

Energy Justice Lab

Electric Utility Disconnections: Legal Protections & Policy Recommendations

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About the Energy Justice Lab

The [Energy Justice Lab](#) is a research group that conducts studies about the equity and justice dimensions of the energy transition. Through research, the lab offers insights on energy justice challenges and opportunities in the ongoing energy transition and what individuals and communities on the frontlines are facing, what vulnerability means in the energy justice context, what types of policies and programs are in place to address these issues, and how well government is doing to protect vulnerable communities. Professors Sanya Carley and David Konisky serve as Co-Directors of the Energy Justice Lab.

Executive Summary

Energy insecurity, or the inability for households to meet their basic energy needs, is a widespread problem across the United States. When households cannot pay their energy bills, utility providers often shut off their service altogether. In 2022, utility providers across the country reported disconnecting nearly 3 million households from service, though this is a drastic underestimate of the actual number of disconnections due to limited national reporting requirements. In some cases, disconnections result in the loss of service for a short period of time if customers are able to quickly pay their overdue bills; in other cases, disconnections may last for days, weeks, or longer if customers are unable to find enough money to restore their service.

In recognition that utility disconnections can compromise people's health and well-being, especially for vulnerable populations and during times of more extreme temperatures, many states limit the circumstances when electric utility providers are allowed to shut off service in response to nonpayment of bills. These legal protections vary across the country; some states have more stringent provisions to protect customers, while other states offer only limited protections.¹

This report summarizes current utility disconnection protections across the United States and offers recommendations on how to strengthen them to better protect customers. We begin from a principle that critical energy services are a basic necessity, and that utilities should only shut off service to customers, particularly vulnerable customers, as a last resort. Moreover, our recommendations rest on the premises that disconnection policies should be: 1) easy-to-understand; 2) widely accessible; 3) designed to reduce household administrative burdens; and 4) broadened to address the impacts of climate change. We direct our recommendations to state governments who currently have responsibility for regulating disconnection policies, but we note that the federal government should consider developing national standards that provide consistent protections across the country. We also provide recommendations for utilities and customers.

We present the following recommendations.

Stakeholder	Recommendation
Policymakers	<ol style="list-style-type: none"> 1. Utility disconnection protection policies should have easy-to-follow and transparent language and impose minimal administrative burdens. 2. A combination of temperature and date-based disconnection policies provide a more robust set of protections than either alone, and which is increasingly necessary with a changing climate and more erratic weather. 3. States should adopt broad definitions of medical conditions to better protect vulnerable customers from disconnections and require that utilities delay disconnections for customers that notify them they intend to obtain a medical certificate. 4. States should provide specific protections for households with young children, households with elderly residents, and customers with disabilities. 5. States should establish a minimum arrearage before disconnections can happen. 6. Tenants where the landlord is the customer should not be subject to disconnection for the landlord's failure to pay their utility bills.
Utility Providers	<ol style="list-style-type: none"> 7. Utility providers should clearly specify the minimum days of notice prior to disconnecting customers and provide advanced notification of potential disconnections to customers through multiple modes of communication. 8. Utility providers should establish a specific date-range in which customers can pay their bills before they are considered late or delinquent. 9. Utilities should provide information on available protections directly to all customers at least twice annually to assure that all customers are aware of the legal protections offered to avoid disconnection.
Customers	<ol style="list-style-type: none"> 10. Customers should educate themselves on what legal protections and state energy programs are available that can help them avoid disconnections, and proactively seek protections if there are opportunities for doing so.

Introduction

Energy insecurity continues to be a pervasive crisis in the United States as many households cannot afford to meet their basic energy needs. While households of all sociodemographic dispositions are at threat of facing energy insecurity, there are disparities in incidence. Low-income households, for example, are more likely to struggle to pay their energy bills. Black and Hispanic households are more likely to experience utility disconnections, in addition to households with young children, and individuals who require electronic medical equipment.² In 2022, electric utilities disconnected nearly 3 million households across the country from service due to nonpayment of bills.³ The actual number of disconnections is much higher. In many states, there are no requirements that utility providers publicly disclose the number of customers that they shut off.

The economic fallout from the COVID-19 pandemic exacerbated the impacts of energy insecurity in the United States.⁴ When individuals are unable to pay their utility bills, and utilities shut off their service, many must resort to activities that can be harmful to their physical, mental, and financial well-being. Many households must forgo other essential expenses to avoid an electric utility disconnection, while others adjust the temperature in their homes to uncomfortable levels to lower their energy bills.⁵

In most states, there are at least some limits as to when regulated utilities can disconnect customers. In general, these “protections” refer to specific limits that state governments place on regulated utility providers that restrict the circumstances in which they can shut off service to a household that has not fully paid their bill. In most cases, these customer protections are intended to prevent utilities from shutting off customers during periods of extreme cold or hot temperatures, as well as to provide relief for vulnerable households, such as those where someone has a medical condition.

Electric utility disconnection protection policies vary greatly across the country. For example, while most states limit utilities from disconnecting customers during the winter, most do not have similar protections for the summer. In addition, states offer protections for different groups of vulnerable populations, and mandate different forms of customer notification before shut offs can occur. Small variations in how legal protections are defined can produce significant differences in protection levels.

This report summarizes current utility disconnection protections across the United States and offers recommendations to strengthen protections for customers. Our analysis is based on careful review of state protection policies, and our judgment as to best practices based on four criteria: 1) easy-to-understand; 2) widely accessible; 3) designed to reduce household administrative burdens; and 4) broadened to address the impacts of climate change. Our goal with this report is to inform policymakers and utility providers of ways to strengthen legal protections for electric utility customers and to reduce the total number of disconnections nationwide.

To conduct this analysis, researchers at the Energy Justice Lab searched statutes and administrative code for all fifty states and the District of Columbia and categorized the different protections available for electric utility customers. We only looked outside of statutory and administrative codes if a state statute or regulation references an outside source or if there was no utility information otherwise available. The full list of items we documented is presented in the Appendix, including information about how we coded and quantified each policy. The categories of protections we summarize in this report include weather protections, medical protections, and protections for vulnerable populations (i.e., households with young people, elderly residents, and individuals with disabilities). We also compiled information regarding policies specifying the minimum days of notice utilities must provide customers before disconnections can take place, the amount of time customers have to pay their bills, whether tenants receive the same protections as other utility customers, and how utilities currently make customers aware of the statutory and regulatory protections available to them.

Weather Protections

Weather protections often include provisions such as temporary moratoria or “no shut-off periods” that are directly linked to seasonal dates or specified temperature thresholds. In some cases, states take a hybrid approach that combines date- and temperature-based protections. Most states have cold-weather protections in place, while hot-weather protections are less common.

Figure 1 presents the number of states that have cold weather protections outlined in their statutory and regulatory code for electric utility customers. 41 states offer protections specific to cold weather. For example, electric utility customers in Ohio may not be disconnected from their utility service from November 15th to April 15th each year, unless the customer has been in arrears for at least 30 days. In Oklahoma, utilities are not allowed to disconnect customers if the National Weather Service (NWS) issues a local

forecast predicting the temperature will drop below 32 degrees F at any time during the following 24 hours.

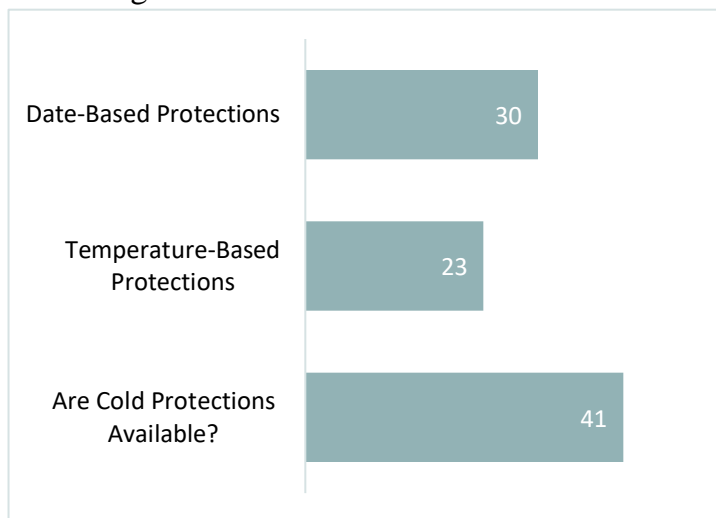


Figure 1. Number of States with Cold Weather Protections

While cold weather protections are quite common, most states do not offer protections that are specific to hot weather. In states with hot weather protections, they typically prohibit utilities from shutting off customers on days when the National Weather Service (NWS) issues a heat advisory, as opposed to seasonal or date-based approaches.

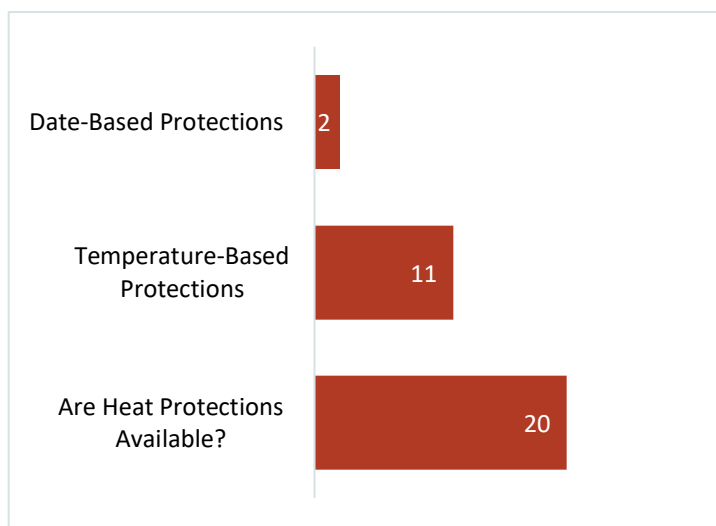


Figure 2. Number of States with Warm Weather Protections

Figure 2 presents the number of states that have hot weather protections outlined in their statutory and regulatory code for electric utility customers. Only 20 states currently offer some form of legal protection against disconnections during times of hot weather. In Colorado, customers may not be disconnected from their utility service when the forecasted temperature increases above 95 degrees F any time in the next 24-hour period where utility personnel will not be able to restore service.

While 11 states offer temperature-based protections, only two states – Delaware and Missouri – offer date-based protections that ensure customers will not be disconnected during specified time periods on an annual basis.

Seven states do not have weather protections of any kind: Alaska, Florida, Hawaii, Nebraska, North Dakota, Tennessee, and Utah. It is also important to emphasize that, in some states, weather protections are limited to certain populations and circumstances. For example, Indiana offers disconnection protections for cold weather, but they only apply to customers who are receiving or are eligible for energy assistance. Additionally, some

states include language in their statutes that indicate that some form of weather protections are available, such as not disconnecting customers during an NWS heat-advisory, but they do not reference an actual date or temperature-based protection. As an example, Georgia prohibits disconnections if an NWS heat-advisory is in effect prior to 8:00am on the date of the scheduled disconnection, but it does not offer a date-based or temperature-based threshold. The State of Delaware has both temperature and date-based protections during the state's cooling season (June 1st - September 30th) based on the NWS heat index. No disconnections can occur if the NWS heat index indicates temperatures over 105 degrees F at 8:00 a.m. on the day of the proposed disconnection.

We recommend that states adopt a combination of temperature and date-based disconnection protection policies to provide electric utility customers with comprehensive protections during periods of severe cold or extreme heat. States that currently do not have hot weather protections should update their policies given current and future impacts from climate change.

For all state protection policies, it is important to **include transparent and easy-to-understand language** so that all customers are aware of their legal protections when facing potential disconnections. Often, statutes and regulatory code can be vague or difficult to understand. **Customers should be made aware of what legal protections they have if they are about to experience a utility disconnection, and utilities should provide information to all customers on ways to seek financial assistance from federal and state energy programs as needed.**

Medical Protections

Medical protections are intended to prevent utilities from shutting off electricity to customers with health conditions that might be aggravated by a loss of service. The total length of disconnection postponement for customers with medical conditions varies by state, and, in most states, medical protections require documentation. Figure 3 presents the number of states that have medical protections for electric utility

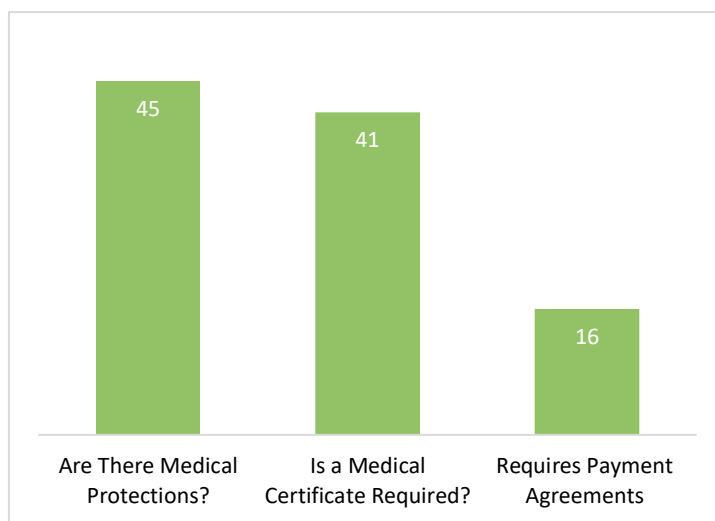


Figure 3. Number of States with Medical Protections

customers. Of the 45 states that offer medical protections for customers, 41 require some documentation in the form of a medical certificate obtained from a medical provider before a utility will delay disconnections, a requirement that may not be well known to customers.

States usually request that medical professionals verify the medical condition of the customer and the expected length of time in which they will need to utilize the protection. Sixteen states require that customers enter into some form of payment agreement with their utility provider if they cannot afford to pay their bills due to a medical condition. While the terms of the agreement vary by state, they typically allow for customers to pay off their past-due bills over time without accruing additional late fees.

Some states will delay a disconnection once a customer is approved for medical protections. South Carolina will delay a utility disconnection for up to 30 days if a customer notifies their utility provider that they intend to obtain a medical certificate. This protection can be renewed three times if the customer requires an extension. Additionally, Arizona allows for the delay of disconnections for up to one year. Across the remainder of states, however, it is rare for utilities to delay disconnections even if customers notify their provider that they intend to obtain a medical certificate.

States should minimize the burden placed on customer to demonstrate that they have a valid medical condition. Any medical condition that is deemed serious or life-threatening by a certified medical professional should be treated as such by electric utility providers to reduce the risk of disconnecting vulnerable populations. Specifically, **we recommended that states adopt broad definitions of medical conditions, so more customers can benefit from these legal protections if they are, in fact, facing medical challenges.** For example, Colorado will postpone electric utility disconnections for customers who are issued medical certificates which evidences that “service discontinuance will aggravate an existing medical emergency or create a medical emergency for the customer or a permanent resident of the customer’s household.” This definition is broad and relatively straight-forward, giving customers more leeway when attempting to obtain medical certification. The State of Illinois requires all public utilities to maintain a registry and mark the meters of customers who depend on electrically operated life support equipment. Customers are responsible for notifying the utility of their dependence on such equipment to receive this protection. **We also recommend that legal protections include provisions that require utilities to delay disconnections if their customers notify the utility that they intend to obtain a medical certificate.**

Customers should also be given ample time to renew their medical protections if applicable.

Other Customer Protections

Utility disconnection protection policies in some states also extend to specific population groups that might be vulnerable to loss of service, including households with young children, elderly residents, and households that have individuals with disabilities.

Figure 4 shows the number of states that have legal protections in their statutory and regulatory code for vulnerable populations. Only four states impose limitations on utility disconnections to specifically protect young people: Idaho, Massachusetts, Rhode Island, and Wisconsin. These states define “young people” in different ways. For example, in Massachusetts, no disconnections can take place if the home is occupied with children under 12 months of age. In Idaho, the state uses the legal definition of a “minor,” noting that households with children under 18 years of age are protected from utility disconnections during the months of December through February.

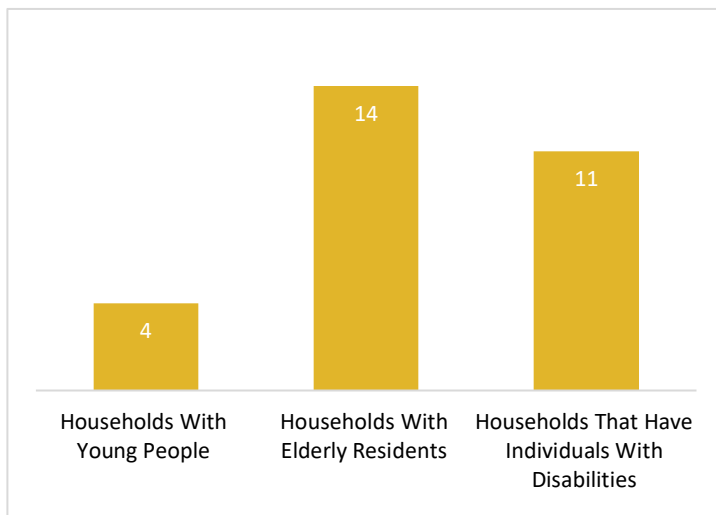


Figure 4. Number of States with Protections for Vulnerable Populations

Fourteen states limit utility disconnections for elderly populations. As is the case for young people, states also define “elderly” in a variety of ways. In Alaska, utilities must delay disconnections for at least 15 days if the utility is notified that the residence is occupied by an elderly individual before the scheduled disconnection date, though the state does not specify the exact age range for elderly customers. States should clearly define elderly in their statutes and administrative code so that customers know whether they are protected or not and there is no ambiguity in interpretation.

As with the protections for young people and elderly customers, states vary in how they define “disabled” in their statutes, although some states do not define disabilities in any specific way. Eleven states have protections for disabled customers. The State of Montana includes protections for households where a customer has a physical or mental

impairment that substantially limits her or his life activities. **In general, states should provide specific protections for households with young children, households with elderly residents, and customers with disabilities, and clearly specify the definitions of covered populations.**

Disconnection Notice & Billing

In many instances, customers receive a disconnection notice on the same day or the day before a disconnection is to take place. This is not enough time for customers to attempt to pay their utility bills or arrange with the utility provider to pay their bills at a later date. As shown in Figure 5, 49 states require for utilities to provide written notice of disconnection to their customers in the mail, while only 21 require notice by telephone as well. Not all residents have access to their mail at their residence (e.g., at a PO Box) at frequent time intervals. Thus, a notice of disconnection within a short time window may miss some energy insecure residents. The mail is also prone to time delays, which again has implications for the efficacy of mail notifications.

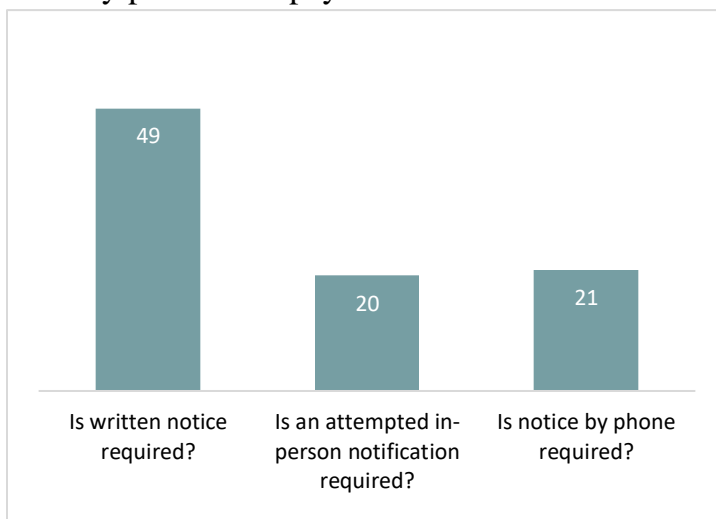


Figure 5. Number of States Required to Deliver Disconnection Notices Using Different Methods

Alaska requires utilities to offer at least 15 days of notice before a disconnection can take place, and written, telephone, and in-person visits are required. The period for minimum number of days notice before disconnection varies by state, with the shortest period coming from Delaware, which only requires 3 days of notice before disconnection. **We recommend that utility providers clearly specify minimum days of notice before they can disconnect a customer from their electric utility service. We also recommend that utility providers inform their customers of scheduled disconnections through multiple modes of communication.**

Customers should also have sufficient time to pay their bills before they are considered “past-due” to avoid potential late fees that might exacerbate financial stress on top of increasing electricity costs. Maine gives customers at least 25 days after the bill’s postmark date to pay their bills. Several states do not define a specific date-range in

which customers can pay their bills before they are considered late or delinquent. **We recommend that utility providers notify customers of the amount of time they have to pay their bills before facing potential disconnections.**

Few states require a minimum arrearage before a disconnection can take place. As an example, in Arizona, a customer must have a minimum arrearage of at least \$300 before they are disconnected. New Jersey has a minimum arrearage of \$200 total before disconnections are permitted, or the customer's account is more than three months in arrears. Other states have lower or no minimum values. For instance, Colorado has a minimum arrearage of \$50, while Arkansas does not have a minimum at all.

There are tradeoffs states must make when choosing the value of a minimum arrearage before disconnections are permitted. If the arrear is a high value, as in the case of Arizona or New Jersey, customers are more likely to accrue energy debt that may be more difficult to pay off over time. If the arrear is too low, someone may be disconnected who might have otherwise recovered on past payments within a short time window. Once someone is disconnected, it can be difficult to recover financially and avoid additional future disconnections.⁶ **We recommend that all states establish a reasonable, minimum arrearage before allowing disconnections and that utilities clearly and regularly communicate this value to customers.** Additionally, any disconnection or reconnection fees imposed by the utility should be held to a minimum to cover the expenses that the utility incurred in disconnection or reconnection.

Tenants and Landlords

A landlord's nonpayment of electric utility bills can result in dire consequences for tenants. State protections for tenants vary, and in some states, tenants do not receive much advance notification of a pending disconnection. In Idaho, utility customers receive a written notification of 7 calendar days before they can be disconnected from their service, while tenants in Idaho only receive 2 days of notice before disconnections can occur. Policies in other states grant more protections. In Washington D.C., tenants receive 21 days of notice before a disconnection can take place, while in Massachusetts, tenants must receive at least 30 days of notice, and the notice must be posted in common areas of the building. However, these types of protections for tenants, even minimum advanced notification, are not guaranteed in every state. Since disconnections in these places take place at no fault of tenants, **we recommend that tenants, where the**

landlord is the customer, should not be subject to disconnection for the landlord's failure to pay.

Required Disclosure of Customer Protections

State regulations pertaining to the provision of information about customer protections vary across the country. While several states do not require utilities to send sources of financial assistance information to their customers, most states do. In Utah, for example, utilities send pamphlets on utility rules to customers annually in September or October. Utilities must also make the information available in the utility business offices and send them to customers upon request.

Utilities should provide information on available protections directly to all customers at least twice annually to ensure all customers are aware of the legal protections offered to avoid disconnection. These protections also should be clearly posted in utility offices and on utility websites for customers to access. Legal protections should also be provided with a disconnection notice and when a customer first begins receiving service from a utility in language that is clear and transparent.

Recommendations

Our objective in this report was to provide an overview of best practices and make recommendations for policymakers, utility providers, and customers with the main goal of identifying potential practices that will reduce the total number of electric utility disconnections across the United States. We summarize our main recommendations in Table 1 below.

Stakeholder	Recommendation
Policymakers	<ol style="list-style-type: none">1. Utility disconnection protection policies should have easy-to-follow and transparent language and impose minimal administrative burdens.2. A combination of temperature and date-based disconnection policies provide a more robust set of protections than either alone, and which is increasingly necessary with a changing climate and more erratic weather.3. States should adopt broad definitions of medical conditions to better protect vulnerable customers from disconnections and require that

	<p>utilities delay disconnections for customers that notify them they intend to obtain a medical certificate.</p> <ol style="list-style-type: none"> States should provide specific protections for households with young children, households with elderly residents, and customers with disabilities. States should establish a minimum arrearage before disconnections can happen. Tenants where the landlord is the customer should not be subject to disconnection for the landlord's failure to pay their utility bills.
Utility Providers	<ol style="list-style-type: none"> Utility providers should clearly specify the minimum days of notice prior to disconnecting customers and provide advanced notification of potential disconnections to customers through multiple modes of communication. Utility providers should establish a specific date-range in which customers can pay their bills before they are considered late or delinquent. Utilities should provide information on available protections directly to all customers at least twice annually to assure that all customers are aware of the legal protections offered to avoid disconnection.
Customers	<ol style="list-style-type: none"> Customers should educate themselves on what legal protections and state energy programs are available that can help them avoid disconnections, and proactively seek protections if there are opportunities for doing so.

Appendix

To categorize and code electric utility disconnection protection policies across the U.S. States, we answered the list of questions below. Each question includes a precise definition of the protection, how we coded different possible answers, and how we quantified certain results.

Are there weather protections? (1 or 0) <i>This question asks whether there are any protections available related to any type of weather. Note, “protections” means that if a person paid nothing at all, that individual could escape having his power shut off. Thus, weather “protections” include provisions such as no-shutoff periods tied to seasonal dates or temperatures, a longer than normal required notice period tied to a weather period, a wintertime minimum arrearage requirement before disconnection, or allowing customers to pay nothing until a later weather-related deferred payment date. “Protections” would not include provisions such as requiring a larger deposit for deferred payments, payment plans (if any amount is immediately due to begin the payment plan), a requirement that customers be notified of their upcoming disconnection by both mail and telephone, nor ability to pass liability for payment on to a guarantor. The answer will be 1 if it applies to the general public or just to a specific group such as the elderly.</i>
Are cold protections available? (1 or 0) <i>This question refers to all weather protections specific to cold weather phenomena. The answer will be 1 if it applies to the general public or a specific subgroup.</i>
Are protections offered to all customers? (1 or 0) <i>The answer will be 1 if the cold weather protections from the previous question apply to the general public. If the protections only apply to a certain small group such as disabled people or families with young children, the answer will be 0.</i>
If not, which groups are protected? (Example: disabled persons) <i>If the cold protections do not apply to the general public, this textbox will specify precisely which subgroups are protected.</i>
Are there temperature-based cold protections? (1 or 0) <i>This question asks whether some of the cold protections available are temperature based. For example—there can be no shutoffs if the predicted temperature is 32 degrees Fahrenheit or below for the next 24 hours.</i>
Temperature of the Protection (F°): (example: 30 or less) <i>This question will help specify the exact temperature protection.</i>
Timing specifics: (example: no shutoffs for 24 hours if the low temperature is forecasted for any time in the next 48 hours) <i>This textbox can capture the timing specifics of temperature-based protections: (1) the timing of the cold weather covered by the regulation and (2) the duration of the actual protection.</i>
Temperature Exceptions: (Example: Customers cannot have their power shut off if the temperature falls below 20 degrees Fahrenheit. However, if their arrearage is higher than \$500, shut off can occur despite low temperatures). <i>If normally customers are protected from shutoff during certain temperatures, but there are exceptions to those protections, note them here.</i>
Are there date-based cold protections? (1 or 0) <i>This question asks if people are more protected during certain date-specific cold weather periods each year. For example:</i>

<i>Customers receive 10 additional days of notice before shutoff between November 1st and March 1st every year.</i>
Actual Dates: (example: December 1 st through February 1 st) <i>This question will help specify the exact dates of the protection.</i>
What is the date-based protection? (Example: During these dates, customers receive 15 days of extra notice and the minimum arrearage for shutoff rises to \$500) <i>This textbox will include the exact details of the date-based cold protection.</i>
Is there a date-based temperature threshold with a cutoff? (1 or 0) <i>This question would reveal states that have temperature-based protections that only cover customers during certain date ranges. If the low temperature comes on a day outside of the date range, the customer has no guarantee of protection.</i>
Are there any additional stipulations on cold weather protections? (Example: shutoff is prohibited on days with snowstorms or fog forecasted) <i>Textbox here on unusual nuances related to cold weather protections that have not yet been captured.</i>
Are heat protections available? (1 or 0) <i>This question refers to weather protections specific to warm weather phenomena. The answer will be 1 if it applies to the general public or a specific subgroup such as the elderly.</i>
Are protections offered to all customers? (1 or 0) <i>The answer will be 1 if the warm weather protections from the previous question apply to the general public. If the protections only apply to a certain small group such as disabled people or families with young children, the answer will be 0.</i>
If not, which groups are protected? (Example: the elderly) <i>This textbox will specify what groups are covered by the protection, if the entire general public is not protected.</i>
Are there temperature-based heat protections? (1 or 0) <i>This question asks whether some of the heat protections available are temperature based. For example—there can be no shutoffs if the temperature is 100 degrees Fahrenheit or higher for the next 24 hours.</i>
Temperature of the Protection (F°)? (Example: more than 105) <i>This question will help specify the exact temperature protection.</i>
Timing specifics: (example: no shutoffs for 24 hours if the high temperature is forecasted for any time in the next 48 hours) <i>This textbox can capture the time specifics of temperature-based protections: (1) the timing of the hot weather covered by the regulation and (2) the duration of the actual protection.</i>
Temperature Exceptions: (Example: Customers cannot have their power shut off if the temperature reaches 100 degrees Fahrenheit or higher. However, if they have been delinquent on any payment for more than six months, disconnection can occur). <i>If normally customers are protected from shutoff during certain warm temperatures, but there are exceptions to those protections, note them here.</i>
Are there date-based heat protections? (1 or 0) <i>This question asks if people are more protected during certain date-specific warm weather periods each year. For example: Customers receive 10 additional days of notice before shutoff between June 1st and September 1st each year.</i>
Actual Dates: (example: May 1 st through August 1 st) <i>This question will help specify the exact dates of the protection.</i>
What is the date-based protection? (Example: There are no disconnections during this date range) <i>This textbox will include the exact details of the date-based heat protection.</i>

<p>Is there a date-based temperature threshold with a cutoff? (1 or 0) <i>This question would reveal states that have temperature-based protections that only cover customers during certain date ranges. If the high temperature comes on a day outside of the date range, the customer has no guarantee of protection.</i></p>
<p>Are there any additional stipulations on warm weather protections? (Example: temperature protections are only available if you qualify for cold weather protections as well) <i>This question will note any warm weather specifics not captured by the previous questions.</i></p>
<p>Are there Protections for Medical Conditions? (1 or 0) <i>This question asks whether there are any shutoff protections available related to a household member's failing health or unique health risks. Recall, "protections" means that if a customer paid nothing at all, that person could escape having his power shutoff. Thus medical "protections" include provisions such as no-shutoff periods for customers with a medical certificate or allowing customers to pay nothing until a later health-related deferred payment date. "Protections" would not include provisions such as payment plans (if any amount is immediately due to begin the payment plan), requiring a utility to send customers a list of charitable or government organizations that could possibly assist customers in making their payments, nor requiring customers to pay for all other payments they are behind on before they are eligible for medical protections. The answer will be 1 if it applies to the general public or just to a specific group such as the elderly.</i></p>
<p>Number of days disconnection will initially be delayed. (Example: 30 days) <i>This question is asking once a customer is approved for medical protections, how many days will he be protected before the safeguard expires, needs to renew etc.</i></p>
<p>Number of times a customer can renew a medical protection: (example: 2) <i>This question evaluates whether and for how long medical protections are renewable if a condition continues to persist beyond the initial protection period.</i></p>
<p>Maximum total length of medical postponement: (example: 60 days) <i>This question gives us a precise snapshot of the maximum number of days a customer can escape shutoff for a medical condition.</i></p>
<p>Is a medical certificate required? (1 or 0) <i>The answer is 1 if a customer must provide a medical certificate for protection from shutoff. If no official certificate is necessary, the answer is 0.</i></p>
<p>Who can issue a medical certificate? (Example: a licensed physician or nurse practitioner) <i>The answer to this question is a full list of all personnel qualified to issue a medical certificate in the specified state.</i></p>
<p>What information must be included in the medical certificate? (Example: expected duration of condition and a statement that disconnection will pose serious risk to life or health) <i>For answering this question, we will not include required basic identifying information such as name, address, phone number etc. In answering this question, we are interested in required medical certificate information specific to the customer's medical condition.</i></p>
<p>Definition for medical condition? (Example: an illness where disconnection would pose an immediate threat to life or well-being) <i>This question is asking for how each individual state defines "medical conditions" worthy of regulatory protection.</i></p>
<p>If you receive a medical condition protection, must you enter into a payment agreement? (1 or 0) <i>Answering 1 here means that entering a payment agreement is a</i></p>

<i>condition for receiving medical condition protection. Answering 0 here means that entering a payment agreement is not required for medical condition protection.</i>
Will a utility delay shutoff for a time if the customer notifies the utility that he intends to obtain a medical certificate? (1 or 0) <i>Many states allow customers to simply call the utility and inform the utility that they are working on obtaining a certificate so that the customer can avoid termination. This question captures this shutoff delay.</i>
If so, for how long? (Example: 7 days) <i>This question captures how long until the utility will require an official medical certificate to be submitted.</i>
Any additional stipulations for medical conditions? (textbox) <i>This textbox will allow us to note any additional medical nuances not yet captured.</i>
Protections for households with young people? (1 or 0)
What is available? (Example: 2 weeks of additional disconnection notice) <i>A textbox to specify exactly what protections are available to households with young people.</i>
Definition of young person? (Example: age 6 and under) <i>How does each state specifically define who is a young person?</i>
Protections for households with elderly people? (1 or 0)
What is available? (Example: power cannot be turned off for households with only elderly residents) <i>A textbox to specify exactly what protections are available to households with elderly people.</i>
Definition of elderly? (Example: 65 or older) <i>How does each state specifically define elderly?</i>
Protections for households that have individuals with disabilities. (1 or 0)
What is available? (Example: Winter protections for these households will be extended an additional 30 days) <i>A textbox to specify exactly what protections are available to households with disabled residents.</i>
Definition of disability? (Example: physical or mental inability to perform everyday tasks) <i>How does each state specifically define disability?</i>
Protections for households with military personnel? (1 or 0)
What is available? <i>A textbox to specify exactly what protections are available to households with military personnel—this may include deployed active-duty military, activity duty military that are not deployed, and veterans depending on the state.</i>
Number of days disconnection delayed: (example: 6 months) <i>Most often military protections apply to deployed active-duty military, and states will apply protections for part or all of the service member's time in service away from home. This question will keep track of maximum military extensions for disconnection dates.</i>
Who is exempt from these statutes and regulations? (Example: rural cooperatives and municipalities) <i>If any entity is exempt from any of the state statutes or regulations we have recorded, we will note those entities here. These entities may have similar protections, stricter protections, or none at all.</i>
Exemption Nuances: (example: otherwise, self-governing municipalities must still follow winter protections) <i>If there are any unique circumstances for state exemptions, they will be noted in this box.</i>
Can customers request an exemption from the rules for hardship? (1 or 0) <i>Sometimes states allow customers to apply for exemptions to state statutes and regulations because these rules would inflict immense hardship on the customer. (We later decided as a team to</i>

mark this question as a one if exemption is allowed for any reason or if no specific reason is required at all. If exemption is possible for customers, put 1)
Can utilities request an exemption from the rules for hardship? (1 or 0) <i>Sometimes states allow utilities to deny some customers certain protections because adhering to the rules would create immense difficulties for the utility. (We later decided as a team to mark this question as a one if exemption is allowed for any reason or if no specific reason is required at all. If exemption is possible for utilities, put 1)</i>
Minimum number of days of notice before disconnection? (Example: 10) <i>This question refers to the number of days a utility must wait after sending a customer an initial disconnection notice before the utility can finally disconnect that customer.</i>
Is written notice required? (1 or 0) <i>This question asks whether a written notice is required at any time before disconnection. Thus, the written notice may not necessarily be the initial notice provided, but it must be given before disconnection can occur. It may be a physical written notice or an electronic written notice such as a text or e-mail.</i>
Is an attempted in-person notification required? (1 or 0) <i>This question asks whether an attempted in-person notice is required at any point before disconnection. Thus, these notices may not necessarily be the initial notice provided but must be given before disconnection can occur. (If the regulation states that in-person OR phone notice is required before disconnection, please mark this as a 1. However, if additional options are provided this will be a 0—for example: Before disconnection, a customer must be notified two times by phone call, e-mail, mail, a door hanger or an in-person visit.) If a utility employee visits the customer's home in-person to disconnect their service, that visit alone does not count as in-person notification.</i>
Is notice by phone required? (1 or 0) <i>This question asks whether an attempted telephone notice is required at any point before disconnection. Thus, these notices may not necessarily be the initial notice provided but must be given before disconnection can occur. (If the regulation states that in-person OR phone notice is required before disconnection, please mark this as a 1. However, if additional options are provided this will be a 0—for example: Before disconnection, a customer must be notified two times by phone call, e-mail, mail, a door hanger or an in-person visit.)</i>
If a utility is unable to reach a customer by phone or in-person visit, will it delay disconnection? (1 or 0) <i>For utilities that notify customers of disconnection by phone or in-person visit, this captures whether the disconnection date will be delayed if a customer cannot be reached.</i>
How long do customers have to pay their bills? (Example: 14 days after receipt) <i>This question specifies the standard amount of time customers have to pay their bills. Essentially, once they are made aware of the bill, how many days until it is due to the utility?</i>
When does a bill become past due? (Example: two days after the due date) <i>Here, a customer has already received his bill and its corresponding due date from the utility. We are asking at what point his bill will be considered past due or delinquent?</i>
Is there a minimum delinquency before disconnection? (1 or 0) <i>Some states require that a bill must remain in a state of delinquency (A.K.A. lateness/tardiness) for a certain period before disconnection can occur. If the given state has such a requirement, we will mark 1. If no minimum delinquency period must be established before disconnection, we will mark 0.</i>

If so, for how long? (Example: 3 months) <i>Precisely how long must the delinquency period last before disconnection can occur.</i>
Minimum arrearage before disconnection? (1 or 0) <i>This question is asking whether the customer must be behind on his payments by a certain minimum amount before he can be disconnected.</i>
Amount of minimum arrearage? (Example: \$300) <i>This question clarifies the exact dollar amount of a state's minimum arrearage before disconnection.</i>
Are disconnection fees prohibited? (1 or 0) <i>This question clarifies whether disconnection fees are barred in the given state.</i>
Max disconnection fee? (Example: \$50) <i>If disconnection fees are permitted, is there a maximum amount the utility can charge?</i>
Are reconnection fees prohibited? (1 or 0) <i>This question clarifies whether reconnection fees are barred in the given state.</i>
Max reconnection fee? (Example: \$25) <i>If reconnection fees are permitted, is there a maximum amount the utility can charge?</i>
Payment plans available. (1 or 0) <i>This question is asking whether any payment plans are available at all—we will answer 1 whether the payment plan is available to the general public or only to a certain group such as the elderly. We will answer 1 whether payment plans are available year-round or only during specific time periods such as winter.</i>
Do tenants, where the landlord is the customer, receive the same protections as other customers? (1 or 0) <i>Answering 1 here means that these tenants are treated the same as other utility customers. Answering 0 here means that these tenants receive additional or fewer protections than other utility customers.</i>
Differences in protections: <i>In this box we will specify the heightened or lowered protections tenants receive where the landlord is the customer.</i>
How do utilities make customers aware of protections? (Example: they send a list of customer rights once annually and with a customer's initial disconnection notice) <i>This question is asking how customers are made aware of all the regulatory and statutory protections available to them. We will note any method of sending a utility may use and note under what circumstances utilities send the information.</i>
Must the utility or commission provide information on available sources of financial assistance? (1 or 0) <i>The question is asking whether under any circumstances a utility is required to provide any group of customers with information regarding financial assistance from government or charitable organizations. Thus, we will mark a 1 even if the financial assistance information is sent out only to a specific group, such as the elderly, or only at a specific limited time, such as during winter months.</i>

Endnotes

¹ Marcus Franklin and Caroline Kurtz. 2017. *Lights out in the cold: Reforming utility shut-off policies as if human rights matter*. Environmental and Climate Justice Program. National Association for the Advancement of Colored People (NAACP).

² Trevor Memmott, Sanya Carley, Michelle Graff, and David M. Konisky. “Sociodemographic disparities in energy insecurity among low-income households before and during the COVID-19 pandemic.” *Nature Energy* 6, 186–193 (2021).

³ Sanya Carley and David Konisky. 2023. “Utility Disconnections Dashboard.” Energy Justice Lab.

⁴ Dominic J. Bednar and Tony G. Reames. “Fleeting energy protections: State and utility level policy responses to energy poverty in the United States during COVID-19.” *Energy Research & Social Science*, 99: Volume 99, 103045 (2023).

⁵ Sanya Carley, Michelle Graff, David M. Konisky, and Trevor Memmott, T. “Behavioral and financial coping strategies among energy insecure households.” *Proceedings of the National Academy of Sciences*, 119 (36) e2205356119 (2022).

⁶ David M. Konisky, Sanya Carley, Michelle Graff, and Trevor Memmott. “The persistence of household energy security during the COVID-19 pandemic.” *Environmental Research Letters*, 17, 104017 (2022).