

# ENERGY BURDEN

## & THE CLEAN ENERGY TRANSITION

Challenges and just solutions from energy assistance practitioners and advocates from around the country.

### KEY REPORT FINDINGS

Challenges and Solutions to Addressing the Energy Burden

Who is Responsible?

Existing Programs & Policies That Work Well

Additional Funds

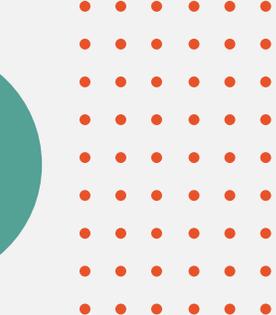
Shining a light on the just path forward.

[justsolutionscollective.org](https://justsolutionscollective.org)

 @just-solutions-collective

 @justsolutions\_org





# Table of Contents

---

## 3 ACKNOWLEDGEMENT

3 Just Solutions Collective

3 Contributing Authors & Experts

## 4 EXECUTIVE SUMMARY

## 6 INTRODUCTION & BACKGROUND

## 12 FINDINGS

12 A. Challenges and Solutions to Addressing the Energy Burden

24 B. Who is Responsible?

25 C. Existing Programs & Policies That Work Well

28 D. Additional Funds

## 30 CONCLUSION

## 31 APPENDIX

31 Appendix A. Background on residential energy

32 Appendix B. Methodology

33 Appendix C. List of existing programs & policies that work well

# Acknowledgement

---

## Just Solutions Collective

The [Just Solutions Collective](#) (formerly the 100% Network) identifies and promotes just solutions to climate change from Black, Latinx, Asian, Indigenous, and Frontline leadership. We provide informed analyses, reports, and more on the just solutions for an energy future that supports the replication of community-developed, equitable, and just solutions.

We are broadening and deepening the understanding of equitable and effective policies and projects, and are fostering a national movement of peer learning. We are elevating the essential role that community-led solutions play in creating change, and are building greater capacity of Black, Latinx, Asian, Indigenous, and frontline community-based organizations to elevate their solutions and replicate them across the country.

We would like to thank the experts working in communities across the country who gave their time and insights to inform this paper. In addition, we would like to thank the Kresge Foundation and Heising Simons Foundation for their general support of our research and analytical work. It is through these partnerships that we are able to both elevate the experience of Black, Latinx, Asian, Indigenous, and lower-income frontline communities and better inform as well as improve policies to address disproportionate impacts of racial, economic, and environmental injustice.

We would also like to thank those who helped review this report including, Arjun Makhijani, President of Institute for Energy and Environmental Research, John Howat, Senior Energy Analyst, National Consumer Law Center, and Beldon Wolson, Design Consultant, The Solutions Project. Finally, we are grateful for our Steering Committee and the expertise and direction they bring.

## Contributing Authors & Experts

**Primary Author:** Zully Juarez, Senior Research and Policy Analyst, Just Solutions Collective

**Practitioner Experts Interviewed for the Report:**

Paula Carmody, Former State Lead (now retired), Maryland's Office of People's Counsel

Carmen Carruthers, Outreach Director, Citizens Utility Board of Minnesota

Dr. Joyce Dorsey, President/CEO, Fulton Atlanta Community Action Authority

Clarke Gocker, Director of Policy and Strategy, PUSH Buffalo

Jake Grobe, Climate Justice Organizer, Iowa Citizens for Community Improvements

John Howat, Senior Energy Analyst, National Consumer Law Center

Roger Lin, Former Climate and Air Counsel, California Environmental Justice Alliance

Shiva Patel, Former Fellow, The Solutions Project

Zafar Shah, Attorney, Public Justice Center

Hassan Shaban, Principal of Energy & Data, Empower Dataworks

Mariel Thuraisingham, Clean Energy Policy Lead,

Front and Centered (Washington State)



# Executive Summary

## Introduction

The purpose of this report is to shine a light on energy burden reduction as an important part of the clean energy transition. This report examines fundamental inequities of our current energy landscape and the opportunities to address the issue while our nation considers changes to the power sector.

Without explicit action, low-and moderate-income (LMI)<sup>1</sup> households, specifically low-income households<sup>2</sup>, are likely to face increased energy burdens during the transition to a clean energy system. With adequate analysis and targeted programs and policies for LMI households, the energy transition is an opportunity to invest in reducing energy burdens systematically<sup>3</sup>. For these reasons, the Just Solutions Collective reached out to experts who work in low-income, BIPOC, and frontline communities<sup>4</sup> across the country and asked their input on how to best address the energy burden to ensure the transition is equitable and just. Experts provided a wealth of important insight, expertise, recommendations, and perspectives on the opportunities and challenges with addressing the energy burden and accessing energy assistance. This report's primary purpose is to inform environmental and climate justice policy advocates, but can also be used by policymakers, utilities, energy practitioners, along with an inclusive public participation process, when making decisions about a clean energy future that centers communities most impacted by the fossil fuel industry and profit-driven IOUs.

## Key Research Findings

There were five key challenges to addressing energy burden as identified by experts in the field: a.) the lack of upfront costs for LMI households to transition into energy efficiency and the lack of funding for programs; b.) shortcomings of program designs that do not properly address the energy burden or LMI household's short-term and long-term needs; c.) administrative barriers faced by people who apply for energy assistance programs; d.) barriers faced by renters when participating in energy efficiency programs; and e.) limitations of our present-day utility models creating barriers to an equitable clean energy transition. According to the interviewees, these challenges need to be addressed to ensure a transition to renewable energy will not increase the energy burden for LMI households.



With adequate analysis and targeted programs and policies for LMI households, the energy transition is an opportunity to invest in reducing energy burdens systematically. Addressing and ultimately eradicating the energy burden is a shared responsibility amongst state agencies and multiple stakeholders. Solutions and recommendations to address energy burden during the transition to clean energy include increasing funding and program investments for LMI households, improving program and policy design that explicitly address energy burden, increasing program participation, creating more efficient buildings and support for renters, and improving utility rates and targeting of programs. Three ways to achieve some of these goals include:

**1** The adoption of community-owned energy and community solar policies. If designed right, the benefits of community solar can be accessible to LMI households. This includes strong policies with requirements placed on the utility companies to interconnect those systems to the grid without exorbitant cost or administrative burdens placed on community-based organizations, nonprofit or cooperative solar developers.

**2** More Collaboration with Community-Based Organizations, Community Action Program (CAP) Agencies, and Faith-Based Organizations. Utilities and programs should work with community-based organizations (CBO's), Community Action Program (CAP) Agencies, and faith-based organizations to conduct outreach, communication, and help increase participation rates by assisting with applications. These collaborations need to be funded partnerships to help CBO's have more capacity to get more people signed up for assistance, as well as work closely with households to address language barriers and the digital divide.

**3** Making buildings more efficient so that they use less energy to bring down costs and address the energy burden. Building codes can be effective to enforce compliance with more energy-efficient building standards. For rental units, there is a need for enhancement of building codes, standards, and public investment in bill affordability and energy efficiency for all households of lower incomes. More advocacy and programs need to prioritize investments in people's homes by addressing poor housing conditions and the legacies of environmental hazards and energy inefficiencies. Programs and policies must ensure landlords do not shift the cost of clean energy systems to tenants.

## Conclusion

It is evident that without explicit action, low- and moderate-income (LMI) households and communities of color are likely to face increased energy burdens during the transition to a clean energy system. Although states and regions differ in their administration of energy assistance programs, depending on program funding and political prioritization, there are common national challenges and barriers in addressing the energy burden, as identified by experts in the field. According to the interviewees, these solutions and recommendations will help the effectiveness of policies and energy assistance programs as we transition to clean energy.

# INTRODUCTION & BACKGROUND

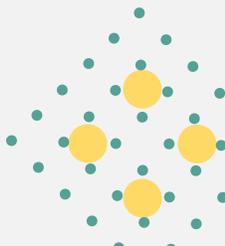
## Introduction

High energy costs as a fraction of household income — called energy burden — is a major stressor on the finances of low-income households, who are disproportionately Black, Indigenous, People of Color (BIPOC) households. They experience much higher energy burdens than the average household nationally, as well as negative health and environmental impacts. As President Biden sets a 2030 greenhouse gas pollution reduction target to shift away from fossil fuels, transition the nation to a clean energy sector, and mandate renewable energy, there are opportunities to address these impacts. If opportunities are missed, there is a real risk that the energy burden for low-income households could get worse as a result of the energy transition.

Studies show that lower-income households spend a bigger share of their income on energy costs (e.g., electricity, natural gas, and other home heating fuels) than higher-income households<sup>5</sup>. High energy burdens are mainly a function of low income rather than differences in household energy costs. For example, in 2017, the average energy bill for non-low-income households was just eight percent more than the average for all households, while the average energy cost for low-income households that received heating energy assistance was about seven percent lower than average. But the average individual energy burdens for these two groups were three percent and 17.2 percent respectively, showing the central role of income in energy burden.

Similar energy bills do not mean the same level of comfort as energy services. Lower-income families disproportionately live in less efficient homes and are more often than not renters. Energy burden often stays high even with energy assistance programs. Research shows that BIPOC and low-income communities experience less access to residential energy-saving appliances and other energy efficiency upgrades<sup>6</sup>. The use of propane and fuel oil for heating also contributes to high energy burdens. At the lowest income levels — less than 50 percent of the federal poverty level — energy burdens are sometimes well over 30 percent, though the guideline for some energy affordability programs in the U.S. are intended to lower energy burden to a six percent<sup>7</sup> of income level<sup>8</sup>.

This report is focused on households with disproportionately higher energy burdens<sup>9</sup> — meaning they spend more than six percent of their income on energy bills<sup>10</sup>. High energy burdens are also correlated with greater risk for respiratory diseases, increased stress, and economic hardship, including difficulty in moving out of poverty<sup>11</sup>.





Our current energy system also causes negative impacts on the environment, further increasing people's energy burden. Fossil fuels account for over 60% of US electricity generation<sup>12</sup>, which further exacerbates climate change and extreme weather events. Ultimately increasing the energy burden as the demand for air conditioning and energy will only increase<sup>13</sup>.



The COVID-19 pandemic has exacerbated U.S. energy poverty - the inability of a household to meet their energy needs<sup>14</sup>. Due to high unemployment during the pandemic, households were unable to pay their electricity bills, consequently putting them at higher risk of utility termination for nonpayment<sup>15</sup>. The pandemic also interrupted weatherization and energy efficiency programs nationally as offices closed their doors and transitioned their services online. The pandemic raises concerns about the equitable treatment of utility customers, particularly lower-income customers who already faced disproportionate energy burdens.



Without explicit action, low-and moderate-income (LMI)<sup>16</sup> households, specifically low-income households<sup>17</sup>, are likely to face increased energy burdens during the transition to a clean energy system. With adequate analysis and targeted programs and policies for LMI households, the energy transition is an opportunity to invest in reducing energy burdens systematically<sup>18</sup>. For these reasons, the Just Solutions Collective reached out to experts who work in low-income, BIPOC, and frontline communities<sup>19</sup> across the country and asked their input on how to best address the energy burden to ensure the transition is equitable and just. Experts provided a wealth of important insight, expertise, recommendations, and perspectives on the opportunities and challenges with addressing the energy burden and accessing energy assistance. This report can be used by policymakers, utilities, energy practitioners, as well as advocates when making decisions about a clean energy transition that centers communities most impacted by the fossil fuel industry and profit-driven IOUs.

## Background

In the context of this work, it is important to understand how the energy and electricity sector, for background on residential energy, how electricity reaches homes, utilities, and the distribution of electricity please refer to [Appendix A](#).

## A. Energy Burden's Impact on Households, Health, and the Environment

### Low-income Households Spend More on Energy

Studies show that lower-income households spend a bigger share of their income on energy than higher-income households<sup>20</sup>. According to the Office of Energy Efficiency and Renewable Energy, low-income households face a disproportionately higher energy burden<sup>21</sup>. Energy burden is defined by their office as the percentage of gross household income spent on energy

costs. Researchers define households with a six percent energy burden or higher to experience a high burden<sup>22</sup>. Data reported by the U.S. Department of Health and Human Services show that low-income households had an average individual energy burden of 17.2 percent<sup>23</sup>.

Even before the COVID-19 pandemic and recession, one in four households struggled with a high energy burden, spending more than six percent of their income on electricity and heat<sup>24</sup>. In the U.S., 67% of low-income households experience a high energy burden, and 60% of those households with a high energy burden face a severe energy burden<sup>25</sup>. The American Council for an Energy-Efficient Economy (ACEEE) released a research report in 2020 that found that low-income, Black, Hispanic, and Native American households all “face dramatically higher energy burdens, spending a greater portion of their income on energy bills than the average household” (Image 1)<sup>26</sup>. Their study found similar patterns across the national, regional, and metro areas. However, residents of the East South Central region (Alabama, Kentucky, Mississippi, and Tennessee) have the greatest percentage of highly burdened households (38%).

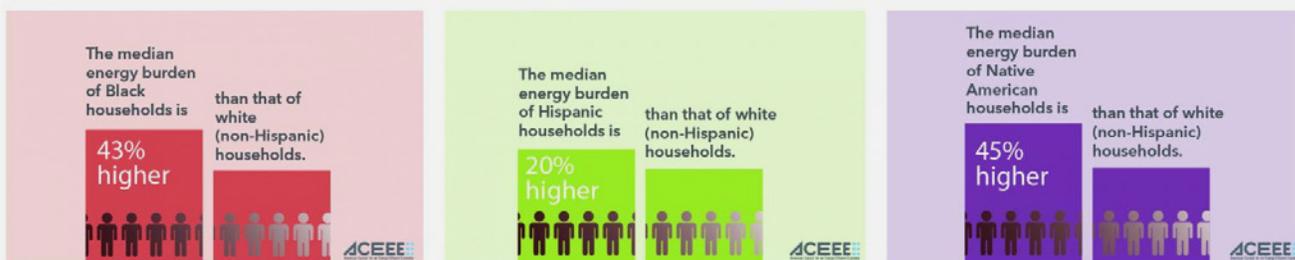


Image 1. American Council for an Energy-Efficient Economy Energy Burden Report 2020

## Energy Burden Impacts Health

Energy-inefficient homes are a significant contributor to high energy burdens. Many low-income consumers live in energy-inefficient homes, with substandard insulation or older appliances, which can mean they have a higher energy cost burden than wealthier families<sup>27</sup> even though, on average, they live in smaller homes. The inefficiency shows up as higher energy use per square foot of home and therefore higher cost per square foot. Many low-income households are also renters and—compared to homeowners—may have less control over the quality of their housing. Furthermore, high energy burdens are correlated with greater risk for respiratory diseases, increased stress, and economic hardship, including difficulty moving out of poverty<sup>28</sup>. About one in five households had to reduce or forgo basic necessities like food and medicine to pay an energy bill<sup>29</sup>. These same communities who experience high energy burdens also experience acute systemic inequalities, barriers, and limited access to public and private resources, and are now being hit the hardest by job losses and health impacts of the COVID-19 pandemic.



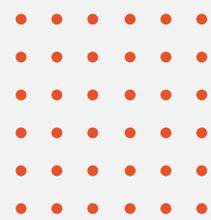
## Energy Assistance Programs Not Meeting the Need

Low-income energy assistance programs provide financially vulnerable utility customers with energy cost savings and payment assistance. Commonly known programs include the Low-Income Home Energy Assistance Program (LIHEAP) which provides federally funded assistance in managing costs associated with home energy bills, energy crises, weatherization, and energy-related minor home repairs<sup>30</sup>. The Weatherization Assistance Program (WAP) reduces energy costs for low-income households by increasing the energy efficiency of their homes while ensuring their health and safety<sup>31</sup>. There are also payment programs for energy bills like the Percentage of Income Payment Plan (PIPP) designed to reduce household energy burdens to an affordable level by capping eligible participants' utility payments at a predetermined percentage of household income. As well as the Arrearage Management Program (AMP) that provides an opportunity for qualifying residential customers to have their eligible past due bills forgiven.

Many utilities, local governments, and other energy efficiency program administrators are implementing programs to increase access to energy efficiency services. Low-income programs are often funded through utility customer bills, and, in some states, are supported by funding from the Department of Energy's Weatherization Assistance Program. Many state legislatures and public utility commissions require their IOUs to provide low-income energy efficiency programs<sup>32</sup>.

All 50 states, the District of Columbia, five U.S. territories, and approximately 150 tribes and tribal organizations receive LIHEAP grants each year<sup>33</sup>. Preliminary 2019 data indicate that an estimated 5.3 million households received assistance with heating costs through LIHEAP<sup>34</sup>. However, programs have faced challenges in driving participation. Enrollment rates in low-income energy efficiency and assistance programs remain low. From 2016 to 2020, the national percent of income-eligible households served by any type of LIHEAP assistance has consistently ranged between 16% to 17%<sup>35</sup>. There is also a noticeable difference among the state's LIHEAP performance. As of 2020, the state with the highest percent of income-eligible households served by any type of LIHEAP assistance is Michigan at 67% and the state with the lowest percentage is Arizona at four percent<sup>36</sup>. WAP is often a one-off, non-recurring capital investment in energy efficiency measures. WAP has weatherized 7 million households; however, nearly 40 million households remain income-eligible for energy efficiency assistance<sup>37</sup>. Research shows that BIPOC and low-income communities experience less access to residential energy-saving appliances and other energy efficiency upgrades<sup>38</sup>.

Both LIHEAP and WAP were created as short-term solutions to assist eligible customers with an immediate energy crisis. LIHEAP was created in 1981 as a response to fuel prices skyrocketing in the wake of the 1979 oil crisis<sup>39</sup>. They were not created to fully address long-term solutions to energy burden or energy poverty. Studies show that although the current LIHEAP performance measures "satisfy the statutory requirements for monitoring and reporting, less is known about the program's effectiveness in reducing the actual problem of energy poverty"<sup>40</sup>.





## Climate Change Makes Matters Worse

Climate change also highlights the need to address high household energy burdens. As extreme weather events are exacerbated by climate change, such as more heatwaves, hurricanes, extreme winter storms, and longer fire seasons, the demand for air conditioning and energy will increase<sup>41</sup>. Energy is needed now more than ever to prevent indoor heat-related illnesses and deaths or lethal cold snaps, as it happened in Texas in February 2021.

Most of the electricity used in the U.S. is generated using fossil fuels, further exacerbating climate change and ultimately the energy burden. In 2020, about 4.01 trillion kilowatt-hours (kWh) of electricity were generated at utility-scale electricity generation facilities in the United States<sup>42</sup>. About 60% of this electricity generation was from fossil fuels—coal, natural gas, petroleum, and other gases. About 20% was from nuclear energy, and about 20% was from renewable energy sources<sup>43</sup>.

## An Opportunity for a Just Transition

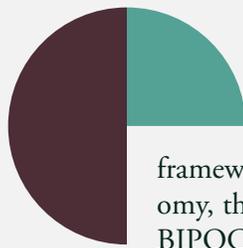
There is a real opportunity to establish long-lasting climate and energy policies and programs. With extreme weather exacerbated by climate change, people are paying more attention to the national electricity landscape, how it functions, and how to transition it to cleaner alternatives. In addition, evaluation of our energy system is a rising priority for policymakers as they confront a host of social, economic, and health burdens caused by the existing energy system<sup>44</sup>. This report examines fundamental inequities of our current energy landscape and the opportunities to address the issue while our nation changes its power sector.

## B. An Equitable & Just Framework

Converting our energy is about more than replacing fossil fuels with clean energy sources. The transition to 100% begins by addressing the way our energy system is structured and requires that power and economic benefits shift hands from the few to the many. This refers to an energy justice framework of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those disproportionately harmed by the energy system<sup>45</sup>. Renewable energy can be a vehicle to democratize our energy infrastructure, improve grid reliability and resilience, and distribute the economic benefits of generating energy more equitably.

The “Building Blocks for a Regenerative & Just 100% Policy” report, by the Just Solutions Collective, offers a comprehensive approach to achieving 100% regenerative energy that is centered on justice<sup>46</sup>. Justice-centered policies recognize that there are long-standing systemic and historical injustices in our energy system and that the bedrock of our energy system is plagued with the profit motive of the fossil fuel industry. Therefore, a clean energy future should be based on a Just Transition<sup>47</sup> where there are explicitly named benefits to and prioritization of frontline communities and Indigenous sovereignty, as represented in Image 2. The central focus of this analysis is on addressing energy burden and ensuring that in our transition to a clean energy future, we do not make people poorer. It recognizes within our





framework that we must move away from a reliance on fossil fuels and an extractive economy, therefore we must both ensure clean energy alternatives and funding and support for BIPOC and lower-income people to access them, as well as reduce the use of dirty energy through efficiencies.

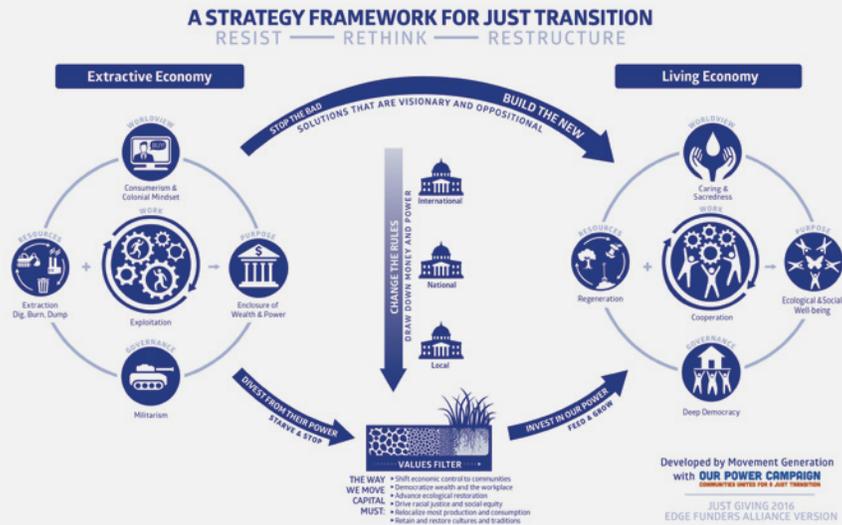
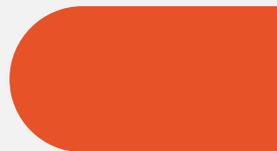


Image 2. Just Transition Image Developed by Movement Generation with Our Power Campaign<sup>48</sup>.



# FINDINGS

---

## A. Challenges and Solutions to Addressing the Energy Burden

This section highlights challenges and solutions to addressing the energy burden as identified by experts in the field. The following sections are grouped into five challenges and five solutions, each offering experts insights on that particular subject. Key challenges to addressing energy burden include: a.) the lack of upfront costs for LMI households to transition into energy efficiency and the lack of funding for programs; b.) shortcomings of program designs that do not properly address the energy burden or LMI household's short-term and long-term needs; c.) administrative barriers faced by people who apply for energy assistance programs; d.) barriers faced by renters when participating in energy efficiency programs; e.) limitations of our present-day utility models creating barriers to an equitable clean energy transition. According to the interviewees, these challenges need to be addressed to ensure a transition to renewable energy will not increase the energy burden for LMI households.

With each challenge, experts shared potential solutions: a.) increasing funding and program investments for LMI households; b.) improve program and policy designs to specifically address energy burden; c.) implement funded partnerships with community-based organizations, Community Action Program agencies, and faith-based organizations to increase program participation; d.) create more efficient buildings, enhancement of building codes, and institutional program support for renters; e.) improve utility rates and targeting programs to ensure a transition to renewable energy will not increase the energy burden for LMI households.

---

### CHALLENGE 1

#### Lack of Upfront Costs & Program Investments

##### **Lack of Upfront Costs for LMI Households to Fully Transition**

Most LMI households are unable to meet the upfront costs and investments needed to transition into energy efficiency, especially if lower-income households are required by policy to make any improvements to their homes. People have various pressing financial needs which make it difficult to implement energy efficiency programs, even if households are eligible. When people's top needs like housing and food are not being met, it will be challenging to implement energy efficiency programs.

---

*“It is not just the investments in clean energy that is necessary to consider [for the transition]. If we do it in a just and equitable way, we need to consider those costs necessary to ensure inequities are not exacerbated. The transition will cost money and raise energy expenditure levels, at least in the short-term.”*

– John Howat, National Consumer Law Center

### **Incentives for Renewable Energy Benefit Wealthier Customers**

According to the U.S. Energy Information Administration (E.I.A.), “federal, state, and local governments and electric utilities encourage investing in and using renewable energy” by providing programs and financial incentives for renewable energy<sup>49</sup>. Often, regulations commend early adopters by incentivizing renewables, but it can end up “shifting costs to low-income consumers or making them pay higher per-unit costs than wealthier consumers”<sup>50</sup>. This model benefits early adopters, many of whom are usually upper to middle-class people who can afford to buy things like solar appliances. This makes it inaccessible for LMI households because by the time the technology becomes affordable for them, federal and utility incentive programs might have already ended or the financial incentives might have been greatly reduced<sup>51</sup>.

### **Lack of Program Funding**

There exist funding gaps within the existing federal and ratepayer-funded programs which are insufficient to lower energy burdens to a more affordable level. In addition to affordability, there are problems with access to technology for energy efficiency and other clean technology investment items by LMI households.

*“To live in an all-electric home affordably, one will need new technology. Whether it be an electric vehicle or water heater you will need a new gadget, or even housing infrastructure changes, that can be prohibitively expensive. These upfront investments to purchase or enjoy new technology are an affordability barrier.”*

– Roger Lin, formerly at California Environmental Justice Alliance

## **SOLUTION 1**

### **Increase Funding & Program Investments**

#### **Policies and Program Models Should Address Affordability and Upfront Investments<sup>52</sup>**

Programs need to address affordability in three aspects. The first is bill affordability, which should include incentives and subsidies that target and benefit BIPOC frontline communities and low-income communities, in addition to tailoring programmatic resources and dollars to

those communities. The second is ensuring the transition is affordable, including incentives to transition to clean energy for LMI households. This includes easier access to the technology which is expensive compared to conventional fossil fuel. An example would be distributed technology and cost-effective distributed technology that increases the efficiency of usage in a way that lowers the cost. The third is a structure for regulatory consumer protection.

### **Increase Program Funding**

An increased allocation of funding or investments in programming reduces the energy burden and the impacts of a transition on BIPOC and low-income communities. LIHEAP and weatherization assistance programs need more funding and subsidies. Furthermore, programs should support households with recurring and direct assistance rather than just one-time assistance. In addition, by increasing funding for energy assistance, programs will be able to ensure people most in need are benefiting from energy assistance. This can be accomplished by funding program offices to have the appropriate staff capacity to ensure outreach, education, and technical support to applying for assistance, and a coordinated, regional approach to home energy and housing policy that integrates programs in each area. Both government and utilities should fund the renewable transition.

## **CHALLENGE 2:** **Shortcomings of Program Design**

Many programs are oriented for crisis relief but households need more support for energy cost reduction on an ongoing basis. Households are facing long-term economic hardship to meet energy costs. Crisis programs are very important and necessary but households need more than crisis assistance, many need programs to better support ongoing bills and energy burden reduction. This support can include arrearage management crisis assistance and reduced future payments that are affordable to the household. It is also important to target communities that are most subject to disconnection and other energy insecurity and equity factors. There is a need for policy and programs to address the root causes of energy poverty and energy insecurity and comprehensive investments in weatherization and healthy home improvements.

---

*“Providing tax credits and grants towards some of the programs like electric vehicles and rooftop solar is not going to get you equity, people can not afford these things.”*

*– Paula Carmody, former head at Maryland’s Office of People’s Counsel*

---

### **Weatherization and Energy Efficiency Program Do Not Address Poor Housing Conditions**



Many poor-quality households will not be able to access energy efficiency or weatherization because a contractor might refuse to or not be able to do work in a house that has lead, mold, asbestos or if the building is in need of structural repairs or substantial wiring. Even if a household qualifies for a free weatherization program, if lead, mold, or asbestos are found in the home, most programs do not make allowances to cover the costs of fixing those problems.

### **Regional Disparities in South East and South West**

There are regional disparities of programs and policies, specifically for the Southeast and Southwest regions with some of the highest poverty rates and Black populations, programs are worse at addressing energy burden. Even in model states that do have effective programs, like Massachusetts, Ohio, and California, the need is still high.

---

*“Affordability programs, efficient technology distribution, and the structure for regulatory consumer protection against disconnections in the Southeast and Southwest are really terrible.”*

*– John Howat, National Consumer Law Center*

---

### **Lack of Regulatory Consumer Protections Against Shut-offs**

There is a need for regulatory consumer protections against shut-offs for households where people with health issues or the elderly live. In addition, the charging of late payment fees and security deposits are punitive and exacerbate affordability challenges. Utilities negotiate payment agreements with consumers that fall behind and it usually fails and can lead to greater economic decline as utilities report customers to collections. Bill assistance, better energy efficiency, and a need to revamp consumer protection structures to ensure better access are needed.

## **SOLUTION 2:**

### **Improve Program and Policy Design to Specifically Address Energy Burden**

#### **Create Policies & Programs that Directly Address and Define Energy Burden**

Policies and programs should be designed to eliminate high energy burdens and any cost attributable to fuel switching or any shift needed to make that transition happen. A well-designed policy should identify where costs are higher and keep them from falling onto low-income residents. Weatherization and energy efficiency programs must be comprehensively included to address the needs of low-income households. Programs should direct grants and technical assistance support to communities that will benefit from their assistance. In addition, there is a need for programs and policies to write off a utility debt. Even with a well-thought-out policy and program, there is still a need for outreach and education to make it successful so households can make their best-informed decisions.

---

*“There needs to be a re-examination of this kind of mix (energy assistance programs) of helping people pay their immediate bills but also give attention to future bills so that those same households aren’t continually burdened”.*

*–Carmen Carruthers, Citizens Utility Board of Minnesota*

---

### **Increases Access to Solar Programs and Ownership of Solar Programs.**

Community-owned energy and community solar policies are a solution to addressing household energy burden because if designed right the benefits of community solar can be universally accessible to any occupants in a building, and to renters as well as homeowners. A customer does not need to own a building or need to have a rooftop that can support a solar installation. This includes community-controlled microgrids and resilience hubs in communities that are fully community-owned and controlled. Policies should include incentives that prioritize community ownership and control, energy efficiency, and retrofits at the state level. In addition, states should provide upfront incentives during project pre-development that can help reduce early costs that community-based organizations, nonprofits, or cooperatives solar developers might face as they are looking to develop projects. A strong policy needs requirements placed on utility companies to interconnect those systems to the grid without exorbitant cost or administrative burdens placed on community-based organizations, nonprofit or cooperative solar developers.

An example of a solar project is the Solar on Multifamily Affordable Housing (SOMAH) program in California. SOMAH provides financial incentives for installing photovoltaic (PV) energy systems on multifamily affordable housing in California. The program delivers clean power and credits on energy bills to hundreds of thousands of the state’s affordable housing residents. SOMAH uses a community-based approach to ensure long-term, direct financial benefits for low-income households, helps catalyze the market for solar on multifamily housing, and creates jobs.

## **CHALLENGE 3: Participation Barriers**

### **Participation Barriers**

One of the most prominent challenges to energy assistance programs is ensuring those who are eligible participate in the program. A technical expert from Empower Data-Works identified key barriers to program participation into four categories, informational, transactional, stigma, and trust (Image 3)<sup>53</sup>.

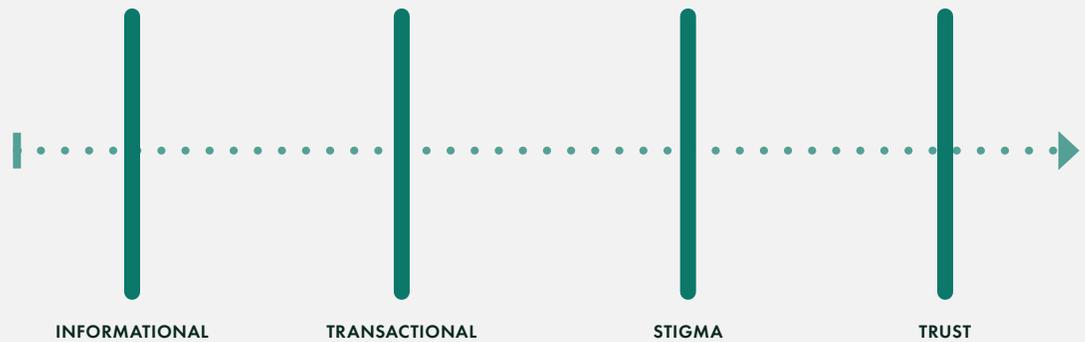
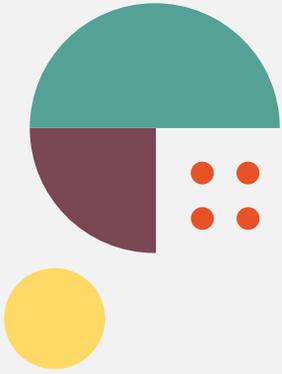


Image 3. Empower Data | Barriers to Program Participation

**Informational:** Program managers may not know what communication channels to use to share information with eligible households. This information can help program managers conduct better outreach about the programs. Program managers might have an outreach strategy that does not consider language barriers or lack of access to the internet or reliable broadband. Many households may speak a language other than English or not have access to reliable computers or mobile devices. There can also potentially be issues with broadband access in areas with high low-income populations or rural areas. The COVID-19 pandemic caused many program offices to close down and the lack of broadband access exacerbated the incomplete applications leading to application rejections.

**Transactional:** There are transactional barriers for administrators and participants of assistance programs. There are too many stipulations that make it nearly impossible to administer assistance programs. For example, one expert shared that as a non-profit worker, he spends more of his time processing application paperwork for his clients than mentoring and spending time with his clients or the people that he is serving and with whom he is working. There are also too many requirements to get assistance from programs. Applications require various documents to show proof of eligibility to receive assistance, such as a copy of a birth certificate, identification card, social security number, and proof of participation in other social services like the Supplemental Nutrition Assistance Program (SNAP). For many people, gathering these documents, if they have access to the documents, is very time-consuming and can be an overwhelming process. Programs also require income verification which is a barrier for many low-income households. The gig economy is increasing, particularly for low-income households and service workers, making it a challenge to get regular or stable paychecks. At times the benefits of the programs do not compensate for the time required to gather documents for the application. It was noted that although few applications get rejected, the extensive application causes people to never fully complete their application which can lead to rejections. In places like Maryland, if customers have not completed their applications within 15 days, they are automatically denied.

**Stigma:** There is a stigma associated with people who receive benefits from the government causing people to refuse assistance even if eligible. A technical expert shared that a common

misconception among eligible applicants is the belief that other people might need it more than they do, which largely discourages people from applying.

**Trust:** Some customers think of utilities as a government body and may not have trust in utilities and governmental program delivery agencies, especially for undocumented people. Undocumented individuals are hesitant to provide information to agencies because of the fear of cross-agency collaborations, specifically with Immigration Customs Enforcement. Programs that require a social security number (SSN) also pose a barrier. Not only does it exclude the undocumented population but it also causes confusion and hesitancy for mixed-status households to apply for any energy assistance, which further complicates the process for these households.

### **SOLUTION 3:** **Increase Program Participation**

**More Collaboration with Community-Based Organizations, Community Action Program (CAP) Agencies, and Faith-Based Organizations.** Utilities and programs should work with community-based organizations (CBO's), Community Action Program (CAP) Agencies, and faith-based organizations to conduct outreach, communication, and help increase participation rates by assisting with applications. These collaborations need to be funded partnerships to help CBO's have more capacity to get more people signed up for assistance, as well as work closely with households to address language barriers and the digital divide. This partnership can also be an opportunity for government agencies or nonprofits that administer energy assistance programs to create jobs and hire people in the community to do canvassing and public outreach. It was also suggested that CBO's receive funding so they can more actively and directly distribute assistance to households.

---

*“Engagement of community-based organizations encourages different ways to think about solutions to the energy insecurity by putting power in the hands of those experiencing higher energy burdens and building trust in a system that is responsive to community needs first.”*

*– Mariel Thuraisingham, Front and Centered*

---

#### **Creating a “One-Stop-Shop” for Programs**

Typically states have a Department of Human Services that administers different programs. However, if different government agencies such as health, energy, and housing agencies can collaborate and share information it can be helpful to streamline the application process. A one-stop shop where someone goes into one place and households are screened for multiple programs would help with participation rates. It will reduce the need for an individual, family, or household to submit the same information to multiple agencies to access different kinds of benefits since it is usually the same information they're sharing across all those different agencies. In addition, it is important to create multiple ways and locations for people to access benefits.





### **Creating Categorical Eligibility & Automatic Enrollment**

Energy assistance is complex to administer because the requirements and eligibility parameters are different for every program and there are so many programs. Many CBOs spend a lot of their capacity just helping people understand what they are eligible for and what could be helpful for them. Categorical eligibility to enroll people in programs or automatic enrollment of eligible households into programs would significantly increase participation levels because it will help streamline the enrollment process for customers on fixed incomes like Social Security and disability<sup>54</sup>. Another option is to create a single portal where an applicant could submit one set of materials and find out whether they are eligible for or can receive other public benefits. It is important to think about more efficient ways to administer programs and focus on eliminating as much arbitrary “paperwork” in the application as possible.

### **Removing Citizenship Status as a Criteria for Eligibility**

It is important to address barriers faced by undocumented individuals when applying for public assistance. Undocumented individuals should be eligible to receive energy assistance regardless of immigration status. Citizenship and an SSN should not be part of the eligibility criteria for energy assistance programs.

For a list of programs shared by our interviewees that they believe work well, see Appendix C.



## **CHALLENGE 4: Barriers for Renters**

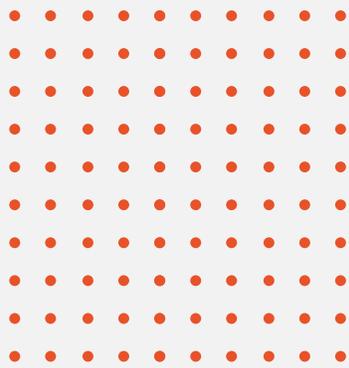
### **Renters have few tools to Systematically Reduce their Energy Burden**

For decades, energy efficiency programs have acknowledged that the participation of renters is low. Renters who pay their energy bills face what is known as the “split incentive” problem - a split between who pays and who benefits. According to ACEEE, the split incentive problem is described as “the party who owns the property and is responsible for capital investments and upkeep (landlord) typically is not the same party who is responsible for paying energy costs (tenant)”<sup>55</sup>. It is ultimately up to the property owners to decide what is going to be done and whether they want to finance it. As a result, renters, including those who have high energy burdens have few tools to systematically reduce those burdens compared to homeowners.

### **Landlords are Not Incentivized to Invest in Energy Efficiency**

There is a lack of policy efforts to create incentives for property owners to weatherize or repair rental properties. At times the costs of the property are externalized to the tenant. Landlords are making a profit from their properties yet are not required to turn that profit into improvements in their buildings. Landlords that do not pay for energy bills, do not have the incentive to invest in energy efficiency and are also less inclined to invest in a property if their tenant might only be there for a few years. There is also a concern for lower-income homeowners of having to adopt weatherizations without financial assistance from the government of financial incentives. Stronger building codes and appliance standards can be instrumental





in addressing this problem. Codes and standards are more detailed below under Solution 4. Landlords can also pose other obstacles even when weatherization investments are available to them at no cost. For instance, the federal Weatherization Assistance Program (WAP) is entirely a grant. But landlords must provide access to their properties so that audits can be done and retrofits implemented. One study in Baltimore found that many landlords refused to provide access for audits to be done, effectively preventing efficiency investments<sup>56</sup>.

### **Weatherization Should Address Needs Faced by Low-Income Households**

There is a need for weatherization to address the kind of energy burdens that low-income households face such as insulation air sealing and the electrification of heating and cooling equipment to drive down energy costs. General building conditions are bad for many poor neighborhoods and communities of color. At times people are forced to live in substandard housing and live in really toxic indoor environments.

---

*“Buffalo has some of the oldest housing stock and some of the highest poverty rates in the country. In many poor neighborhoods and communities of color, there are toxic indoor environments with high levels of lead, mold, and asbestos or absentee property ownership. Therefore, the general conditions of people’s homes are really bad.”*

*– Clarke Gocker, PUSH Buffalo*

---

### **Landlord’s Third-Party Billing Systems for Utilities Add Fees to Tenants**

With master metered properties, landlords can create a third-party billing system for utilities, including additional fees such as account fees, administrative fees, and late fees, increasing tenants’ bills<sup>57</sup>. Master metered properties are illegal in some states, yet this is a business model embedded in some billing systems. For example, YES Energy Management is a service provider that takes the total master metered energy bill for a building and creates it into many different bills for all the different units in the property. Companies make a profit from these services. As a result, these third-party services add a layer of cost to renter’s energy bills that are not there when each unit is separately metered.

### **Consumers are Subject to Exploitative Tactics by Unregulated Third-Party Energy Suppliers**

Third-Party energy suppliers are not regulated and can potentially exploit consumers by overcharging them in places where generation is deregulated, like the Northeast and Mid-Atlantic regions. Sometimes this is in relation to the supposed higher cost of the company acquiring renewable energy to resell it to the consumer. Some of the charges may be legitimate, while there may be overcharging in other cases in the transition to renewable energy, unlike larger energy providers that are regulated. Overcharging also occurs when there is no renewable energy involved. In Maryland, third-party energy suppliers are advertising and selling various products to consumers, including low-income renters, under the idea that they will save on their energy bills. When low-income households are overcharged much of the assistance they get does not go to reduce energy burdens but flows to third-party suppliers. It is important to note that most states do not allow this practice, we recommend more research is to be done on this retail competition.



### **Lack of Connections Between Housing and Environmental Advocacy**

There are no strong connections between housing and environmental advocacy and much of the work still exists in siloes. Energy and climate, as a housing issue, will probably remain at the bottom of the list of political priorities. There are a lot of other pressing issues like stopping evictions and making rent affordable than addressing climate and energy.

## **SOLUTION 4:**

### **More Efficient Buildings and Support for Renters**

#### **Building Efficiency and Codes**

A long-term solution is making buildings more efficient so that they use less energy as a way of bringing down costs and addressing the energy burden. Building codes can be effective to enforce compliance with more energy-efficient building standards. For rental units, there is a need for enhancement of building codes, standards, and public investment in bill affordability and energy efficiency for all households of lower incomes. Using building codes to require absentee landlords to make investments in rental property will help bring it up to modern energy codes so people can live in safe quality energy-efficient housing. More advocacy and programs need to prioritize investments in people's homes by addressing poor housing conditions and the legacies of environmental hazards and energy inefficiencies.

Landlords need to invest in homes to ensure equipment is high quality. Tax incentives for improvements in rental properties can be created within Housing Authority Contracts with landlords, municipal affordability programs, or rental assistance programs to create some incentives. It is equally important to provide targeted support for building owners to make those investments in exchange for them agreeing not to raise rents or to displace tenants. Putting restrictions on their ability to raise rents and displace people from those buildings will protect renters. Programs and policies must ensure landlords do not shift the cost of clean energy systems to tenants. However, there is a need to further study what might trigger a landlord's interest in investing. Therefore a more holistic approach is needed when thinking about landlords' interest in investing in their building and the benefit they get from an investment.

In addition to building efficiency, tenants should have greater access to energy-efficient appliances, specifically tenants in public housing. Public housing agencies should install energy-efficient appliances in public housing buildings where lower-income households already live. This will provide direct access to renewable energy for LMI households that does not require upfront costs to households.

#### **A Policy that Requires Landlords to Report Energy Usage**

Building efficiency can come from creating a policy where cities put a regulation on landlords requiring them to have an energy audit and therefore invest in energy-efficient programs. For example, the City of Des Moines has a greenhouse gas emissions inventory requiring landlords to upload data on how much energy is used by each apartment building to the City. As part of a long-term greenhouse gas reduction effort, the Des

Moines City Council passed the Energy and Water Benchmarking Ordinance in 2019. The ordinance requires owners of commercial, multifamily, and municipal buildings 25,000 sq. ft. or larger to benchmark and submit their energy and water usage to the City annually. This allows owners and occupants to understand their building's relative energy performance. It can also provide further insight to the City, utility companies, and other agencies as to where areas of assistance may be needed. Building owners are not required to make improvements based on reported energy and water usage however it increases overall awareness of energy and water waste and finding sustainable solutions. Although there is a desire for this usage data from landlords, it is key to maintain privacy to prevent subjecting tenants to abusive marketing practices.

---

*“Des Moines’ greenhouse gas inventory found that 70% of our emissions are coming from residential power usage. Despite initial opposition from the city’s corporate-monopoly utility provider, grassroots organizing and public pressure resulted in a resolution committing to use 24/7 carbon-free electricity by 2035 to pass unanimously.”*

*– Jake Grobe, Iowa CCI*

---

In regard to landlord’s third-party billing systems, tenant advocates are pushing for more regulation of Ratio Utilities Billing Systems (RUBS). Attorney Zafar Shah shared, **“in one Maryland county, we’ve won legislation that puts the onus on landlords to report transparently about the calculation of allocated utility charges”**. He further expressed that there is state legislation currently before the Maryland General Assembly that would expand that policy across the state.

## **CHALLENGE 5:** **Limitations of Utility Models**

### **Many Utilities Have Long-Term Contracts with Power Plants**

Experts noted that there are utilities that are tied to decades-long contracts with power plants to get their power. When they are bound to these contracts, utility cooperatives are limited to how much clean energy they can introduce into their portfolios.

### **Utilities have outsized influence over policy**

IOUs, co-op’s and municipal utilities have a great deal of influence at the state level, both in the legislative and regulatory arenas; they are often among the most influential players at the state level. It is in their interest to maximize the profit from their existing fossil fuel and nuclear assets and that can slow down progress in renewable energy<sup>58</sup>. Their influence is evident in the large sums of money over market prices that they have been able to get for nuclear electricity in

some states like New York<sup>59</sup> and New Jersey<sup>60</sup>. More stringent approaches to renewable energy and to economic and climate justice will require greater accountability on the part of governing institutions to the public in the matter of energy policy, especially in regard to electricity and natural gas.

---

*“Utility regulators are not looking out for the interests of vulnerable and marginal customers and care more about large corporate interests and corporate scale utility customers and not wanting to transfer additional cost to them through a progressive rate structure.”*

*– Clarke Gocker, PUSH Buffalo*

---

### **There is a Lack of Customer Data**

Addressing the disparity and ensuring the clean energy transition benefits everyone will require better data on how disadvantaged communities are using energy now. Utilities are highly reluctant to provide customers data. There is a need for more data on customer arrearages, disconnections, late payments fee levels, and customers’ billing. Without customer data, it is difficult to target populations who may not be receiving assistance and access the field to better design programs.

## **SOLUTION 5: Improve Utility Rates and Targeting of Programs**

### **Reform Customer Rate Structures**

It is important to reform customer rate structures to better incentivize the use of renewable heating and cooling technology. At the state level, the utility regulators need to develop progressive utility rate structures to ensure low-income, poor, working-class, or moderate-income households can see lower utility rates to reduce their cost to operate that equipment.

### **More Accessible Customer Data**

Utilities control customer data, such as energy consumption, energy history, and overall households energy profile. This data should be shared with agencies that administer programs, providers of weatherization programs, and nonprofits to help match eligible households to the programs. For example, the New York State Energy Research and Development Authority (NYSERDA) administers energy efficiency programs, armed with more data, could communicate with agencies that administer programs to then identify eligibility to benefits and direct weatherization resources. Greater demographic and geographic data, including linguistic isolation, racial identification, zip code, census tract, rental status, and self-certification of income could help with participation by identifying which groups are being left out of energy assistance and efficiency programs.



## B. Who is Responsible?

Addressing and ultimately eradicating the energy burden is a shared responsibility amongst state agencies and multiple stakeholders. Key players include government agencies and state legislators, utilities and utility regulators, fossil fuel industries, Community Action Program (CAP) agencies, and society as a whole. Government agencies and state legislators were identified as responsible because they pass policies and mandates for industries and utilities. Utilities and utility regulators are responsible because they create and control rates and energy programs. Fossil fuel industries also have a responsibility in addressing past harms to the environment and communities. Community action programs (CAP) and community-based organizations were identified as key players because they administer energy assistance programs and conduct outreach, provide education, and have a mission to support low-income communities. Lastly, most experts emphasized that energy is a public matter, therefore our society as a whole is responsible for ensuring people have access to such a vital resource.

### **Government Agencies and State Legislature**

Government and state legislators are key players in addressing the energy burden. Technical experts believe that government agencies and legislatures create and implement policies that give energy providers control to create rates and affordability programs, as well as decide how and when they will issue turn-off notices or provide grace periods for customers. Environmental justice policy advocates shared that government agencies have a duty to work in the public's interest in holding corporations and regulators accountable. Furthermore, elected representatives need to do more to address and lower the energy burden for their constituencies. This can include federal and state-level mandates to provide funding through taxation.

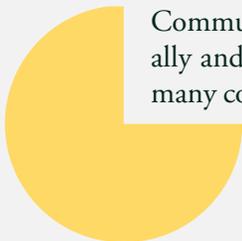
### **Utilities & Utility Regulators**

Utility and utility regulators play a key role in addressing the energy burden. Utility regulators authorize surcharges on customers' bills to pay for renewable energy programs or weatherization programs. However, these programs do not equitably reach low-income households. Renters are at a special disadvantage. Utility regulators can and should ensure utilities spend solar energy and weatherization monies equitably. Although utility regulators have appointed positions to work in the public's interest, utilities, unfortunately, have a lot of influence over them.

Environmental justice policy advocates believe utilities should bear more of the upfront costs of new infrastructure and shareholders should bear the burden of costs, especially in shifting to clean energy. However, given the power of big utilities, it will be a struggle to ensure that the benefits of the energy transition are equitably distributed. Utilities want to maximize profits from legacy power plants even though they may be polluting and even though solar and wind may be cheaper. It is essential for legislators and regulators to ensure that an economical and equitable energy transition takes place. There is little or no built-in incentive for profit-making utilities to make the transition if they can simply continue business as usual.

### **Community Action Program (CAP) Agencies**

Community Action Program (CAP) agencies are key players because they are located nationally and can connect with communities on the ground. A public policy expert shared that many communities do not know they can be helped by CAP agencies, and many times CAP



agencies are at capacity. They also note that CAP agencies' staff might only be trained on how to administer LIHEAP but other energy assistance programs that are available might be less accessible in terms of eligibility such as providing proof of citizenship, residency, or certain documentation. In addition, CAP agencies have to understand the different parameters of different energy assistance programs, making the process much more difficult.

---

*“For community actions agencies all over the nation, we are supposed to help people to become self-sufficient. So when they walk in the door, you already have the mindset that not only are you helping them through this crisis, you’re teaching them how to handle the crisis going forward.”*

*– Dr. Joyce Dorsey, President/CEO, Fulton Atlanta Community Action Authority*

---

### Society

Energy burden is a societal responsibility because access to home energy is a vital need and a public policy matter. An energy assistance practitioner shared that electricity services are public services, “we need it to survive”. A policy expert shared the importance of looking at the social benefits of energy efficiency. When looking at the costs and benefits of energy resources, it is important to look at the social costs including for instance improved public health, local air quality, and local water quality. Specifically for environmental justice communities that have been polluted, restitution is needed to correct the harms made.

## C. Existing Programs & Policies That Work Well

Besides LIHEAP, there are a variety of energy assistance programs and policies that experts believe work well. It is important to note that states and regions differ in their administration of energy assistance programs depending on funding and political prioritization. The following section showcases an evaluation of the PIPP program and examples of efficient energy assistance programs in Maryland, Minnesota, and Washington. The state program examples approach energy assistance in different ways, statutory mandates to target LMI households, an expansion of eligibility requirements to support more households during the COVID-19 pandemic, and commitments to electricity supply free of greenhouse gas emissions.

### PIPP Program

Percentage of Income Payment Plans (PIPP) is a payment plan where customers pay a portion of their monthly bill based on their income. Overall experts were in support of PIPP, they believe it aligns with affordability and explicitly tries to reduce the energy burden to a reasonable level. According to practitioners, PIPP is the most “workable”, it is a model that works better than giving a “flat discount” to people regardless of how much they make because it adjusts to their energy bills and their energy burden. Only a few states administer PIPP, this includes Ohio, Colorado, Illinois, Pennsylvania, Maine, Nevada, Virginia, and New Jersey, while other states have tried to implement similar programs.

Although PIPP programs are favored by our experts, they shared the following concerns about the program:

- People still struggle to pay their bills on time, whether they get unexpected bills or expenses, it is still difficult for people to make ends meet.
- PIPP's are generally oriented to limiting the household energy costs to a certain, pre-defined affordable percentage of income, typically 6%. Although 6% is a common percentage used for the PIPP program, Nevada runs a PIPP program where the benefit level is not set to 6%. Nevada's agency that delivers their program is required to calculate yearly what the home energy burden of the median income households is, which fluctuates every year between 2%-3%.
- According to a national policy advocate, for PIPP to succeed, it must operate comprehensively with an arrearage management program component. They believe PIPP should be combined with arrearage forgiveness, arrearage retirement, or an arrearage management program model that does not add to the affordability challenges of the program participant. If a customer enters a PIPP that has a due balance, through the remaining PIPP payment, a percentage of the amount is retired each month. If a customer has a PIPP that limits payment to a certain percentage of income and loads repayment of past due balance it puts people back to a less affordability range.
- PIPP benefit is set for low income to be the same as the energy burden experienced by the median income households. However, the challenge is that if the program were to serve all income-eligible utility consumers, the program cost will be high.

## State by State Programs

### Maryland

The Maryland Public Service Commission adopted regulations for a Community Solar Pilot Program in Maryland. It emphasized providing renewable energy benefits for low and moderate-income customers. The seven-year community solar pilot program will include providing access to solar-generated electricity for all Maryland customers without requiring property ownership, incentivizing solar companies to provide service to low- and moderate-income customers, and allowing renters to contract for solar energy with the same benefits as rooftop owners<sup>61</sup>.

The Public Service Commission ensured that statutorily a pilot program, for each of the companies that were approved, has to target and include LMI customers. The Maryland Community Solar Program is an example where the program specifically mandated that the public commission had to set up specific LMI targets.



The State of Maryland does not have a PIPP program so policy and energy assistance practitioners have packaged a variety of programs together to support households. Programs include the Office of Home Energy Program, Electric Universal Service Program, EmPOWER Maryland, Critical Medical Needs Program, and the Community Solar Pilot Program (for more information on each program please visit Appendix C).

### Minnesota

In 2021, the Minnesota Department of Commerce, which operates the Energy Assistance Program, received over \$130 million in federal funding to help more households during the COVID-19 pandemic<sup>62</sup>. The Energy Assistance Program helps households pay for current and past-due bills for electricity, gas, oil, biofuel, and propane, emergency fuel delivery, and repair/replacement of homeowners' broken heating systems, and could also cover water and sewer bills.

Due to the COVID-19 pandemic, the Minnesota Department of Commerce changed the income guidelines to capture more people who need help. Commerce raised the income eligibility limit to 60% of Minnesota's median income levels (\$67,765 per year for a family of four) and increased benefit amounts to reduce energy burdens by including up to \$1,600 for energy bills, plus up to \$1,200 for past-due energy bills.

With these changes, the Minnesota Department of Commerce reported that over 600,000 Minnesota households are income-eligible for Energy Assistance. During the previous program year (October 2020–September 2021), about 116,000 Minnesota households applied and qualified for Energy Assistance<sup>63</sup>. Carmen Carruthers from the Citizens Utility Board of Minnesota shared that they were **“very proactive and made some smart moves related to assistance”**. They also extended the application deadline, typically households have to apply by May 31st but it was extended to September 1st of 2021.

### Washington

On May 7, 2019, Governor Jay Inslee signed into law the Clean Energy Transformation Act (CETA<sup>64</sup>), which commits Washington to an electricity supply free of greenhouse gas emissions by 2045. The law provides safeguards to maintain affordable rates and reliable service. It also requires an equitable distribution of the benefits from the transition to clean energy for all utility customers and adds and expands energy assistance programs for low-income customers.

Interviewees who work in Washington believe CETA is a great legislative policy and framework for thinking about energy assistance. Hassan Shaban from Empower Dataworks believes it works well because it sets a clear goal for utilities while also giving them flexibility on how they can achieve their goal. He states, **“if you try to prescribe every step of a program for utilities, it's not going to work. Every utility has different customers and service territories but you can set a common goal in terms of energy burden”**.

Interviewees also shared the importance of ensuring good implementation of the policy. As utilities are trying to interpret their equity obligations, therefore, public stakeholder processing for commenting on regulatory proceedings. Mariel Thuraisingham from Front and Centered,



the coalition that helped to write, pass and implement CETA shared that it is important for utilities to show that highly impacted communities and vulnerable populations are considered, prioritized, receiving benefits from, and not being burdened by higher costs and risks associated with the transition to 100% clean in Washington.

For a list of additional programs shared by our interviewees that they believe work well, see Appendix C.

## D. Additional Funds

The Low Income Home Energy Assistance Program (LIHEAP), a federally funded program operated through the U.S. Department of Health and Human Services Administration for Children and Families, is the most common federal energy assistance used nationally. LIHEAP assists eligible low-income households with their heating and cooling energy costs, bill payment assistance, energy crisis assistance, weatherization, and energy-related home repairs<sup>65</sup>. However, LIHEAP is limited in funds, and once the funds are exhausted, there are no more available until the next annual cycle. The following were shared by interviewees as funding opportunities for reducing the energy burden.

### Emergency Federal Relief Funds

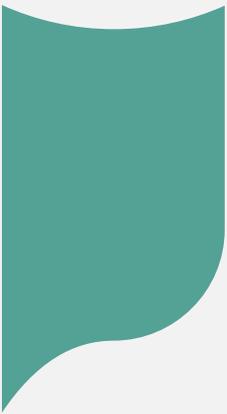
COVID-19 relief funds from the federal government and other emergency rental assistance funds have the potential to address energy assistance, such as the Coronavirus Aid, Relief, and Economic Security (CARES) Act. Other federal funding with large budgets includes the American Rescue Plan and President Biden's Infrastructure Plan which provide immediate relief funds for water, housing, and energy assistance. Although interviewees believe shoring up essential services and social services is key, they also predict it will be hard to get enough funding to go into all these areas since the budget package is limited. Interviewees also shared that tapping into health funding pools, like Medicaid, should also be considered because of the ramification of energy unaffordability and the impacts it has on public and individual health.

### Ratepayer Funded Assistance programs

Ratepayer-funded assistance programs usually work in conjunction with LIHEAP. Utility ratepayer-funded programs provide bill payment assistance or energy efficiency services to low-income households<sup>66</sup>. In some states, the ratepayer-funded programs are administered by a state agency, typically the same one that administers LIHEAP and weatherization assistance. Utilities themselves administer the program in other states. Both mechanisms usually have oversight by the regulatory commission.

### Utility Donation Programs

According to an interviewee many utilities set up a bank account where they put donations from their customers. They run assistance programs using funds collected voluntarily from customers and prevent rates from increasing. However, it is important to note that these programs are limited, the funding levels are usually very low and the funding is very unpredictable. In addition, these are best used as a supplement to ratepayer or taxpayer-funded assistance programs.



### **Loans from the U.S. Department of Agriculture**

Rural utilities can get very low-interest loans from the U.S. Department of Agriculture and use them to implement energy efficiency or weatherization programs<sup>67</sup>. Although utilities ultimately have to pay them back, there is a very low-interest rate.

### **Conservation Improvement Program (CIP)<sup>68</sup>, Minnesota**

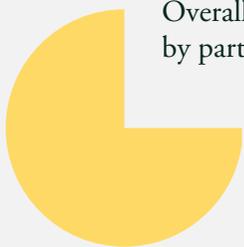
This program requires utility programs to provide energy efficiency services. It helps Minnesota households and businesses use electricity and natural gas more efficiently. CIP is funded by ratepayers and administered by electricity and natural gas utilities.

### **RentHelpMN<sup>69</sup>, Minnesota**

This program was created to help Minnesotans who have fallen behind on their rent or fear that could happen. This program uses federal funds from the American Rescue Plan that have been passed onto the state to help people who have been impacted by the COVID-19 economic crisis with late rent and future rent. One can request utility assistance through the program.

### **Solar for All<sup>70</sup>, New York**

Solar for All is a New York State utility bill assistance program. Eligible New Yorkers can get the benefits of clean energy while lowering their energy costs. It is meant to provide low-income eligible households access to community solar credits at no cost to them and help reduce their electric bills.



Overall, it is important to identify ways to administer energy assistance programs efficiently by partnering with similar programs to ensure it is easy for households to apply.

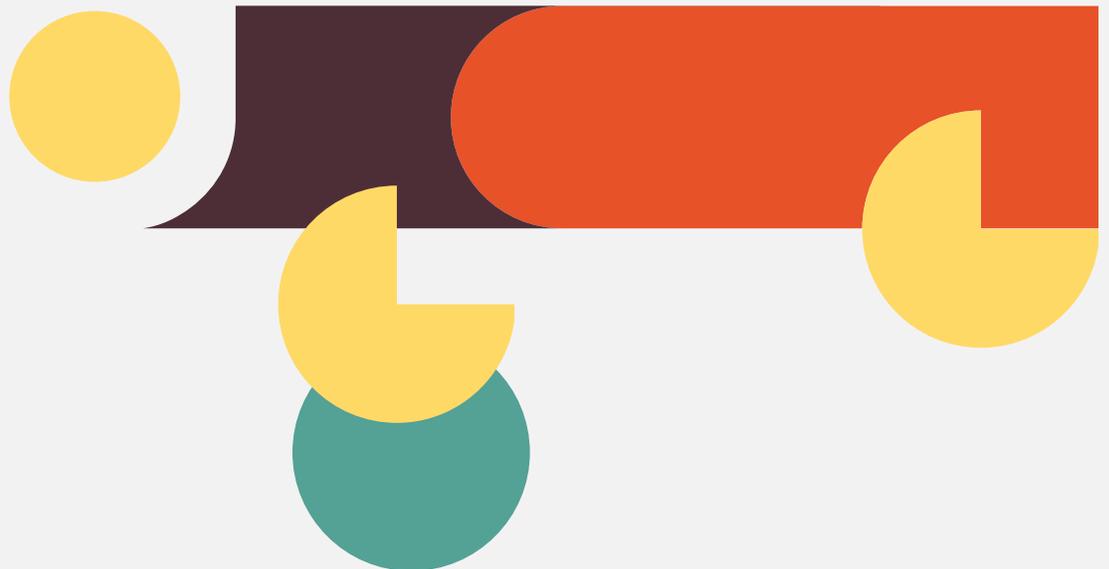
# CONCLUSION

---

It is evident that without explicit action, low- and moderate-income (LMI) households and communities of color are likely to face increased energy burdens during the transition to a clean energy system. Although states and regions differ in their administration of energy assistance programs, depending on program funding and political prioritization, a variation that is highly problematic, there are common national challenges and barriers in addressing the energy burden as identified by experts in the field. These challenges include the lack of upfront costs by LMI households to transition into energy efficiency and the lack of funding for programs, inefficient program designs, administrative and participation barriers, lack of renter participation, and limits of our current utility models.

With adequate analysis and targeted programs and policies for LMI households, the energy transition is an opportunity to invest in reducing energy burdens systematically. Addressing and ultimately eradicating the energy burden should be a shared responsibility amongst state agencies and multiple stakeholders. Solutions and recommendations to address energy burden during the transition to clean energy include increasing funding and program investments for LMI households, improving program and policy design that explicitly address energy burden, increasing program participation, creating more efficient buildings and support for renters, and improving utility rates and targeting of programs. A solution that was uplifted the most by experts is the adoption of community-owned energy and community solar policies. If designed right, the benefits of community solar can be the most accessible LMI households. This includes strong policies with requirements placed on the utility companies to interconnect those systems to the grid without exorbitant cost or administrative burdens placed on community-based organizations, nonprofit or cooperative solar developers. According to the interviewees, these solutions and recommendations will help the effectiveness of policies and energy assistance programs as we transition to clean energy.

Given the low participation rates in energy assistance programs, further research is needed to evaluate the effectiveness of energy assistance programs like LIHEAP to then move towards designing policies and programs that promote a targeted reduction of energy burden with long-term impacts on LMI households.



# APPENDIX

---

## Appendix A. Background on residential energy<sup>71</sup>

Electricity reaches homes via electric utilities who distribute electricity via the wires they own. They acquire electricity in two ways. In fully regulated states, like in the Southeast, the utilities also own large power generating stations; in these cases, the entire structure is a monopoly regulated by state utility commissions and provided with a guaranteed rate of return on investment. In other states, like the Northeast and most of the Mid-Atlantic region — the so-called deregulated states — electric power plants are owned by unregulated companies that sell power into a wholesale market where the utilities that bring it to homes purchase it, with the power flow to ensure reliability being managed by regional transmission operators. Distribution companies, which are regulated by state utility commissions, purchase the electricity wholesale and resell it to households and businesses. In some deregulated states (Maryland for instance), the unregulated generation companies, like Exelon, are allowed to own the distribution companies, creating de facto quasi-monopolies of a new kind — partly regulated and partly not.

Natural gas is brought to homes similarly to electricity in states that are deregulated. Regulated distribution companies purchase natural gas wholesale from pipeline companies not subject to state regulation and resell it to homes and businesses. Propane, fuel oil, and wood operate outside of the state regulatory system altogether.

Electric and gas utilities can be owned by investors, such as individual shareholders, pension funds, hedge funds, and the like; these companies are called “Investor-Owned Utilities” or IOU’s. Some utilities are also cooperatively-owned; this is typical in rural areas. Finally, there are also publicly-owned utilities, which are owned by local or state governments or, in some cases, like the Tennessee Valley Authority and the Bonneville Power Administration, which are generation and transmission entities, owned by the federal government.

According to the U.S. Energy Information Administration (EIA), about 3,000 electric distribution companies were operating in the United States in 2017<sup>72</sup>. IOUs currently dominate the energy landscape in the United States. Although they are the smallest number of electric utilities in the U.S. (Image A), they served 72% of U.S. electricity customers in 2017<sup>73</sup>. In most states, IOUs are the largest electricity retailers. Companies like Exelon, Duke, Mid-American (owned by Berkshire Hathaway), Southern Company, and American Electric Power wield enormous influence at the state level, where most regulatory policy is made. This is true even in areas where generation is deregulated like New York, New Jersey, and Maryland. It is also true where the electric utilities are fully regulated, including generation, as for instance, in Georgia and Florida.

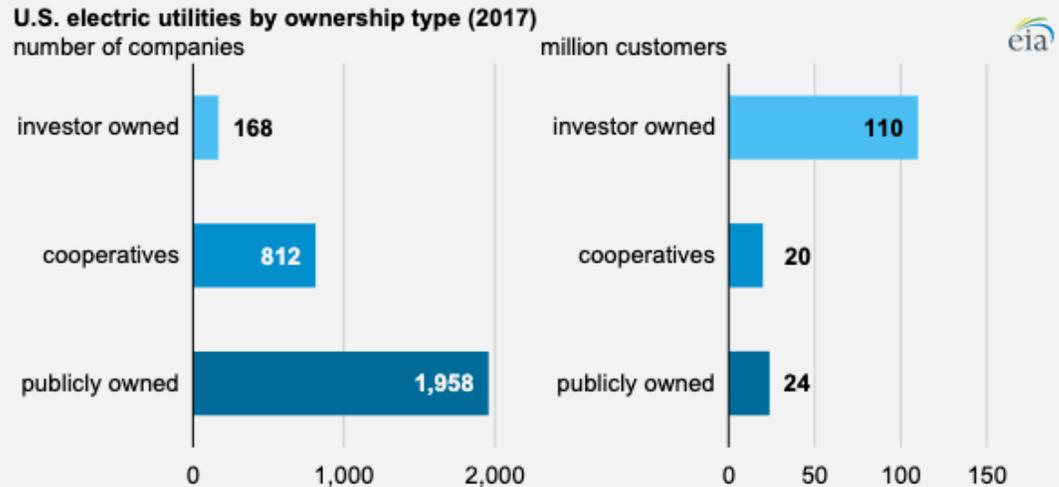


Image A. U.S. Energy Information Administration (EIA)

## Appendix B: Methodology

The Just Solutions Collective reached out to experts that work in low-income and BIPOC-frontline communities across the U.S. and asked their input on how to best address access to energy assistance, identify challenges and barriers to energy assistance, and get partner expert's views on potential solutions, namely BIPOC-frontline supported state programs or policies of energy assistance that work well. In addition, to identify opportunities to ensure the transition is equitable and just.

### Interviews with Community Practitioners and National Advocates

Interviews were conducted with experts representing organizations in California, Georgia, Iowa, New York, Maryland, Minnesota, Washington, and others that work nationally. Experts include community-based organizations, community action authorities, social service practitioners, public policy advocates, energy assistance practitioners, and technical advisors.

Experts provided a wealth of important insight, expertise, recommendations, and perspectives on the opportunities and challenges with addressing the energy burden and accessing energy assistance. Expert's perspectives are deeply grounded in a commitment to centering BIPOC frontline community voices and those most impacted by the energy burden. While not fully comprehensive of all the important work within the expert's scope of work, this report provides a snapshot of relevant and important programs, policies, and strategies being advanced by the experts and communities across the country.

The purpose of this paper is to highlight that energy burden reduction is an important part of the energy transition. Although we spoke to various experts, this work does not represent every state or nation, however, it is meant to provide an understanding of challenges and opportunities to address the energy burden. A list of participating organizations and individuals can be found in the acknowledgment section of the paper.

Below is a brief categorical description of their work and the ways they address the energy burden and provide energy assistance or policy solutions for a clean energy future.

## Experts Scope of Work

Community-Based Organizations and Community Action Authorities include community organizers and programs and policy strategists. Experts also include practitioners working in community action authorities that help administer LIHEAP and work with local legislators under the Community Action Association. Social Service Practitioners include nonprofits that advocate for utility customers. Experts provide educational presentations to help consumers understand their utility bills and ways to reduce energy. Public Policy Advocates work on energy and utility issues such as bill assistance and consumer protection for low-income households. Others conduct policy advocacy work by tracking the development of policy and thinking through legislation, the regulatory arena, and rulemaking. Energy Assistance Practitioners include advocates for customers in regulatory arenas with regard to utility services. They represent residential customers before the Public Service Commission and federal agencies and provide them with direct energy assistance, resources, guides, and legislative advocacy. Technical Advisors include attorneys that provide legislative advocacy at the state and local levels. Experts also include data scientists that assist utilities with energy equity initiatives and energy assistance programs: needs assessments, evaluations, program design, and implementation.

## Appendix C. List of existing programs & policies that work well

	Program Name	State	Type	About
1.	California Alternate Rates for Energy (CARE)	CA	Rate Percentage Discounts Programs	Low-income customers that are enrolled in the CARE program receive a 30-35 %discount on their electric bill and a 20 % discount on their natural gas bill.
2.	Energy Savings Assistance (ESA)	CA	Energy Assistance	Provides no-cost weatherization services to consumers who meet the CARE income limits.
3.	Equitable Energy Efficiency (E3)	CT	Program/Policy Framework	The Connecticut Department of Energy and Environmental Protection (DEEP) created the Equitable Energy Efficiency (E3) which are equity principles for energy programs. The principles can support the framing of programs.

4.	<a href="#">Des Moines 100%, 24/7 Carbon-Free Electricity</a>	IA	24/7 Carbon-Free Energy Resolution	Des Moines City Council passed a resolution in 2021 that sets a timeline for the shift from fossil fuels to renewable energy sources including wind and solar power. By 2035, the city hopes to achieve 100%, 24/7 carbon-free electricity. Meaning the grid must have carbon-free sources of power available all the time, a goal to which no other American city has committed.
5.	<a href="#">IMPACT Community Action Partnership</a>	IA	Community Action Partnership	IMPACT assists residents to apply to energy assistance programs. Polk County partnered with IMPACT and has successfully distributed more funds than the entire rest of the state of Iowa.
6.	<a href="#">Solar Energy System Tax Credits</a>	IA	Solar Tax Credit	A Solar Energy System Tax Credit is available for taxpayers who install a solar energy system on property located in Iowa
7.	<a href="#">Utility Discount Rates for Low-Income Consumers in Massachusetts</a>	MA	Rate Percentage Discounts Programs	<b>State law</b> requires all non-municipal electric and gas companies to provide discounted rates to low-income customers who receive or are eligible for public benefits. Customers can get a discount on their electric and gas bills if their income is at or below 60% of state median income and receive any benefits under any income-tested benefits program.
8.	<a href="#">Office of Home Energy State Program (OHEP)</a>	MD	Energy Assistance	The Office of Home Energy Programs (OHEP) provides bill assistance to low-income households in the State of Maryland to make their energy costs more affordable and to help with the prevention of loss and the restoration of home energy service.

9.	<a href="#">Electric Universal Service Program (EUSP)</a>	MD	Energy Assistance	EUSP assists low-income electric customers to retire utility bill arrearages, make current bill payments, and access home weatherization following the restructuring of Maryland's electric companies and electricity supply market.
10.	<a href="#">EmPOWER (Maryland)</a>	MD	Energy Assistance	EmPOWER programs have the potential to provide cost-effective long-term benefits, including reduced energy consumption and rates, avoided investments in energy transmission and distribution, job creation, and improvements to the environment. [EmPOWER is a well-recognized 10 yr program, focused on residential households.
11.	<a href="#">Community Solar Pilot Program</a>	MD	Solar Pilot Program	The Maryland Public Service Commission has adopted regulations for a Community Solar Pilot Program in Maryland, with an emphasis on providing renewable energy benefits for low and moderate-income customers.
12.	<a href="#">Critical Medical Needs Program (CMNP)</a>	MD		The CMNP provides rapid assistance with past-due energy bills and pending utility service shutoffs to medically vulnerable households who meet income eligibility guidelines. The Program relies on trained "Navigators" housed within medical facilities and community assistance agencies.

13.	<a href="#">Minnesota's Energy Assistance Program expands eligibility to offer more benefits.</a>	MN	Energy Assistance Program	In 2021, the Minnesota Department of Commerce, which operates the Energy Assistance Program, raised the income eligibility limit to 60% of Minnesota's median income levels. With these changes, over 600,000 Minnesota households are income-eligible for Energy Assistance, significantly expanding who can receive this essential help.
14.	<a href="#">EmPower New York</a>	NY	Ratepayer-funded energy efficiency program	Provides no-cost weatherization assistance to income-eligible households that are earning under 60% of area median income. For households in a slightly higher income bracket, the state has a subsidized program where they provide about 50% subsidy direct grant off the cost of the weatherization improvements.
15.	Warm and Dry on the West Side (Green and Healthy Homes Initiative)	NY	Energy Efficiency	NYSERDA weatherization and energy efficiency funds are combined with the affordable housing agency in New York to address some of those general conditions that can be barriers to people accessing energy efficiency. The program delivers deep comprehensive improvements to people's homes: replace a roof and fix leaks in the foundation and remediate a moldy basement and insulate their walls, do air sealing, and put in a new heating system.
16.	<a href="#">PUSH for Clean Heat</a>	NY	Community-based Program	A community-based outreach and education campaign led by PUSH Buffalo centered around helping residents and businesses in Erie County reduce greenhouse gas (GHGs) emissions and install energy-efficient equipment.

17.	<a href="#">NY-Sun Initiative</a>	NY	Solar Policy Initiative	A New York State policy that enables community solar projects to be developed, owned, and controlled by community-based organizations and cooperatives. NY-Sun provides various resources to help New Yorkers harness the power of the sun.
18.	<a href="#">Washington Clean Energy Transformation Act (CETA)</a>	WA	100% Clean Energy Act	CETA commits Washington to an electricity supply free of greenhouse gas emissions by 2045. The law provides safeguards to maintain affordable rates and reliable service. It also requires an equitable distribution of the benefits from the transition to clean energy for all utility customers and adds and expands energy assistance programs for low-income customers.
19.	<a href="#">Utilities and Transportation Commission (UTC) extends disconnection and late fee moratorium for investor-owned utilities</a>	WA	Extension of disconnection and late fee moratorium	<p>The Utilities and Transportation Commission (UTC) extended protections for electric and natural gas customers struggling to pay bills due to the ongoing impacts of COVID-19.</p> <p>State regulators extended an order, previously set to expire April 30, 2021 preventing investor-owned energy utilities from disconnecting customers for nonpayment through July 31, 2021. The order also requires the utilities to continue to waive late fees through late January 2022.</p>
20.	<a href="#">Washington's IOU places \$2,500 automated credit towards LMI households</a>	WA	Automated credit towards LMI households	Investor-owned utilities (IOUs) in Washington have in place a \$2,500 a year automatic credit towards low-income households with high past dues to arrearages.

21.	Energy For All (HB 1490)	WA	Energy Assistance	Maintains residential electricity and heating service for low-income households and households with people with disabilities. More information on the progress of the bill can be found <a href="#">here</a> .
22.	Community Action Authorities	All	Community Action Authorities	CAA's support people's access to programs and services. They offer classes, one-on-one meetings, and follow-ups to ensure people are successfully receiving aid.
23.	Utilities Affordability Programs	All	Affordability Programs	Some utilities have affordability programs with a goal to bring down an electricity or natural gas bill to a certain percentage of income. They are typically surcharges that are put on everyone's utility bills to help fund additional discounts for customers who qualify.
24.	Arrears Forgiveness Program	All	Arrears Forgiveness Program	The Forgiveness Program, also known as the Arrears Management Program or AMP, allows customers to get on a payment plan. If customers make payments on time, a portion of their past-due amount will be forgiven. Affordability programs usually include an arrears forgiveness program.

# Endnotes

1. "Low-Income Community Energy Solutions." Energy.gov, <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions#:~:text=How%20is%20Low, costs%20of%20living>.
2. Note: When referring to LMI, it is important to note that there is diversity in financial circumstances and security within the LMI construct.
3. Howat, John, and Stephen Rouzer. "New Report Tackles Energy System Inequities, Opportunities during the Clean Energy Transition." National Consumer Law Center, 5 Mar. 2019, <https://www.nclc.org/media-center/new-report-tackles-energy-system-inequities-opportunities-during-the-clean-energy-transition.html>.
4. Schaefer, Aiko. "Regenerative & Just 100% Policy Building Blocks Released by Experts from Impacted Communities." Just Solutions Collective, 21 Jan. 2020.
5. Drehobl, Ariel, and Roxana Ayala. "Energy Burden Research." ACEEE, American Council for an Energy-Efficient Economy, <https://www.aceee.org/energy-burden>.
6. Ibid.
7. Fisher, et al. "Fisher, Sheehan & Colton." Home Energy Affordability Gap, May 2013, <http://www.homeenergyaffordabilitygap.com/>.
8. Note: For some households energy affordability at six percent of income is still unaffordable due to insufficient income to pay for basic necessities.
9. Howat, John, and Stephen Rouzer. "New Report Tackles Energy System Inequities, Opportunities during the Clean Energy Transition." National Consumer Law Center, 5 Mar. 2019.
10. Fisher, et al. "Fisher, Sheehan & Colton." Home Energy Affordability Gap, May 2013, <http://www.homeenergyaffordabilitygap.com/>.
11. Drehobl, Ariel, and Roxana Ayala. "Energy Burden Research." ACEEE, American Council for an Energy-Efficient Economy, <https://www.aceee.org/energy-burden>.
12. "Frequently Asked Questions (Faqs) - U.S. Energy Information Administration (EIA)." Frequently Asked Questions (FAQs) - U.S. Energy Information Administration (EIA), <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>.
13. "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." June Heat Wave in the Northwest United States Resulted in More Demand for Electricity - Today in Energy - U.S. Energy Information Administration (EIA), <https://www.eia.gov/todayinenergy/detail.php?id=48796>.
14. Bednar, Dominic J., and Tony G. Reames. "Recognition of and Response to Energy Poverty in the United States." Nature News, Nature Publishing Group, 23 Mar. 2020, <https://www.nature.com/articles/s41560-020-0582-0>.
15. Keaton, Madilyn. "Who Pays the Most? Covid-19, Utility Accessibility, and Race." RHLS, RHLS, 21 May 2020, <https://www.rhls.org/2020/05/who-pays-the-most-covid-19-utility-accessibility-and-race/>.
16. "Low-Income Community Energy Solutions." Energy.gov, <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions#:~:text=How%20is%20Low, costs%20of%20living>.
17. Note: When referring to LMI, it is important to note that there is diversity in financial circumstances and security within the LMI construct.
18. Howat, John, and Stephen Rouzer. "New Report Tackles Energy System Inequities, Opportunities during the Clean Energy Transition." National Consumer Law Center, 5 Mar. 2019, <https://www.nclc.org/media-center/new-report-tackles-energy-system-inequities-opportunities-during-the-clean-energy-transition.html>.

tion.html.

19. Schaefer, Aiko. "Regenerative & Just 100% Policy Building Blocks Released by Experts from Impacted Communities." Just Solutions Collective, 21 Jan. 2020.
20. Noor, Dharna. "Poor Households Spend Nearly Four Times as Much on Utilities as Well-off Ones." Gizmodo, Gizmodo, 11 Sept. 2020, <https://gizmodo.com/poor-households-spend-nearly-four-times-as-much-on-util-1845010294>.
21. "Low-Income Community Energy Solutions." Energy.gov, <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions#:~:text=How%20is%20Low,costs%20of%20living>.
22. Fisher, Sheehan, and Colton. "Home Energy Affordability Gap Analysis" May 2013.
23. "LIHEAP Performance Measures Report." Liheappm.acf.hhs.gov, U.S. Department of Health and Human Services, 18 Oct. 2018, (Ref. Table A3b), [https://stage.liheappm.acf.hhs.gov/sites/default/files/private/notebooks/2017/FY17\\_HEN\\_Part3\\_Perf\\_Meas.pdf](https://stage.liheappm.acf.hhs.gov/sites/default/files/private/notebooks/2017/FY17_HEN_Part3_Perf_Meas.pdf).
24. Drehobl, A., L. Ross, and R. Ayala. 2020. How High are Household Energy Burdens? Washington, DC: American Council for an Energy-Efficient Economy.
25. Ibid.
26. Ibid.
27. Drehobl, Ariel. "Poor Households Pay More for Energy, but Efficiency Can ..." Low-Income Households Pay More for Energy, but Efficiency Can Help, U.S. News, 30 Sept. 2020, <https://www.usnews.com/news/healthiest-communities/articles/2020-09-30/poor-households-pay-more-for-energy-but-efficiency-can-help>.
28. Ibid.
29. "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." RECS: One in Three U.S. Households Faced Challenges in Paying Energy Bills in 2015, <https://www.eia.gov/consumption/residential/reports/2015/energybills/>.
30. "Low Income Home Energy Assistance Program (LIHEAP)." The Administration for Children and Families, U.S. Department of Health & Human Services, 1 Nov. 2019, <https://www.acf.hhs.gov/ocs/low-income-home-energy-assistance-program-liheap>.
31. "Weatherization Assistance Program." Energy.gov, Office of Energy Efficiency & Renewable Energy, <https://www.energy.gov/eere/wap/weatherization-assistance-program>.
32. "Low-Income Energy Efficiency Programs." ACEEE, American Council for an Energy-Efficient Economy (ACEEE), <https://www.aceee.org/topic/low-income>.
33. "Low Income Home Energy Assistance Program (LIHEAP)." The Administration for Children and Families, U.S. Department of Health & Human Services, <https://www.acf.hhs.gov/ocs/fact-sheet/liheap-fact-sheet>.
34. Ibid.
35. "Welcome to the LIHEAP Performance Management Website.", Administration for Children & Families, <https://liheappm.acf.hhs.gov/>.
36. Ibid.
37. "Recognition of and Response to Energy Poverty in the United States." Nature News, Nature Publishing Group, 23 Mar. 2020, <https://www.nature.com/articles/s41560-020-0582-0>.
38. Drehobl, A., L. Ross, and R. Ayala. 2020. How High are Household Energy Burdens? Washington, DC: American Council for an Energy-Efficient Economy.
39. History of LIHEAP. LIHEAP Clearinghouse, [https://liheapch.acf.hhs.gov/sites/default/files//webfiles/docs/OK\\_Chocotaw-Nation\\_2022.pdf](https://liheapch.acf.hhs.gov/sites/default/files//webfiles/docs/OK_Chocotaw-Nation_2022.pdf).
40. "Recognition of and Response to Energy Poverty in the United States." Nature News, Nature Publishing Group, 23 Mar. 2020, <https://www.nature.com/articles/s41560-020-0582-0>.

41. "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." June Heat Wave in the Northwest United States Resulted in More Demand for Electricity - Today in Energy - U.S. Energy Information Administration (EIA), <https://www.eia.gov/todayinenergy/detail.php?id=48796>.
42. "Frequently Asked Questions (Faqs) - U.S. Energy Information Administration (EIA)." Frequently Asked Questions (FAQs) - U.S. Energy Information Administration (EIA), <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>.
43. Ibid.
44. Baskin, Kara. "Why Energy Justice Is a Rising Priority for Policymakers." MIT Sloan, MIT Sloan School of Management , 27 Jan. 2021, <https://mitsloan.mit.edu/ideas-made-to-matter/why-energy-justice-a-rising-priority-policymakers>.
45. "What Is Energy Justice?" Initiative for Energy Justice, 15 Feb. 2022, <https://iejusa.org/>.
46. Schaefer, Aiko. "Regenerative & Just 100% Policy Building Blocks Released by Experts from Impacted Communities." Just Solutions Collective, 21 Jan. 2020.
47. "Movement Generation Justice & Ecology Project." Movement Generation, <https://movementgeneration.org/movement-generation-just-transition-framework-resources/>.
48. Ibid.
49. "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." Renewable Energy Explained - Incentives - U.S. Energy Information Administration (EIA), U.S. Energy Information Administration, <https://www.eia.gov/energyexplained/renewable-sources/incentives.php>.
50. Benoit , Philippe, and David R. Hill. "The Poor Pay More for Energy - the US Can Correct the Imbalance." The Poor Pay More for Energy — the US Can Correct the Imbalance, The Hill, 20 July 2021, <https://thehill.com/opinion/energy-environment/563849-the-poor-pay-more-for-energy-the-us-can-correct-the-imbalance?r=1>.
51. Shaban, Hassan. Video Call Interview. July 8th, 2021.
52. Howat, John. Video Call Interview. July 6th, 2021.
53. Shaban, Hassan. Video Call Interview. July 8th, 2021.
54. Carmody, Paula. Video Call Interview. July 20th, 2021.
55. "Multifamily and Manufactured Housing Program." Home, American Council for an Energy-Efficient Economy (ACEEE), 1 Feb. 2009, <https://www.aceee.org/content/multifamily-and-manufactured-housing-program>.
56. "Energy Justice in Maryland's Residential and Renewable Energy Sectors." Institute for Energy and Environmental Research, <https://ieer.org/resource/energy-issues/energy-justice-marylands-residential/>.
57. Shah, Zafar. Video Call Interview. August 4th, 2021.
58. Meraay, Hibba. "Energy Monopolies: The Dark Side of the Electricity Business (Episode 74)." Institute for Local Self-Reliance, 21 June 2019, <https://ilsr.org/energy-monopolies-blp-episode-74/>.
59. Judson, Tim. "New York Just Proved Why Bailing out Nuclear Power Is a Bad Idea · NIRS." New York Just Proved Why Bailing Out Nuclear Power Is a Bad Idea, Nuclear Information and Resource Service, 3 Aug. 2016, <https://www.nirs.org/new-york-just-proved-why-bailing-out-nuclear-power-is-a-bad-idea/>.
60. Hartenstein, Crista Hartenstein. "New Jersey Passes \$300 Million Nuclear Power Subsidy." CAPER, Center for Advanced Power Engineering Research , 13 Apr. 2018, <https://caper-usa.com/news/new-jersey-passes-300-million-nuclear-power-subsidy/>.
61. "Community Solar Pilot Program." Electricity, Maryland Public Service Commission, 23 June 2020, <https://www.psc.state.md.us/electricity/community-solar-pilot-program/>.

62. "Minnesota's Energy Assistance Program Expands to Offer More Benefits, Cold Weather Rule Protections Start Earlier." Minnesota.gov, Minnesota Department of Commerce, 27 Sept. 2021, <https://mn.gov/commerce/media/news/?id=17-500590>.
63. Ibid.
64. "CLEAN ENERGY—ELECTRIC UTILITIES—VARIOUS PROVISIONS." Lawfilesext.leg.wa.gov, State of Washington, 13 May 2019, <https://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Bills/5354-S.pdf?q=20220225221526>.
65. "Low Income Home Energy Assistance Program (LIHEAP)." Welcome to Benefits.gov | Benefits.gov, Benefits.gov, <https://www.benefits.gov/benefit/623>.
66. "Energy Assistance Programs Beyond LIHEAP." The National Council on Aging, The National Council on Aging, 25 Apr. 2018, <https://www.ncoa.org/article/energy-assistance-beyond-liheap>.
67. "Rural Utilities Loan Interest Rates." Rural Development, U.S. Department of Agriculture, 28 Feb. 2022, <https://www.rd.usda.gov/page/rural-utilities-loan-interest-rates>.
68. "Conservation Improvement Programs." Minnesota.gov, Minnesota Department of Commerce, 5 Nov. 2020, <https://mn.gov/commerce/industries/energy/utilities/cip/>.
69. "What Is RentHelpMN? ." RentHelpMN COVID-19 Emergency Rental Assistance, State of Minnesota , <https://www.renthelpmn.org/>.
70. "Solar for All Means Solar for You." NYSEDA, New York State, <https://www.nyserda.ny.gov/All-Programs/NY%20Sun/Solar%20for%20Your%20Home/Community%20Solar/Solar%20for%20All>.
71. Arjun Makhijani of the Institute for Energy and Environmental Research provided some of the background information on utilities as part of a review of a draft of this report.
72. "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." Investor-Owned Utilities Served 72% of U.S. Electricity Customers in 2017 - Today in Energy - U.S. Energy Information Administration (EIA), 15 Aug. 2019, <https://www.eia.gov/todayinenergy/detail.php?id=40913>.
73. Ibid.



---

## **ENERGY BURDEN & THE CLEAN ENERGY TRANSITION**

 **JUST SOLUTIONS**  
Collective

Suite 480  
1000 Broadway, Oakland, CA 94607, USA

EMAIL [hello@justsolutionscollective.org](mailto:hello@justsolutionscollective.org)  
WEBSITE [justsolutionscollective.org](http://justsolutionscollective.org)