



NARUC

National Association of Regulatory Utility Commissioners

State Energy Justice Roundtable Series: Customer Affordability and Arrearages



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Background

The National Association of Regulatory Utility Commissioners (NARUC), National Association of State Energy Officials (NASEO), and National Governors Association (NGA) hosted a State Energy Justice Roundtable (Roundtable) in April 2022. Participants included federal and state decision-makers, members of community-based organizations, and subject-matter experts. The Roundtable members explored current state efforts to articulate and incorporate energy justice concerns into energy-related decision-making. Participants established connections with one another to better understand the current landscape of existing resources, learn about emerging efforts, and identify ongoing support opportunities for advancing energy justice.

This paper is one of five authored by the host organizations on topics that were the focus of the Roundtable. Each paper summarizes key themes, emerging efforts, and group takeaways that were discussed at the Roundtable and should assist state members in developing and meeting their own state goals around energy justice. The papers all include the same discussions of background, introduction, and reading list so they can be read separately. Each paper is written from the perspective of one association and includes options for its members to take actions that could support more equitable state energy policies and programs. The five papers cover:

- Participation in decision making (NARUC)
- Customer affordability and arrearages (NARUC)
- Energy justice metrics (NARUC)
- Equity in clean energy research and development (NASEO)
- Equitable distributed energy resource (DER) access (NGA)

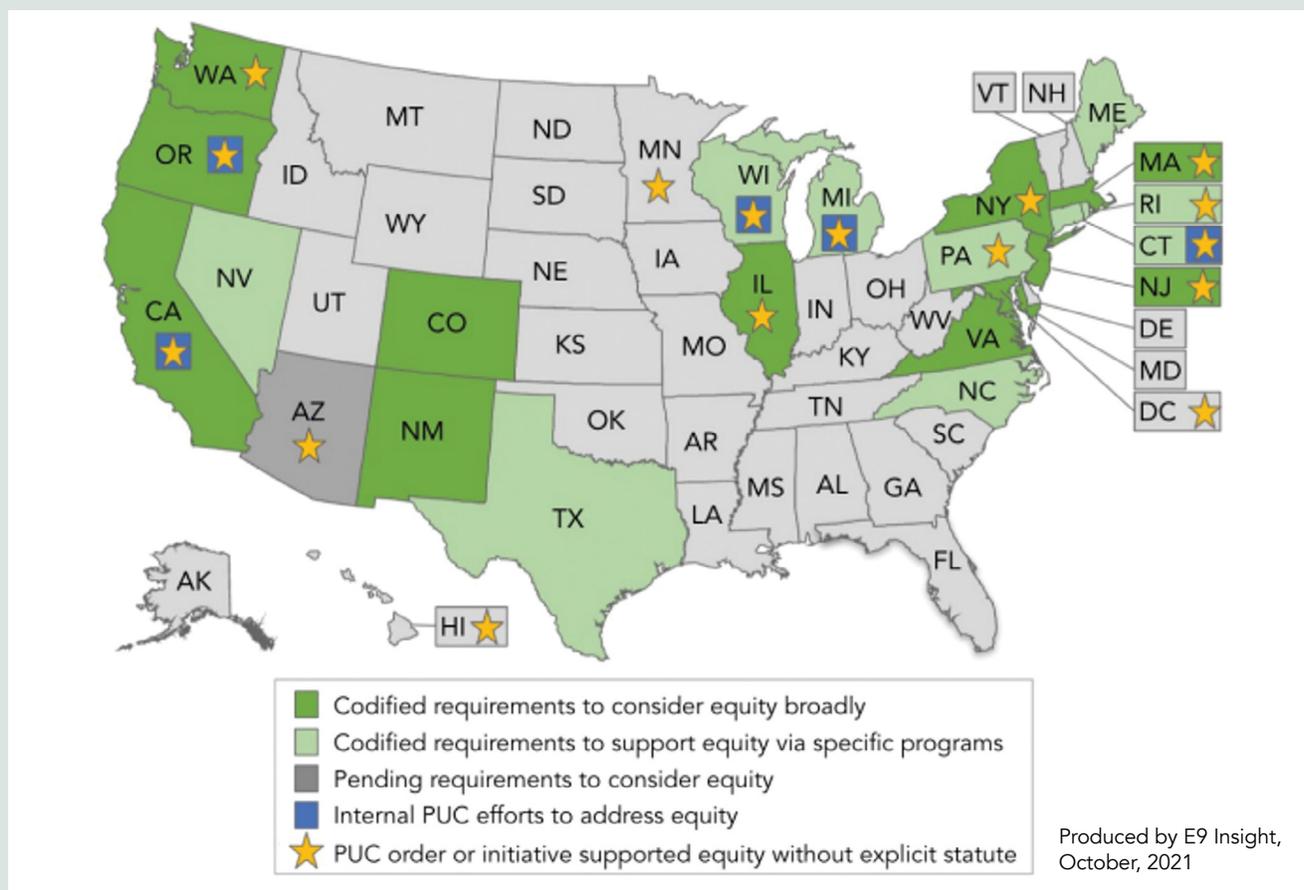
The resources and recommendations listed in these papers are not meant to be exhaustive, as this field of study continues to evolve. Although this brief is focused on electricity, energy justice considerations extend to all energy needs and services, including the impact of energy extraction, processing, and distribution functions.

Introduction

The Growing Priority of Energy Justice in Energy Policy

The impetus for the Roundtable was the emergence of energy justice as a priority for state and federal decision-makers in recent years. The energy sector transition from fossil fuels to low-carbon energy resources has highlighted the disparate social, economic, and health impacts of the current energy system. The recent focus on energy justice has been driven by state legislative mandates, state programs and policies, focused federal investments, and societal recognition of inequities. Examples of recent state legislation on energy justice include California's [SB 350, 2021](#), Colorado's [HB21-1266, 2021](#), Illinois' [SB 2408, 2021](#), Maine's [HP 1251, 2021](#), Massachusetts' [S.9, 2021](#), and Oregon's [HB 2475, 2021](#).¹ Further, **Figure 1** illustrates actions by state public utility commissions (PUCs) across the country.

Figure 1. Equity Activities and Requirements at U.S. Public Utility Commissions



Significant federal action has also occurred recently. In early 2021, President Biden issued [Executive Order 14008](#), directing 40 percent of the overall benefits from federal climate and clean energy investments toward disadvantaged communities in an initiative known as Justice40. In July 2021, the Office of Management and Budget released [Interim Guidance for the Justice40 Initiative](#) that outlined requirements for federal agencies that manage covered programs, established an interim definition of disadvantaged communities, and defined actions required of state agencies, such as State Energy Offices, that manage Justice40 programs. Subsequently, on July 25, 2022, the U.S. Department of Energy (DOE) released

¹ C. Farley et al., *Advancing Equity in Utility Regulation*, Lawrence Berkeley National Laboratory, 2021, <https://emp.lbl.gov/publications/advancing-equity-utilityregulation>

[General Guidance for Justice40 Implementation](#) that provided program and funding guidance, policy priorities and benefits, and case studies for demonstration and educational purposes.²

In addition, on February 18, 2022, the White House Council on Environmental Quality released the beta version of its [Climate and Economic Justice Screening Tool \(CEJST\)](#) to help federal agencies identify disadvantaged communities that are marginalized, underserved, and overburdened by pollution.³ On the same day, the U.S. Environmental Protection Agency released an update to its [EJSCREEN](#) tool, an environmental justice mapping and screening tool that may complement CEJST. Additional guidance from the federal government on the Justice40 initiative is expected.

Defining Energy Justice

Although the concept of energy justice and injustice varies among organizations and stakeholders, it generally includes evaluation of:

- **Energy burden** – the proportion of energy expenditures relative to overall household income
- **Energy insecurity** – the hardships households face when meeting basic household energy needs
- **Energy poverty** – the lack of access to reliable and affordable energy
- **Energy democracy** – whether communities have agency in shaping their energy future⁴

The host organizations of the Roundtable proposed the following working definition of energy justice, adapted from the Initiative for Energy Justice:

The goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those historically harmed by the energy system. Energy justice explicitly centers the concerns of marginalized communities and aims to make energy more accessible, affordable, clean, reliable, resilient, and democratically managed by and for all communities.⁵

What's The Difference between Energy Justice, Environmental Justice, and Climate Justice?

Justice, by definition, implies fairness and impartiality. Energy justice, environmental justice, and climate justice are inherently connected and together represent a more just future for individuals and communities who have suffered historic injustices. **Environmental justice** specifically involves the 'recognition and remediation of the disproportionately high and adverse human health or environmental effects on communities of color and low-income communities' as well as fair treatment and meaningful involvement in the development, application, and administration of environmental laws, regulations, and policies. **Climate justice** focuses on the 'remediation of the impacts of climate change on poor people and people of color, and compensation for harms suffered by such communities due to climate change.' Collectively with **energy justice** (defined above) these frameworks can help create a comprehensive vision for a just transition. The principle of a just transition supports the co-existence of a healthy economy and clean environment, and the process and practice of achieving this vision is one that is fair and does not cost workers or community residents their health, environment, jobs, or economic assets.

Baker, S., DeVar, S., & Prakash, S. (2019). *The Energy Justice Workbook*. Initiative for Energy Justice. <https://iejusa.org/workbook/>.

2 U.S. Department of Energy Office of Economic Impact and Diversity, Justice40 Initiative, <https://www.energy.gov/diversity/justice40-initiative>. Climate and Economic Justice Screening Tool, 2022, <https://screeningtool.geoplatform.gov/en/>

3 Climate and Economic Justice Screening Tool, 2022, <https://screeningtool.geoplatform.gov/en/>

4 S. Baker, S. DeVar, and S. Prakash, *The Energy Justice Workbook*, Initiative for Energy Justice, 2019, <https://iejusa.org/workbook/>

5 Ibid.

The energy industry is embarking on fundamental changes to the way energy is produced and delivered that will result in cleaner, and possibly more localized, options. This transformation offers an opportunity to recognize disparities in who has received the benefits and who has carried the burdens of the existing system by intentionally investing in historically disadvantaged communities.

A four-pillar framework has emerged in energy justice literature that helps conceptualize how energy justice is achieved. Although the exact terminology varies slightly among groups, the following language was used to frame the Roundtable discussions:

- **Distributional justice** – an inherently spatial concept⁶ that concerns both the distribution of costs, hazards, or externalities, and the distribution of benefits and access to modern energy systems and services, throughout society.⁷
- **Procedural justice** – relates to the accessible and meaningful participation of individuals in the energy decision-making processes.
- **Recognition justice** – seeks to acknowledge the various needs, rights, and experiences of different groups in relation to the energy system.⁸
- **Restorative justice** – aims to repair the harm done to people (and/or society/nature) and can pinpoint where prevention needs to occur.⁹

6 McCauley, D., Heffron, R.J., Stephan, H., & Jenkins, K. (2013). *Advancing energy justice: the triumvirate of tenets*. International Energy Law Review. https://research-repository.st-andrews.ac.uk/bitstream/handle/10023/6078/IELR_2013.pdf?sequence=1&isAllowed=y

7 Sovacool, B.K., & Dworkin, M.H. (2014). *Global Energy Justice: Problems, Principles, and Practices*. Cambridge University Press.

8 Gillard, R., Snell, C., Bevan, M, *Advancing an energy justice perspective of fuel poverty: Household vulnerability and domestic retrofit policy in the United Kingdom*, Energy Research & Social Science, 2017, <http://dx.doi.org/10.1016/j.erss.2017.05.012>.

9 Heffron, R.J., and McCauley, D, *The concept of energy justice across the disciplines*, Energy Policy, 2017, <http://dx.doi.org/10.1016/j.enpol.2017.03.018>.

The Role of Affordability and Arrearages in Energy Justice

Utility services are essential for health, safety, and the ability to fully participate in modern society. Affordability of energy bills is a priority consideration in decisions made by state public utility commissions and other decision-makers. When a customer is unable to afford their utility bill and falls into arrears, options for the customer to avoid shutoff and resume payments are essential. Disconnection of service is a last resort because utility services are so vital to our basic human needs. In fact, some consumer advocates argue that disconnection should never be an option.

Customer affordability and arrearages directly pertain to the concept of energy justice. As described below, energy insecurity is prevalent in historically disadvantaged communities and correlated to overall financial security. For example, 2015 Energy Information Administration data show that households with income of less than \$20,000 were five times more likely to lose heat than households with income over \$80,000.¹⁰ Utility affordability concerns have far-reaching impacts beyond the ability to pay one's utility bill and have been exacerbated by the economic hardship caused by the COVID-19 pandemic and high inflation trends. This paper provides an overview of the issues and related state actions.

Characteristics of Energy Burden and Actions to Increase Affordability

Vulnerable Populations and Customer Affordability

Nearly 25 percent of all households face a high energy burden, defined as paying 6 percent or more of total household income, which has remained a persistent national challenge.¹¹ High energy burdens are also correlated with greater risk for respiratory diseases, increased stress and economic hardship, and difficulty moving out of poverty.¹² High rates of inflationary price pressures have aggravated these affordability challenges. The U.S. Bureau of Labor Statistics reports that energy costs have risen 30 percent in the 12-month period from May 2021 to May 2022.¹³ These challenges are significantly exacerbated when further disaggregated by race, geography, average household age, and type of housing.

Research clearly shows that the energy burden is disproportionate across various population groups. The median energy burden for Black households is 43 percent higher than for non-Hispanic white households (4.2 percent of total income versus 2.9 percent on average).¹⁴ A recent survey from the O'Neill School of Public and Environmental Affairs at Indiana University found that of households at or below 200 percent of the federal poverty line, 13 percent could not pay an energy bill during the prior month and 9 percent had received a shutoff notice. That study also finds that "energy insecurity is highly prevalent among low-income American households, especially among households that identify as Black and Hispanic. We found that those who require use of an electronic medical device and live in poor or less-efficient housing conditions experience higher rates of energy insecurity."¹⁵

10 C. Farley et al. *Advancing Equity in Utility Regulation*, Lawrence Berkeley National Laboratory, 2021, <https://emp.lbl.gov/publications/advancing-equity-utilityregulation>

11 American Council for an Energy-Efficient Economy (ACEEE), *Energy Burden Report*, 2020, <https://www.aceee.org/energy-burden>. This statistic is specific to electricity, but high energy burden also applies to, and is multiplied by, the cost of other fuel sources (like natural gas, propane, and transportation fuels) and water.

12 Drehobl, A., L. Ross, and R. Ayala, *How High are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burdens across the U.S.*, American Council for an Energy-Efficient Economy (ACEEE), 2020, <https://www.aceee.org/research-report/u2006>.

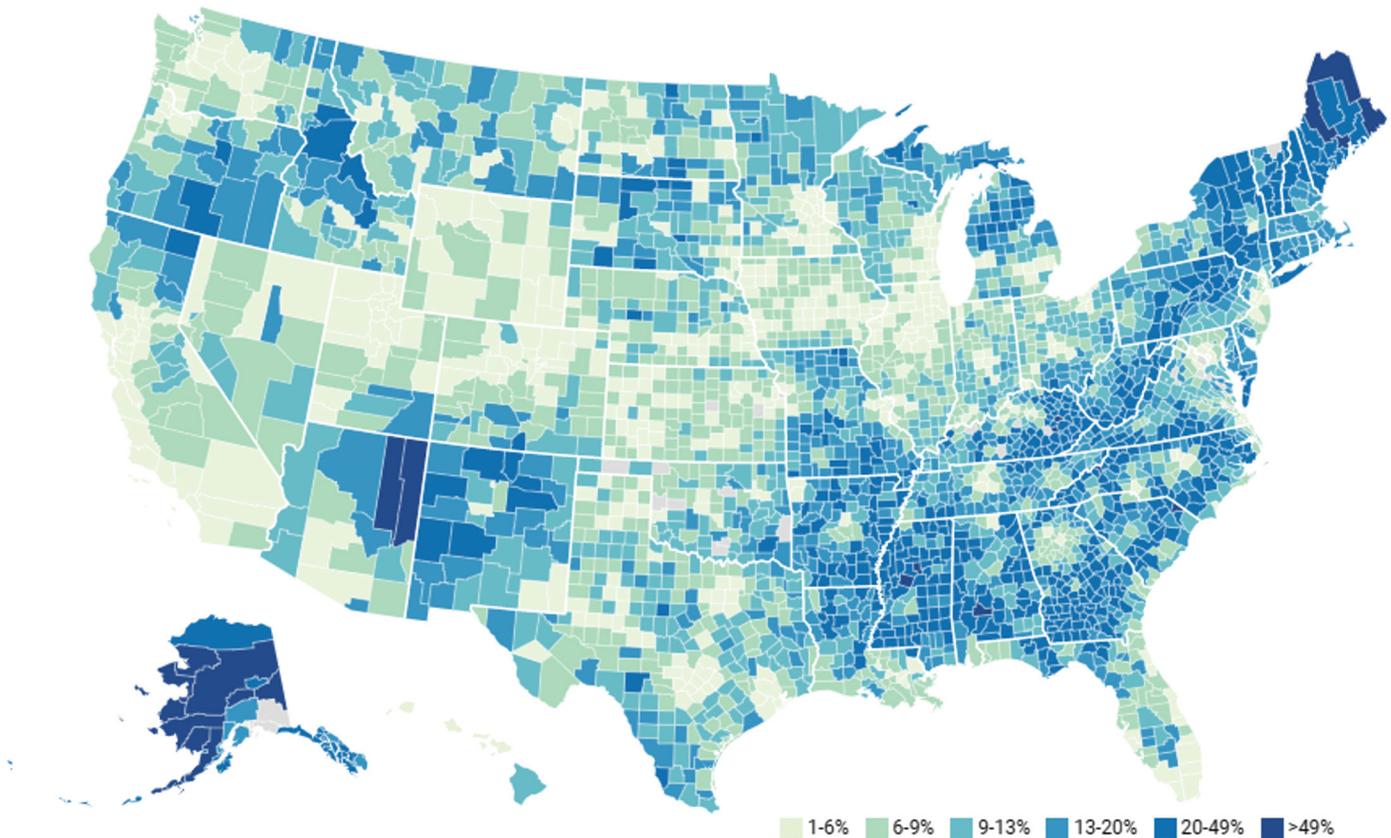
13 U.S. Bureau of Labor Statistics, *Consumer Price Index Summary – May 2022*, June 10, 2022, <https://www.bls.gov/news.release/cpi.nr0.htm>.

14 Ibid.

15 Konisky, David, et al., *Survey of Household Energy Insecurity in Time of COVID*, O'Neill School of Public Policy and Environmental Affairs at Indiana University, June 10, 2020, <https://oneill.indiana.edu/doc/research/energy-insecurity-survey-june-2020.pdf>.

Similar disparities exist on a regional scale as well as between rural and urban areas (Figure 2). The Southeast region of the United States consistently has higher rates of energy insecurity and energy burden than other regional counterparts.¹⁶ The combination of relatively higher rates of poverty, energy inefficient housing, and the high amount of energy needed for cooling and heating all contribute to this regional disparity.¹⁷ Similarly, rural communities pay higher than average bills for both electricity and heating fuels. Rural residents tend to have older housing stock on average, which has produced a ‘rural energy-efficiency gap’, driving higher household energy costs.¹⁸

Figure 2: Energy Burden for Low- and Moderate-Income Households by County¹⁹



Researchers calculate a household's energy burden by dividing a household's total energy costs by the total household income. Households that spend more than 6% of their total income face a high energy burden, while households that spend more than 10% of their income experience a severe energy burden.

Map: Emily Schmidt, APM Research Lab, Source: National Renewable Energy Laboratory, Get the data, created with Datawrapper

The disparity among these various demographic groups was an area of focus during the Roundtable. Several attendees expressed the opinion that the policy responses to the COVID-19 crisis, as well as renewed public investment in infrastructure and utility assistance, have created a unique opportunity to address utility

16 U.S. Department of Energy Office of Energy Efficiency & Renewable Energy, Low-Income Energy Affordability Data (LEAD) Tool, <https://www.energy.gov/eere/slsc/low-income-energy-affordability-data-lead-tool>.

17 Brown, Marilyn A., et al., *High energy burden and low-income energy affordability: conclusions from a literature review*, Progress in Energy Journal Volume 2., Issue 4, Oak Ridge National Lab, October 2020, <https://doi.org/10.1088/2516-1083/abb954>.

18 Ross, Lauren, Drehobl, Ariel, Stickles, Brian, *The High Cost of Energy in Rural America: Household Energy Burdens and Opportunities for Energy Efficiency*, July 2018, <https://www.aceee.org/sites/default/files/publications/researchreports/u1806.pdf>.

19 Schmidt, Emily, APM Research Lab, *Feeling the Heat: Energy Insecurity in the Nation's Hottest States*, May 5, 2022, <https://www.apmresearchlab.org/10x-energy-insecurity>.

affordability challenges. For instance, the Justice40²⁰ initiative has increased focus on energy justice topics at the federal level while also attaching federal funding eligibility requirements to specific historically disadvantaged communities; this effort can encourage states to examine existing energy disparities within their jurisdictions.

Pronounced Impacts from COVID-19

The economic impact of the COVID-19 crisis has further compounded issues surrounding customer affordability. The ongoing challenges caused by the COVID-19 pandemic highlight enormous financial difficulties for low- and moderate-income customers. As state disconnection moratoria policies have expired, some project that \$27 billion in past-due utility bills remain unpaid in the United States.²¹ Utilities and state public utility commissions report that many customers who were previously able to make utility bill payments are now at risk of falling behind on their bills because of the economic fallout from the dual public health and economic crises.

At the onset of the COVID-19 pandemic in April/May 2020, 9 percent of respondents in the O’Neill School survey received a disconnection notice, and 4 percent²² had their service disconnected. Using the 2020 survey data in tandem with the 2018 American Community Survey, researchers estimate that between 2019 and 2020, “approximately 4.7 million households (24.3 million individuals) could not pay an energy bill, and just over 50 percent—2.4 million households (12.5 million individuals)—indicated that at least one of the bills they could not pay was in the past month (April/May 2020).”²³ The Energy Information Administration (EIA) noted that in 2020, 34 million U.S. households representing 27 percent of all U.S. households reported difficulty paying energy bills or keeping about energy cost.²⁴

Policy responses to alleviate economic pressures on vulnerable and lower-income customers vary widely by state. State and federal policy responses on this issue generally fall into five categories: 1) emergency disconnection moratoria; 2) data collection and analysis; 3) public assistance programs; 4) utility bill payment management plans; and 5) energy efficiency programs. **Table 1** provides a summary of how states and the federal government have handled these issues recently, followed by additional discussion of each.

Table 1. Federal and State Policy Responses & Assistance Programs

Policy Response	Description	Examples
1) Emergency Disconnection Moratoria	The COVID-19 crisis and subsequent gubernatorial emergency orders allowed utility disconnection moratoria to go into effect for most Americans, preventing immediate disconnection during the worst portions of the pandemic. Nearly all moratoria have expired at this point and states are utilizing different policy responses, both old and new, to address the ongoing challenges with customer arrearages and affordability concerns.	Map of Disconnection Moratoria resulting from COVID-19 Emergency Declarations

20 Executive Order No. 14008, January 27, 2021, <https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0202-0012>.

21 Horsley, Scott, *Fiasco Waiting To Happen: Millions At Risk Of Losing Power Over Unpaid Bills*, National Public Radio (NPR), May 30, 2021, <https://www.npr.org/2021/03/30/982325413/fiasco-waiting-to-happen-millions-at-risk-of-losing-power-over-unpaid-bills>.

22 Konisky, David, et al., *Survey of Household Energy Insecurity in Time of COVID*, O’Neill School of Public Policy and Environmental Affairs at Indiana University, June 10, 2020, <https://oneill.indiana.edu/doc/research/energy-insecurity-survey-june-2020.pdf>.

23 *Ibid*

24 U.S. Energy Information Administration, *In 2020, 27% of U.S. households had difficulty meeting their energy needs*, April 11, 2022, <https://www.eia.gov/todayinenergy/detail.php?id=51979>.

Policy Response	Description	Examples
2) Data Collection & Analysis	The COVID-19 crisis precipitated several regulatory directives to utilities requiring data collection to track the magnitude of customer impacts stemming from COVID-19 related economic issues. Most data collection orders tracked the number of disconnections and customer arrearages. The frequency and scope of data collection differs by state. ²⁵	Varies state by state - many state public utility commissions have standing orders to collect disconnection and arrearage information from their regulated utilities.
3) Public Assistance Programs	State and federal programs administer direct public assistance to eligible participants. The federal LIHEAP program is the largest assistance program and administered \$3.37 billion in federally funded assistance in FY22 to states to manage costs associated with home energy bills. The LIHWAP program was established as a recent policy response to the COVID-19 crisis and growing concerns around water utility affordability; it is not a permanent program.	<ol style="list-style-type: none"> 1. Low-Income Home Energy Assistance Program (LIHEAP) 2. Low-Income Household Water Assistance Program (LIHWAP) 3. California Arrearages Payment Program (CAPP)
4) Utility Bill Payment Management Plan (arrears management plans, percentage of income payment plans, etc.)	State and utility-specific programs that offer customers in arrears, or behind on utility payments, an option to make a partial payment on an outstanding bill or spend only a portion of their income toward utility services without incurring additional penalties or disconnection of service.	<ol style="list-style-type: none"> 1. Massachusetts Arrearage Management Plan (AMP) 2. Illinois Percentage of Income Payment 3. Payment Arrangement / Extension Requests (e.g., Maryland)
5) Energy Efficiency Programs	<p>Programs to improve energy efficiency are another critical component to improving customer affordability. Most state and utility programs offer financial incentives, direct financial assistance, low-cost loans, or tax adjustments to add energy efficiency upgrades to a property. The federal WAP program was allocated \$313 million in FY22 and a historic \$3.5 billion in the Bipartisan Infrastructure Law. Funding will be distributed by state and local agencies to directly make energy improvements in eligible housing, typically determined largely based on income level.</p> <p>Utilities also design and run programs to provide energy efficiency improvements to low-income households. Nationally, in 2019, electric utilities spent more than \$571 million to provide efficiency programs to low-income customers while gas utilities spent more than \$365 million.</p>	<ol style="list-style-type: none"> 1. Weatherization Assistance Program (WAP) 2. Consortium for Energy Efficiency Residential Low Income Program Summary (CEE Program Resources) 3. American Council for an Energy-Efficient Economy Low-Income Energy Efficiency Programs (ACEEE)

25 National Governors Association, *Memorandum on State Utility Moratoriums and Utility Affordability*, 2021, www.nga.org/wp-content/uploads/2021/06/Utility-Affordability-Memo.pdf.

1. Disconnection Moratoria Policy Decisions

Policy decisions like the disconnection moratoria implemented in most states also presented a unique opportunity to better understand the volume and impact of late fees and disconnections. Several states have used this opportunity to share thorough data on the number of arrearages and impacts on vulnerable customers. In Maryland, the statutorily required annual report on the Electric Universal Service Program contains several post-emergency disconnection moratoria analyses of existing arrearage management programs in Maryland.²⁶ Following the COVID-19 emergency declaration, the Maryland Public Service Commission required monthly reporting of utility data on arrearages; this requirement is ongoing. The report details several key takeaways for affordability in the state and is representative of the type of affordability analysis states have conducted in the post-pandemic era. Maryland's arrearage relief-related recommendations include waiving of income limitations for eligibility in the Maryland Electric Universal Service program when applicants qualify for similar public assistance programs, continuation of an average bill assistance grant of \$500, and similar funding allocations for the overall program.²⁷

There is a growing consensus among state PUCs, the private utility sector, and key advocates that the blanket moratoria policies enacted early in the pandemic response could have been more strategically implemented. For example, policies could have been exclusive to low- and moderate-income customers and encouraged customers in arrears to proactively work with their utility on payment plan options during the moratorium. Customers and utilities alike were unprepared for the massive arrearage burden stemming from blanket policies prohibiting disconnections. Additionally, customers may not have been aware of the length of time the moratorium would be in place and were unprepared when it was lifted. There was little incentive to apply for assistance funding or develop a partial payment plan with utilities because customers thought they would not be disconnected.

Additionally, before the pandemic, utilities used multiple avenues to communicate with customers, particularly vulnerable customers, such as physical locations, which were shuttered at the outset of the pandemic. Accessible communication channels between target populations and state governments and utilities remain a challenge. States continue to coordinate messaging with utilities to identify additional methods for emergency communications, including electronic mailing notices, routine mailers, and other outlets for disseminating information.

2. Data Collection for Utility Assistance

In addition to the widespread use of disconnection moratoria during the height of the COVID-19 pandemic, many state public utility commissions issued data collection orders for the regulated utilities. These orders generally tracked the number of customers in arrears by customer class; many of these reporting requirements remain in effect even after disconnection moratoria have been lifted. While states have generally opted to reduce the frequency of reporting requirements for utilities, much of the same data is still being collected and monitored by public utility commissions. Examples of states that have some ongoing COVID-19 related data reporting requirements include [California](#), [Maryland](#), [Minnesota](#), and [North Carolina](#).

A 2019 NARUC resolution on "Best Practices in Data Collection and Reporting for Utility Services Delinquencies in Payments and Disconnections of Service" reflects NARUC's support for standardization of data collected on delinquencies and disconnections and responsible sharing of information with relevant federal, state, and private entities to continuously improve policies and programs designed to reduce arrearages and disconnections.²⁸

26 Maryland Public Service Commission, *2021 Annual Report: Electric Universal Service Program, Prepared for the General Assembly of Maryland, Pursuant to § 7-512.1(c) of the Public Utilities Article Annotated Code of Maryland, 2022*, <https://www.psc.state.md.us/wp-content/uploads/2021-EUSP-Report-FINAL.pdf>.

27 *Ibid*

28 National Association of Regulatory Utility Commissioners, *Resolution on Best Practices in Data Collection and Reporting For Utility Delinquencies in Payments and Disconnections of Service, November 2019*, <https://pubs.naruc.org/pub/9392BD1E-D055-4A2C-9677-AAD00FEA7527>.

Although reporting of utility disconnection data and other indicators of customer hardship can be valuable, there were challenges around the uniformity of data collected. Specificity is important for policymaking to address affordability challenges. Several state commissions have reported that the quality and type of data vary widely, depending on a utility's size and capacity to respond to these commission orders and requests. PUCs have also reported difficulty matching service data to the right jurisdiction and/or utility. Some advocates have suggested standardization at the federal level on required reporting from utilities to ensure uniformity for data collection, allowing for more accurate policy analysis and targeted programming to alleviate customer hardship. Section 4001 of the Infrastructure Investment and Jobs Act (IIJA) directs the EIA to expand certain types of data collection activities and harmonize data gathering efforts with other federal agencies.²⁹ Data collection at the federal level has historically been largely market-focused, with few direct reporting requirements for customers in hardship.

Data collection challenges and the intersection with public trust were issues raised by Roundtable participants. A fundamental tension exists between customers experiencing hardship and data collection that may be construed as overly burdensome or invasive of customer privacy. Additionally, participants noted that policymakers must be cautious about collecting data for the sake of collecting data if that information is not used toward specific types of beneficial policy analysis or program design. Attendees agreed that states should continue to carefully monitor information-sharing agreements and ensure that personally identifiable information is excluded whenever possible.

3. Assistance Programs

Energy assistance policies vary dramatically by state. Best practices for programs include eliminating barriers to eligibility and proactive enrollment. Some commissions worked with their utilities to allow forbearance if the customer pledges to pay a late fee or use public assistance funding to start paying off a bill.

Participants in the Roundtable noted that federal funding is critical to offsetting the extraordinary number of customers in arrears following the COVID-19 pandemic. Several advocated to make the LIHWAP program permanent and expand LIHEAP coverage. Connecting eligible customers with expanded federal funding opportunities for utility bill assistance is a cornerstone for ongoing efforts to improve affordability outcomes for utility services. Many states used the influx of federal emergency assistance funding through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) in 2020 to directly pay down utility bills for the most vulnerable customers.

State legislatures also enacted new utility assistance programs utilizing federal assistance dollars. In California, the state legislature passed the California Arrearage Payment Plan (CAPP) program, which dedicated \$1 billion in federal American Rescue Plan Act funding to address Californian's energy debts. Utility customers did not need to apply to receive assistance under the CAPP program. If a customer account is eligible, a credit was automatically applied to the customer's bill. Utilities applied for CAPP assistance on behalf of customers who incurred a past due balance of 60 days or more on their energy bill during the COVID-19 pandemic relief period covering March 4, 2020, through June 15, 2021.

4. Payment Plans

Some states, either through legislative action or regulatory decision making at the PUCs, require utilities to offer Percentage of Income Payment Plans (PIPP) as another avenue to improve customer affordability. As the name suggests, PIPP billing is adjusted based on the customer's income so that the amount due is more likely to be paid and arrearages avoided. For example, the investor-owned gas and electric utilities in Illinois offer

²⁹ National Conference of State Legislatures, *Bipartisan Infrastructure Investment and Jobs Act Summary: A Road to Stronger Economic Growth, 2022*, <https://www.ncsl.org/documents/statefed/IIJA-Section-by-Section.pdf>.

PIPP plans by Illinois Commerce Commission order. The investor-owned gas and electric utility in Ohio are also statutorily required to offer PIPP for late bills.³⁰

In addition to the disconnection moratoria, 34 state public utility commissions eliminated fees for late payments and reconnection fees during the pandemic. Other states opted to enter into voluntary agreements with their investor-owned utilities to suspend shutoffs and collection of late fees. Arizona Governor Doug Ducey organized this type of agreement, which was later used by 16 different states and territories.³¹

Utility trade association Edison Electric Institute (EEI) recommends including digital payment options and eliminating 'convenience fees' to pay with credit or with debit cards. Roughly five percent of utility customers in the United States do not have a bank account and rely on pre-paid cards that act like a debit or credit card to pay their utility bills. Eliminating those fees provides direct benefits to low-income customers.³²

Participants in the Roundtable noted that late fees and other hidden service fees to reconnect service often act as an insurmountable barrier to resuming utility services for customers in hardship. Even after disconnection moratoria expired, many states continued to enforce or enact prohibitions on late payments or offer delayed payment agreements. In Kentucky, Governor Andy Beshear rescinded the emergency disconnection moratoria order but continued to keep the suspension on late bill fees through the end of calendar year 2020.³³ The Arkansas Public Service Commission required utilities to proactively communicate with customers about repayment options and offer delayed payment agreement plans even after the end of the disconnection moratoria in 2021.³⁴

5. Energy Efficiency Programs

State, federal, and utility assistance programs and related tax incentives to improve energy efficiency allow low- and moderate-income customers to install energy efficient upgrades to a property, lowering their monthly energy bills. The primary federal energy efficiency program is DOE's Weatherization Assistance Program (WAP). The program distributes program funding to all 50 states, the District of Columbia, U.S. territories, and tribal groups through formula funding. These entities then subsequently contract with 800 local agencies, community action agencies, nonprofit organizations, and local governments to deliver in-house or private contracting services for low-income families. Weatherization improvements potentially include installing insulation, heating upgrades, ventilation, air-conditioning system improvements, and replacement of dated lighting and appliances. Eligible households save an average of \$372 a year on energy bills through these weatherization improvements and upgrades; over 35,000 homes a year receive DOE funding.³⁵ The federal WAP program was allocated \$313 million in FY22 and a historic \$3.5 billion in the Bipartisan Infrastructure Law, which is expected to improve energy efficiency in more than 700,000 homes over five years.³⁶

30 Office of the Ohio Consumers' Counsel, *Know the Facts: PIPP Plus*, <https://www.occ.ohio.gov/factsheet/pipp-plus#:~:text=Instead%20of%20paying%20for%20the,percent%20of%20their%20monthly%20income>.

31 D. Lauf & D. Peters, *State Moratoriums on Utility Shut-offs and Related Actions During the COVID-19 Pandemic*, National Governors Association, April 30, 2020, <https://www.nga.org/wp-content/uploads/2020/05/State-Actions-on-Utility-Disconnections-May-2020.pdf>

32 Adam Cooper, Lisa Wood, and Mike Shuster, *Enhancing Customer Payment Approaches to Better Serve Residential and Small Business Customers*, Edison Electric Institute, May 2022, https://www.eei.org/-/media/Project/EEI/Documents/Issues-and-Policy/EEI_Payment-Approaches-Issue-Brief.pdf.

33 National Governors Association, *Memorandum on State Utility Moratoriums and Utility Affordability*, 2021, www.nga.org/wp-content/uploads/2021/06/Utility-Affordability-Memo.pdf.

34 Arkansas Public Service Commission, *APSC COVID-19 Information and Resources*, State of Arkansas, 2021,

35 U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy, *Weatherization Assistance Program Fact Sheet*, 2022, https://www.energy.gov/sites/default/files/2022-06/wap-fact-sheet_0622.pdf.

36 The White House, *FACT SHEET: Top 10 Programs in the Bipartisan Infrastructure Investment and Jobs Act That You May Not Have Heard About*, August 3, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/08/03/fact-sheet-top-10-programs-in-the-bipartisan-infrastructure-investment-and-jobs-act-that-you-may-not-have-heard-about/>

Utilities also design and run programs to provide energy efficiency improvements to low-income households, typically defined based on criteria relative to the federal poverty line (e.g., at or below 200 percent of FPL), state median income, area median income, or LIHEAP eligibility.³⁷ Nationally, in 2019, electric utilities spent more than \$571 million to provide efficiency programs to low-income customers while gas utilities spent more than \$365 million.³⁸ Commissions who oversee these utilities might require that low-income programs are included in energy efficiency portfolios, set spending level minimums or maximums, modify benefit-cost assessment methods for determining which low-income programs to fund, or include incentives for utilities to achieve certain energy savings targets for low-income customers.³⁹ Recent analysis by ACEEE shows that while more than 27 percent of all U.S. households are low-income, they receive only 13 percent of electric and gas utility energy efficiency spending.⁴⁰

Several states allow on-bill financing and/or on-bill repayment as financing methods for energy efficiency improvements directly applied to a customer's monthly bill.⁴¹ This type of program allows ratepayers to borrow money for energy upgrades to their homes and repay the loans as a part of their utility bill. Inclusive utility financing programs enable customers who may otherwise be limited by financial barriers, such as poor credit, debt, and renter status, to access home energy efficiency upgrades. The Pay As You Save (PAYS) program is the most common tariffed on-bill program for energy efficiency. The utility recovers its cost through a cost recovery charge that is significantly less than the estimated annual savings from the upgrade. Through 2021, U.S. utilities with PAYS programs had cumulatively deployed more than \$50 million for building efficiency and electrification upgrades to nearly 6,000 locations, and more than \$170 million is committed for similar deployment over the next three years.⁴²

In Georgia, a PAYS program called the Residential Investment Saving Energy (RISE) program was approved as a pilot program by the Georgia Public Service Commission (GPSC) in June 2020. A \$7 million budget to support efficiency measures at 500 homes in the highest energy burdened areas of Atlanta and Athens was approved by the GPSC.⁴³ RISE aims to save 25 percent of a customer's baseline household electric usage. The immediate bill savings include 80 percent payback of the upgrade costs and a 20 percent reduction in current bills. Even after paying back the tariff charge, the customer should still see a bill reduction. The most recent investor-owned utility (IOU) programs are in Missouri, which has become the first U.S. state where all IOUs are set to operate a PAYS program in their energy efficiency portfolio.

37 Consortium for Energy Efficiency, Inc., CEE Residential Low Income Program Summary, August 31, 2022, <https://cee1.force.com/s/resources?id=a0V2R00000sUQdZ>.

38 Morales, D., and S. Nadel, *Meeting the Challenge: A Review of Energy Efficiency Program Offerings for Low-Income Households*, American Council for an Energy-Efficient Economy, 2022, www.aceee.org/research-report/u2205.

39 American Council for an Energy-Efficient Economy (ACEEE), *Supporting Low-Income Energy Efficiency: A Guide for Utility Regulators*, April 28, 2021, <https://www.aceee.org/toolkit/2021/04/supporting-low-income-energy-efficiency-guide-utility-regulators>.

40 ACEEE, Press Release: Despite Progress, Low-Income Households Underserved by Utilities' Efficiency Programs, November 18, 2022, <https://www.aceee.org/press-release/2022/11/report-despite-progress-low-income-households-underserved-utilities>.

41 National Association of State Energy Officials (NASEO), On-Bill Financing/On-Bill Repayment, <https://www.naseo.org/issues/energy-financing/on-bill>.

42 Jill Ferguson, Stephen Bickel, Harlan Lachman, Paul A. Cillo, & Holmes Hummel, *Pay As You Save System Of Inclusive Utility Investment for Building Efficiency Upgrades: Reported and Evaluated Field Experience in the U.S.* Clean Energy Works, 2022, <https://www.cleanenergyworks.org/2022/10/25/field-experience-for-pays-in-the-us/>.

43 Jasmine McAdams, National Association of Regulatory Utility Commissioners (NARUC), *State Approaches to Pay As You Save Programs Surge Call*, 2022, <https://pubs.naruc.org/pub/D9C246C0-1866-DAAC-99FB-0973A12547C0>.

Actions for Public Utility Commissions

Participants in the Roundtable would like to see Commissions move forward with energy justice metrics by adopting promising practices identified in this brief and also:

- Evaluate the data necessary to support affordability efforts while ensuring customer privacy is protected to the extent possible.
- Adopt payment plans that support the need for payment flexibility for customers with high energy burden.
- Consider investigatory dockets into late fees and other financially burdensome fee structures.
- Support development of programs that make energy more affordable such as energy efficiency programs directed to low-to-moderate income residents.
- Establish equitable rate structures/classes that minimize cross-subsidization.
- Implement equity and affordability requirements in utilities' integrated resource plans (IRPs).

Resource List

The following list of publications, data and tools, and organizations conducting work on energy justice issues is included to assist state members seeking more detailed information and support for their efforts. Content was compiled from Roundtable participants and staff conducting research for these briefs. Inclusion in this list is not an endorsement of any individual resource or organization's content by NARUC, NASEO, or NGA members, or staff.

Publications

Overarching Resources

- [Advancing Equity in Utility Regulation](#), Lawrence Berkeley National Laboratory
- [Comprehensive Building Blocks for a Regenerative & Just 100% Policy](#), The 100% Network
- [Energy Infrastructure: Sources of Inequities and Policy Solutions for Improving Community Health and Wellbeing, RAP](#), Synapse, and Community Action Partnership
- [Energy Justice Workbook](#), Initiative for Energy Justice
- [Incorporating Equity into Energy Benchmarking: Guidance for Practitioners](#), Institute for Market Transformation
- [Just Energy Policies and Practices: Action Toolkit](#), National Association for the Advancement of Colored People
- [Making Equity Real in Climate Adaptation and Community Resilience Policies and Programs: A Guidebook](#), The Greenlining Institute
- [Racial Equity Toolkit](#), Greenlining Institute
- [State and Local Energy Justice Programs](#), Center for Local, State, and Urban Policy, University of Michigan Ford School of Public Policy

Participation in Decision-Making

- [Climate Equity & Community Engagement in Building Electrification: A Toolkit, Emerald Cities Collaborative](#), People Organizing to Demand Environmental & Economic Rights
- [Community acceptability and the energy transition: a citizens' perspective, The Environmental Research Institute](#), University College Cork, Ireland
- [Community Engagement: A Practitioner's Guide](#), Citizen Lab
- [Dear Policymakers: Community Engagement is Critical for Climate Policy](#), Climate Xchange
- [Designing Equity-Focused Stakeholder Engagement to Inform State Energy Office Programs and Policies](#), NASEO
- [Public Utility Commission Stakeholder Engagement: A Decision-Making Framework](#), NARUC
- [State Approaches to Intervenor Compensation](#), NARUC
- [Surfacing Social Values & Community Priorities: A Landscape Report of Relationship-Building Approaches for Public Engagement with Climate](#), American Association for the Advancement of Science

Arrearages and Affordability

- [High energy burden and low-income energy affordability: conclusions from a literature review](#), Oak Ridge National Laboratory
- [How High are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burdens across the U.S.](#), American Council for an Energy Efficient Economy
- [Memorandum on State Utility Disconnection Moratoriums and Utility Affordability](#), NGA
- [Sociodemographic disparities in energy insecurity among low-income households before and during the COVID-19 pandemic](#), O'Neill School of Public Policy and Environmental Affairs at Indiana University
- [Supporting Electricity Customers During Times of Crisis: Being There When It Matters Most](#), Critical Consumer Issues Forum
- [Survey of Household Energy Insecurity in Time of COVID](#), O'Neill School of Public Policy and Environmental Affairs at Indiana University

Clean Energy Research, Development, and Deployment

- [An analysis of energy justice program across the United States](#), O'Neill School of Public Policy and Environmental Affairs at Indiana University
- [Comprehensive Building Blocks for a Regenerative & Just 100% Policy](#), The 100% Network
- [Designing Electricity Rates for an Equitable Energy Transition](#), Energy Institute at Haas
- [Energy Democracy: Honoring the Past and Investing in a New Energy Economy](#), Race Forward
- [Fostering Equity Through Community-Led Clean Energy Strategies](#), American Council for an Energy-Efficient Economy
- [Framework for an equitable energy supply transformation](#), Meister Consultants Group
- [Justice40+ Playbook](#), Emerald Cities Collaborative
- [Policy Options to Enable an Equitable Energy Transition](#), Resources for the Future
- [Regulators' Energy Transition Primer: Economic Impacts on Coal-Producing Communities, Environmental Justice Consideration, and Implications on Clean Energy Jobs](#), NARUC
- [The Role of State Utility Regulators in a Just and Reasonable Energy Transition: Examining Regulatory Approaches to the Economic Impacts of Coal Retirements](#), NARUC
- [Workers and Communities in Transition: Report of the Just Transition Listening Project](#), Labor Network for Sustainability

Metrics

- [Clean Energy for Low Income Communities: Metrics and Indicators](#), Better Buildings, U.S. Department of Energy
- [The State of Equity Measurement: A Review for Energy-Efficiency Programs](#), Urban Institute
- [The State of Equity Measurement: A Review of Practices in the Clean Energy Industry](#), VEIC
- [Review of Energy Equity Metrics](#), Pacific Northwest National Laboratory
- [Quantitative Energy Equity](#), Empower Dataworks

Data and Tools

- [Climate and Economic Justice Screening Tool](#), White House Council on Environmental Quality
- [Community Engagement Innovation Products \(Resources, Tools, Guides, and Implementation Examples\)](#), Urban Sustainability Directors Network
- EJScreen, U.S. Environmental Protection Agency
- [Energy Burden Calculator](#), Sierra Club
- [Energy Justice Dashboard \(BETA\)](#), U.S. Department of Energy
- [Justice in 100 Metrics: Tools for Measuring Equity in 100% Renewable Energy Policy Implementation](#), Initiative for Energy Justice
- [Low-Income Energy Affordability Data \(LEAD\) Tool](#), U.S. Department of Energy
- [Map of Disconnection Moratoria](#), National Regulatory Research Institute

Organizations and Initiatives

- [ACEEE Leading with Equity](#)
- [Center for the New Energy Economy](#), Colorado State University
- [Climate Justice Alliance](#)
- [Climate Justice Network](#)
- [Electric Power Research Institute](#)
- [Emerald Cities Collaborative](#)
- [Energy Democracy Project](#)
- [Energy Efficiency for All](#)
- [Energy Equity Project](#), University of Michigan
- [Energy Justice Lab](#), Indiana University
- [Equity in a Clean Energy Economy](#), DEFG
- [Government Alliance on Race & Equity](#)
- [Initiative for Energy Justice](#)
- [Institute for Market Transformation](#)
- [Just Solutions Collective](#)
- [Justice40 Accelerator](#)
- [National Utilities Diversity Council](#)
- [Race Forward](#)
- [US Climate Action Network](#)



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