Utility Disconnections Dashboard

Version 1.1

Technical Documentation

The Energy Justice Lab

May 2024

Acknowledgments

Contributors

The Utility Disconnections Dashboard (Dashboard) is a product of the Energy Justice Lab, which is co-directed by David Konisky (Indiana University) and Sanya Carley (University of Pennsylvania). Numerous individuals, listed alphabetically, have contributed the development and continued updates of the Dashboard: Jacob Alder, Harsh Atha, Haider Attiq, Sanya Carley*, Steph Clampitt, Karen DuVall, Matt Flaherty, Brian Foote, Megan Freveletti, Rohit Gampa, Alexander Gordon-Sandweiss, Jason Gumaer, Himanshu Joshi, Vijayanand Kandasamy, Jonathan Kim, Alison Knasin, David Konisky*, Emmanuel Kwakye, Zhao Liu, Roger Morris, Emily Nash, Abhijit Nayak, Audrey Priest, Victor Peters, Shi Qi, Thomas Reynolds, Tushar Samantaray, Shubham Saurabh, Kyle Stirling, Margaret-Bailey Turner, Shivani Vogiral, Brie Warnick, David Wild, Joy Zayatz, and students from Roger Morris' graduate course on data management systems.

Advisory Group

The Energy Justice Lab is grateful for the guidance of the following individuals, who served on the Advisory Board for the disconnection dashboard project:

- Denise Abdul-Rahman, The Chisolm Legacy Project
- Subin DeVar, Initiative for Energy Justice
- Amanda Dewey, American Council for an Energy-Efficient Economy
- Charlie Harak, National Consumer Law Center
- Monisha Shah, National Renewable Energy Laboratory
- Khalil Shahyd, National Resource Defense Council
- Jean Su, Center for Biological Diversity
- Margo Weisz, Texas Energy Poverty Research Institute

Funding Recognition

The Utility Disconnections Dashboard received generous financial support from Indiana University, the Alfred P. Sloan Foundation, and the McKinney Family Foundation.

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 (University of Pennsylvania) and David Konisky (Indiana University) serve as Co-Directors of the Energy Justice Lab.

Table of Contents

Introduction

In the United States, investor-owned, municipal, cooperative, and non-profit entities engage in the provision of basic utility services: e.g., electricity, natural gas, heating oil, propane, water, sewage. In general, state regulatory authorities and public utility commissions (PUCs) determine the conditions under which utilities operate, including when a utility can interrupt or terminate service to customers. Most often, utilities terminate customer service because of an extended failure to pay bills. In most states, however, states place some limits on the circumstances in which a utility can disconnect customers (e.g., when the outside temperature is too hot or cold; a household has a resident with medical condition that requires continual service).

The Utility Disconnections Dashboard (Dashboard) has two main components. First, the Dashboard presents utility-level data on reported disconnections. State legislation or PUC orders determine whether and how frequently utilities must report their disconnection activity to the public. In general, neither utilities nor PUCs make this information readily accessible, and formal disclosure reports are often difficult to find and interpret. The Energy Justice Lab (the EnJ Lab) has gathered these reports for all utilities who gather and submit such data. The EnJ Lab also obtained data on disconnections from some municipal utilities through open records requests and this information is also incorporated into the Dashboard. The Dashboard attempts to make information on service disconnections understandable and accessible in a usable, searchable format. In total, the EnJ Lab has collected data from at least some utilities in 42 of 50 states plus the District of Columbia; in 8 states, the EnJ Lab could not identify any reliable information on utility disconnections. The Dashboard includes reported disconnections for the period of 2000 to 2023, but the time frame captured for each utility varies.

The second component of the Dashboard is a compilation of current state policies, laws, and regulations that govern utilities' electricity disconnection practices in all fifty states and the District of Columbia. The policy feature of the Dashboard provides both summaries and detailed profiles of the protections offered to customers in each state during different times of year, during extreme weather, and for various individual situations (e.g., medical protections, families with young children). This information provides some guidance on how customers can protect themselves from having their electricity shut off if they fail to pay a bill (or many bills).

The Utility Disconnections Dashboard builds on the important work of many other individuals and organizations, such as the NAACP, the Center for Biological Diversity, and the National Consumer Law Center. These resources are listed at the end of this Technical Documentation. The EnJ Lab's development of the Dashboard benefited from countless conversations and regular feedback with individuals from academic, government, for-profit, and non-profit organizations.

The EnJ Lab has made every effort to carefully compile the data presented in the Utility Disconnections Dashboard. Any errors are unintended, and the Lab will make corrections as expeditiously as possible. Please direct comments about potential mistakes or make suggested corrections to enjlab@indiana.edu.

Methodology Overview

Utility Disconnections Data

The EnJ Lab collected and organized data on utility service disconnections from utilities across the United States with a goal of being as comprehensive as possible. The scope of the Dashboard data includes utility disconnections from two types of energy services: electricity and natural gas. Because there is no single, central repository for this information, the EnJ Lab compiled this information state-by-state and utility-by-utility.

In states where disclosure is required, report formats, amount of information, and terminology differ. To make the information commensurate, the EnJ Lab had to make assumptions and coding decisions to interpret each utility's reported disconnections.

Future versions of the Dashboard may include other relevant indicators, such as the number of customers with arrears, the number of customers that have entered into deferred payment agreements, the number of disconnection notices issued each month, and disconnection rates by different residential or low-income customer segments.

Version 1.1 of the Dashboard includes information on disconnections, reconnections, and disconnection rates, using indicators as defined below:

Disconnection: The involuntary termination of a customer's regular energy services as a result of bill nonpayment.

Reconnection: Utility service restored within a 24-hour window after a disconnection.

Total Number of Residential Accounts: The total number of residential customer accounts for electricity, natural gas, or combined.

Disconnection Rate: The number of disconnections divided by the total number of residential accounts.

The information on disconnections and reconnections comes directly from utility reports, data the EnJ Lab received from open records requests from municipal utilities, or data shared from partners as documented on a state-by-state basis below. The information on the number of residential accounts comes from multiple sources. In cases where utilities report the number of residential accounts directly in their reports, the EnJ Lab uses this number. In some cases, the EnJ Lab had to infer this value from the reports based on the information provided (e.g., New York reports total customers as a function of total residential sales), or we compiled it from Commission orders or from a direct communication with a utility or Commission representative.

In most cases, utilities in their reporting do not distinguish between the number of *customers* and numbers of *accounts* – that is, a single customer could have multiple accounts or multiple customers (e.g., a family) could have a single account. In our calculation of disconnection rates, we use the total number of residential accounts as provided by utilities. In cases where utilities do not report the total number of residential accounts in their disconnections report, the EnJ Lab uses the annually reported number of customers in corresponding EIA 861 (electric) and EIA 176 (gas) reports, matched by utility, state, and year.

General Procedure V1.1

The subsequent sections outline state-specific details and assumptions made about the available data in each given state. In every state, the EnJ Lab made a substantial effort to find public data and to document assumptions, as well as to include instructions for a reproducible process. The general procedure the EnJ Lab followed for compiling information on disconnections is as follows:

1. Find a data source. Most of the disconnections data come from state regulatory dockets wherein the regulator ruled that a utility must report disconnections on a regular or semi-regular (i.e., quarterly or annually) basis.
2. Convert data into a usable format. Most of the disconnection data collected by the EnJ Lab come from monthly reports, tracked in a tabular format (e.g., a CSV/spreadsheet format, or a CSV/spreadsheet saved as a PDF). The EnJ Lab extracted relevant information from f these reports using a programming script or application, including R, Python, and Tableau Prep Converter. In some cases, extraction using these tools was not possible because the data were in a text or narrative format and the EnJ Lab used manual data entry. Merge all state specific data into a single dataset to incorporate into the Dashboard.

Scope of Dataset

The Utility Disconnections Dashboard dataset contains utility disconnections over the period from 2000 to 2023, although available data in the earlier years are sparse. Of the 50 states and Washington, D.C., 26 have an active formal reporting requirement designated either by state regulatory action (from the public utility commission) or a state legislative determination. Of those, 8 started requiring utilities to report because of and in response to the COVID-19 pandemic. Another 8 states required some level of disconnection reporting in response to the COVID-19 pandemic, but no longer require disconnection reporting. Through open records requests, the EnJ Lab also obtained disconnection reports for some municipal utilities in 27 states, 8 of which did not have any reporting requirements during or after the COVID-19 pandemic. In total, the EnJ Lab has obtained at least some disconnection information for 41 states and Washington, DC.

Utility Types

There are 345 unique state-utility combinations, representing 323 unique reporting utilities. These include 217 investor-owned utilities (in 36 states), 79 municipal utilities (in 28 states), and 27 co-operative utilities (in 13 states). Many of these utilities are owned by common parent companies, but they report separately according to the laws and regulations of each state which they operate.

For example, Xcel Energy, an investor-owned utility (IOU) operates utilities in three states with reporting requirements: Colorado, Minnesota, and North Dakota. The reporting requirements differ significantly in each state. Since 2008, in both Colorado and North Dakota, Xcel has been required to report the number of customers disconnected for non-payment. In Colorado on a quarterly basis, Xcel reports the total number of residential customers disconnected in the quarter, as well as other metrics including arrearages and customers with a payment plan. In North Dakota, Xcel reports the disconnection, bill amount, customer type, and relative service address (at the city level). In Minnesota, as a result of the COVID-19 pandemic, Xcel has been required to report disconnections on a monthly basis, as well as other metrics including arrearages and customers with arranged payment plans.

State Data Collection Detailed Descriptions

The following descriptions contain information about each state (listed in Table 1). For the 8 states for which the EnJ Lab did not find any disconnection data, the description includes details about efforts made to locate information. The EnJ Lab used the Advanced Energy United PowerSuite Insight Engine tool to search thousands of state regulatory dockets and legislative code for disconnection information, especially for information pre-dating 2020.

Table 1. States that have data included in the Dashboard and associated last check of information.

State	Date	State	Date	State	Date	State	Date
AL	4/4/24	IA	4/12/24	NE	4/4/24	RI	4/4/24
AZ	4/4/24	KS	4/4/24	NH	4/4/24	SC	4/9/24
CA	4/4/24	KY	4/4/24	NJ	4/4/24	SD	4/4/24
CO	4/21/24	LA	4/4/24	NM	4/16/24	TX	4/4/24
CT	4/5/24	ME	4/15/24	NY	4/11/24	UT	4/4/24
FL	4/5/24	MD	4/15/24	NC	4/7/24	VT	4/4/24
GA	4/10/24	MA	4/21/24	ND	4/7/24	VA	4/4/24
HI	4/10/24	MI	4/15/24	OH	4/4/24	WA	4/11/24
ID	4/4/24	MN	4/15/24	OK	4/4/24	WI	4/4/24
IL	4/4/24	MO	4/16/24	OR	4/7/24	DC	4/11/24
IN	4/20/24	MT	4/4/24	PA	4/4/24		

Alabama

Alabama does not require disconnection reporting. However, through an open records request, the EnJ Lab obtained disconnections information from the City of Dothan (Jan 2010 – Mar 2022).

Alaska

Alaska does not require public reporting of utility disconnections. The Regulatory Commission of Alaska requires public utilities to keep open books, under AS 42.05.491 and that "[each] utility shall maintain a record of each disconnection of service, including the reason for the disconnection. This record must be maintained for two years and must be available for commission inspection" 3 AAC 52.450(i). However, public disclosure of these data is left to the utilities and the Regulatory Commission of Alaska does not make these data available to the public.

Arizona

Arizona requires public reporting of utility disconnections on a quarterly basis in Docket E- 00000A-19-0128, "In the matter of Investigation and Comprehensive review of the Commission's Disconnection rules and the Disconnection Policies of Public Service Corporations." [link: https://edocket.azcc.gov/search/docket-search/item-detail/22652]. Only documents relating to Decision No. 77849 contain disconnections information. However, no further disconnection data updates have been reported since Q4 of 2022, and no reconnection data has been reported.

Each utility's report is in a different format. In addition, Arizona Public Service, Tucson Electric Power, and Ajo Improvement Company, and Morenci Water and Electric Company also report ZIP code level data.

Arkansas

Arkansas does not require reporting of utility disconnections. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections, but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

California

California requires extensive disconnection reporting. The California Public Utility Commission (CPUC) instituted disconnection reporting requirements in 2010 under the Docket R.10-02-005. These reports include disconnections, reconnections, numbers of customer accounts (e.g., low-income, energy assistance, and elderly), arrearages at multiple intervals (e.g., 30-day, 31-60 day, 61-90 day, 91-120 day, and 120+ days of arrearages), indicators for usage of Weatherization Assistance Program (WAP) and Low-Income Home Energy Assistance Program (LIHEAP) consumer assistance programs. In 2018, CPUC opened an additional investigation docket, R.18-07-005, and expanded reporting requirements to include ZIP code level reporting. These reports are saved in a tabular PDF format, updated each month. The EnJ Lab downloaded and cleaned each month to compile the data from each utility. From both dockets, the EnJ Lab obtained disconnections information from Pacific Gas and Electric Company (January 2010 – December 2022), San Diego Gas & Electric (January 2010 – December 2022), Southern California Edison Company (January 2010 – December 2022), Southern California Gas Company (January 2010 – December 2022).

Through open records requests, the EnJ Lab obtained disconnections information from the Los Angeles Department of Water and Power (2013-2020), City and County of San Francisco (2017-

2022), City of Corona (2012-2022), City of Lodi (2016-2020), City of Redding (2018-2021), City of Palo Alto (2014-2020), City of Glendale (2018-2022), and City of Burbank Water and Power (2017-2021).

Colorado

Colorado's Division of Regulatory Agencies ("DORA") instituted reporting requirements in 2008 under docket 08M-305EG and implemented it using a disconnection reporting template from the National Association of Regulatory Utility Commissioners (NARUC). This template is a text questionnaire format that utility representatives submit on a quarterly basis and covers arrearages, disconnections, and other indicators. Years prior to 2018 do not have more than two quarters. In 2021, the two natural gas entities under Black Hills Energy merged. Prior to the merger, the EnJ Lab kept the utility reports separate. In 2019, Black Hills Energy started reporting reconnections quarterly instead of cumulatively annually. Colorado Natural Gas reported disconnections cumulatively over the year. Mountain View only reported annual disconnections but has not published a report since July 2021. To convert the data from quarterly to monthly, the EnJ Lab used a simple average to apply the quarterly data to monthly data, e.g., 300 disconnections in Q1 is recorded as 100 disconnections for January, February, and March.

Please note that the 2023 Q4 filing for Colorado National Gas, the 2023 Q1 and 2023 Q3 filings for Black Hills Energy are missing from the docket as of April 24, 2024. They will be updated when made available.

Connecticut

Connecticut instituted reporting requirements in 2018 to account for numbers of "hardship customers" under Docket No. 18-04-25. During the COVID-19 pandemic, the Public Utilities Regulatory Authority (PURA) expanded the reporting requirements with Orders No. 1, 3, 5, 8, and 10. These reporting requirements cover disconnections, arrearages (number and dollar amount), and other hardship indicators. Connecticut later opened Docket No. 21-07-01, and compliance filings for Order Nos. 47, 49, and 54 include separate monthly compliance filings from Eversource and UI Energy. This docket includes primarily ZIP code data for disconnections and reconnections. Connecticut later opened Docket No. 23-05-01, which information bears similarity to docket 21-07-01 but does not include ZIP code data.

The EnJ Lab also obtained disconnections information from the City of Norwich (2017-2021) through an open records request.

Delaware

Delaware does not require public reporting of utility disconnections. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

Florida

Florida instituted a reporting requirement in response to the COVID-19 pandemic under Docket

No. 20210000-0T but has not required further reporting. Utilities report under a catchall docket, with reports titled "Financial impacts on utility customers as a result of the COVID-19 pandemic." Later on, it was moved to Docket No. 20190140. However, there have been no updates on utility data in the new docket since October 2022. To avoid duplicative data cleaning effort with the CBD, the EnJ Lab used the data reported by CBD for Florida utilities: Duke Energy, Florida City Gas, Florida Power & Light Company, Florida Public Utilities, and Gulf Power for January 2020 through October 2022.

The EnJ Lab obtained disconnections information from Jacksonville Electric Authority (2010-2022), City of New Smyrna Beach (2020-2022), City of Lake Worth Beach (2010-2021), Beaches Energy Services (2021-2022), City of Tallahassee (2010-2022), Kissimmee Valley Authority (2008-2022), and Keys Energy (2007-2022) through open records requests.

Georgia

Georgia does not require disconnection reporting; however, Georgia Power, the state's largest and sole investor-owned utility included disconnection reporting in its 2019 Base Rate Case, under Docket No. 42516. The utility has updated disconnection reports and statuses since the initial filing in May 2019. Additionally, Georgia has open Docket No. 13330, "Emergency Rules of the Georgia Public Service Commission Regarding Low Temperature Disconnection of Natural Gas Service and Customer Rights for Switching Marketers and Reestablishing Service" which contains weekly disconnection counts from Atlanta Gas Light Company dating back to 2000. This data is used, but the reporting utilities claim the disconnection ("shut off because of non-pay" or "SONP") information is sensitive and confidential and have redacted many of the public reports.

Additionally, Atlanta Gas Light Company has 13 marketers (Colonial Energy, Constellation, Fireside Natural Gas, Fuel Georgia, Gas South, Georgia Natural Gas, Mansfield Power & Gas, SCANA Energy, Stream Energy, Town Square Energy, True Natural Gas, Walton EMC Natural Gas, and Xoom Energy) and one regulated provider, SCANA Energy Regulated, which serves customers separately from its deregulated business, SCANA Energy. Only SCANA Energy Regulated routinely reports its disconnection data. The other 13 unregulated marketers reported disconnection data only once, in November 2023.

The EnJ Lab also obtained disconnections information from Albany Utility Board for February of 2022 through an open records request.

More information about the Marketers of Atlanta Gas Light Company: https://psc.ga.gov/utilities/natural-gas/list-of-certified-marketers-and-contact-information/.

More information about the regulated provider of Atlanta Gas Light Company, SCANA Energy Regulated: https://psc.ga.gov/about-the-psc/consumer-corner/natural-gas /general-information/regulated-provider-faq/.

Hawaii

Hawaii does not require ongoing public reporting of utility disconnections. However, during the COVID-19 pandemic, the Hawaii PUC opened Docket No. 2020-0209 "Proceeding to Gather Data

to Inform Commission Decision-Making Regarding Suspension of Utility Disconnections and Related Issues as a Result of the COVID-19 Pandemic." The reports in this docket contain information about utility debt (e.g., arrearages and accumulated debt) but do not record information about utility disconnections. The Commission authorized Hawaii utilities to establish regulatory assets to record all costs resulting from the suspension of disconnections due to the emergency order. To avoid duplicative data cleaning effort with the CBD, the EnJ Lab included the data reported by CBD for Hawaii utilities: Hawaii Gas, Hawaiian Electric Company, Inc., and Maui Electric Company, Limited for January 2020 through October 2022, though all utility companies listed only reported during select quarters in 2021.

Idaho

Idaho does not require public reporting of utility disconnections. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

Through open records request, the EnJ Lab obtained disconnections information from the City of Idaho Falls (2016-2022).

Illinois

Illinois has two dockets with utility disconnection reporting information: the first, 20-NOI-01, as opened in March 2020 during the COVID-19 pandemic, required utilities to report disconnections, reconnections, and various other metrics for January 1, 2013 and through December 31, 2019. The latter docket, number 20-0309, opened as a more permanent response to the previous docket (a Notice of Inquiry). This new docket required quarterly reporting through December 31, 2022, according to the final ICC order (dated June 18, 2020, Stipulation 1.18(b)).

For both Ameren Illinois and Commonwealth Edison, the number of disconnections reflects the reported "Number of Residential Customer Accounts that were Disconnected during the Period for Non-Payment and that Remained Disconnected (Displacement) during the Entire Period" as opposed to the "Number of Residential Customer Accounts that were Disconnected during the Period and Reconnected within 12 Months."

The EnJ Lab also obtained disconnections information from Rochelle Municipal Utilities (2021-2022), City of St Charles (2018-2022), City of Geneva (2013-2023), City of Batavia (2018-2022), and the City of Naperville (2020-2022) through open records requests.

Indiana

Indiana instituted utility disconnection reporting requirements during COVID-19 under two phases, first, under Cause No. 45380 and second under Cause No. 45736. Under the first phase, which ended in 2022, Indiana utilities filed reports with disconnection information, as well as other useful metrics, including arrearages and disconnection notices. The second phase began in 2023 and requires the same metrics for a longer basis. Updates are usually published monthly and include data from the entire calendar year so far. After March 2024, utilities were no longer

required to report disconnections, but they are likely to do so at least through March 2025.

The EnJ Lab obtained disconnections information from the City of Mishawaka (2018- 2021) through an open records request.

Iowa

Iowa instituted reporting requirements in 2014. Utilities share monthly disconnections with the Iowa Utilities Board, which the Board then aggregates and compiles into a singular document published on its website each month. The EnJ Lab compiled the data from each of these documents. In several cases, the Board noted that a utility did not file a complete report or filed a revision due to an error; the EnJ Lab used only the revised (assumedly most up-to-date) reports if more than one report was available for a given month. The document categories that the EnJ Lab records include total accounts, accounts past due, disconnection notices issued, involuntary disconnections, and reconnections for each of the six utilities on each monthly document.

Kansas

Kansas instituted a reporting requirement during the COVID-19 pandemic but did not require continuous reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

Kentucky

Kentucky does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

Louisiana

Louisiana does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

The EnJ Lab obtained disconnections information from the City of Lafayette (2000- 2022) through an open records request.

Maine

Maine has required utilities to annually file an “Annual Credit and Collection Report” (CADA) with the Public Utilities Commission in April of each year since 1999. Every utility must file the following information with the Consumer Assistance & Safety Division (CASD) by February 15 of each year, with the information listed separately for residential and non-residential customers (unless otherwise specified): annual average number of accounts; annual average customer bill; annual

average number of accounts with overdue amounts; average dollar amount of overdue amounts per billing period; number of disconnection notices issued per month; number of disconnections and reconnections; and various other useful metrics (e.g., negotiated payment arrangements, gross revenue received, and write-offs).

Maryland

Maryland requires utilities to file quarterly disconnection data through Docket PC53, which the Maryland Public Service Commission opened in August 2020, "Impacts of COVID-19 Pandemic on Maryland's Gas and Electric Utility Operations and Customer Experiences." The EnJ Lab manually downloaded the reports and converted the text, which was presented as tables within text documents, both manually and using Tableau Prep.

For Maryland, the reports have the following items: (1) number of accounts in arrears for up to 30 days, from 30 to 60 days, and more than 60 days; (2) total dollar amount of arrearages including other charges; (3) number of customers who have been sent a termination notice; (4) number of customers who have entered into a payment plan; (5) number of customers who requested a payment plan but either did not receive one or did not accept the terms offered; (6) number of customers who defaulted on a payment plan after the August 31 Order; (7) number of customers who have applied for energy assistance; (8) number of customers who have had service reconnected; and (9) number of terminations the company has effectuated.

The report from Maryland's docket does not include the number of customers; therefore, the EnJ Lab used the annual customer data from the EIA. Electric utility data is sourced from the EIA-861, with annual updates released in October of the following year. Gas utility data is drawn from the EIA-176, with annual updates released in September of the following year. For the purpose of analysis, we are currently using the 2022 customer data as a proxy for the years 2023 and 2024 to estimate disconnection and reconnection rates. We will update these figures with the actual customer data once they are published to the EIA website.

Massachusetts

Massachusetts requires utilities to file monthly disconnection reporting in Docket 20-58. Every time a utility company submits a report, it includes all the data from March 2019 onward in a tabular (excel) format. The reports contain many useful indicators, e.g., arrearages at multiple intervals (e.g., 30-day, 31-60 day, 61-90 day, 91-120 day, and 120+ days of arrearages), disconnection notices, bad debt, and financial health.

Michigan

Michigan instituted a reporting requirement in the early stage of the COVID-19 pandemic (April 2020) in response to Executive Order 2020-21. The reports are filed under Docket Case U- 20757. Under the Consumer Standards and Billing Practices for Electric and Natural Gas Service, Mich Admin Code, R 460.101 – R 460.169 (billing rules), the Commission requires investor- owned natural gas and electric utilities to file quarterly reports with monthly data on residential disconnection notices, shutoffs, and reconnections. Prior to the Commission's response to the

executive order; however, the data do not cover the number of currently disconnected customers and whether the households are occupied without electric or gas service. The Commission consequently ordered investor owned utilities to report these data and report: 1) efforts made to determine whether the residences are occupied; 2) The number of occupied residences that do not have service as a result of a shutoff due to nonpayment; 3) the number of occupied residences that do not have service as a result of a shutoff due to other reasons, e.g., misuse, or unsafe conditions; and 4) attempts the utility made to reconnect the service during the pandemic.

The EnJ Lab also obtained disconnections information from the Lansing Board of Water and Light (2010-2022), Holland Board of Public Works (2018-2022), and the City of Bay City (2020-2022) through open records requests.

The report from Michigan's docket does not include number of customers; therefore, the EnJ Lab used the annual customer data from the EIA. Electric utility data is sourced from the EIA-861, with annual updates released in October of the following year. Gas utility data is drawn from the EIA-176, with annual updates released in September of the following year. For the purpose of analysis, we are currently using the 2022 customer data as a proxy for the years 2023 and 2024 to estimate disconnection and reconnection rates. We will update these figures with the actual customer data once they are published to the EIA website.

Minnesota

Minnesota instituted a reporting requirement in the early stage of the COVID-19 pandemic (March 2020) in response to Emergency Executive Order 20-01. These reports are filed in Docket 20-375 April 2020 through April 2022 and contain weekly and monthly data. Utilities began using a new monthly reporting template and reporting Docket 22-02 as of May 2022; from May 2022 onward, data will be collected and filed into Docket Nos. YR-02 for the current year (e.g., 22-02 for 2022).

Anoka Municipal Utilities, Austin Utilities, City of Chaska, City of Moorhead, Marshall Municipal Utilities, Northern States Power Company, and Worthington Public Utilities have no further updates since the last report in December 2022. Owatonna Public Utilities has no further update since the last report in February 2023. Additionally, there are some missing data in the reports of Northwestern Wisconsin Electric in early 2023.

The EnJ Lab also obtained disconnections information from the City of Moorhead (2010-2021), Anoka Municipal Utilities (2018-2022), Austin Utilities (2020-2022), Marshall Municipal Utilities (2019-2022), Owatonna Public Utilities (2020-2023), and Worthington Public Utilities (2010-2022) through open records requests.

Mississippi

Mississippi does not require disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

Missouri

During the COVID-19 pandemic, the Public Service Commission required Commission Staff to gather information from utility companies about disconnections for non-payment, anticipated disconnections (within a 6-month period), customers with past-due accounts, customers who received final disconnection notices, and customers participating in payment plans. Staff filed these quarterly reports until January 31, 2023, after which the Commission closed the docket in February 2023. The EnJ Lab converted the text documents into usable data.

The EnJ Lab also obtained disconnections information from the City of Columbia (2020-2022) and City Utilities of Springfield (2018-2022) through open records requests.

In November 2023, a new rule (20 CSR 4240-13.075) was passed mandating that Missouri utilities serving more than 2,000 residential customers must provide disconnection data monthly, beginning in January 2024. The EnJ Lab will integrate this disconnection data in its next update.

Montana

Montana does not require utility disconnection reporting; however, during COVID-19, the public service commission requested that the state's largest utility, Montana Dakota Utilities, demonstrated compliance with the emergency executive order by providing the number of customers disconnected for nonpayment.

Additionally, the EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections, but did not find any relevant documents or reports, beyond the singular report from MDU. The EnJ Lab also communicated with advocates and reached out to Montana Dakota Utilities for additional information, but neither responded to multiple email requests.

Nebraska

Nebraska does not require active utility disconnection reporting. The Nebraska Public Service Commission required Black Hills Energy to participate in Docket NG. 101.1 and Northwestern Gas to participate in Docket NG 101.2, which involved quarterly reporting of disconnections, reconnections, customer accounts by different segments, and various other useful metrics. These reports were required from September 2020 to June 2021; however, the reports were inaccessible and consequently, despite efforts to obtain them, were not included in the Dashboard.

The EnJ Lab obtained disconnections information from the Lincoln Electric System (2020-2022) through an open records request.

Nevada

Nevada does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

New Hampshire

New Hampshire requires utility disconnection reporting; however, the reports are not publicly

available on the State Regulatory Commission's website and must be requested from Board Staff. The New Hampshire Code of Administrative Rules Chapter PUC 1203.20 Uniform Administration of Utility Customer Relations outlines the required information for two separate reports on disconnection activity and accounts receivable, for each electric or gas utility with more than 10,000 customers.

New Jersey

New Jersey does not require utility disconnection reporting; however, several municipal utilities provided to the New Jersey Board of Public Utilities (NJBPU) disconnection information. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

The EnJ Lab also obtained disconnections information from the City of Vineland (2015-2022) through an open records request.

New Mexico

New Mexico instituted a reporting requirement in response to the COVID-19 pandemic, Docket No. 20-00205-UT, "In the Matter of the Temporary Moratorium on Residential Utility Disconnections During the Time Period COVID-19 Pandemic Emergency Orders are in Effect as Authorized By 17.9.560, 17.10.650 & 17.12.760 NMAC". The reports in this docket contain disconnection information in a tabular format.

New York

New York requires active utility disconnection reporting under Docket No. 91-M-0744, "Proceeding on Motion of the Commission to examine the collection practices of the major gas and electric utilities in New York State to identify ways to reduce losses due to uncollectibles while maintaining a high level of customer service." New York instituted a reporting requirement in July 1991; however, the reported disconnections available online are current only from 2016 to present. The reporting requirements include quantity and dollar amounts for arrearages; disconnections; number of final termination notices issued, and reconnections. These data are reported monthly.

North Carolina

North Carolina instituted a reporting requirement for utility disconnections in 1975; however, the reported disconnections available on the website date back to only 1995 under Docket M-100, SUB 61A. These reports vary in format and information collected over the nearly three decades of active reporting and cover several company mergers and acquisitions. The data are recorded in the Dashboard according to the names titled on the reports, as opposed to the current parent companies.

The EnJ Lab obtained disconnections information from the City of New Bern (2012- 2022) and City of Concord (2020-2022) through open records requests.

Public Service Company of NC, Inc. is doing business as Dominion Energy North Carolina, with the

docket corporate number G-5. Dominion Energy North Carolina is doing business as Virginia Electric & Power Co., with the docket corporate number E-22. We retain the utility company names that are more familiar to customers.

North Dakota

North Dakota requires active disconnection reporting under the Dockets numbered PU-XX-XXX, where the first two XX digits correspond with the last two digits of a year since 2008, and the last three XXX correspond with a utility e.g., 003 – Otter Tail Power Company, 004 – Montana- Dakota Utilities, 005 – Northern Power States Company, 006 – Great Plains Natural Gas Co.
Thus, PU-23-003 is the Service Disconnects Reporting docket for Otter Tail Power Company.

The docket opened in 2008 and older reports are uploaded as images, rather than PDFs, which posed difficulty to parse. Additionally, the reports detail customer-by-customer disconnections, rather than aggregated totals. The reports only include disconnections and the amount of the customer's bill at the time of disconnection.

Ohio

Ohio instituted annual reporting requirements under R.C. 4933.123 “Regarding Service Disconnections for Nonpayment” in 2008, but older reports are uploaded as scanned PDFs, which compromised accessibility. The EnJ Lab obtained disconnection information for most Ohio utilities from June 2014 to June 2022 (utilities file at the end of June each year in separate annual dockets, e.g., 23-0532-GE-UNC, and 22-0513-GE-UNC, for 2023 and 2022 respectively.

These reports have some overlap, e.g., reporting the last month of a period twice: May 2016 in the 2015-2016 report and again in the 2016-2017 report. The EnJ Lab used the disconnection number from the more recent report, in case the utility inadvertently corrected the prior month. Also note, that Duke Energy Ohio electric and gas customers are added because these reports separated the data for every indicator except total customers, so the EnJ Lab aggregated the indicators to match the aggregation level of the total Duke customers.

The EnJ Lab also obtained disconnections information from the City of Cleveland (2010-2022) through an open records request.

Oklahoma

Oklahoma does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

The EnJ Lab obtained disconnections information from the Stillwater Utility Authority (2017-2022) through an open records request.

Oregon

Oregon instituted reporting requirements in 2018 under Docket RO 12, “In the Matter of Energy

Utility Quarterly Report of Residential Disconnections for non-payment and subsequent reconnections per OAR 860-021-0408, the Disconnect Reporting Rule." These reports, in tabular format, contain monthly-level disconnection, reconnection, arrearages, and other pertinent metrics.

Due to the moratorium on disconnections related to COVID-19, there were no residential disconnections for non-payment for most of 2020 and 2021.

Pennsylvania

Pennsylvania instituted reporting requirements in response to COVID-19, under Docket M- 2020-3019244. The state PUC opened this docket in March 2020 and later closed it in May 2022. The state's moratorium on utility disconnections expired on March 31, 2021, meaning that utilities could begin disconnections on April 1, 2021. The Commission opened the docket to track extraordinary utility expenses, for the purpose of authorizing utilities to create a COVID-19 regulatory assets to recover extraordinary, nonrecurring costs during the pandemic. The Commission required utilities to file detailed quarterly reports concerning accounts at risk of termination, dollar amounts of arrears, and number of accounts disconnected for non- payment, through the fourth quarter of 2021.

Rhode Island

Rhode Island instituted reporting requirements under 810-RICR-10-00-1, effective October 19, 2008, which are made publicly accessible in Docket 1725, "Rules and Regulations Governing the Termination of Residential Electric, Gas and Water Utility Service." However, the docket only includes disconnection reports through 2019.

South Carolina

South Carolina instituted reporting requirements in 2006, under Docket 2006-193-EG. The reports date back to 2004 for Duke Power, Lockhart Power Company, Piedmont Natural Gas, and South Carolina Electric & Gas Company; however, conversion of the early reports required manual transcription.

Piedmont Natural Gas, September 2009, did not report disconnections, a likely mistake because they reported July 2009 twice. However, the company reported total disconnections for 2009 Q3, from which the EnJ Lab subtracted July and August to obtain the September 2009 number.
Piedmont Natural Gas also has two reports for 2009 Q4 with different numbers. The first report has a date of January 13, 2020 and the second January 24, 2020.

Duke Energy, 2014 Q2 gave data for 2012 Q2 instead and matched the totals from the 2012 Q2 report. The EnJ Lab dropped these data from the dashboard.

The report from South Carolina's docket does not include the number of customers; therefore, the EnJ Lab used the annual customer data from the EIA. Electric utility data is sourced from the EIA-861, with annual updates released in October of the following year. Gas utility data is drawn from the EIA-176, which annual updates released in September of the following year. For the purpose

of analysis, we are currently using the 2022 customer data as a proxy for the years 2023 and 2024 to estimate disconnection and reconnection rates. We will update these figures with the actual customer data once they are published to the EIA website.

South Dakota

South Dakota does not require utility disconnection reporting; however, pursuant to an order from the public utility commission, investor-owned utilities did report disconnection activity and cost effects from arrearages and bill pay activity resulting from the COVID-19 pandemic under Docket GE20-002.

Tennessee

Tennessee does not require utility disconnection reporting, however, Docket No. 2000047 required disconnection reporting during COVID-19. It has since been closed and has not been updated since 8/24/2021. The EnJ Lab attempted to obtain disconnection information from Nashville Electric Service, but Electric Power Board requires state citizenship and an in-person visit to the office for verification, and it would not share public records via email.

Texas

Texas does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

The EnJ Lab obtained disconnection information from the Brownsville Public Utilities Board (2010-2022), City of New Braunfels (2010-2022), and CPS Energy (2019-2022) through open records requests.

Utah

Utah issued a one-time reporting requirement to its largest and sole investor-owned utility, Rocky Mountain Power, during the COVID-19 pandemic. The report covers nearly 20 years of disconnection information. Utah Low Income Lifeline Program Reporting.

Rocky Mountain Power, March 2021 is missing data for actual terminations. Also, the EnJ Lab interpreted Schedule 1 customers to mean all residential customers and Schedule 3 customers to mean low-income customers only. Rocky Mountain Power also reported “recoveries” which the EnJ Lab did not interpret to mean “reconnections” and consequently was not included in the Dashboard.

The EnJ Lab obtained disconnections information from the City of St George (2020- 2022) through an open records request.

Vermont

Vermont instituted utility disconnection reporting requirements in 2018 under VT Rule 3.308. The EnJ Lab cleaned and compiled reports for the state's largest investor-owned utility, Green

Mountain Power going back to 2018, as well as various municipal and co-operative utilities that filed reports with the Commission. Each report is filed under a separate docket, e.g., 18A-0233, for Green Mountain Power in 2018 and 22A-0011 for Green Mountain Power in 2022. The EnJ Lab obtained disconnections information from City of Burlington Electric (2010-2022) through an open records request.

Virginia

Virginia does not require disconnection reporting. However, the EnJ Lab obtained utility disconnections information from the State Corporation Commission, which collects some of this information on a voluntary basis for eight investor-owned utilities and thirteen co-operative utilities. The State Corporation Commission does not collect the information for Southwestern Virginia Gas, which considers the information confidential. In addition, the Commission aggregates the information for the thirteen co-operative utilities to mask potentially confidential information given the utilities' small number of customers.

Washington

Washington instituted reporting requirements in response to the COVID-19 pandemic under Docket No. U-200281. The Utilities and Transportation Commission also assembled an interactive dashboard for viewers to explore the state's utility disconnection and arrearage information.

The EnJ Lab obtained disconnections information from Seattle City Light (2016- 2019), City of Richland (2010-2022), and City of Tacoma (2010-2022) through open records requests.

The 2023 Q4 filing for Cascade Natural Gas is missing from the docket as of April 24, 2024, and will be updated once the information is made available.

Washington, D.C.

The District of Columbia instituted disconnection reporting as early as 2005, under Dockets No. ADIR2022-01-15134 (for Washington Gas and Light) and ADIR2022-01-14293 (for Pepco Energy). Many of the early reports are scanned images and the numbers are hard to read. The reports include disconnection and arrearage information; the EnJ Lab assumed that the number of arrearage related restorations are reconnections.

West Virginia

West Virginia does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections, but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

Wisconsin

Wisconsin instituted utility disconnection reporting requirements in response to the COVID-19 pandemic under Docket No. 5-UI-120, "Investigation on the Commission's Own Motion to Ensure Safe, Reliable and Affordable Access to Utility Services During Declared Public Health Emergency

for COVID- 19.”

The EnJ Lab obtained disconnections information from Sun Prairie Utilities (2014- 2022) through an open records request.

Wyoming

Wyoming does not require utility disconnection reporting. The EnJ Lab used PowerSuite to search regulatory and legislative proceedings to identify any reported information about disconnections but did not find any relevant documents or reports. The EnJ Lab also communicated with local stakeholders to confirm the lack of available information.

State Policy Collection Detailed Description

The Dashboard displays and contains information on state level policies that specify the circumstances of when regulated utilities may disconnect customers due to nonpayment. To collect and code this information in a systematic and nationally consistent manner, we developed a detailed list of yes/no questions (yes coded 1, and no coded 0). Each question includes a definition of what is being asked, how we coded different answers, and how we quantified results.

To answer the coding questions for each state, we conducted searches of state statutes and administrative codes (available on LexisNexis, Westlaw and state government websites). We only looked outside of statutory codes and administrative codes if a state statute or regulation referenced an outside source or if there was no utility information available from either resource.

The categories of summarized protections 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 that specify 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. The policy data incorporated into the mapping feature of the Dashboard is limited, but full state policy profiles are available for download as PDF files (most recent updates listed in Table 2).

Table 2. States with policy information published to the Dashboard and last check of information.

State	Date	State	Date	State	Date	State	Date
AL	9/5/23	IN	12/18/23	NE	12/29/23	SC	10/30/23
AK	9/6/23	IA	12/28/23	NV	12/20/23	SD	10/30/23
AZ	9/10/23	KS	12/18/23	NH	12/30/23	TN	10/24/23
AR	9/27/23	KY	12/18/23	NJ	1/2/24	TX	10/23/23
CA	9/22/23	LA	12/18/23	NM	1/3/24	UT	10/23/23
CO	9/19/23	ME	12/18/23	NY	1/4/24	VT	10/19/23
CT	9/24/23	MD	12/18/23	NC	11/27/23	VA	10/18/23
DE	10/8/23	MA	12/18/23	ND	11/27/23	WA	10/10/23
FL	10/12/23	MI	12/18/23	OH	11/27/23	WV	10/9/23
GA	12/15/23	MN	12/18/23	OK	11/26/23	WI	10/6/23
HI	12/15/23	MS	12/28/23	OR	11/23/23	WY	9/21/23
ID	12/15/23	MO	12/28/23	PA	11/23/23	DC	10/10/23
IL	12/16/23	MT	12/28/23	RI	11/6/23		

Are there weather protections? (1 or 0) 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.

Are cold protections available? (1 or 0) 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.

Are protections offered to all customers? (1 or 0) 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.

> ***If not, which groups are protected?*** (Example: disabled persons) If the cold protections do not apply to the general public, this textbox will specify precisely which subgroups are protected.

Are there temperature-based cold protections? (1 or 0) 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.

> ***Temperature of the Protection (F°)***: (example: 30 or less) This question will help specify the exact temperature protection.
>
> ***Timing specifics:*** (example: no shutoffs for 24 hours if the low temperature is forecasted for any time in the next 48 hours) 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.
>
> ***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). If normally customers are protected from shutoff during certain temperatures, but there are exceptions to those protections, note them here.

Are there date-based cold protections? (1 or 0) This question asks if people are more protected during certain date-specific cold weather periods each year. For example: Customers receive 10 additional days of notice before shutoff between November 1st and March 1st every year.

Actual Dates: (example: December 1st through February 1st) This question will help specify the exact dates of the protection.

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) This textbox will include the exact details of the date-based cold protection.

Is there a date-based temperature threshold with a cutoff? (1 or 0) 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.

Are there any additional stipulations on cold weather protections? (Example: shutoff is prohibited on days with snowstorms or fog forecasted) Textbox here on unusual nuances related to cold weather protections that have not yet been captured.

Are heat protections available? (1 or 0) 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.

Are protections offered to all customers? (1 or 0) 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.

If not, which groups are protected? (Example: the elderly) This textbox will specify what groups are covered by the protection, if the entire general public is not protected.

Are there temperature-based heat protections? (1 or 0) 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.

Temperature of the Protection (F°)? (Example: more than 105) This question will help specify the exact temperature protection.

Timing specifics: (example: no shutoffs for 24 hours if the high temperature is forecasted for any time in the next 48 hours) 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.

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). If normally customers are protected from shutoff during certain warm temperatures, but there are exceptions to those protections, note them here.

Are there date-based heat protections? (1 or 0) 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.

Actual Dates: (example: May 1st through August 1st) This question will help specify the exact dates of the protection.

What is the date-based protection? (Example: There are no disconnections during this date range) This textbox will include the exact details of the date-based heat protection.

Is there a date-based temperature threshold with a cutoff? (1 or 0) 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.

Are there any additional stipulations on warm weather protections? (Example: temperature protections are only available if you qualify for cold weather protections as well) This question will note any warm weather specifics not captured by the previous questions.

Are there Protections for Medical Conditions? (1 or 0) 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.

Number of days disconnection will initially be delayed. (Example: 30 days) 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.

Number of times a customer can renew a medical protection: (example: 2) This question evaluates whether and for how long medical protections are renewable if a condition continues to persist beyond the initial protection period.

Maximum total length of medical postponement: (example: 60 days) This question gives us a precise snapshot of the maximum number of days a customer can escape shutoff for a medical condition.

Is a medical certificate required? (1 or 0) 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.

Who can issue a medical certificate? (Example: a licensed physician or nurse practitioner) The answer to this question is a full list of all personnel qualified to issue a medical certificate in the specified state.

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) 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.

Definition for medical condition? (Example: an illness where disconnection would pose an immediate threat to life or well-being) This question is asking for how each individual state defines "medical conditions" worthy of regulatory protection.

If you receive a medical condition protection, must you enter into a payment agreement? (1 or 0) Answering 1 here means that entering a payment agreement is a condition for receiving medical condition protection. Answering 0 here means that entering a payment agreement is not required for medical condition protection.

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) 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.

If so, for how long? (Example: 7 days) This question captures how long until the utility will require an official medical certificate to be submitted.

Any additional stipulations for medical conditions? (textbox) This textbox will allow us to note any additional medical nuances not yet captured.

Protections for households with young people? (1 or 0)

What is available? (Example: 2 weeks of additional disconnection notice) A textbox to specify exactly what protections are available to households with young people.

Definition of young person? (Example: age 6 and under) How does each state specifically define who is a young person?

Protections for households with elderly people? (1 or 0)

What is available? (Example: power cannot be turned off for households with only elderly residents) A textbox to specify exactly what protections are available to h ouseholds with elderly people.

Definition of elderly? (Example: 65 or older) How does each state specifically define elderly?

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) A textbox to specify exactly what protections are available to households with disabled residents.

Definition of disability? (Example: physical or mental inability to perform everyday tasks)

How does each state specifically define disability?

Protections for households with military personnel? (1 or 0)

What is available? 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.

Number of days disconnection delayed: (example: 6 months) 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.

Who is exempt from these statutes and regulations? (Example: rural cooperatives and municipalities) 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.

Exemption Nuances: (example: otherwise, self-governing municipalities must still follow winter protections) If there are any unique circumstances for state exemptions, they will be noted in this box.

Can customers request an exemption from the rules for hardship? (1 or 0) 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 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) 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)

Minimum number of days of notice before disconnection? (Example: 10) 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.

Is written notice required? (1 or 0) 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.

Is an attempted in-person notification required? (1 or 0) 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.

Is notice by phone required? (1 or 0) 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.)

If a utility is unable to reach a customer by phone or in-person visit, will it delay disconnection? (1 or 0) 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.

> ***How long do customers have to pay their bills?*** (Example: 14 days after receipt) 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?
>
> ***When does a bill become past due?*** (Example: two days after the due date) 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?

Is there a minimum delinquency before disconnection? (1 or 0) 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.

> If so, for how long? (Example: 3 months) Precisely how long must the delinquency period last before disconnection can occur.

Minimum arrearage before disconnection? (1 or 0) This question is asking whether the customer must be behind on his payments by a certain minimum amount before he can be disconnected.

> ***Amount of minimum arrearage?*** (Example: $300) This question clarifies the exact dollar amount of a state's minimum arrearage before disconnection.

Are disconnection fees prohibited? (1 or 0) This question clarifies whether disconnection fees are barred in the given state.

> ***Max disconnection fee?*** (Example: $50) If disconnection fees are permitted, is there a maximum amount the utility can charge?

Are reconnection fees prohibited? (1 or 0) This question clarifies whether reconnection fees are barred in the given state.

> ***Max reconnection fee?*** (Example: $25) If reconnection fees are permitted, is there a maximum amount the utility can charge?

Payment plans available. (1 or 0) 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.

Do tenants, where the landlord is the customer, receive the same protections as other customers? (1 or 0) 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.

> ***Differences in protections:*** In this box we will specify the heightened or lowered protections tenants receive where the landlord is the customer.
>
> ***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) 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.

Must the utility or commission provide information on available sources of financial assistance? (1 or 0) 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.

Selected Resources

Access to Utility Services | NCLC Digital Library. 2018. 6th ed. National Consumer Law Center. https://library.nclc.org/book/access-utility-services.

Bell, Selah Goodson, Jean Su, Matt Kasper, Shelby Green, and Christopher Kuveke. 2023. "Powerless in the United States: How Utilities Drive Shutoffs and Energy Injustice." Center for Biological Diversity.

Franklin, Marcus, and Caroline Kurtz. 2017. "Lights Out in the Cold: Reforming Shut-Off Policies as If Human Rights Matter." Environmental and Climate Justice Program, NAACP. https://naacp.org/resources/lights-out-cold.

Ryan, Greer. 2021. "Power Crisis: Despite Transparency Failures, Utility Information Reveals Major Home Shutoff Problem."

Su, Jean, and Christopher Kuveke. 2021. "Powerless in the Pandemic: After Bailouts, Electric Utilities Chose Profits Over People."

———. 2022. "Powerless in the Pandemic 2.0: After Bailouts, Electric Utilities Chose Profits Over People."