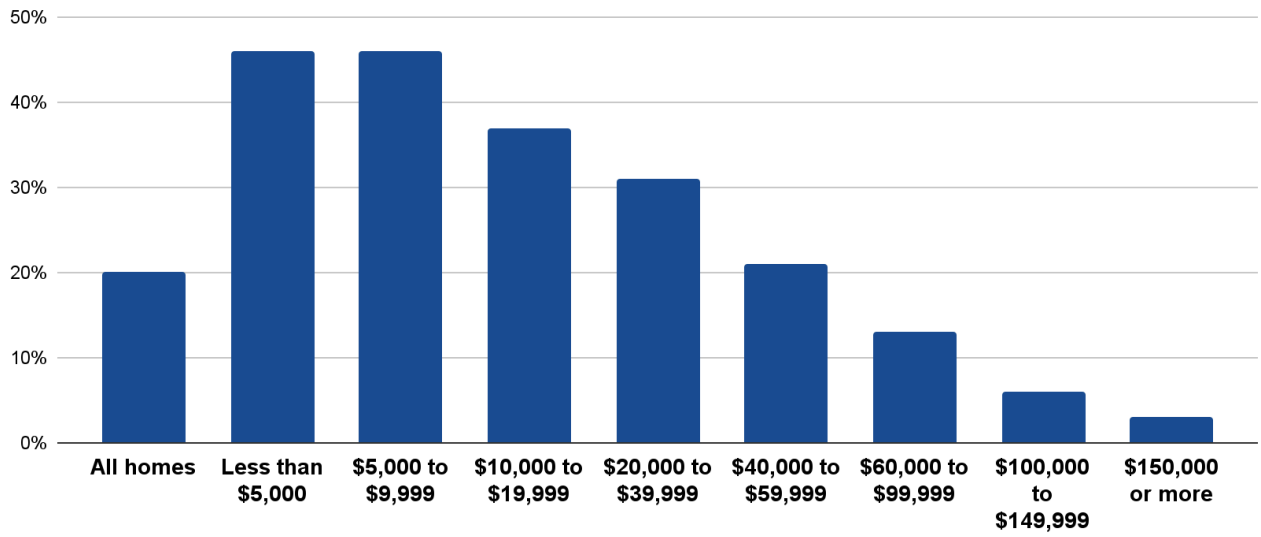
percentage of U.S. households within each category



Source: *U.S. Energy Information Administration, Residential Energy Consumption Survey (RECS)*

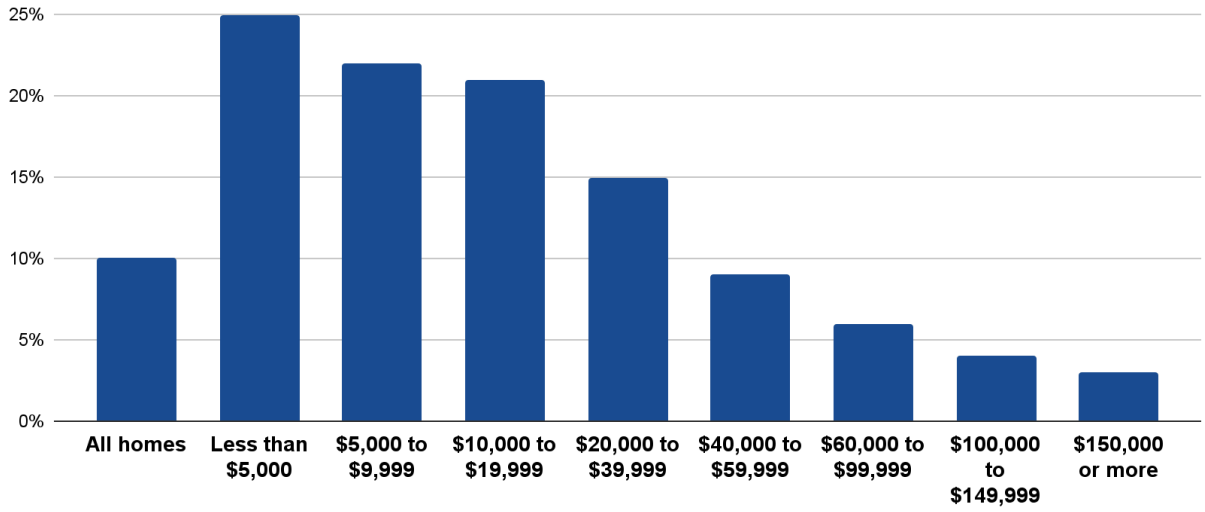
The EIA data highlights the difficult decisions financially struggling customers face each month when utility services are unaffordable:

Reducing or forgoing food or medicine to pay energy costs - 2020 Household income

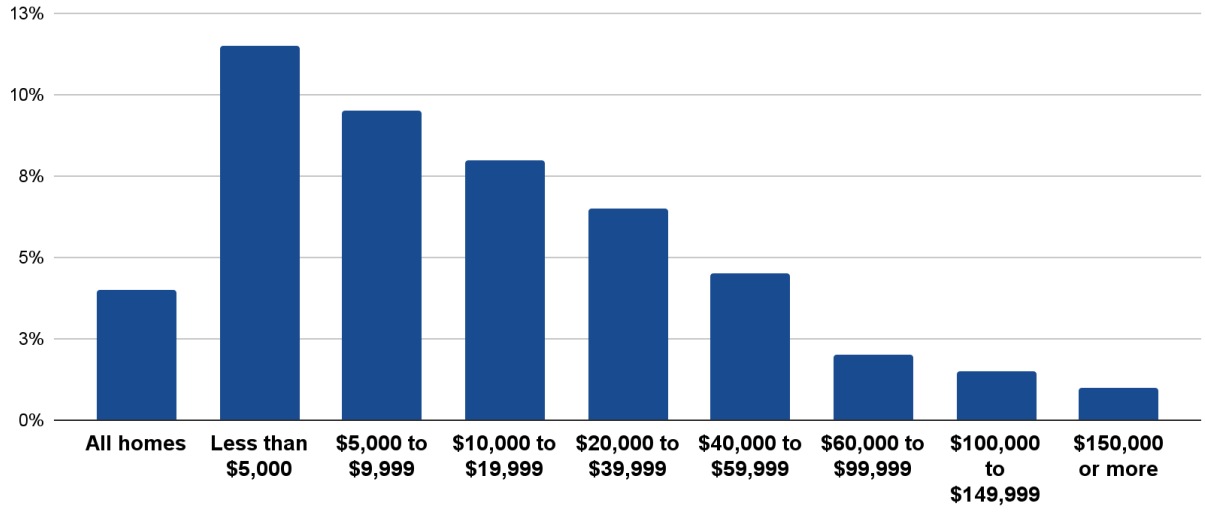


Similarly, the EIA data shows that households that struggle to pay the utility bills each month engage in deprivation of essential utility services, which can have significant health impacts on the occupants of those households:

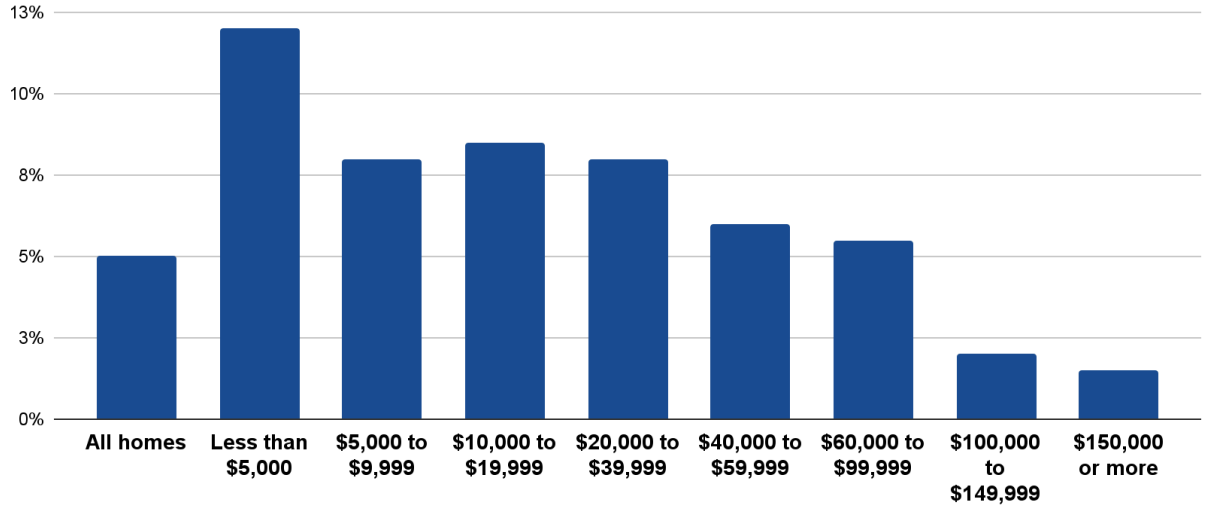
Leaving home at unhealthy temperature - 2020 Household Income



Unable to use heating equipment - 2020 Household Income



Unable to use cooling equipment - 2020 Household income



The figures above, reflecting national data from the EIA's 2020 Residential Energy Consumption Survey and NCLC cross tabulation of American Community Survey data[31], show a near-linear relationship between household income and various measures of home energy insecurity, including foregoing necessities to pay an energy bill, maintaining unhealthy indoor temperatures, or inability to use heating or cooling equipment due to shutoff or failed equipment.[32]

Scholarly research, too, highlights the connection between unaffordable utility bills and physical and mental well-being:

Households that cannot afford to pay their energy bills are more likely to suffer from depression and anxiety, physical discomfort, including increased rates of asthma and respiratory infection, and, in more extreme but certainly not rare situations, lower life expectancies or premature death.[33]

LIHEAP ALONE WILL NOT ENSURE AFFORDABLE UTILITY BILLS DURING EXTREME HEAT

Access to cooling in the hot summer months is essential to ensuring public health and safety in light of extreme heat and climate change impacts. But recent data show that only 31 states offer summer LIHEAP cooling programs for financially struggling utility customers despite the higher bills that increased summer usage associated with the extreme heat brings.[34] All of the programs are dependent on annual budgets that are sufficient in size to last through the summer months.

It is well-documented, too, that state and federal investments in the weatherization of housing, particularly for low-income households, are desperately needed to reduce the monthly burden of increasing energy bills. In a 2020 report that examined low-income households' energy burden (the proportion of monthly income devoted to paying energy bills) and the potential for energy efficiency to reduce that burden, American Council for an Energy-Efficient Economy (ACEEE) researchers made the following conclusions:

- Low-income households spend three times more of their income on energy costs compared to the median spending of non-low-income households (8.1% versus 2.3%).
- Low-income multifamily households spend 2.3 times more of their income on energy costs compared to the median spending of multifamily households (5.6% versus 2.4%).
- The median energy burden for Black households is 43% higher than for non-Hispanic white households (4.2% versus 2.9%), and the median energy burden for Hispanic households is 20% higher than that for non-Hispanic white households (3.5% versus 2.9%).
- The median renter energy burden is 13% higher than that of the median owner (3.4% versus 3.0%). More than 25% (30.6 million) of U.S. households experience a high energy burden, and about 50% (15.9 million) of households with a high energy burden face a severe energy burden.
- Of low-income households (≤ 200% FPL), 67% (25.8 million) experience a high energy burden, and 60% (15.4 million) of those households with a high energy burden face a severe energy burden.
- Low-income households, Black, Hispanic, Native American, renters, and older adult households all have disproportionately higher energy burdens than the national median household.[35]

The researchers concluded that weatherization measures, including insulation, air sealing, new heating, ventilation, and air conditioning appliances, can reduce energy burden by 25% for the average low-income household.[36] Yet, the need for additional weatherization funding, training opportunities and the employee capacity at the agency level to make the needed investments remains insufficient.[37]

Each year, consumer advocates push for increased funding for LIHEAP and WAP programs, with advocacy and annual letters to Congress detailing the immense need. Yet, the amount appropriated by Congress is never sufficient to meet the demand for year-round utility assistance in the states, which often varies (among other reasons) depending on the price of energy during winters, when heating fuel usage increases, and summers, when electricity usage increases.[38] Moreover, uncertain and unpredictable congressional commitment to LIHEAP funding and regular political battles when annual federal budget approval deadlines approach make it unreasonable for state policymakers to rely on Congress to ensure sufficient federal assistance to prevent customer arrearages and disconnections.

Nationwide weatherization efforts got a boost in 2022 when Congress passed the Inflation Reduction Act, which provides nearly $400 billion to support clean energy investments, including weatherization and electrification measures like air source heat pumps that provide both heating and cooling, in an effort to reduce energy burden and address climate change.[39] The law includes $8.8 billion allocated to the states and tribal areas for the Home Owner Managing Energy Savings (HOMES) Rebates Program, and the High-Efficiency Electric Home Rebates or Home Electrification and Appliance Rebates (HEAR) Program.[40]

The U.S. DOE estimates these rebates will save households up to $1 billion annually on energy bills and support over 50,000 U.S. jobs.[41] The rebate programs run through 2031. It will be critical for state plans to ensure the rebate programs are leveraged and braided with existing state and utility-sponsored weatherization programs to ensure easy and efficient consumer access to these benefits.[42]

These new federal investments in weatherization and electrification measures point to the need for a continued commitment from policy makers to ensure that utility customers are not shouldering more than their fair share of funding the energy transition. The impacts of climate change are being felt across the country, triggering increased energy usage, and utility customers are being asked to subsidize new climate change policies through the monthly utility bill. These policies, mainly designed to achieve 100% clean energy targets by a date certain, include renewable energy program subsidies,[43] net metering payments for solar panel users,[44] EV charging station initiatives,[45] nuclear plant subsidies,[46] electrification initiatives,[47] energy efficiency programs,[48] and energy worker training programs,[49] adding up to millions of dollars in ratepayer-funded subsidies, even while existing gas main replacement program funding continues through monthly surcharges.[50] With the necessary transition to electrification, investor-owned electric utilities across the country are proposing significant rate increases to pay for billions in new investment, purportedly to meet the increased peak demand that the movement to electrify both transportation and building heating will bring.[51] Meanwhile, gas

companies claim that state clean energy goals will require a combination of utility delivery services, including continued maintenance and repair of the existing gas delivery system.[52]

The bottom line is that new clean energy policies designed to combat climate change come at a steep cost, which will continue to place significant upward pressure on utility rates, with little to no risk of revenue recovery for the utilities because of special rate recovery mechanisms, such as riders, formula rates, and performance-based regulation. Monthly utility bills will continue to grow more unaffordable for financially struggling populations unless policymakers act quickly to minimize the ever-increasing energy burden triggered by extreme heat and climate change.

Monthly utility bills will continue to grow more unaffordable for financially struggling populations unless policymakers act quickly to minimize the ever-increasing energy burden triggered by extreme heat and climate change.

UTILITY CREDIT AND COLLECTION POLICIES REQUIRE MAJOR OVERHAUL

Extreme weather signals an urgent need for state policymakers and regulators to enact critical protections against disconnection and to introduce bill affordability measures, to help ensure continued access to essential utility services and reduce energy burdens. Vulnerable populations, including older adults, households with children, persons with disabilities and households with a member with serious illness, are particularly at risk for health and safety risks and must be protected from utility disconnections.

Calendar-Based Moratoria on Disconnections Offer Vital Health and Safety Protections During Extreme Weather and Cataclysmic Events

When the COVID-19 pandemic arrived in 2020, there was an understanding among policy makers and governors that people could not remain safe in their homes if essential utility services were disconnected. The majority of policy makers recognized that continuous access to essential utility services was necessary for a home to remain inhabitable and maintain public health and safety, and they rose to the occasion to enact moratoria on utility disconnections in March of 2020 and for many months beyond the initial worldwide shutdown date. All of those moratoria have expired.

Today, most states have in place disconnection moratoria for the winter months for both electric and gas utilities, typically running from mid-November or December 1, through March 31st, but often lack necessary protections from the impacts of extreme heat and humidity during summer months.[53]

Best practices point to the need to enact calendar-based moratoria that ensure protection from disconnection regardless of the temperature during a designated time frame. That would ensure that a utility will not refrain from disconnection one day, only to order shutoff operations to commence again once a temperature drops below a maximum degree of heat or humidity, or engage in selective disconnections within a large service territory based on slight differences in temperature or humidity.[54]

One best practices model is in Arizona, which specifically directs a utility to adopt one of the following conditions under which it shall not terminate residential service:

a. During any period for which the local weather forecast, as predicted by the National Weather Service, indicates that the weather in the customer's service address:

  i. Will include temperatures that do not exceed 32° F;

  ii. Will include temperatures that exceed 95° F; or

  iii. Will include other weather conditions that the Commission has determined, by order, are especially dangerous to health; or

b. During the calendar days of June 1 through October 15 of each year, which shall be specified as non-termination dates in a utility's tariffs.[55]

In the alternative, if temperature is chosen as a metric for disconnection protection, best practices demand that states incorporate a heat index or National Weather Service warning metric to account for the impact of humidity (also known as the wet bulb temperature) in addition to a temperature-based metric. One recent example is Illinois' legislators' decision to not only lower the summertime disconnection moratorium from the previously existing 95 degree temperature trigger to 90 degrees, but also to incorporate a National Weather Service heat advisory warning as a disconnection prohibition trigger, in recognition of the role humidity plays in triggering heat stroke.[56]

Maine policy makers, too, recently recognized the health impacts and dangers extreme heat triggers and approved a change in law that prohibits: (1) disconnection of essential electric and gas services "for unpaid utility bills during extreme weather or temperature conditions, including extreme heat or humidity, between April 16th and November 14th;" (2) disconnections for arrearages less than $50; and (3) for low income customers, charging a restoration or reconnection fee, requiring a security deposit for a restoration of service, and charging late fees that accrued prior to the termination or disconnection.[57]

When extreme heat or other emergency events occur outside of any existing calendar-related moratoria, for example, states may also choose to provide a more generic approach to protecting public health and safety. California's Public Utilities Commission (CPUC), when faced with intense wildfires, enacted interim disaster relief emergency customer protections that go into effect whenever the California governor declares a state of emergency.[58] These protections require electric, gas, water, and sewer utilities to:

1. Waive deposit requirements for affected residential customers seeking to reestablish service for one year and expedite move-in and move-out service requests.

2. Stop estimated energy usage for billing attributed to the time period when the home/unit was unoccupied as result of the emergency;

3. Discontinue billing;

4. Prorate any monthly access charge or minimum charges;

5. Implement payment plan options for residential customers;

6. Suspend disconnection for non-payment and associated fees, waive deposit and late free requirements for residential customers; and

7. Support low-income residential customers by: (a) freezing all standard and high-usage reviews for the California Alternate Rates for Energy (CARE) program eligibility in impacted counties until at least the end of the year and potentially longer, as warranted; (b) contact all community outreach contractors, the community based organizations who assist in enrolling hard-to-reach low-income customers into CARE, in impacted counties to help better inform customers of these eligibility changes; (c) partner with the program administrator of the customer funded emergency assistance program for low-income customers and increase the assistance limit amount for the next 12 months for impacted customers; and (e) indicate how the energy savings assistance program can be deployed to assist impacted customers.[59]

Importantly, the California PUC encouraged the utilities "to do more," noting that "the utilities are not barred from implementing their own disaster assistance programs to augment these interim rules."[60] In approving the order, the California Public Utilities Commission observed:

> We recognize the need for prompt Commission consideration of disaster preparedness and disaster relief as California experiences the harsh effects of climate change, which increases the probability and severity of disasters like wildfires…The aim of this decision is to provide continuity and support to customers during times of crisis by establishing interim, minimum disaster relief emergency protocols and protections to assist customers with recovery from indiscriminate harm.[61]

Such an approach to customer protections, which allows states and utilities to act quickly to protect utility customers from harm during times of crisis, should be in addition to statutory or codified calendar-based protections noted above.

STATES NEED NEW CREDIT AND COLLECTIONS RULES THAT PROTECT CONTINUED ACCESS TO ESSENTIAL UTILITY SERVICE IN LIGHT OF CLIMATE CHANGE

The reality of climate change and increasingly unaffordable utility bills calls into question electric and gas utilities' century-old response of disconnecting customers who cannot afford their monthly bills. Those policies punish people for being poor while ignoring the root causes of poverty and the racial wealth gap.[62]

Disconnecting people when they cannot afford their monthly utility bills has produced disparate impacts on communities of color. It has been well-documented that the impacts of punitive disconnection policy falls disproportionately on Black and Brown communities.

In 2021, a Tufts University analysis[63] of Illinois zip-code-level disconnection data, from the 2013-2020 period showed:

- Customers in non-white neighborhoods were four to five times more likely to have their power disconnected, both in normal times and during the COVID-19 pandemic, controlling for income distribution and other demographics.
- There was a nine-times expansion in low-income assistance to pay utility bills during the COVID-19 pandemic, but disconnections were double and deferred payment plans triple their historical averages in October 2020. About 20% of all accounts were charged late fees. The odds for each of these measures were multiples higher in non-white zip codes.[64]

In a 2022 Illinois Commerce Commission proceeding involving the establishment of performance-based ratemaking metrics for northern Illinois electric utility Commonwealth Edison Company, unrebutted testimony found that there was a striking overlap between race and service disconnections.[65] Among the 20 zip codes with the highest disconnections ratio, 13 were among the top 20 zip codes with the highest non-white populations for the period examined.[66] The testimony highlighted that 16 of the 20 zip codes cited fell within environmental justice communities, and all 20 fell within the state's definition of equity investment communities.[67]

Other scholarly research has documented the disproportionate impact of disconnection policies on non-white communities:

> In-depth studies in U.S. cities, and an analysis conducted at the U.S. Census Division level, revealed that certain demographic populations are more likely to be energy insecure, including households of color, those without a college education, and the chronically underemployed. A recent national survey of low-income U.S. households similarly found that Black and Hispanic households, those that live in deficient housing conditions, as well as those that rely on an electronic medical device are all more likely to be energy insecure.[68]

An analysis of energy insecurity conducted during the COVID-19 pandemic published on the Indiana University Energy Justice Lab likewise showed that:

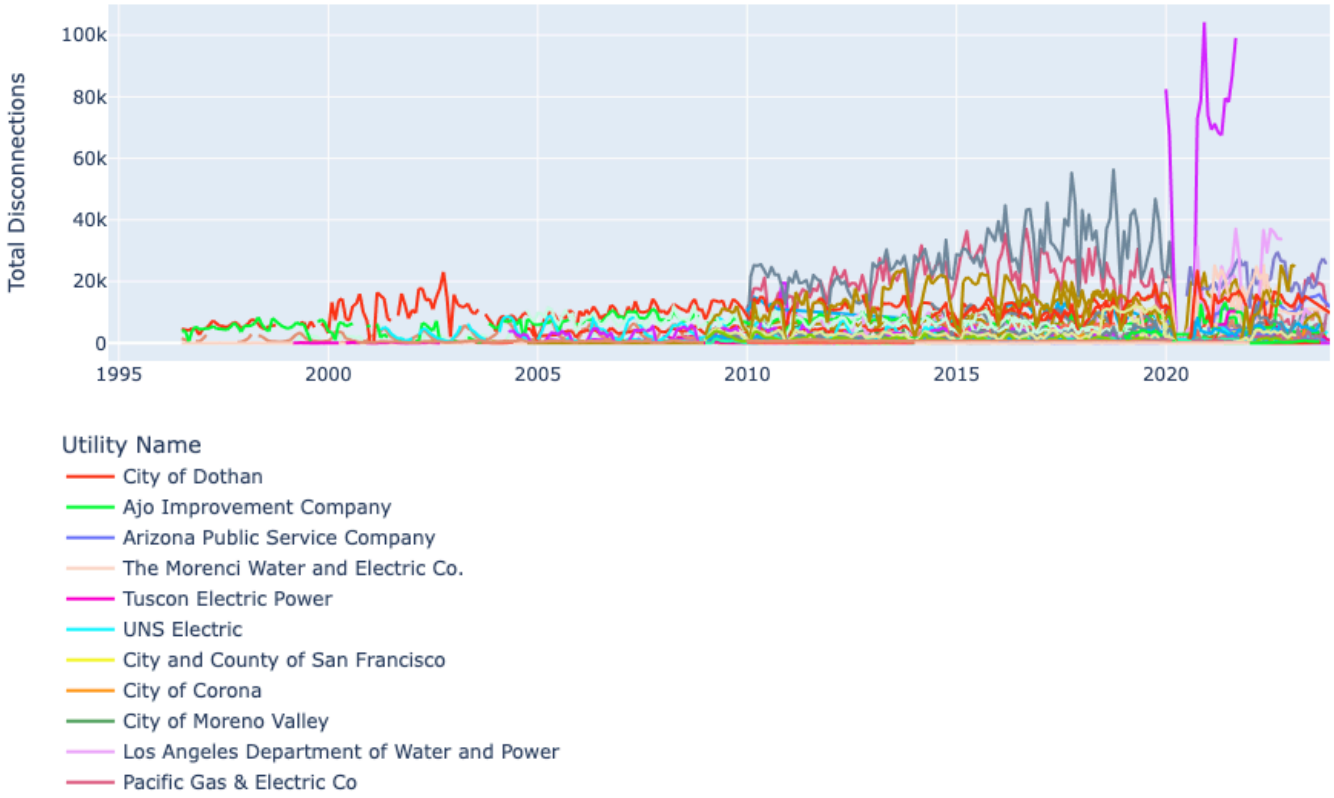
- Energy insecurity is highly prevalent among households at or below 200% of the federal poverty level (FPL);
- Black and Hispanic households are more likely to experience energy insecurity and face utility disconnection;
- Households with young children are more likely to experience energy insecurity and face utility disconnection;
- Individuals who require electronic medical devices are more likely to experience energy insecurity and face utility disconnection; and
- Persons living in dwellings with inefficient or poor conditions are more likely to experience energy insecurity and face utility disconnection.[69]

The authors concluded that while these conditions exist under normal circumstances, the COVID-19 pandemic "seems to have exacerbated the overall incidence of energy insecurity."[70] As state policymakers continue to address climate change through utility bill subsidies, the need to protect certain segments of the population is clearer than ever.

VULNERABLE POPULATIONS NEED YEAR-ROUND PROTECTION FROM DISCONNECTION OF ESSENTIAL UTILITY SERVICE

Our new reality of extended and frequent episodes of extreme heat require state commissions and legislatures to enact new disconnection protections that truly recognize the essential nature of public utility service and the utility's obligation to serve all customers (including financially struggling customers) as a quid pro quo for serving geographic areas as part of the monopoly franchise.

Generally speaking, the rate of electric utility disconnections across the country has increased, particularly since 2010.[71] The Indiana University Energy Justice Lab documented this phenomenon in its user-interactive Utility Disconnections Data Explorer, shown in the snapshot below:



The installation of advanced metering infrastructure, which allows electric utilities to disconnect (and reconnect) customers in arrears remotely with a software command, may be a factor in this increase. In Illinois, for example, which has had ubiquitous advanced metering across the two major investor-owned electric utility service territories since the end of 2019, rates of disconnection have climbed significantly.[72]

Given policymakers' recognition that uninterrupted access to essential utility service is necessary for a person to remain safely in their home and the disproportionate impacts of extreme heat on vulnerable and historically disenfranchised populations, several actions are needed by regulators to adjust to our new climate reality and ensure equity in the affordability of utility service. Consistent with the CDC's identification of vulnerable populations,[73] as well as the state LIHEAP programs' identification of "priority populations"[74] at the start of each program year, year-round protection from utility shutoffs should be provided to the following financially struggling households:

- Older adults (aged 60 and above)[75]
- Households with children under 6
- People with disabilities
- Households with persons with medical conditions certified by a health professional

With regard to medical certifications as a protection against disconnections, the National Consumer Law Center in 2021 published a report documenting best practices across the states for ensuring uninterrupted access to utility service for the medically vulnerable. The report concludes that a strong "serious illness" (medical certification) protection rule should embody six principles:

1. **Broad Scope:** Eligibility for the protection should be broad and include anyone with a serious illness, whose health and safety would be put at risk by involuntary disconnection of energy service. A state's definition of "serious illness" should include a broad range of physical, mental, and emotional conditions for low-income customers.

2. **Diversity of Certifiers**: A wide range of entities should be allowed to certify serious illness, and the utility company should be required to abide by their certification unless it is patently unreasonable. To reflect the limited access to health care and health care providers that many low-income consumers encounter, the persons who can certify serious illness should include a broad range of medical professionals and others who can attest to the customer's health: for example, medical doctors, nurse practitioners, physician assistants, psychiatrists, psychologists, and local health boards.

3. **Prompt Initiation and Adequate Duration of Protection:** Seriously ill customers must be able to obtain protection against disconnection promptly, and the duration of the protection should correlate to their health needs. Serious illness protection rules must allow the customer to obtain protection (whether a reconnection, or a suspension of a termination) via a phone call, with a health professional's certification of a serious illness to be submitted within an approved time frame (for example, within 7 days). The initial disconnection protection should last at least 30 days and should be renewable for the duration of the medical condition.

4. **Adequate Notice and Easily-Accessible Process:** Utilities should be required to notify customers of the serious illness protection rules, with an explanation of a clear and simple application procedure. Utilities should notify customers of the serious illness protection rules at initiation of service and whenever collection and disconnection notices are sent. Notices should be made available in multiple languages, where relevant to the territory. Further, to simplify procedures, the state should adopt a standardized application form.

5. **Affirmative Outreach:** Utilities should act affirmatively to identify medically fragile customers and avoid terminating their service. States should ensure that company service representatives are trained to identify when a customer may qualify for protection; to discuss the issue with the customer; and to postpone terminations pending certification of the illness.

6. **Monitoring and Enforcement:** Utilities should be required to collect, report, and analyze data, at a granular level (e.g., by zip code) to monitor the administration of the protections.[76]

The report identified Massachusetts as a state that provides a model serious illness protection that covers a broad range of serious illnesses, noting:

> The state's regulation uses simple language that leaves it up to the medical professional to determine who has a "serious illness": No company may shut off or refuse to restore utility service to the home of any customer if: (a) It is certified to the company: . . . . . 1. That the customer or someone living in the customer's home is seriously ill.[77]

Another credit and collection practice that appears to be prevalent among electric and gas utilities across the United States that can impact the timing of a customer's disconnection status is internal or third-party risk-ranking of customers.[78] As practiced, risk-ranking involves a non-transparent system of employing black-box algorithms to a series of utility-supplied metrics, including age of the account, number of times an account was paid late, whether a disconnection notice was sent, whether disconnection has occurred, whether a security deposit has been requested, and in some instances, whether the customer is a renter.[79] A customer ranking is then assigned to each account based on perceived risk of nonpayment. The disconnection process can then be accelerated for those accounts deemed at high risk for non-payment as compared to accounts with low risk rankings.[80] Alternatively, customers deemed at low-risk for non-payment are provided more time to pay a past-due bill.[81]

Using "risk-ranking" to accelerate disconnections of those deemed at higher risk of nonpayment should be prohibited by state policy makers and regulators.

While the use of risk-ranking to identify customers who may need energy assistance outreach is not necessarily objectionable, using the process to accelerate disconnections of those deemed at higher risk of nonpayment is discriminatory and should be prohibited by state policy makers and regulators.

Other ways to protect financially and medically vulnerable utility customers include regulators' implementation of:

- Longer deferred payment arrangements or payment plans that actually reflect a customer's ability to pay (e.g., minimum of 24 months, with a right to re-negotiate a longer payment plan tailored to the customer's financial circumstances if default occurs);
- A prohibition on late fees for all residential customers[82] or, in the alternative, all customers whose income falls at or below 80% area median income[83];
- A prohibition on security deposits[84] for all residential customers or, at a minimum, all customers whose income falls at or below 80% area median income[85]; and
- No reconnection fees, particularly when the utilities have advanced metering infrastructure.

These are but some examples of needed measures utility regulators and state policy makers can and should make now to help reduce energy burden.

STATE COMMISSIONS MUST ENACT NEW AFFORDABILITY MEASURES THAT ENSURE A CUSTOMER PAYS NO MORE THAN A REASONABLE PERCENTAGE OF THEIR MONTHLY INCOME FOR ELECTRICITY AND HEAT/COOLING

While extreme heat incidence increases and states pass clean energy usage targets, policy makers in several states[86] have initiated "future of gas" proceedings designed to start the process of investigating how to minimize the usage of gas as a heating fuel and begin the process of electrification of buildings, including residential, commercial and industrial end-uses, to minimize methane emissions, which contribute toward global warming. Electric utilities, in anticipation of increased peak energy loads, are filing significant rate increase requests across the country, arguing that substantial infrastructure investments are needed to meet the coming demand for electric vehicles, electrified buildings, and other usage sources. Even while the push for electrification begins, many gas utilities are still building out their distribution systems, financed through special monthly surcharges, as part of so-called system modernization programs that were originally initiated by state policy makers to manage aging gas distribution systems. Additionally, it has been reported that some states are proposing to build more natural gas power plants over the next 15 years to meet growing demand for electricity, including the usage that comes from a growing number of data centers.[87]

This upward pressure on utility rates requires specific action by state policy makers and regulators to protect financially vulnerable customers from increasing monthly residential energy bills, including the establishment of Percentage of Income Payment Plan and Tiered Discount Rate programs for low-income utility customers, which should be available to all financially eligible households without regard to immigration status and aim to produce monthly energy bills (both heat and electricity) that do not exceed a reasonably affordable percentage of household income. While some researchers have identified high energy burdens as greater than 6% of income,[88] consumer advocates have raised concerns that 6% may be too high for many low-income families, and a lower percentage more fully reflects the financial realities faced by under-resourced families.[89] In addition, the median energy burden among U.S. households has been identified as 3.1%.[90]

Percentage of Income Payment Plan Programs (PIPPs)

Percentage of Income Payment Plan programs are designed to ensure that a financially eligible customer pays no more than a designated percentage of their monthly income for their electric and gas utility bills. The percentage of income is tied to a desired energy burden set by statute or the regulator. The state of Ohio offers a PIPP[91] to customers whose income falls at or below 175% of the federal poverty level (FPL) and have utility service from an electric or natural gas company regulated by Ohio's Public Utility Commission. Under the program, gas heat

customers pay 5% of gross household income for gas bills, and 5% gross household income for electric bills. If a customer has electric heat, the monthly payment is 10% of gross household income. The balance of the utility bill is subsidized by the state of Ohio. The program offers a minimum monthly payment of $10 In addition, Ohio's PIPP offers a debt reduction component. Paying on-time and in-full each month reduces the customer's outstanding balance. If 24 on-time and in-full payments are made, the outstanding utility arrearage is eliminated.

Illinois, too, offers a PIPP, but the program is currently budget-constrained and has not accepted new enrollees for two years. Under Illinois' PIPP, a customer's heat and electric bill are set at a combined 6% of monthly income.[92] However, due to the aforementioned budget issues, there exists a benefit cap of $1,800. California's Public Utilities Commission also initiated a PIPP on a pilot basis. As part of the pilot, eligible customers' monthly bills are capped at 4% of their monthly income.[93] Notwithstanding that calculation, customers with incomes between 0 to 100% FPL have bills capped at $37, and customers with income between 101% to 200% FPL have bills capped at $109.[94]

Nevada's PIPP requires that eligible customers (with income at or below 150% FPL) receive assistance "by determining the amount of assistance that is sufficient to reduce the percentage of the household's income that is spent on natural gas and electricity to the median percentage of household income spent on natural gas and electricity statewide."[95]

To ensure true reduction in energy burden for those most in need, the eligibility requirements of PIPP and discount rate programs should at least incorporate the eligibility guidelines established in the state's LIHEAP guidelines.[96] Because unaffordability also plagues households whose income may slightly exceed those LIHEAP guidelines, states should consider utilizing a more generous eligibility ceiling, such as 80% of area median income or 300% FPL. Nevada's program, to its credit, aims to achieve an energy burden for eligible households that equals the median percentage of household income in the state for energy services.

Tiered Discount Rates

Tiered discounts are another affordability option for regulators to consider when trying to improve the affordability of rates for financially struggling customers. Like PIPPs, tiered discounts are designed to reduce financially struggling customers' monthly energy bills by a designated percentage in order for customers to achieve a designated, lower energy burden each month – ideally at a percentage level that approximates the energy burden of a median income household within a utility's service territory.[97] Unlike PIPPs, however, the discount is not specifically tied to an individual customer's usage. Instead, the discounts are set at the midpoint within income tiers.

One example of tiered discounts was recently authorized in Illinois. The Illinois Commerce Commission established a tiered discount rate mechanism for the three large investor-owned gas utilities serving nearly the state. In the City of Chicago, Peoples Gas Light & Coke Company will offer the following discounts to eligible customers beginning October of 2024, all designed to

generate bills that on average approximate a 3% energy burden for customers whose income falls within each tier:

- Tier 1 (0-50% FPL): 83%
- Tier 2: (50-100% FPL) 68%
- Tier 3: (100-150% FPL) 45%
- Tier 4: (150-200% FPL) 20%
- Tier 5: (200-300% FPL) 5%

The state's electric distribution utilities are proposing their version of discount rates in 2024. Assignment of a customer's appropriate income tier will be communicated to each of the utilities by LIHEAP agencies located throughout the state.

The state of Washington state Utilities and Transportation Commission, too, approved robust five-tier discounts for its utility customers.[98] The utilities permit self-attestation for customer enrollment, with monthly random selection of a small percentage of customers who enrolled in the previous month for verification of eligibility.

In October 2022, the Connecticut Public Utility Regulatory Authority (PURA) approved a two-tiered, whole bill low-income discount rate for two electric Investor-Owned Utilities (IOUs), with the first eligibility tier incorporating customer income of up to 60% of state median income receiving a 10% discount, and the second tier for households with income up to 160% of FPL receiving a 50% discount.[99] The PURA decision noted that the percentages were based on a set of assumptions that would result in reaching customer monthly bills that achieve an energy burden of 4 - 6%.[100] In setting the target energy burdens, the decision noted that customer usage, household income, and size characteristics factored into the analysis.[101]

Tiered discount rates provide a more targeted approach to lowering energy burden by income.

Flat low-income discount rates provide a less targeted approach to lowering energy burden by income. Both Massachusetts and California electric and gas utility companies have offered low-income customers flat discount rates for years. In Massachusetts, the discount percentages vary by company, but generally are in the range of 25-32% off of the entire utility bill.[102] Qualification for LIHEAP assistance automatically qualifies the applicant for the discount rates, although enrollment in LIHEAP is not a prerequisite for receiving the discounts. In California, the California Alternate Rates for Energy ("CARE") program provides a 30% to 35% electric utility discount, and a 20% gas utility discount, respectively, to the state's IOU electric and gas utility customers whose income falls at or below 200% FPL.[103] The state's Family Electric Rates Assistance ("FERA") program provides an 18% discount on electric bills for households whose income falls above the CARE eligibility level, up to 250% FPL.[104]

All discount rate programs should be adjusted annually based on changes in monthly utility costs to ensure achievement of the targeted energy burden, and exclude any assumptions about customer receipt of LIHEAP payments.

Arrearage Management Programs

Accumulated arrearages due to unaffordable utility bills trigger disconnections and can present significant barriers for customers attempting to acquire housing or reconnect to utility service after being disconnected. These debts follow a customer, making re-establishment of housing and essential utility service more difficult. Arrearage Management Programs (AMPs), when coupled with affordable bills through PIPP or discount rate programs reward customers for on-time payment of affordable monthly bills by eliminating debt by 1/12 for every on-time utility payment. These programs benefit both the utility and the customer by encouraging regular payment of utility bills, with utilities receiving revenues that might otherwise have never been collected, thereby minimizing utility bad debt, and providing a fresh start for financially struggling utility customers. Massachusetts electric and gas utilities have offered AMPs for years, and have been embraced by both customers and the utilities as a means of reducing debt for both customers and the utilities offering them.[105]

PUBLIC REPORTING OF UTILITY DATA IS NEEDED TO ASSESS THE AFFORDABILITY OF ESSENTIAL UTILITY SERVICE

To increase transparency on the impact of utility credit and collection policies and the affordability of rates in general, state policy makers should require utilities to file monthly arrearage, disconnection and other data by zip code or census tract. Public access to utility credit and collections data is critical for policy makers and regulators to assess the state of affordability of utility service within utility service territories.[106] Transparency in data, too, allows for public review of the impact of utility rate, disconnection and other credit and collections policies to assess whether certain populations or communities are being disproportionately impacted by utility policies. Data on arrearages, disconnection notices, disconnections, deferred payment arrangement defaults, late fees, and other metrics, by zip code or U.S. Census tract, are necessary for utilities, advocates, the public and policy makers to assess the affordability of rates in general and to craft needed remedies to ensure affordability and end the inequitable disconnection of vulnerable populations.

Both California[107] and Illinois[108] require electric, gas, and water utilities to report monthly zip code level disconnections, customer arrearage and other credit and collections data. Illinois also maintains an interactive public dashboard on the Commission's website that allows users to select the utility, the credit and collections metric and zip code, among other capabilities to assess how communities across the state are impacted by these policies.[109] At a minimum, policy makers and regulators should require energy and water utilities to report the following data, by zip code and for both residential customers as a whole and those classified as low-income customers as a subgroup, each month:

- Number of customers
- Dollar amount billed
- Number of customers charged a late payment fee
- Dollar value of late fees collected
- Number of customers with a past due balance, by age of arrearage
  - 30 days past due
  - 60–90 days
  - 90+ days
- Dollar value of arrearages, by vintage
  - 30 days past due
  - 60–90 days
  - 90+ days
- Number of disconnection notices sent
- Number of disconnections for nonpayment
- Number of service restorations after disconnection for nonpayment
- Average duration of disconnection
- Dollar value of level of security deposits collected
- Number of security deposits collected
- Number of new deferred payment agreements entered into
- Average repayment term of new deferred payment agreements
- Successfully completed deferred payment agreements[110]

The Illinois credit and collections dashboard in particular offers a model for a public-facing website that can inform policy makers, utilities and advocates on the ground about the impact of utility rates and credit and collection policies as communities continue to endure the impacts of climate change and extreme heat.

In 2022, The Energy Democracy Project published a model utility data collection statute for advocates to consult when pushing for more transparency in utility reporting, as well as subsequent analysis by regulators of the data, within their states.[111] Importantly, the report notes:

> Even neutrally applied policies can have differential or discriminatory effects. Designing equitable policies requires regulators and utilities to consider how utility policies affect different groups differently and to take affirmative steps to address those inequities. It also provides an opportunity for advocates to remind utilities and regulators that access to uninterrupted essential utility service is necessary for public health and safety, and to engage in everyday life, including access to the internet and online learning and job acquisition.[112]

CONCLUSION

Frequent and intense patterns of extreme heat driven by climate change now regularly occur across the United States, pointing to the need for immediate policy solutions from state and federal policy makers and utility regulators to protect the health and safety of vulnerable households. Timing is critical, because at the same time that extreme weather impacts vulnerable populations, policy makers in several states are focused on shifting to clean energy sources and reducing greenhouse gasses through expensive new clean energy programs, electrification of buildings and vehicles – all while electric and gas companies propose substantial infrastructure investments and significant rate increases to pay for the investments.

To improve the affordability of essential utility and protect vulnerable populations from disconnection, the following actions should be taken by state policy makers and regulators:

- **Identify and implement disconnection prohibitions for financially struggling vulnerable populations**, including older adults, households with children, and people with disabilities and certified medical conditions.;
- **Implement calendar-based, weather-related moratoriums** or, as a second-best alternative, temperature-related disconnection protections that include assessment of humidity to ensure continued access to utility service during extreme heat and cold;
- **Establish Percentage of Income Payment Plan and Tiered Discount Rate programs** for low-income utility customers that reduce monthly energy burden to a maximum, combined electric and gas bills of 6% of monthly income;
- **Revise antiquated credit and collection practices** to end the century-old model of punishing people for being poor through disconnection of essential utility service. These measures should include implementation of:
    - Longer deferred payment arrangements (DPAs) that reflect a customer's ability to pay (e.g., minimum of 24 months, with a right to re-negotiate a longer payment plan tailored to the customer's financial circumstances if default occurs);
    - A prohibition on late fees for all residential customers or, in the alternative, all customers whose income falls at or below 80% AMI;
    - A prohibition on security deposits for all residential customers or, at a minimum, all customers whose income falls at or below 80% AMI;
    - No reconnection fees, particularly when the utilities have AMI meters; and
    - Ending the use of customer risk-ranking to accelerate disconnections for payment troubled households, renters and new customers

- **Increase transparency on the impact of utility credit and collection policies** and the affordability of rates in general, by requiring utilities to file monthly arrearage, disconnection and other data by zip code or census tract.
- **Increase, significantly, federal subsidization of LIHEAP** to ensure year-round (including summertime) access to critical energy assistance.
- **Increase federal allocations to the states for crucial weatherization services, and implement current programs with a focus on the needs of under-resourced consumers,** to address the immense need for retrofitting energy inefficient housing to help reduce low-income customers' energy burdens all year-long, and to assist states in achieving building electrification goals.
- **Implement Inflation Reduction Act programs with strong consumer protections.**

Implementation of all of these measures will assist policy makers, regulators, utilities, and stakeholders in ensuring that our most vulnerable populations are protected from the health and economic impacts of extreme heat as states continue to attempt to address the impacts of climate change.

ENDNOTES

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utilities through open records requests and this information is also incorporated into the Dashboard."

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76. Charlie Harak and Olivia Wein, *Protecting Seriously Ill Consumers From Disconnections: What States Can Do To Save Lives Now,* National Consumer Law Center, Sept. 28, 2022, p. 7-8, https://www.nclc.org/resources/report-protecting-seriously-ill-consumers-from-utility-disconnections-what-states-can-do-to-save-lives-now/

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