

# **Energy Justice Background Brief**

## ***For State Roundtable Co-Hosted by NARUC, NASEO, and NGA***

**April 21 & 22, 2022**

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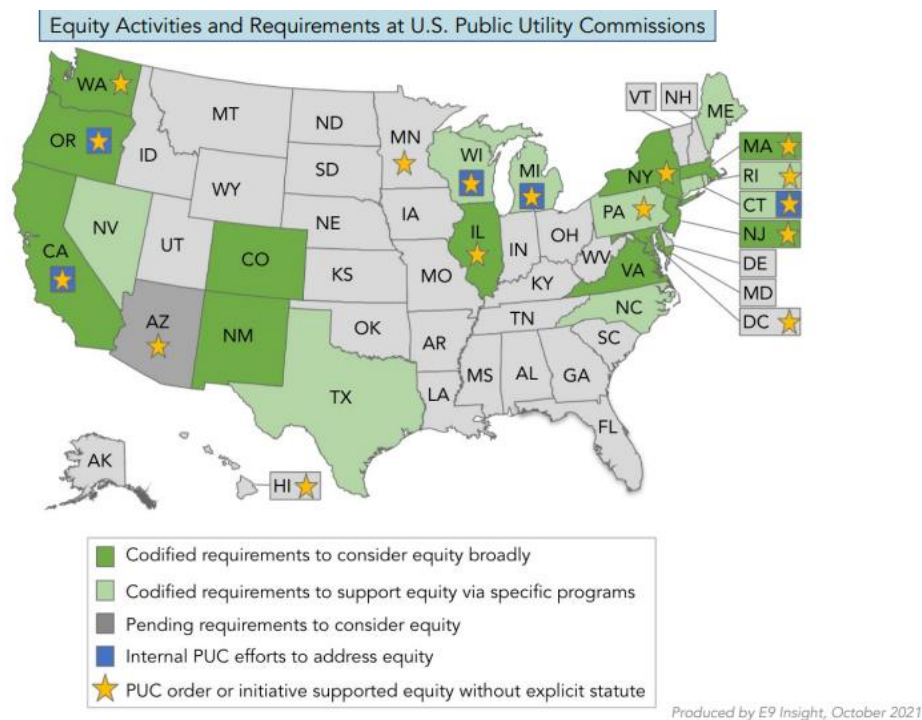
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## Introduction

### The Growing Recognition of Energy Justice in Decision-Making

In recent years, energy justice has emerged as a priority for decision-makers, particularly as climate change and the energy sector’s transition away from fossil fuels towards low-carbon energy resources have highlighted the social, economic, and health disparities inherent in the current energy system. The recent focus on energy justice at the state and federal levels has been driven by changing state legislative mandates, additional state programs and policies, focused federal investments, and societal recognition of inequities. Recent state legislation includes Colorado’s [SB 350, 2021](#), Illinois’ Climate and Equitable Jobs’ Act ([SB 2408, 2021](#)), Maine’s [HP 1251, 2021](#), [Massachusetts’ S.9, 2021](#), and Oregon’s [HB 2475, 2021](#).<sup>1</sup> Even in states without legislative mandates, various state agencies have initiated efforts to address equity. For example, Figure 1 illustrates the nature of these considerations at public utility commissions (PUCs) across the country. Many of these are a result of state legislation and policy actions. The chapters below identify additional state examples from Public Utility Commissions, State Energy Offices, and Governor’s Offices.

Figure 1. State PUC Equity Considerations



In early 2021, President Biden issued [Executive Order 14008](#), directing 40 percent of the overall benefits from federal climate and clean energy investments towards disadvantaged communities in an initiative called Justice40. In July 2021, the Office of Management and Budget released [Interim Guidance for the Justice40 Initiative](#), outlining requirements for federal agencies that manage Justice40 programs. The

<sup>1</sup> Farley, C., J. Howat, J. Bosco, N. Thakar, J. Wise, J. Su, L. Schwartz (technical editor). (2021). *Advancing Equity in Utility Regulation*. Lawrence Berkeley National Laboratory. <https://emp.lbl.gov/publications/advancing-equity-utilityregulation>

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interim guidance included an interim definition of disadvantaged communities and actions required of state agencies, such as State Energy Offices, that manage Justice40 programs. On February 18, 2022, the White House Council on Environmental Quality released the beta version of its [Climate and Economic Justice Screening Tool \(CEJST\)](#) to help federal agencies identify disadvantaged communities that are marginalized, underserved, and overburdened by pollution.<sup>2</sup> On the same day, the U.S. Environmental Protection Agency released an update to its [EJSCREEN](#) tool, an environmental justice mapping and screening tool that may complement CEJST. Additional guidance from the Administration on the Justice40 initiative is forthcoming.

### What is Energy Justice?

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

While the definition of energy justice can vary among organizations and stakeholders, it generally encompasses the dimensions of:

- **energy burden** – the proportion of energy expenditures relative to overall household income
- **energy insecurity** – the hardships households face when meeting basic household energy needs
- **energy poverty** – the lack of access to reliable and affordable energy
- **energy democracy** – the notion that communities have agency in shaping their energy future<sup>3</sup>

For this roundtable event, the hosts propose a working definition of energy justice, adapted from the Initiative for Energy Justice, as:

**The goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those historically harmed by the energy system. Energy justice explicitly centers the concerns of marginalized communities and aims to make energy more accessible, affordable, clean, reliable, resilient, and managed by and for all communities.**<sup>4</sup>

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<sup>2</sup> Climate and Economic Justice Screening Tool (2022). <https://screeningtool.geoplatform.gov/en/>

<sup>3</sup> Baker, S., DeVar, S., & Prakash, S. (2019). *The Energy Justice Workbook*. Initiative for Energy Justice. <https://iejusa.org/workbook/>

<sup>4</sup> Ibid.

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### What's the difference between energy justice, environmental justice, and climate justice?

Energy justice, environmental justice, and climate justice are inherently connected and together represent the complex lived experiences faced by marginalized communities. **Environmental justice** specifically involves the 'recognition and remediation of the disproportionately high and adverse human health or environmental effects on communities of color and low-income communities.' **Climate justice** focuses on the 'remediation of the impacts of climate change on poor people and people of color, and compensation for harms suffered by such communities due to climate change.' Together, these frameworks can help define a vision for a **just transition**, a concept that is defined by the Just Transition Alliance as a principle, a process, and a practice. The principle of a just transition supports the co-existence of healthy economy and clean environment, and the process and practice of achieving this vision is one that is fair and does not cost workers or community residents their health, environment, jobs of economic assets.

Baker, S., DeVar, S., & Prakash, S. (2019). *The Energy Justice Workbook*. Initiative for Energy Justice. [HYPERLINK "https://iejusa.org/workbook/" https://iejusa.org/workbook/](https://iejusa.org/workbook/)

Just Transition Alliance. What is Just Transition? <http://jtalliance.org/what-is-just-transition/>

To conceptualize how energy justice is achieved, it may be useful to think of it within a framework of four central pillars. These pillars, which are often discussed in energy justice literature and may vary slightly in terminology, will be used to frame the roundtable discussions. These pillars are:

- **Distributional justice** – an inherently spatial concept<sup>5</sup> that concerns both the distribution of costs, hazards, or externalities, and the distribution of benefits and access to modern energy systems and services, throughout society.<sup>6</sup>
- **Procedural justice** – relates to the accessible and meaningful participation of individuals in the energy decision-making processes.
- **Recognition justice** – seeks to acknowledge the various needs, rights, and experiences of different groups in relation to the energy system.<sup>7</sup>

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<sup>5</sup> McCauley, D., Heffron, R.J., Stephan, H., & Jenkins, K. (2013). *Advancing energy justice: the triumvirate of tenets*. International Energy Law Review. [https://research-repository.st-andrews.ac.uk/bitstream/handle/10023/6078/IELR\\_2013.pdf?sequence=1&isAllowed=y](https://research-repository.st-andrews.ac.uk/bitstream/handle/10023/6078/IELR_2013.pdf?sequence=1&isAllowed=y)

<sup>6</sup> Sovacool, B.K., & Dworkin, M.H. (2014). *Global Energy Justice: Problems, Principles, and Practices*. Cambridge University Press.

<sup>7</sup> Gillard, R., Snell, C., Bevan, M. (2017). *Advancing an energy justice perspective of fuel poverty: Household vulnerability and domestic retrofit policy in the United Kingdom*. Energy Research & Social Science. <http://dx.doi.org/10.1016/j.erss.2017.05.012>

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- **Restorative justice** – aims to repair the harm done to people (and/or society/nature) and can pinpoint where prevention needs to occur.<sup>8</sup>

This background document provides a brief overview of a few key energy justice issues in relation to the pillars presented above. Additionally, the background documents include state examples. The key topics discussed on the following pages are (1) participation in decision making, (2) customer arrearages and affordability, (3) equity in clean energy research and development, and (4) metrics. While this background brief is focused on electricity, energy justice, from a state policy perspective can extend to delivered fuels and of course the impact of extraction, refining, and other energy processing and distribution.

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<sup>8</sup> Heffron, R.J., & McCauley, D. (2017). *The concept of energy justice across the disciplines*. Energy Policy. <http://dx.doi.org/10.1016/j.enpol.2017.03.018>

## **Chapter 1. Participation in Decision Making**

Tanya Paslawski, NARUC

One of the critical realizations in exploring a more just energy system is the need for direct participation of communities and community representatives in energy-related decision-making processes. Yet, many of the current policy development and implementation frameworks are largely inaccessible to those without the time and resources to pay a professional to represent them. While public forums may be available as a source of community input, often the people who show up to speak may not fully understand the parameters of an issue or might raise matters outside of the direct topic of an event so that their feedback or concerns are too easily dismissed as irrelevant or out of scope. Further, community members are typically not at the table when policies and programs are being developed and may be left only with the opportunity to respond to what others have created.

Meaningful engagement with communities throughout the decision-making process, in ways that are authentic and transparent, is necessary to further energy justice and achieve the customer participation that will be needed to meet state carbon reduction and clean energy goals. The success of programs that involve customer-located distributed energy resources (DERs), energy efficiency, community-based energy, and adoption of new technologies will require customers that are knowledgeable and willing to work with their utility. Today, many citizens are largely unaware of the process by which energy policy is made and rates are set. Further, many distrust the motivations of policy makers and utilities due to historic harm from the legacy energy system and systemic discrimination. Without direct and open involvement of communities in the decisions about how the future energy system will be structured, we will be unable to attain the trust and empowerment necessary to be successful.

This backgrounder explores foundational considerations that can be used in reevaluating or developing decision making processes that genuinely engage communities, honor local priorities, and advance meaningful pathways to cleaner and more just energy policies and programs.

### **Community Engagement Frameworks**

Effective community participation in the development and implementation of energy policy can be difficult. It can be particularly hard in regulatory proceedings that may have rules and statutory requirements that govern procedures, and requirements about what information or evidence can and cannot be considered in decision making. Historical and legacy influences on decision making processes can preclude meaningful change. An assessment of the processes and procedures in place today is an important step in making them more inclusive, including where barriers to engagement exist. The assessment should include a determination about what is within an organization's ability to alter in the normal course of business, what may require a formal proceeding to change, and what requires a legislative solution.

There are a number of tools and frameworks that have been developed on how to foster genuine inclusiveness in decision making and define a vision of justice and equity in organizations. A 2020

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National Association of State Energy Offices (NASEO) publication<sup>9</sup> identified several approaches that decision makers may find useful in considering actions to increase involvement of communities in energy policy and program development. One example is the Spectrum of Community Engagement to Ownership.<sup>10</sup> It offers a staged approach to community capacity building in governance and collaboration to transform decision making and solutions development activities, starting with the most basic and least impactful actions through active democratic participation. The steps are as follows:



The Spectrum of Community Engagement to Ownership was designed to:

1. acknowledge marginalization
2. assert a clear vision
3. articulate a development process
4. assess community participation efforts

There are detailed actions and outcomes associated with each of the stages to help decision makers identify where they are today and where they want to go.

Another tool is power mapping - categorizing the influence and alignment of rights holders, impacted communities, and stakeholders to better understand how to achieve goals in diverse groups. Ultimately, the understanding of who is involved in the discussion also allows for a gap analysis of who is missing. The U.S. Department of Energy Clean Energy for Low Income Communities Accelerator is one example of power mapping in program design and implementation.<sup>11</sup>

<sup>9</sup> Designing Equity-Focused Stakeholder Engagement to Inform State Energy Office Programs and Policies: [https://naseo.org/data/sites/1/documents/publications/13-0376\\_0549\\_000208-KOEHLER%20FINAL%20cover.pdf](https://naseo.org/data/sites/1/documents/publications/13-0376_0549_000208-KOEHLER%20FINAL%20cover.pdf)

<sup>10</sup> The Spectrum of Community Engagement to Ownership <https://movementstrategy.org/resources/the-spectrum-of-community-engagement-to-ownership/>

<sup>11</sup> Department of Energy Clean Energy for Low Income Communities Accelerator <https://betterbuildingssolutioncenter.energy.gov/CELICA-Toolkit/stakeholder-engagement>.

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The National Coalition for Dialogue & Deliberation created another resource titled Resource Guide on Public Engagement.<sup>12</sup> The Guide identifies the following seven principles, or fundamental components of quality public engagement:

- Careful Planning and Preparation
- Inclusion and Demographic Diversity
- Collaboration and Shared Purpose
- Openness and Learning
- Transparency and Trust
- Impact and Action
- Sustained Engagement and Participatory Culture

The Resource Guide also includes four engagement streams: exploration, conflict transformation, decision making, and collaborative action, that offer different approaches based on the specific situation at hand. Within the engagement streams there are process distinctions that provide suggestions for who and how to bring people into the discussion that support each engagement stream. It includes considerations to better define the goals of a process or event and the actions that can help support accomplishing them.

NARUC has also published a guide on Public Utility Commission Stakeholder Engagement<sup>13</sup> (2021), which provides nearly a dozen examples of commission experiences gathering input outside of formal adjudicatory processes to inform decision making.

These are only a couple of examples. The best framework or approach for each organization or situation will be based on the starting point (assessment of authority and current engagement practices) and knowing where you want to go (goals, objectives, vision). The NASEO publication includes a guide for development of stakeholder engagement practices.<sup>14</sup>

### Social and Cultural Considerations

In addition to having a framework that supports defining and implementing intended outcomes, consideration of and respect for a variety of social and cultural experiences will bolster trust among participants and enhance community engagement. Understanding the experiences and needs of those new to the process or topic gives power and credibility to their voices in the decision-making process.<sup>15</sup> Consider, for instance, the different expertise brought forward by the real, day-to-day experiences of those most impacted by poverty, adverse health impacts, climate change, and high energy burden. Often this requires an intentional disruption of the status quo that is largely process and procedure driven. The following actions and considerations support a more welcoming and inclusive space

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<sup>12</sup> National Coalition for Dialog and Deliberation Resource Guide on Public Engagement:  
<https://www.ncdd.org/resource-guide.html>.

<sup>13</sup> NARUC Public Utility Commission Stakeholder Engagement: A Decision-Making Framework:  
<https://pubs.naruc.org/pub/7A519871-155D-0A36-3117-96A8D0ECB5DA>

<sup>14</sup> NASEO, pgs 11-12.

<sup>15</sup> NASEO, pgs 9-10 (referencing DOE Clean Energy for Low-Income Communities Accelerator: Stakeholder Engagement).

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*Time:* Authentic engagement takes time. Regular community listening sessions to better understand a wide variety of experiences and expectations can foster relationship building. Allowing for the necessary time to develop relationships and understanding as part of the decision-making process is important. Other time related considerations are length of meetings, evening or weekend meetings, and clear time commitment expectations.

*Accessible Communications:* Ensure communications are developed and delivered in a way that intentionally reaches communities that may be hard to reach, such as those without access to technology, for whom English may not be the primary language, and that recognizes different reading levels and modes of understanding material. Accessible information that can be shared to provide a basic understanding of relevant topics, issues, and processes can be circulated among community members to reach more people. Holding regular education sessions on agency processes and basic energy concepts can also support community involvement. Consider facilitated conversations between state decision makers and communities to ensure that each can understand the other.

*Investment:* Typical participants in energy policy decision making processes are professional lawyers, engineers, accountants, economists, etc. and tend to be relatively well compensated. Inviting community members to lend their time to engage in the process for free when they may already be struggling financially is a barrier to effective engagement. Building or identifying existing resources to recognize the value of community participants' time and input will allow for meaningful involvement. Adequate funding to provide stipends for travel, technology, childcare, etc. recognizes the importance of these voices in the process. Intervenor funding, mostly used in PUC proceedings, is available in some states (six as of December 2021) though there can be qualifications or requirements that make it difficult for some customers to utilize. An overview of state intervenor compensation programs at PUCs can be found in the State Approaches to Intervenor Compensation report prepared by the National Association of Utility Regulatory Commissioners (NARUC).<sup>16</sup> Further, resources that build community capacity and expertise are vital to long term changes in decision making processes.

*Accountability:* Foster transparency and accountability. Be clear about goals, objectives, and expectations and conduct and publish regular assessments on how the organization is meeting them. Fairly identify barriers or challenges and address them. Identify and collect relevant data to support understanding of who receives the benefits and burdens of the energy system, including health impacts and higher costs. Establish an evaluation framework with metrics to capture priorities, accomplishments, and areas of improvement. For an overview of metrics, see chapter 4.

## State Action

Many states and state decision makers have or are evaluating and implementing policies and actions that result in greater and more diverse stakeholder participation. The following are just a few examples:

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<sup>16</sup> State Approaches to Intervenor Compensation report prepared by the National Association of Utility Regulatory Commissioners, available at: <https://pubs.naruc.org/pub/B0D6B1D8-1866-DAAC-99FB-0923FA35ED1E>.

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- **Oregon:** [Oregon HB2021](#) requires power companies to establish a Community Benefits and Impacts Advisory Group that files biennial reports on community benefits and impacts, energy burden, opportunities to increase contracting with minority-owned businesses, actions to improve resilience in environmental justice communities, and customer experience and engagement. Costs associated with the advisory group, including compensation for members, are recoverable in rates.
- **Minnesota:** In 2020, the Minnesota State Energy Office adopted an [Affirmative Action Plan](#) to define roles and responsibilities and processes as part of their diversity, equity, and inclusion work. In addition, the office [committed](#) to actively participating in community-driven cluster meetings of weatherization and energy assistance community action programs, tribal nations, and the state; incorporating the tribal liaison at weekly leadership collaboration meetings; partnering on equity-related presentation opportunities; and developing a year-long equity education series for staff in order to more deeply rethink policy and program development with meaningful engagement of Tribal Nations as well as other Black, Indigenous, and People of Color communities.
- **California:** California's [AB 2722](#) establishes the [Transformative Climate Communities](#) program that outlines specific community engagement guidelines for the Strategic Growth Council, the state-level cabinet committee administering the program. The Council is required to conduct outreach to disadvantaged communities to encourage input on policies and award grants to build a more equitable funding and implementation process.
- **Washington:** Washington State adopted [SB 5141](#) that requires state agencies to apply principles of environmental justice in applying state laws and agency rules and policies and to develop a community engagement and environmental justice implementation plan. It also creates the Environmental Justice Council which provides guidance to state agencies and biennially evaluates agency progress. Further, the Washington Utilities and Transportation Commission issued an [order](#) in docket [U-210959](#) that implements a law allowing utilities to enter into financial assistance agreements with organizations representing customers so they can participate in cases; it prioritizes vulnerable populations and highly impacted communities. Costs are recoverable in rates.
- **Massachusetts:** Massachusetts [SB 9](#) requires consideration of environmental justice principles in policy and decision making, establishes an environmental justice council to advise on standards to achieve the principles within state agencies, provide accessible information about projects that includes non-English speakers, and promotes an equitable clean energy workforce.
- **Colorado, Illinois, and Maine:** Colorado ([SB21-272](#)), Illinois ([Climate and Equitable Jobs Act](#)), and [Maine](#) have also enacted legislation to require or encourage greater engagement with historically disadvantaged communities.

Other state entities have adopted diversity, equity, inclusion, and accessible and/or justice statements or principles to guide the work and practices of the organization.

## **Chapter 2. Customer Arrears and Affordability**

William McCurry, NARUC

### **Introduction**

Utility services constitute an essential component of life and are necessary to meet a household's basic needs and full participation in society. A customer's ability to afford their utility bills is one of the cornerstones of decision-making across state public utility regulation, energy policymaking, and within the private sector. These key decision makers closely scrutinize energy burden as a function of the expenses a ratepayer incurs for essential services and the ratepayer's ability to pay for those expenses. Customer affordability for essential utility services has far reaching implications for health, safety, and material societal benefits.

When a customer is unable to afford their utility bills and falls into arrears, providing policy avenues for that customer to resume payments, thereby allowing a utility company to recoup cost of service and continue providing delivery of that essential service, is a priority across energy policymakers and stakeholders. Disconnection of service is treated as a last resort after all other options have been exhausted because utility services are so vital to our basic human needs.

Several critical considerations for customer affordability and customers in arrears pertain directly to concepts of energy justice. Energy insecurity is borne disproportionately by historically disadvantaged communities. For example, in 2015, households with income of less than \$20,000 were five times more likely to lose heat than households with income over \$80,00. Furthermore, utility affordability concerns have far-reaching impacts beyond the immediate financial concerns around ability to pay one's utility bill. These impacts have all been exacerbated and pronounced by the ongoing economic hardship caused by the COVID-19 pandemic. The following sections summarize some key takeaways and conclusions to better prepare participants for the upcoming State Energy Justice Roundtable discussions on affordability.

### **Vulnerable Populations and Customer Affordability**

**Energy insecurity** is an economic term used to describe a household's inability to meet its basic energy needs. **Energy burden** describes the percentage of a household's income that goes towards energy bills. High energy burdens have remained a persistent national challenge with nearly 25% of all households paying more than 6% of total income on energy bills. High energy burdens are also correlated with greater risk for respiratory diseases, increased stress and economic hardship, and difficulty moving out of poverty.<sup>17</sup> These challenges are significantly exacerbated when further broken down by categories that include differences among groups based on race, geography, average household age, and type of housing.

Research clearly shows that energy burden is disproportionate across various population groups. The median energy burden for Black households is 43% higher than for non-Hispanic white households (4.2%

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<sup>17</sup> Drehobl, A., L. Ross, and R. Ayala. (2020) *How High are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burdens across the U.S.* American Council for an Energy-Efficient Economy. <https://www.aceee.org/research-report/u2006>.

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of total income versus 2.9% on average).<sup>18</sup> A recent survey from the O’Neill School of Public and Environmental Affairs at Indiana University of households at or below 200% of the federal poverty line (FPL) found that 13% could not pay an energy bill during the prior month, and 9% had received a shutoff notice. That study also finds that “energy insecurity is highly prevalent among low-income American households, especially among households that identify as Black and Hispanic. We found that those who require use of an electronic medical device and live in poor or less-efficient housing conditions experience higher rates of energy insecurity.”<sup>19</sup>

Similar disparities exist on a regional scale as well as between the rural and urban divide. The Southeast of the United States consistently has higher rates of energy insecurity and energy burden than other regional counterparts.<sup>20</sup> The combination of relatively higher rates of poverty, energy inefficient households, and the high amount of energy needed for cooling and heating all contribute to this regional disparity.<sup>21</sup> Similarly, rural communities pay higher than average bills for both electricity and heating fuels. Rural residents tend to have older housing stock on average, which has produced a ‘rural energy-efficiency gap’, driving higher household energy costs in rural communities.<sup>22</sup> The myriad factors contributing to overall energy insecurity and higher energy burden are rooted in the causes of poverty, which may be difficult to pinpoint. However, we can closely follow the disproportionate outcomes related to energy insecurity and energy burden on different subsets of the population.

### Pronounced Impacts from COVID-19

The economic impact of the COVID-19 crisis has further compounded issues surrounding customer affordability. The ongoing challenges caused by the COVID-19 pandemic highlight enormous financial difficulties, not only for low-income, but also for moderate-income customers. As state disconnection moratoria policies have expired, some estimates project that \$27 billion in past-due utility bills remain unpaid in the U.S. Utilities and state PUCs report that many customers who were previously able to make utility bill payments are now at risk of falling behind on their bills because of the economic fallout from the dual public health and economic crises.

At the onset of the COVID-19 pandemic in April/May 2020, 9% of respondents in the O’Neill School survey received a disconnection notice, and 4% were disconnected from energy service.<sup>23</sup> Using the 2020 survey data in tandem with the 2018 American Community Survey, researchers estimate that between 2019 and

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<sup>18</sup> Ibid.

<sup>19</sup> Konisky, David, et al., (June 10, 2020). *Survey of Household Energy Insecurity in Time of COVID*. O’Neill School of Public Policy and Environmental Affairs at Indiana University. <https://oneill.indiana.edu/doc/research/energy-insecurity-survey-june-2020.pdf>.

<sup>20</sup> Department of Energy. Office of Energy Efficiency & Renewable Energy. Low-Income Energy Affordability Data (LEAD) Tool. <https://www.energy.gov/eere/slsc/low-income-energy-affordability-data-lead-tool>

<sup>21</sup> Brown, Marilyn A., Soni, Anmol, Lapsa, Melissa V., Southworth, Katie, & Cox, Matt. (October 2020) *High energy burden and low-income energy affordability: conclusions from a literature review*. Progress in Energy. Journal Volume 2., Issue 4. Oak Ridge National Lab. <https://doi.org/10.1088/2516-1083/abb954>

<sup>22</sup> Winner B, Macdonald S, Juillerat J and Smith L. (2018) *Bridging the rural efficiency gap: expanding access to energy efficiency upgrades in remote and high energy cost communities*. American Council for an Energy Efficient Economy. Summer Study on Energy Efficiency in Buildings: Making Efficiency Easy and Enticing. <https://link.springer.com/article/10.1007/s12053-019-09798-8>

<sup>23</sup> Konisky, David, et al., (June 10, 2020).

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2020, “approximately 4.7 million households (24.3 million individuals) could not pay an energy bill, and just over 50%—2.4 million households (12.5 million individuals)—indicated that at least one of the bills they could not pay was in the past month (April/May 2020).”<sup>24</sup>

### Federal and State Responses and Assistance Programs

Policy responses to alleviate economic pressures on vulnerable and lower-income customers vary extensively by state. State and federal policy responses on this issue generally fall into four categories; 1) Data collection and analysis; 2) Public assistance programs; 3) Energy efficiency programs; and 4) Emergency disconnection moratoria

**Table 1. Federal and State Policy Responses & Assistance Programs**

Policy Response	Descriptions	Examples
<b>Data Collection &amp; Analysis</b>	The COVID-19 crisis precipitated several regulatory directives to utilities to require data collection orders to track the magnitude of the customer impacts stemming from COVID-19 related economic issues. Most data collection orders tracked the number of disconnections and customer arrearages. The frequency and scope of data collection differs by state. <sup>25</sup>	Varies state by state - many state PUCs have standing orders to collect disconnection and arrearage information from their regulated utilities.
<b>Public Assistance Programs</b>	State and federal programs administer direct public assistance to eligible participants. The federal LIHEAP program is the largest assistance program and administered \$3.37 billion in federally funded assistance in FY22 to states to manage costs associated with home energy bills. The LIHWAP program is not a permanent program but a recent policy response to the COVID-19 crisis and growing concerns around water utility affordability.	<ol style="list-style-type: none"> <li>1. Low-Income Home Energy Assistance Program (<a href="#">LIHEAP</a>)</li> <li>2. Low-Income Household Water Assistance Program (<a href="#">LIHWAP</a>)</li> <li>3. California Arrearages Payment Program (<a href="#">CAPP</a>)</li> </ol>
<b>Energy Efficiency Programs</b>	Programs to improve energy efficiency are another critical component to improving customer affordability. Most programs offer financial incentives, direct financial assistance, or tax adjustments to add energy efficiency upgrades to a property. On-bill financing (OBF) and on-bill repayment (OBR) are methods of financing energy efficiency improvements through a customer’s utility bill. The customer receives an upfront loan to make energy efficiency or renewable energy improvements to his or her property, then repays that loan through a surcharge on his or her utility bill. The type of payment structure differs	<ol style="list-style-type: none"> <li>1. Weatherization Assistance Program (<a href="#">WAP</a>)</li> <li>2. On-Bill Financing &amp; On-Bill Repayment (<a href="#">OBF/OBR</a>)</li> </ol>

<sup>24</sup> *Ibid*

<sup>25</sup> National Governors Association. (2021) *Memorandum on State Utility Moratoriums and Utility Affordability*. <https://www.nga.org/wp-content/uploads/2021/06/Utility-Affordability-Memo.pdf>.

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	depending on the program.	
<b>Emergency Disconnection Moratoria</b>	The COVID-19 crisis and subsequent gubernatorial emergency orders allowed utility disconnection moratoria to go into effect for most Americans, preventing immediate disconnection during the worst portions of the pandemic. Nearly all moratoria have expired at this point and states are utilizing different policy responses, both old and new, to address the ongoing challenges with customer arrearages and affordability concerns.	<a href="#">Map of Disconnection Moratoria</a> Resulting from COVID-19 Emergency Declarations

### Opportunities to Address Affordability

Stopping disconnections presented a unique data opportunity to look specifically at impacts to vulnerable customers from late fees and disconnections. The disconnection moratoria allowed for commissions to specifically use that intervention to look more closely at low- and moderate-income customers. Many of the data collection orders are still in effect even after the expiration of disconnection moratoria.

There is a growing consensus among state PUCs, the private utility sector, and key advocates that the blanket moratoria policies enacted early on in the pandemic response could have been more strategically implemented. Moratoria policies could be more exclusive to low- and moderate-income customers with caveats that customers in arrears can proactively work with their utility on multiple repayment plan options for eligibility in disconnection moratoria. Customers and utilities alike were unprepared for the massive arrearage burden stemming from blanket moratoria policies prohibiting disconnections.

At the state level, certain states, either through legislative action or regulatory decision making at the PUCs, have required utilities to offer Percentage of Income Payment Plans (PIPP) as another avenue to improve customer affordability. Most of the customer-centric state energy assistance policies vary dramatically on a state-by-state basis. Improvements to those programs involve eliminating barriers for eligibility and proactive enrollment in available programming.

Additionally, utilities have multiple avenues of communication with their customers, in particular vulnerable classes of customers. Traditionally, there were physical locations, either walk-in centers for state public advocates or utility assistance offices, that vulnerable customers could utilize. At the outset of the pandemic, many walk-in options were shuttered to limit exposure risk. Accessible and varied communication channels between target populations and state governments and utilities remains a challenge. States continue to coordinate messaging between state governments and utilities to identify additional methods for emergency communications, including electronic mailing notices, routine mailers, and other potential outlets of disseminating information.

## **Chapter 3. Equity in Clean Energy Research, Development, and Deployment**

Kelsey Jones and Kirsten Verclas, NASEO  
Cara Dougherty and Jessica Rackley, NGA

### **Introduction**

In recent years, states have been key actors in the promotion and advancement of clean energy to meet climate and environmental goals. As of August 2021, 30 states, two territories, and Washington, D.C. have active renewable or clean energy requirements and Renewable Portfolio Standards (RPS).<sup>26</sup> Additionally, California, Colorado, Connecticut, Nevada, New Jersey, New Mexico, New York, Virginia, and Wisconsin have vowed to invest in 100 percent carbon-free electricity by between 2040 and 2050. The Governors of Hawaii, Puerto Rico, and Rhode Island have ordered or signed into law 100 percent renewable energy goals between 2030 and 2050. Louisiana, Massachusetts, and Oregon have set a net-zero greenhouse gas (GHG) emissions goal between 2040 and 2050.<sup>27</sup> Many of these state initiatives include consideration of an equitable transition to clean energy alternatives and states have increasingly included equity in clean energy research, development, and deployment over the past few years. This background paper focuses on equity considerations in clean energy research and development as well as clean energy deployment, two critical components of achieving an equitable energy transition on the state level.

### **Equity Considerations in State Clean Energy Research and Development**

When considering equity in the clean energy transition, the focus is often on the deployment of clean energy technologies, such as community solar, or incentives for electric vehicles for low- and medium-income households (for more see below). Historically, equity considerations have been largely absent from clean energy research and development (R&D) projects. R&D considerations usually focus on technology feasibility and economic viability, with inequities often only addressed retrospectively.<sup>28</sup> However, to fully consider equity in the clean energy transition, equity must be top of mind at the clean energy technology project-inception stage. By including disadvantaged communities in the development process, these communities are better able to access the benefits of clean energy, access technologies these communities themselves have identified as needed, and minimize unintended consequences. While barriers remain, states such as Washington, California, and Oregon have begun to stress equity implications in their research and development programs.

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<sup>26</sup> National Conference of State Legislatures. (2021). State Renewable Portfolio Standards and Goals. <https://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>

<sup>27</sup> Clean Energy States Alliance. (2022). 100% Clean Energy Collaborative - Table of 100% Clean Energy States. <https://www.cesa.org/projects/100-clean-energy-collaborative/guide/table-of-100-clean-energy-states/>

<sup>28</sup> <https://science.house.gov/imo/media/doc/Shobita%20Parthasarathy%20Testimony.pdf>

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### Current Status of Equity in R&D

Responses to a recent U.S. Department of Energy (DOE) Request for Information (RFI)<sup>29</sup> highlighted several barriers for disadvantaged communities in participating in current DOE-funded grant opportunities, which also apply to research and development programs more generally. The RFI respondents stressed the high cost-share and administrative burdens of applying to funding opportunities for R&D. The inequitable access to research and capital funding prevents disadvantaged communities from being a part of the clean energy technological ecosystem. This results in community needs not being considered and separates the technology developers and communities these technologies will eventually be deployed in. An additional barrier is the need to balance novel technologies' failure or economic risks because often R&D projects have an inherent risk of failure. While disadvantaged communities should be included in clean energy technology development, it is important that communities are not saddled with the cost of failed technologies.

### Ways to Consider Equity in Clean Energy R&D

Responses to the DOE RFI highlighted the need for DOE to support entrepreneurship-focused organizations that provide opportunities for early-stage innovators and companies. Respondents also suggested partnerships between DOE and strong, trusted, community-based organizations can enable an inclusive clean energy ecosystem. Through meaningful stakeholder engagement, R&D funding programs can examine and incorporate community needs and fund projects that were developed and designed with equity considerations from the beginning. One potential way to frame R&D programs includes an equity impact assessment for energy innovation by examining equity in design, distribution, process, and historical legacy. Innovators are encouraged to consider questions, such as: Does the new technology reinforce inequalities? Is the new technology easily accessible to disadvantaged communities? Has the relevant community in the new technology's development been consulted? How might disadvantaged communities perceive traditional, similar technologies?<sup>30</sup> Additionally, technical support for applicants, no or low-cost matches, and application processes that have low hurdles for participation (for example through a pass/fail and scoring phase) can all further the inclusion of disadvantaged communities in R&D projects. Once clean energy projects are funded, continued support for developers and communities, and metrics to further evaluate success and equity considerations can provide further refinement of R&D funding programs and ensure equity considerations continue to be developed.

### State Examples

States are increasingly aware of the importance of equity, inclusion, and representation in energy and climate policy. States can provide equity consideration in policy and grant making program design, and stakeholder convening related to clean energy R&D. These approaches offer a major opportunity to connect innovators of emerging technologies with information about markets, public priorities, and regulations. In addition to offering targeted investment and support of cleantech innovation, state agencies can facilitate information sharing, communications, and coordination in their cleantech

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<sup>29</sup> U.S. Department of Energy (2022). Summary Report of Responses to a Request for Information on Inclusive Innovation and Entrepreneurship in Climate Technology. <https://www.energy.gov/sites/default/files/2022-02/summary-report-rfi-inclusive-innovation-entrepreneurship-climate-technology-81767.pdf>

<sup>30</sup> Shobita Parthasarathy (2021). Testimony Before the United States House of Representatives. <https://science.house.gov/imo/media/doc/Shobita%20Parthasarathy%20Testimony.pdf>

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innovation ecosystems, bringing together both private and public partners and helping to bridge federal, regional, state, and local stakeholders. Several states have included equity considerations in their research and development programs.

Oregon's Community Renewable Energy Grant Program will award half of its grants to "projects that serve environmental justice communities, including communities of color, lower-income communities, rural communities, and others. Grants are to be awarded on a competitive basis and priority is to be given to projects that support program equity goals, demonstrate community energy resilience, and include energy efficiency and demand response."<sup>31</sup> The program includes an Advisory Committee that ensures the program is meeting its goals and disadvantaged communities can access the benefits. Hawaii is implementing a new program "to advance Hawaii's clean energy goals through addressing inequities in vulnerable communities by creating jobs that launch a new generation of clean energy leaders."<sup>32</sup> The Clean Energy Wayfinders program is designed to identify community needs and concerns and increase the understanding of Hawaii's energy ecosystem and opportunities.<sup>33</sup>

States continue to be at the forefront of clean energy technology and equity considerations. By changing R&D funding programs to make them more accessible to disadvantaged and disadvantaged communities, states can ensure that the clean energy transition also benefits those communities.

### Equity Considerations in State Clean Energy Deployment

Clean energy projects have been deployed unevenly across socio-economic groups. A study by Lawrence Berkeley National Laboratory (LBNL) found that "low- and moderate (LMI) income households are less likely than high-income households to adopt rooftop solar photovoltaics in the United States."<sup>34</sup> Additionally, while the clean energy transition can generate important benefits such as new economic development opportunities and improved environmental conditions, benefits have also not been enjoyed by disadvantaged communities, among them low-income communities, communities of color, and coal mining communities. To address these inequalities, states have adopted a variety of programs and policies.

### State Examples

States have implemented various programs and services that disadvantaged communities as the energy sector transitions and clean energy technologies are deployed. As of December 2020, 22 states plus Washington D.C. have policies that support community solar.<sup>35</sup> For example, in 2016, the Illinois Legislature passed the Future Energy Jobs Act (FEJA), which includes strategies to make solar energy more accessible to low-income communities through community solar projects, brownfield solar, and rooftop solar. The Illinois Power Agency and Illinois Commerce Commission together created equitable

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<sup>31</sup> Community Renewable Energy Grant Program. <https://www.oregon.gov/energy/Incentives/Pages/CREP.aspx>

<sup>32</sup> Hawaii State Energy Office. New Clean Energy Wayfinders Program Starting in 2022.

<https://energy.hawaii.gov/new-clean-energy-wayfinders-program-starting-in-2022>

<sup>33</sup> [https://energy.hawaii.gov/wp-content/uploads/2022/02/CleanEnergyWayfinders\\_Presentation\\_2-8-2022.pdf](https://energy.hawaii.gov/wp-content/uploads/2022/02/CleanEnergyWayfinders_Presentation_2-8-2022.pdf)

<sup>34</sup> Lawrence Berkeley National Laboratory (2020). The impact of policies and business models on income equity in rooftop solar adoption. <https://emp.lbl.gov/publications/impact-policies-and-business-models>

<sup>35</sup> National Renewable Energy Laboratory. (2022). Community Solar. <https://www.nrel.gov/state-local-tribal/community-solar.html>

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community solar programs and set prices through a lottery-style Adjustable Block Program.<sup>36</sup> In North Carolina, Governor Roy Cooper signed Executive Order No. 246, which establishes pollution reduction and net-zero emissions goals while prioritizing environmental justice and equity for communities overburdened by pollution. The Executive Order directs cabinet agencies to consider environmental justice when taking actions related to climate change, resilience, and clean energy and to identify an environmental justice lead to support equitable energy transition efforts.<sup>37</sup> In New York, the Equitable Investment in Energy Efficiency (S.3126A) bill, passed in March 2021, protects low-income communities and communities of color from pollution burdens through investments in energy efficiency funding and hiring and training for energy efficiency programs.<sup>38</sup> Also in New York, the Solar for All utility bill assistance program has successfully funded solar farms to allow low-income homeowners and renters to sign up for community solar on their utility bills and provides a \$5-\$15 credit on monthly electric bills.<sup>39</sup>

Many states also have energy efficiency programs aimed at low- to-moderate income communities. For example, Efficiency Vermont, an organization created by the Vermont Legislature and the Vermont Public Utility Commission, offers rebates to low-to-moderate income customers ranging from \$200 to \$500 as well as rebates or bill credits from utilities. Efficiency Vermont also offers zero-interest financing to low- and moderate-income residents for many types of clean energy upgrades.<sup>40</sup>

Many states are also implementing or considering support for an equitable workforce transition. In Illinois, SB 2408, which established a goal of 100% clean energy by 2050, the Energy Transition Navigators program informs equity-focused populations of workforce development programs and the Clean Jobs Workforce Network Hubs program to support and encourage members of equity-focused communities to enter the clean energy career pipeline, among other energy justice advancements.<sup>41</sup>

### Federal Equity Investments

In addition to state level initiatives, several federal investments have been made to address the needs of under-resourced and disadvantaged communities in the clean energy transition. The Biden-Harris

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<sup>36</sup> Former Illinois Governor Bruce Rauner. (2016). SB2814.

<https://www.ilga.gov/legislation/publicacts/99/PDF/099-0906.pdf>

<sup>37</sup> North Carolina Governor Roy Cooper. (2022). Governor Cooper Signs Executive Order Detailing Next Steps on Path to a Clean Energy and Equitable Economy for All North Carolinians. <https://governor.nc.gov/news/press-releases/2022/01/07/governor-cooper-signs-executive-order-detailing-next-steps-path-clean-energy-and-equitable-economy#:~:text=The%20Order%20strengthens%20North%20Carolina's,possible%2C%20no%20later%20than%202050>

<sup>38</sup> Walton, Robert. (2021). New York Senate Advances Environmental Justice Package, Including Energy Efficiency Jobs Bill. Utility Dive. <https://www.utilitydive.com/news/new-york-senate-passes-environmental-justice-package-energy-efficiency-jobs-bill/596199/>

<sup>39</sup> New York Governor Kathy Hochul. (2020). Solar for All: Income-Eligible New Yorkers Can Save Up to \$180 Annually. <https://www.nysesda.ny.gov/All-Programs/NY%20Sun/Solar%20for%20Your%20Home/Community%20Solar/Solar%20for%20All>

<sup>40</sup> Clean Energy States Alliance (2021). State and Federal Initiatives Increasingly Promote Energy Equity. <https://www.cesa.org/state-and-federal-initiatives-increasingly-promote-energy-equity/>

<sup>41</sup> Illinois Governor J.B. Pritzker. Gov. Pritzker Signs Transformative Legislation Establishing Illinois as a National Leader on Climate Action. <https://www.illinois.gov/news/press-release.23893.html>

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administration has prioritized energy justice delivery through Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, which established the *Justice40 Initiative*. This government-wide initiative delivers 40 percent of overall benefits of Federal climate, clean energy, affordable and sustainable housing, clean water, and other investments to communities that have endured the deleterious effects of pollution.<sup>42</sup> Additionally, the Department of Energy Office (DOE) of Economic Impact and Diversity created the Energy Justice Dashboard (BETA), a pilot data visualization tool that displays DOE-specific investments in communities experiencing disproportionate air pollution or public health risks for the fiscal years 2019 to present.<sup>43</sup> In March, DOE's Office of Electricity (OE) Energy Storage Program selected 14 communities throughout the country to receive technical support, equity assessments, and workforce analyses from Pacific Northwest National Laboratory as part of the agency's broader Energy Storage for Social Equity initiative (ES4SE), among other federal programs aimed at increasing equity in clean energy RD&D.

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<sup>42</sup> The White House. (2021). Delivering on Justice40. <https://www.whitehouse.gov/omb/briefing-room/2021/12/02/delivering-on-justice40/#:~:text=President%20Biden%20is%20committed%20to,underserved%2C%20and%20overburdened%20by%20pollution>

<sup>43</sup> Department of Energy Office of Economic Impact and Diversity. (2022). Energy Justice Dashboard (BETA). <https://www.energy.gov/diversity/energy-justice-dashboard-beta>

## Chapter 4. Energy Justice Metrics

Jasmine McAdams, NARUC

### The Need for Energy Justice Metrics

Advancing energy justice requires a robust system of measurement to quantify and characterize the various dimensions of distributional, procedural, recognition, and restorative justice. These metrics and their underlying data are essential for understanding how inequities are embedded in current programs, for providing accountability towards community, program, and policy goals, and to ensure measurable and real achievement of results.<sup>44</sup> The metrics can also be used as equity indicators which can be tracked to establish baseline measurements and set goals.<sup>45</sup>

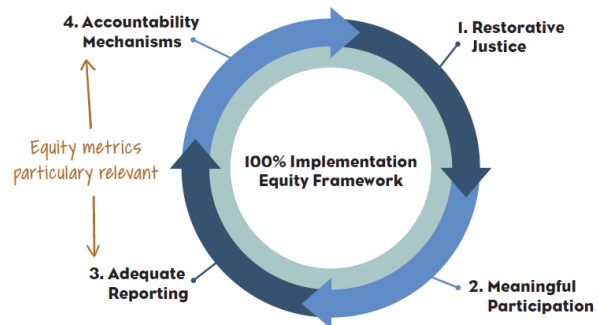
It may be useful to consider how energy justice metrics are integrated into a broader framework for the equitable implementation of policy or community objectives. The following framework, developed by the Initiative for Energy Justice and Front and Centered, provides a holistic view for 100 percent renewable energy policy implementation<sup>46</sup>, but can also be used to guide the equitable implementation of other applications.

1. **Restorative Justice** ensures that past and current energy injustices guide implementation and underline all aspects of policy-making and program implementation processes, particularly to frame, ground, and clarify definitions and parameters.

2. **Meaningful Participation** is key throughout the development, evaluation, iteration, and enforcement of implementation plans.

3. **Adequate Reporting** is necessary for state decision-makers and the public to meaningfully evaluate and respond to actions undertaken during the implementation period.

4. **Accountability Mechanisms** are structures that hold the utility (or other party) accountable to the goals and actions outlined in an implementation plan. Here, the process restarts with a commitment



<sup>44</sup> Cosgrove, E. (2021). *Turning Policy into Performance: Measuring Equity to Achieve Restorative Justice*. Northeast Energy Efficiency Partnerships. <https://neep.org/blog/turning-policy-performance-measuring-equity-achieve-restorative-justice>

<sup>45</sup> Lanckton, T., DeVar, S. (2021). *Justice in 100 Metrics*. Initiative for Energy Justice. <https://iejusa.org/wp-content/uploads/2021/03/Justice-in-100-Metrics-2021.pdf>

<sup>46</sup> *Ibid.*

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to restorative justice and active engagement of the public to respond to progress and address remaining inequities.<sup>47</sup>

### Types of Energy Justice Metrics

In a literature review of energy equity metrics, the Pacific Northwest National Laboratory identifies the following categories of key equity metrics:

- **Target population identification metrics** capture descriptive analytics on the population that may be eligible for support programs. Potential questions to guide identification of these metrics are:
  - Who is eligible for support programs?
  - Which communities are included/excluded in the federal and/or state definitions of disadvantaged communities?
  - Where are energy prices higher or more burdensome?
  - Who is able to make their monthly utility bill payments?
  - Where have energy efficiency measures been put into place?
- **Investment decision making metrics** describe how one population compares to another and can be used to direct program investments toward communities that meet designated eligibility criteria.
- **Program impact assessment metrics** show how well a support program has helped a target community. Key questions to consider include:
  - Are communities satisfied and enrolling in the program?
  - Has the program generated wealth for targeted communities?
  - Has the program generated savings in energy or costs?
  - Has the program improved communities' quality of life?<sup>48</sup>

Sample metrics, organized by the pillars of energy justice, are provided in the table below.

Energy Justice Pillar	Energy Justice Goal	Sample Metric
Distributional Justice	Affordability	Share of household income spent on fuel and electricity
		Percent of customers enrolled in an energy assistance or benefit program
	Workforce Impact	Number of jobs created through program investment

<sup>47</sup> *Ibid.*

<sup>48</sup> Tarekegne, B., Pennell, G., Prezioso, D., O'Neil, R. (2021). Review of Energy Equity Metrics. Pacific Northwest National Laboratory. <https://www.osti.gov/servlets/purl/1830804>

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	Energy Security	Targeted weatherization investments in the most impacted communities
Procedural Justice	Accessibility	Resources for conducting linguistically- and culturally-appropriate outreach
	Increasing Participation	Amount of intervenor compensation funding
Recognition Justice	Understanding Public Health Impacts	Air pollution index by factors such as race, ethnicity, and income
		Percent of population burdened by legacy environmental pollution
Restorative Justice	Recognizing the Non-Energy Impacts in Communities	Funds in an energy financial reserve obligation <sup>49, 50</sup>

### Identification of Energy Justice Metrics

One of the challenges of identifying appropriate metrics is that stakeholders have different interpretations of justice and equity. Multiple organizations have recognized the need to address this issue and have convened diverse stakeholders to define and characterize energy justice metrics for use by state, local, and federal agencies, utilities, and other entities. A few ongoing initiatives are highlighted below:

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<sup>49</sup> Refers to the financial obligation to communities from companies that operate energy infrastructure to provide reassurance that risks that could negatively impact the well-being of communities will be compensated for in a timely manner.

<sup>50</sup> Hazrati, M., Heffron, R.J. (2021). Conceptualising restorative justice in the energy Transition: Changing the perspectives of fossil fuels. *Energy Research & Social Science*. <https://doi.org/10.1016/j.erss.2021.102115>

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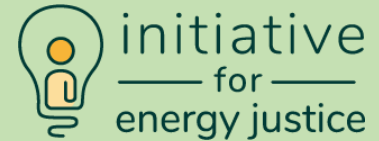


Launched in early 2021, the [American Council for an Energy Efficiency Economy's \(ACEEE\) Leading with Equity Initiative](#) is convening community-based organizations, advocates, and utilities to jointly define success for equitable decarbonization, and use this definition to develop metrics for ACEEE's [city, state, and transportation electrification](#) scorecards that capture progress towards equity-centered clean energy policies and program outcomes.



Energy Equity Project

The [Energy Equity Project \(EEP\)](#) is an initiative housed out of the Urban Energy Justice Lab at the University of Michigan's School for Environment & Sustainability working to create a framework for measuring energy efficiency and clean energy programs among utilities, state regulatory agencies, and other practitioners. EEP is centering Black, Indigenous and People of Color (BIPOC) and frontline communities in the metrics development process to support the equitable distribution of benefits of climate and clean energy programs. A beta version of the equity measurement framework is set to launch in 2022.



The [Initiative for Energy Justice](#) developed the [Justice in 100 Metrics Report](#) by reviewing existing literature and compiling equity metrics for the implementation of 100% renewable energy policy. The framework is composed of equity indicators and utility actions across the categories of energy access and affordability, procedural justice and democracy, community ownership and economic participation, and health and environmental impacts.

### Justice40 Metrics

President Biden's Executive Order 14008: Tackling the Climate Crisis at Home and Abroad introduced the Justice40 initiative to direct 40 percent of the benefits to disadvantaged communities from climate and clean energy investments.<sup>51</sup> The Justice40 process of identifying disadvantaged communities, calculating benefits, and conducting community engagement can also be a template for entities exploring methods of identifying and calculating benefits.

### State Examples

#### *Target Population Identification in New York*

New York's [Climate Leadership and Community Protection Act](#) (Climate Act), signed into law in 2019, requires state agencies, authorities, and entities to direct 40 percent of the benefits from clean energy and energy efficiency program investments to disadvantaged communities. The Act also directed the [Climate Justice Working Group](#) to establish criteria for defining disadvantaged communities.<sup>52</sup> Over the last couple of years, the working group has been developing a mapping tool that aggregates data at the census tract level. While the Climate Act provided broad categories for consideration of disadvantaged

<sup>51</sup> Exec. Order No. 14008. (January 27, 2021). <https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0202-0012>

<sup>52</sup> NYSERDA. *Disadvantaged Communities*. <https://www.nyserda.ny.gov/ny/disadvantaged-communities>

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communities, such as areas burdened by pollution and areas most vulnerable to climate change, the working group identified 45 unique indicators such as income, race, home ownership, and prevalence of asthma to come up with an aggregate score for each census tract. Using this proposed method, the census tracts that score in the top 27 percent statewide, and those that score in the top 27 percent in New York City, would be designated as disadvantaged communities. The state opened a 120-day public comment period from March 9, 2022, to July 7, 2022 on the proposed criteria and methods.<sup>53</sup>

### *Investment Decision-Making in Connecticut*

To achieve their goal of weatherizing 80 percent of all homes in the state by 2030, the Connecticut Department of Energy and Environmental Protection and the Connecticut Green Bank set their focus on attracting private investment to scale up low-income energy efficiency efforts and ensure equitable access to solar. The metrics strategy used by Connecticut was to use a variety of data sources to define the low-income residential sector for energy efficiency and solar deployment in low- and moderate-income communities, and track their progress in a [statewide energy efficiency dashboard](#). Connecticut also utilized the U.S. Department of Energy's [Low-Income Energy Affordability Data](#) (LEAD) tool to target programs to single-family owner-occupied homes and large multifamily buildings. For energy efficiency programs, the Green Bank conducted analysis at the census tract level on households that may be eligible for utility-administered programs, which provided insight on whether equitable participation was being achieved. For solar photovoltaic (PV) deployment, they visualized the data at the census tract level for the number of projects and the kW installed to calculate the kW installed per capita at different income levels. The Green Bank also leveraged analysis on customer behavior and bias to better tailor customer communication. Census-tract level maps were also used to target new low-income customers for these programs. These measures, along with others, helped support the launch of the [Solar for All](#) program, bringing solar and energy efficiency to underserved communities.<sup>54 55</sup>

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<sup>53</sup> Pontecorvo, E. (February 2, 2022). *New York environmental justice leaders propose new definition for 'disadvantaged communities'*. Grist. <https://grist.org/equity/new-york-environmental-justice-leaders-propose-new-definition-for-disadvantaged-communities/>

<sup>54</sup> Department of Energy. *Issue Brief: Using Data to Set Priorities and Track Success of Low-Income Energy Programs*. [https://betterbuildingsolutioncenter.energy.gov/sites/default/files/IB\\_Using%20Data%20to%20Set%20Priorities\\_Final.pdf](https://betterbuildingsolutioncenter.energy.gov/sites/default/files/IB_Using%20Data%20to%20Set%20Priorities_Final.pdf)

<sup>55</sup> Connecticut Green Bank. *Solar for All Program*. <https://www.ctgreenbank.com/solarforall/>

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## Glossary of Terms

**Climate Justice:** remediation of the impacts of climate change on poor people and people of color, and compensation for harms suffered by such communities due to climate change ([Initiative for Energy Justice](#))

**Disadvantaged Communities:** Communities living in geographic locations characterized by energy inequity and facing economic or historical barriers to participation in energy decisions and solutions. ([Pacific Northwest National Laboratory](#))

**Distributional Justice:** concerns both the distribution of costs, or the hazards and externalities, and the distribution of benefits, or access to modern energy systems and services, throughout society. ([Sovacool & Dworkin, 2014](#))

**Energy Burden:** the expense of energy expenditures relative to overall household income ([Initiative for Energy Justice](#))

**Energy Democracy:** the notion that communities have agency in shaping their energy future ([Initiative for Energy Justice](#))

**Energy Insecurity:** the hardships households face when meeting basic household needs ([Initiative for Energy Justice](#))

**Energy Justice:** the goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those historically harmed by the energy system. Energy justice explicitly centers the concerns of marginalized communities and aims to make energy more accessible, affordable, clean, reliable, resilient, and managed by and for all communities. (Adapted from the [Initiative for Energy Justice](#))

**Energy Poverty:** the lack of access to reliable and affordable energy ([Initiative for Energy Justice](#))

**Environmental Justice:** refers to the recognition and remediation of the disproportionately high and adverse human health or environmental effects on communities of color and low-income communities ([Initiative for Energy Justice](#))

**Just Transition:** the principle of a just transition supports the co-existence of healthy economy and clean environment, and the process and practice of achieving this vision is one that is fair and does not cost workers or community residents their health, environment, jobs or economic assets. ([Just Transition Alliance](#))

**Procedural Justice:** relates to the accessible and meaningful participation of individuals in the energy decision-making processes.

**Recognition Justice:** seeks to acknowledge the various needs, rights, and experiences of different groups in relation to the energy system. ([Gillard et al., 2017](#))

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**Restorative Justice:** aims to repair the harm done to people (and/or society/nature) and can pinpoint where prevention needs to occur. ([Heffton and McCauley, 2017](#))

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## Resource List

### Reading

#### Overarching Resources

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

#### Participation in Decision-Making

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

#### Arrearages and Affordability

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

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- [Survey of Household Energy Insecurity in Time of COVID](#), O’Neill School of Public Policy and Environmental Affairs at Indiana University

### Clean Energy Research, Development, and Deployment

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

### Metrics

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

## Data and Tools

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

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### **Relevant Organizations**

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