Utility Affordability and Consumer Protections during Extreme Heat Events

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National Consumer Law Center
Fighting Together for Economic Justice

National Consumer Law Center

- Since 1969, the nonprofit National Consumer Law Center® (NCLC) has worked for consumer justice and economic security for low-income and other disadvantaged people, including older adults, in the U.S.

Roadmap

- Extreme Heat and Utility Unaffordability
- What's Needed Now: Implementation of Proactive Policies Addressing Affordability and the Protection of Vulnerable Populations from Disconnections
  - Disconnection protections year-round for vulnerable populations (infants/children 6 and under; older adults, chronically ill and disabled customers)
  - Robust, tiered discount rates or percentage of income payment plans (or both)
  - Summer moratorium protections
  - Emergency orders invoking disconnection moratoriums

2024: Warmest Year on Record

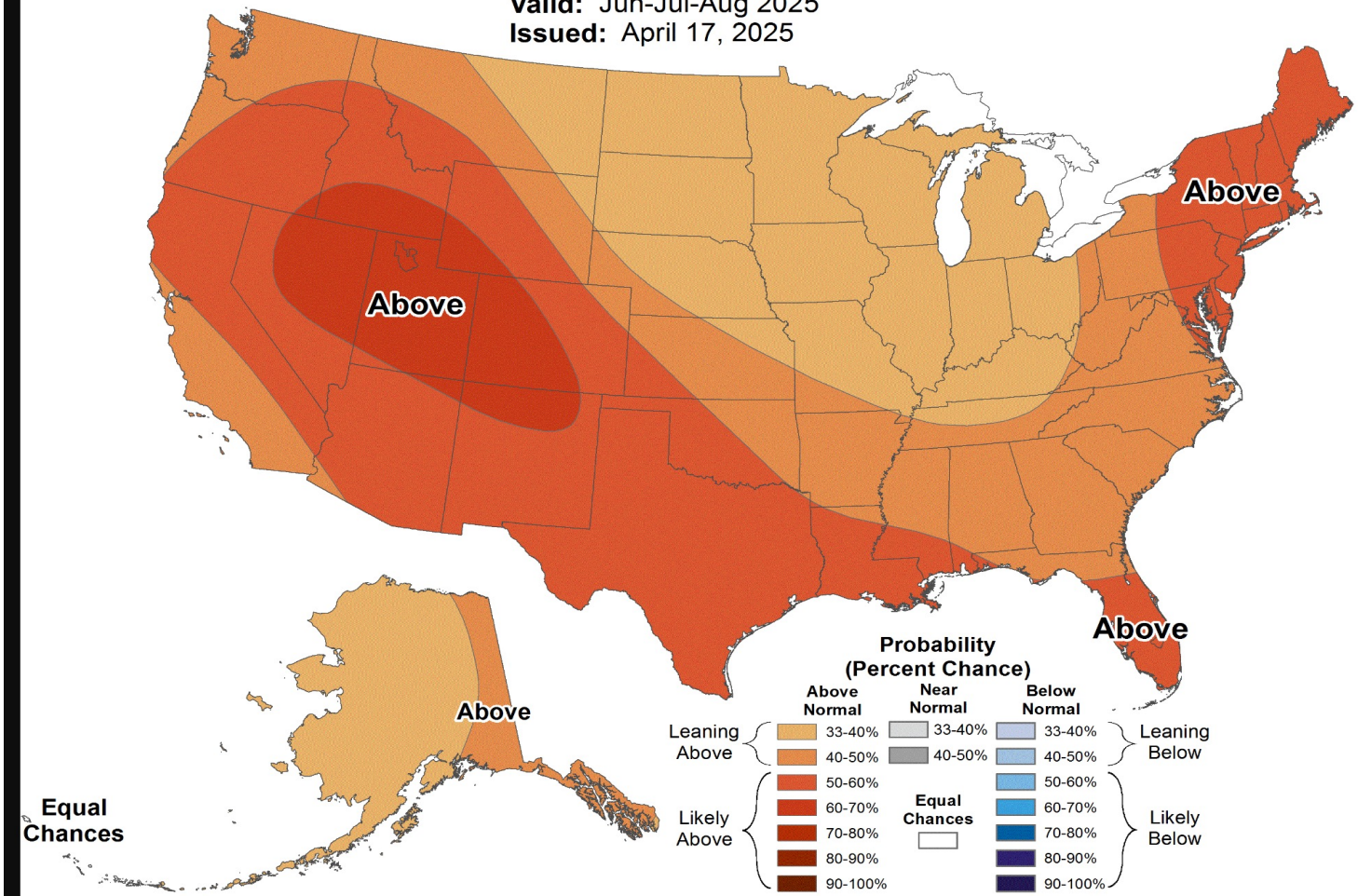
- **2024: the warmest year ever recorded.***
- 2023 was the warmest year in a 174-year climate record.**

*NASA Earth Observatory

**The National Oceanic and Atmospheric Administration's (NOAA)

Seasonal Temperature Outlook

Valid: Jun-Jul-Aug 2025
Issued: April 17, 2025



Extreme Heat and Weather-Related Deaths

- Extreme heat is the leading cause of weather-related deaths
- Nearly a quarter of people in the U.S. are vulnerable to extreme heat.
- According to the Centers for Disease Control and Prevention, approximately 1,220 people in the United States are killed by extreme heat every year.
- One estimate pegs the cost of heat events in the U.S. at $1 billion in excess health care costs each year and if unaddressed, could cost the U.S. economy $14.5 trillion over the next fifty years.

Dangers Accompanying Increased Heat

- One example: 2023, Maricopa County, Arizona
- Record number of heat-related deaths, with 645 heat-related deaths reported;
- 2024: 602-610 deaths reported in draft report (other deaths still being investigated)

  "Mortality from environmental heat is a significant public health problem in Maricopa County, and all heat-related deaths are preventable."
  Maricopa County Dept. of Public Health

- In 1995, more than 700 Chicagoans died due to extreme heat in a single week.

Urban Heat Islands

Heat Islands bring increased heat risk to vulnerable populations by increasing:

1. High all-day temperatures and pollution
2. Increased Energy consumption
3. Increased Utility Bills

Who is Vulnerable to Extreme Heat?

Older Adults

Risk Factors:
- Poor Health
- Lower Mobility
- Heat Sensitivity

Children

Risk Factors:
- Increased sensitivity to ozone pollution and smog

LMI Populations

Risk Factors:
- Poor housing conditions
- Lack of cooling access

Disabled and Chronically Ill

Risk Factors:
-Mobility constraints
-Diabetes
-Cognitive challenges

Outdoor Workers

Risk Factors:
- prone to heat exhaustion and stroke
- exposure to ozone pollution

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Utility bill assistance is a recognized part of the heat mitigation strategy

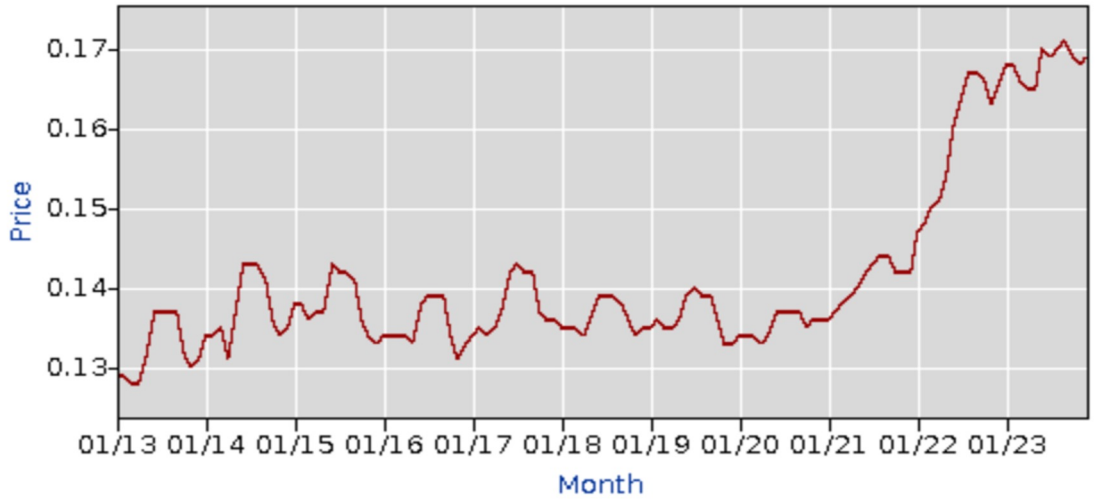
Utility Advocacy Needed

- Electricity Prices Increasing
- Bill Affordability Programs Needed (LIHEAP is not enough)
- Protections from Utility Disconnections Needed

Average Electricity Prices Increasing Across the U.S.

Consumer Price Index Average Price Data

Series Id: APU000072610
Series Title: Electricity per KWH in U.S. city average, average price, not seasonally adjusted
Area: U.S. city average
Item: Electricity per KWH



Payday loans and Extreme Heat Events

More extreme temperature days in a month increases payday loan demand.

More extreme heat days in a month leads to deteriorating performances of existing payday loans.

Increases in online payday loan inquiries, delinquency, and default rates with decreases in accounts opened and credit issued with more extreme heat days.

Payday loan lenders reduce credit supply during extreme heat days out of concern for an increase in default and delinquency rates.

Source: *Extreme Weather and Low Income Household Finance: Evidence from Payday Loans*, S. Xie, V. Wenxin Xie, X. Zhang, January 8, 2024

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High temperatures correlate with later increases in disconnections

nature energy

Article

https://doi.org/10.1038/s41560-022-01134-2

High temperatures and electricity disconnections for low-income homes in California

Received: 8 September 2021

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Check for updates

Alan Barreca[1,2,3], R. Jisung Park[2,4] and Paul Stainier[1]

Evidence suggests that households adapt to hot weather by employing energy-intensive technologies, such as air conditioning. Ensuing energy expenses might cause some low-income households to incur insurmountable energy debt and eventually become disconnected due to non-payment. Here we examine this possibility using electricity use and disconnection data for 300,000 low-income households from California 2012–2017. We find that each additional day with a maximum temperature of 95 °F causes electricity expenses to increase by 1.6% in the current billing period, and the relative risk of disconnection to increase by 1.2% 51–75 days later. In the context of climate change, a back-of-the-envelope calculation indicates the average risk of disconnection would increase by 12% if today's weather resembled projected weather for the 2080–2099 period.

Low-income households face a unique set of trade-offs when adapting to extreme heat events. They may need to temporarily incur higher energy expenses by using home cooling technologies, such as air conditioning, to protect their health[1–7]. Past studies have investigated whether households reduce consumption of necessities, such as food, to pay for high energy bills[8–11]. Less is known about whether the financial distress causes households to miss paying important bills altogether. In particular, non-payment of an energy bill can lead to a household being disconnected by their utility provider. Sociological interviews suggest that the cost of disconnection includes material hardship in the short term and any associated costs of reconnecting service[12–15]. Defaulting on energy debt may also cause longer-term harm, such as limiting access to credit or adding to the cumulative stresses of poverty[16–18].

Here we estimate the relationship between temperature, electricity expense and electricity disconnections using administrative data from California from 2012 through 2017. Our data come from Southern California Edison (SCE), a major utility that serves over 15 million people in a 50,000 square mile area of central, coastal and southern California. The overwhelming bulk of the accounts in our sample was enrolled at some point in the California Alternate Rates for Energy (CARE) programme, which provides a subsidy of around 30% for qualifying low-income households[19–21]. SCE employs a tiered pricing plan, but these tiers have varied historically with minor differences for CARE customers[20–23]. Time of use pricing is relatively rare in our sample period because SCE had only begun piloting an opt-out time-of-use pricing plan in 2016[24].

This research innovates on existing work in two key ways. First, this disconnection analysis adds to the broader energy insecurity literature[25–29] but more specifically complements the sociological and economic studies that investigate bill juggling strategies and difficult consumption choices that households face with higher energy bills. National survey data suggest that 14% of US households receive a shut-off or delivery-stop *notice* at some point during the year, but information on the frequency of actual disconnections is typically not collected[30]. Qualitative studies featuring in-depth interviews of low-income households find that fear of disconnection is a significant psychological stressor[3,31]. Quantitative analyses find that high energy bills lead to less food consumption, something referred to as the 'heat or eat' trade-off[32–35]. Analysis of disconnections is largely absent from such studies, with the exception of one study from Australia, probably due to the dearth of available disconnection data[36,37].

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"The results from this study show that hot weather causes financial strain on low-income households, as evidenced by an increase in electricity expenses and subsequent electricity disconnections."

Nature Energy article available at https://www.nature.com/articles/s41560-022-01134-2

Who gets disconnected when?

- Zip code level data shows disparate impacts on communities of color

Utility disconnection rates are higher in communities of color

- E.g., Tufts University analysis of Illinois zip-code-level disconnection data, 2013-2020*:
  - Controlling for income distribution and other demographics, 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.
  - During the COVID-19 pandemic, there was a 9X expansion in low-income assistance to pay utility bills, 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.

Source: The incidence of extreme economic stress: Evidence from utility disconnections, S. Cicala, Tufts University, June 28, 2021.

More evidence from Illinois zip code-level data:

- **Ameren Electric:** In testimony filed July 22, 2025 in an Illinois Commerce Commission proceeding establishing performance-based metrics for Ameren Illinois Electric Company, NCLC found that Ameren customers living in the top 20 disconnection zip codes have disconnection rates about 3½ times higher than that for households living in all other Ameren zip codes. The data further demonstrated that the percentage of non-white households in the top 20 zip codes is over 4 times higher than in the remaining Ameren zip codes, and that median household income in these zip codes is about ½ that of the remaining zip codes.

- **Commonwealth Edison:** In testimony filed July 28, 2025 with the Illinois Commerce Commission in a proceeding establishing performance-based metrics, NCLC found that the percentage of non-white households in the top 20 zip codes with the highest disconnection ratios is about twice that of the remaining ComEd zip codes. The weighted average non-white population in the top 20 zip codes was nearly 93 percent.

New evidence from University of Minnesota researchers highlighting racial disparities in shut-offs in Xcel Energy service territory

Figure 3. Disconnected households, comparing non-disadvantaged versus disadvantaged CBGs in Xcel Energy's service area and in Hennepin and Ramsey Counties from 2017-2021.

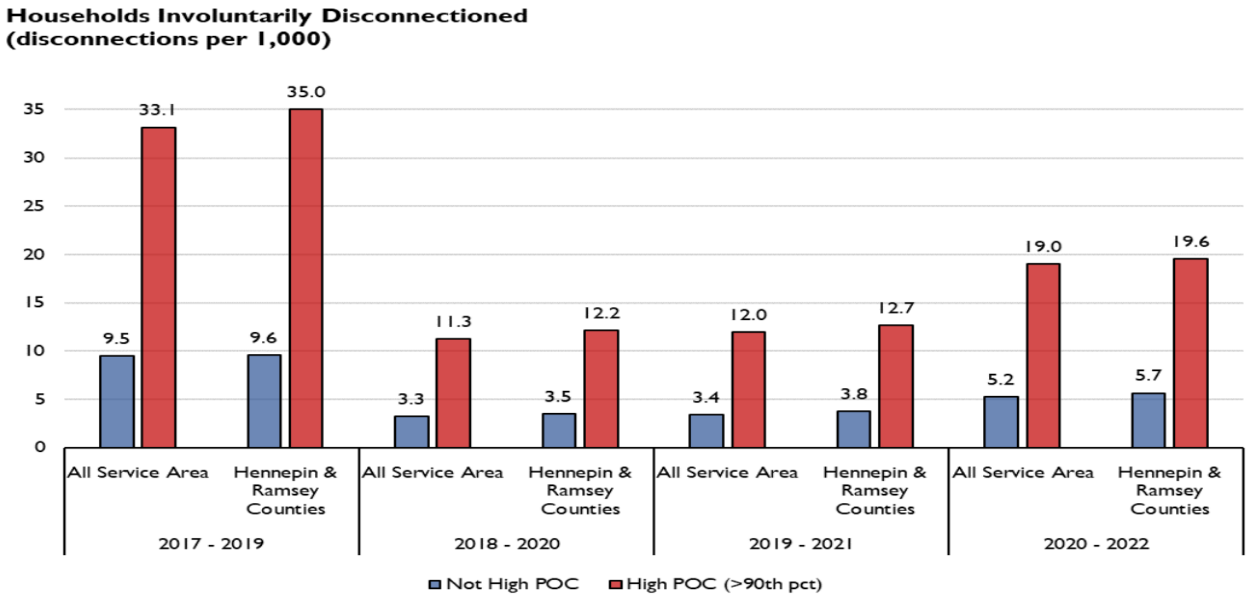

Figure 4. Disconnected households, comparing CBGs with high percentage of people of color (POC) with others in Xcel Energy's Service Area and in Hennepin and Ramsey Counties from 2017-2022.

How to change these outcomes?

- Utility Bill Affordability Programs
  - Tiered Discount Rates
  - Percentage of Income Payment Plan (PIPP) programs
  - Set at maximum 3% energy burden / 6% (electric heat)

- Arrearage Management Programs – customer debt cancelled by 1/12th for every on-time monthly payment (coupled with affordable discount rates or PIPP

- Disconnection moratoriums – Calendar- and weather-based

Proactive monthly bill affordability programs

Tiered discount rates

- Percentage discounts should aim for energy burden reduction, similar to PIPPs: in Illinois, tiered discounts set at 3% energy burden for financially eligible electricity customers and 3% for financially eligible gas customers rates; or

Percentage of Income Payment Plan (PIPP) program

- fully funded PIPP w/ a 3% maximum energy burden target

Illinois Gas Utility Discount Rates, (eff. Oct. 1, 2024)

- **Peoples Gas Light & Coke Co. discounts (serving City of Chicago):***
  - *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%
- **Nicor discounts (serving Northern Illinois suburbs and outer counties):***
  - *Tier 1 (0-50% FPL)*: 75%
  - *Tier 2 (50-100% FPL):* 55%
  - *Tier 3 (100-150% FPL)*: 25%
  - *Tier 4 (150-200% FPL)*: 10%
  - *Tier 5 (200-300% FPL)*: 5%
- ***All designed to achieve a maximum average 3% energy burden**

Washington State Income-Based Discount Tiers

Income FPL = Federal Poverty Level AMI = Area Median Income	Avista Discount	Cascade Nat Gas Discount	NW Natural Discount	Puget Sound Energy	
				Discount	Est. Total Ratepayer Assistance (BDR + HELP)
Zero to 5% FPL	94%	90%	80%	45%	109%
6 to 20% FPL	75%				
21 to 50% FPL		71%		40%	100%
51% to 60% FPL	35%	40%		20%	76%
61 to 100% FPL			40%		
101 to 120% FPL	20%	15%		15%	65%
121-150% FPL			20%		
151 to 200% FPL	15%	8%	15%	10%	56%
200% FPL to 80% Area Median Income				5%	41%

Fighting the discounted rates = “discrimination” argument

- Best practice: States should include references to discounted rates (tiered discounts or PIPPs) in anti-discrimination provision of a state’s Public Utilities Act as authorized commission activity.
  - 1979 CO Supreme Court ruling (Mountain States Legal Foundation v. Public Utilities Commission, 197 Colo. 56, 590 P.2d 495 (1979) was a setback for discount rate programs
  - Later, in In 2000, *before* the passage of S.B. 07-022 that created specific authorization for a low-income discount rate, CO PUC distinguished the 1979 Mountain States ruling by concluding that a program or rate that has an economic justification is lawful.
- IL – conflicting appellate court rulings: one distinguishes “reasonable” discrimination for a particular purpose as lawful (*Coalition to Request Equitable Allocation of Costs Together v. Commonwealth Edison Co.,* 2015 IL App (2d) 14020228, 28 N.E.3d 223 (March 2015))
- 2025 Ameren appeal of 2023 gas discount rate case (awaiting Supreme Court decision on pending PLA) calls discount rates unlawful, notwithstanding specific authority in Section 9-241 for ICC to implement discount rates. *See* 220 ILCS 5/ 9-241(d)
- Stay tuned! In the meantime, advocates should make the business and monopoly service provider cases for assistance programs to protect access to essential utility service if lacking specific statutory authority.

Arrearage Management Programs

Arrearage Management Programs (AMPs): reduce customer debt by 1/12 for every on-time monthly bill payment

- When accompanied by PIPPs or discounted rates, wipes out customer debt
- Examples: MA AMPs, Illinois PIPP, Washington State programs

Protections from Disconnection (in addition to Affordability Programs)

- **Question:** How do we best protect customers – particularly those most vulnerable to the impacts of extreme heat – from disconnection?

Best Practices

- *Year-round* protections for low-income vulnerable populations, including
  - Households with children under 6
  - Older persons (seniors)
  - Disabled and chronically ill persons

  - In other words, follow the federal LIHEAP statute's identification of vulnerable populations (which allows states to prioritize these groups' access to energy assistance at the start of each LIHEAP season).

Protections from Disconnection During Extreme Heat

- Calendar- *and*
- Weather-based shutoff moratoriums

- (In many states, both already exist for winter weather protections.)

Protections from Utility Disconnection in Extreme Heat

Arizona

A. Restrictions on termination of service; recordkeeping and repayment requirements

. . . .

11. A utility shall adopt only one of the following conditions under which it shall not terminate residential service:

a. During any period of time for which the local weather forecast, as predicted by the National Weather Service, indicates that the weather in the area of 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.

Ariz. Admin. Code R14-2-211; ACC Docket No. RU-A-19-0132, Decision 78316 (Nov. 9, 2021)

Protections from Utility Disconnection in Extreme Heat

Illinois

220 ILCS 5/8-205(b):

If gas or electricity is used as the only source of space cooling or to control or operate the only space cooling equipment at a residence, then a utility may not terminate gas or electric utility service to a residential user, including all tenants of master metered apartment buildings, for nonpayment of bills:

(1) on any day when the National Weather Service forecast for following 24 hours covering the area of the utility in which the residence is located includes a forecast that the temperature will be 90 degrees Fahrenheit or above;

(2) on any day preceding a holiday or weekend where National Weather Service for the following 24 hours covering the area of the utility in which the residence is located includes a forecast that the temperature will be 90 degrees Fahrenheit or above during the holiday or weekend; or

(3) when National Weather Service issues an excessive heat watch, heat advisory, or excessive heat warning covering the area of the utility in which the residence is located.

Protections from Utility Disconnection in Extreme Heat

Maine

1. For residential customers of transmission and distribution utilities and gas utilities, the rules must:
    A. Prohibit the termination or disconnection of utility service for unpaid utility bills during extreme weather or temperature conditions, including extreme heat or humidity, between April 16th and November 14th; and
    B. Establish a threshold dollar amount greater than $50 owed by a customer who does not pay or make a payment arrangement on an undisputed overdue utility bill at or above which the utility may terminate or disconnect utility service; and
2. For low-income customers of a transmission and distribution utility, the rules must prohibit the utility from:
    A. Charging a restoration or reconnection fee or requiring a security deposit for a restoration of service; and
    B. Charging late fees that accrued prior to the termination or disconnection.

Source: 2023 Maine Senate Paper No. 798, Maine One Hundred Thirty-First Legislature - First Special Session (approved March 19, 2024)

Appendix 1: Summer and Winter Shutoff Protections by State

Protections Listed by State			
Summer Protections	**No Summer Protections**	**Winter Protections**	**No Winter Protections**
Arizona	Alabama	Alabama	Alaska
Arkansas	Alaska	Arizona	California
Colorado	California	Arkansas	Colorado
Delaware	Connecticut	Connecticut	Florida
District of Columbia	Florida	Delaware	Hawaii
Georgia	Hawaii	District of Columbia	Kentucky
Illinois	Idaho	Georgia	North Dakota
Louisiana	Indiana	Idaho	Virginia
Maryland	Iowa	Illinois	
Minnesota	Kansas	Indiana	
Mississippi	Kentucky	Iowa	
Missouri	Maine	Kansas	
Nevada	Massachusetts	Louisiana	
Oklahoma	Michigan	Maine	
Oregon	Montana	Maryland	
Texas	Nebraska	Massachusetts	
Washington	New Hampshire	Michigan	
Wisconsin	New Jersey	Minnesota	
	New Mexico	Mississippi	
	New York	Missouri	
	North Carolina	Montana	
	North Dakota	Nebraska	
	Ohio	Nevada	
	Pennsylvania	New Hampshire	
	Rhode Island	New Jersey	
	South Carolina	New Mexico	
	South Dakota	New York	
	Tennessee	North Carolina	
	Utah	Ohio	
	Vermont	Oklahoma	
	Virginia	Oregon	
	West Virginia	Pennsylvania	
	Wyoming	Rhode Island	
		South Carolina	
		South Dakota	
		Tennessee	
		Texas	
		Utah	
		Vermont	
		Washington	
		West Virginia	
		Wisconsin	
		Wyoming	

Source: Center for Energy Policy and Climate

Another Tool:
Emergency Disconnection Moratorium Orders

- California enacted a model emergency disconnection moratorium (and other protections) order post wildfires that the Commission now can re-issue when needed to address public health and safety concerns that arise, including during extreme weather events.

- *"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."*

ABILITY TO RECONNECT IF DISCONNECTED DURING EXTREME HEAT

- **Pending MA legislation: H. 3972**

The bill protects low-income consumers during times when extreme heat is most expected to strike, by limiting disconnections of water or electricity during the most dangerous weeks of the year.

- Applies to low-income customers of investor-owned utilities and municipal utilities alike.
- Creates a disconnection moratorium for low-income customers from May 15 to September 30 each year, covering the time when extreme heat events are most likely to occur, and when vulnerable young children are out of school and at home.
- Provides an addition protection to halt disconnections when the National Weather Service issues an extreme heat warning or advisory, even if the advisory is issued outside of the moratorium period.
- Allows eligible customers to request that their utilities be re-connected temporarily prior to an extreme heat event, if electricity or water had been involuntarily disconnected due to financial hardship.

See https://malegislature.gov/Bills/194/H3972

Questions?

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