NATIONAL GOVERNORS ASSOCIATION

# STATE APPROACHES TO EQUITABLE DISTRIBUTED ENERGY RESOURCE DEPLOYMENT

MARCH 2023

## Acknowledgements

This brief was written by Cara Dougherty, Dan Lauf, and Jessica Rackley and is based on work supported by the U.S. Department of Energy under Award Number DE-OE0000927. The authors thank the following individuals for their contributions, comments, and insights, which helped to improve the paper:

- Kelsey Jones, NASEO
- Maddie Koewler, NASEO
- Jasmine McAdams, NARUC
- Tanya Paslawski, NARUC
- Kirsten Verclas, NASEO
- All roundtable participants including federal and state decision-makers, members of community-based organizations, and subject-matter experts

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# BACKGROUND

As technology continues to advance, prices decline, and new federal funding through the Infrastructure Investment and Jobs Act (IIJA) and other federal legislation provides capital for new energy technologies, Governors are actively advancing distributed energy resources (DERs).[1] Governors and state energy policymakers are establishing ambitious decarbonization, reliability, and electrification goals, working to reduce energy costs, and, increasing customer choice by increasing the deployment of and access to DERs (i.e., rooftop solar, wind energy, heat pumps, electric vehicle infrastructure, battery storage, microgrids, and energy efficiency)[2] across their states and territories. Expanding access to clean, renewable DERs in an equitable manner is a priority of many Governors, and can cut household costs, improve public health, and reduce greenhouse gas emissions (GHGs).

Governors are setting increasingly ambitious state energy goals that are enhancing the deployment of DERs, and are increasingly including equity provisions in energy policies, including DER programs.[3] Below are some state policy drivers that focus on either enhancing DER deployment generally or specific equity-related provisions.

- 17 states, plus the U.S. Virgin Islands and Puerto Rico, have established **50 to 100 percent carbon-free or -neutral electricity** or **renewable portfolio requirements** between 2030 and 2050 that often will rely on a variety of DERs such as wind, solar, and energy efficiency measures to meet these targets.[4]
- 11 states have **codified requirements that utility regulators must consider equity** in their decisions.[5]
- 16 states currently have an **authorized intervenor compensation, financing, or funding program** in their legislative rules and statutes.[6]
- 20 states and Washington, D.C. **have cost caps in their Renewable Portfolio Standards (RPS) policies** to limit increases to a certain percentage of ratepayers' bills.[7]
- As of July 2021, at least 47 states and Washington, D.C., offer incentives to support the deployment of **electric vehicles or alternative fuel vehicles** and supporting infrastructure, either through state programs or private utility incentives within the state.[8]
- As of December 2021, 39 states, plus Washington D.C., have **community solar projects** in place, and 22 states, plus Washington, D.C., have policies that support community solar.[9]

While DERs can bolster state and local economies through job creation, tax revenues, and lower energy costs, data indicates that under-resourced communities[10] have experienced an inequitable share of the costs and have not seen the same benefits from this transition.[11] Although costs of DERs have declined, many low-income and rural customers are unable to afford the up-front costs of DER technologies. In other instances, low- and moderate-income (LMI) customers may live in housing with deferred maintenance and other structural challenges that would increase the cost of DERs such as rooftop solar and energy efficiency measures. Renters responsible for their energy bills may not be able to make the requisite updates needed to reduce energy costs. DERs funded through utility rates may be cross subsidized by LMI ratepayers and is a concern if LMI populations are unable to access the technologies themselves. For example, some solar, EV and other programs have been paid for by all ratepayers; however, these programs have been utilized primarily by those with higher incomes.[12]

This paper provides a brief overview of how Governors can increase access to distributed energy resources for under-resourced communities through a range of policy and regulatory mechanisms, such as state laws, executive orders, stakeholder engagement and governance, and energy utility regulations and rate design.[13]

Key Gubernatorial actions described in this paper are grouped in the following categories:

1. Establish agency leadership & governance structures to support state agencies and local communities;
2. Engage with stakeholders and gather data to identify needs and inform policy/programs;
3. Prioritize DER deployment in geographically vulnerable (flooding-prone and rural) communities;
4. Develop grant and financing programs to reduce the cost of DERs for low- and moderate-income (LMI) communities; and
5. Work with state and territory public utility commissions (PUCs) to establish equitable rate structures/classes that minimize cross-subsidization.

# STATE ACTIONS

## 1. *Establish Agency Leadership & Governance Structures to Support Local Communities and Under-Resourced Populations*

Governors can prioritize energy equity and justice by establishing executive directives and enabling governance structures—such as agency leads, chief equity officers, and cross-agency task forces—to prioritize energy and environmental justice when taking actions related to DER deployment. These governance structures can establish equity as a priority across state agencies, uncover needs in the state, and bring subject matter experts to the table as Governors consider policies to support deployment of DERs.

Governance structures that Governors can consider – and implement through executive action – include:

- Issuing executive orders that direct agencies to consider equity in technology and infrastructure deployment, including DERs. This may include establishing specific targets for DER deployment to under-resourced populations.
- Appointing a statewide equity or energy justice lead and tasking them with addressing energy inequities.
- Creating a cross-agency task force to identify barriers to equitable DER deployment and collaborate on energy equity solutions.
- Initiating robust energy planning processes that incorporate equitable DER deployment as an objective.
- Considering how state agencies can identify economic development opportunities, energy and environmental benefits, and funding opportunities that consider energy justice in grant awarding processes.
- Strengthening partnerships and coordination among federal, state, and local government agencies to enhance research and assessment approaches to equitable DER deployment.
- Requiring state agencies and energy justice working groups to monitor the implementation of state and federal laws, rules, and regulations relating to DER deployment strategies.

Some states have created entities to assist in the coordination of equity, environmental justice, and/or LMI household policies across state agencies. At the recommendation of the Governor's Task Force on Climate Change, **Wisconsin** Governor Tony Evers issued Executive Order No. 161, which ordered the Department of Administration to establish the Office of Environmental Justice. This office was designed to create a "principal office to

coordinate agency frameworks, strategies, and policymaking to help ensure state action does not have an adverse or disparate environmental effect on communities."[14] The role of this office will be to analyze state agencies and programs to identify issues of environmental justice that need to be addressed, including input from the community to advise the Governor's Office on these issues with actionable, community-driven solutions. Once implemented, this office will help ensure that community input has an impact on environment and energy policymaking.

A handful of states have also established similar task forces that explicitly address equitable DER deployment solutions. **Maryland** then-Governor Hogan, through Executive Order 2019.09, established the Task Force on Renewable Energy Development and Siting, which encourages the responsible siting of clean and renewable energy projects, such as wind and solar, in Maryland and makes consensus-based recommendations for accelerating the siting of renewable energy projects, minimizing the impact of these projects on agriculturally or ecologically sensitive areas, and identifying specific equitable changes to state law, policies, procedure, and other means of support. In **New Mexico**, Governor Lujan Grisham issued Executive Order 2019-003 on Climate Change and Waste Prevention, to create the state Interagency Climate Change Task Force, which adopted Equity Guiding Principles that have been agreed upon by stakeholders to consider in all task force actions.[15]

## 2. *Engage With Communities and Stakeholders to Identify Energy Equity Needs and Barriers to Equitable DER Deployment*

While Governors are responsible for the policy direction of their states, individual customers and local communities are most aware of the energy challenges they face. By engaging with communities to better understand their challenges and needs, Governors can tailor policies and programs to address historical inequities and more effectively encourage DER adoption where it will provide the greatest benefit.

Participants at the National Governors Association (NGA)/National Association of State Energy Officials (NASEO)/National Association of Regulatory Utility Commissioners (NARUC) State Energy Justice Roundtable in April 2022 identified several ways that Governors can incorporate community representatives and perspectives in DER decision-making and program design.

Suggestions for Governors from the Roundtable are as follows:[16]

- Engage with stakeholders (i.e., nonprofit organizations, community groups, national laboratories, university research centers, etc.) as the first step in developing plans that will increase access to distributed energy resources.
- Organize community listening sessions (with virtual components) to gather public input in developing state and territory clean energy plans.

Additionally, the Roundtable participants also suggested that Governors could direct state agencies to:

- Create an online tool and phone number that allows community groups to submit comments, questions, and statements to state agencies regarding energy justice concerns.
- Develop and implement public participation plans that include best practices for community engagement, meaningful dialogue, and mechanisms to incorporate public input in agency decision-making.
- Ensure public meetings, regulatory proceedings, requests for comment, and other forms of stakeholder and public engagement are accessible to those with disabilities, those for whom English is not the first language, and those without access to affordable broadband.

To increase access to DERs in states and territories, Governors and state policymakers can work with various community representatives to get an accurate view of needs. These can include local governments, nonprofit and community action organizations, local educational institutions, and houses of worship, among others. Meaningful engagement mechanisms may include public listening sessions, for example, while developing plans and solutions. The following section highlights ways Governors can lead stakeholder engagement processes to incorporate community needs and equitable solutions in distributed energy resource policies and projects.

In 2019, **Connecticut** Governor Ned Lamont's Executive Order No. 3 required that the Governor's Council on Climate Change (GC3) prioritize equity and environmental justice. As a result, the Equity and Environmental Justice Working Group (EEJ) was formed to develop plans and guidelines for engaging diverse stakeholders in the process of integrating equity and environmental justice in decision-making processes.

In November 2020, the GC3 prepared the Equity & Environmental Justice Working Group Report, which outlines some of its accomplishments:

- Conducted outreach with Connecticut's Department of Energy and Environmental Protection to engage representatives from environmental justice communities in the GC3 process, and all GC3 working groups and committees.
- Developed a concept paper on equity.
- Drafted public participation guidelines and, in response to the COVID-19 pandemic, guidelines on remote engagement, both of which were circulated across GC3 working groups.
- Developed recommendations with an equity lens for the creation and support of an environmental and climate justice mapping tool to provide a visual representation of the relative vulnerabilities of Connecticut's communities.
- Provided analysis iteratively with other GC3 working groups to encourage and provide feedback on recommendations considering issues of equity.
- Launched a webinar series on environmental and climate justice to provide context for GC3 participants and other interested parties.[17]

## *Case Study: The North Carolina Perspective*

In 2022, **North Carolina** Governor Roy Cooper signed Executive Order No. 246, *North Carolina's Transformation to a Clean, Equitable Economy*, establishing pollution reduction and net-zero emissions goals while prioritizing environmental justice and equity for communities overburdened by pollution. The EO directs cabinet agencies to consider environmental justice when taking actions related to climate change, resilience, and clean energy and identifies an Environmental Justice and Equity Lead ("EJ Lead") in each cabinet agency to support equitable energy transition efforts.[18] Some of the duties required of the EJ Lead include increasing awareness among agency leadership and staff of the history and current impacts of environmental, economic, and racial inequities, as well as developing and implementing the Public Participation Plan and Limited English Proficiency Plan.

Notably, each Cabinet agency, supported by the Governor's Office, is required to develop an agency public participation plan informed by stakeholder input. The plans must include best practices for community engagement, meaningful dialogue, and efficient mechanisms to receive and incorporate public input into agency decision-making. The plans, released in June 2022, aim to improve community engagement, foster relationships, and enhance transparency with the public, including under-resourced communities and populations with limited English proficiency.

Also included in the EO is an outline of the North Carolina Clean Transportation Plan, developed in partnership with the North Carolina Department of Transportation, Department of Environmental Quality (the State Energy Office), Department of Commerce, and other relevant agencies. The plan's purpose is to recommend strategies for decarbonizing the transportation sector, consistent with plans and goals in the EO. This includes investing in clean transportation infrastructure in under-resourced communities and equitable access to clean mobility options with plans informed by key stakeholders including transportation experts, municipalities and other local governments, planning organizations, auto manufacturers, North Carolina residents, under-resourced communities, and other stakeholders interested in the implementation of the Clean Transportation Plan.[19]

## 3. *Prioritize DER Deployment in Geographically Vulnerable Communities*

While many rural communities face economic challenges, they have also recently experienced incredible growth in renewable energy and energy efficiency projects, especially wind and solar.[20] There are many regions and communities in the U.S. experiencing challenges due to climate change. Impacts of climate change range from heat waves, coastal flooding, and sea level rise in the east, droughts and increased wildfires in the southwest, to shrinking glaciers and thawing permafrost in Alaska, and constrained freshwater supplies and a decrease in food and water security in Hawaii and the Pacific Islands.[21] These communities face extreme challenges related to location, terrain, resources, and communication capabilities, and it is therefore critical to include them in the participation and development of DER infrastructure and to understand the needs of varying demographic communities throughout the country. Governors can prioritize DER deployment in geographically vulnerable communities in similar ways to the efforts taken to increase deployment in LMI communities. Some solutions include: plan for community listening sessions to gather public input; direct state agencies to create an online tool for public comments and questions; and ensure that public meetings are offered not only at a convenient location but also through a virtual means.

### *Case Study: The Alaska Perspective*

The Alaska Energy Authority (AEA), since 1976, has functioned as the State Energy Office and lead agency for statewide energy policy and program development in the state. The AEA, with Governor Mike Dunleavy's support, has introduced various clean energy solutions and DER deployment strategies to reduce energy costs in Alaska communities.[22]

**Alaska,** like much of the country, is working on transitioning to electric and alternative fuel vehicles. However, the state -- in addition to common barriers to adoption, such as

affordability issues, and lack of charging infrastructure -- also has other barriers exacerbated by the environment like unknown performance of EVs in cold climates. As a result, AEA is leading an effort to minimize barriers that inhibit EV adoption in Alaska with a particular focus on ensuring investments benefit under-resourced communities.

AEA, in a partnership with the Alaska Department of Transportation and Public Facilities (DOT&PF), electric vehicle stakeholders, utilities, communities, and residents, has drafted the Alaska Electric Vehicle Infrastructure Implementation Plan. Through the Infrastructure Investment and Jobs Act (IIJA), Alaska will receive significant funding over the next five years to build electric vehicle (EV) infrastructure across the state, including approximately $7.7 million for fiscal year 2022. After building out Alaska's fist Alternative Fuel Corridor, the funds will be used to build a statewide EV fast-charging network and community-based charging sites in rural and urban areas across Alaska.

Such electrification efforts, as part of the Alaska DOT&PF's Sustainable Transportation and Energy Program, include emissions reductions from state-owned and operated ferries that serve disadvantaged communities along Alaska's coastal maritime corridors, currently recognized as a crucial component of the international navigable waterways along the America Marine Highway (AMH) Route M-5. Electric marine transportation relies on the development of equitable DERs, such as hydro, that can serve as a green source of shoreside power for cruise lines, freight liners, and public transport. DOT&PF considers early community engagement to be critical to successfully integrate multi-modal transportation end users with distributed energy resources. This multi-modal approach to sustainable transportation can support light duty EVs, heavy duty industrial freighters, public transit, and the tourism industry by staying ahead of potential regulations and enabling deployment of low emission fueling options.

AEA has requested input from the public and interested EV fast-charging site(s) hosts to inform the development of EV charging infrastructure at appropriate locations throughout the state, including rural Alaska. The public is invited to a series of information sessions, with both in-person and virtual meeting options. In June, Governor Dunleavy re-shared an AEA post on his Facebook page about a request for information deadline extension for EV-fast charging sites to show his support of the public outreach process.[23] Additionally, AEA uses social media, community councils, newsletters, and media interviews to reach and engage with local governments and tribes to better understand community needs. Thirty of the 54 communities and local governments in the stakeholder's list (56%) lie within Justice40 boundaries, which include tribal councils and native organizations, port communities, and small businesses. One goal of speaking and engaging with these under-

resourced groups is to ensure that AEA can provide charging access in rural under-resourced communities to foster growth for EVs. According to the draft report, "the expected penetration in the early years in these communities is expected to be low, but the investment will ensure that the DACs are not left behind as the vehicle fleet shifts to electric power."[24]

### 4. *Develop Grant and Financing Programs to Reduce the Up-Front Cost of DERs for Low- And Moderate-Income (LMI) Communities*

Many Governors are championing and signing laws that extend energy autonomy and agency to under-resourced communities. State policymakers, with the encouragement and support of Governors, are considering how to create safeguards for under-resourced communities. These safeguards might include adopting policies that increase opportunities for communities to weigh in on energy policy decision-making related to DERs, such as the deployment of electric vehicle infrastructure and the development of solar energy projects. DER costs (i.e., rooftop solar, wind energy, etc.) are not economically viable for all communities. State programs can be designed with stakeholders to include incentives for those projects that drive community benefits. This section will highlight recently passed state policies that dedicate greater and more diverse community engagement processes to create more equitable grant and financing programs.

In November 2021, **Alabama** Governor Kay Ivey endorsed the Alabama Department of Economic and Community Affairs' (ADECA) state electric vehicle education and marketing program, "Drive Electric Alabama." The Initiative by the State Energy Office is a statewide coalition dedicated to adopting electric vehicles and deploying EV charging stations as well as educating consumers, utility regulators, and government officials about the benefits of electric vehicles. ADECA's Electric Vehicle Infrastructure Plan encourages the state to continue funding the Electric Vehicle Infrastructure Grant Program, with a $5 million increase per year, which includes a set-aside for equity-related needs. This category encourages applications for projects that will serve low- and moderate-income, rural, and/or other areas with a high ratio of multi-unit dwellings and single-family homes. Additionally, as stated in the Plan, Alabama's Equity Considerations Subcommittee will help assess and guide outreach regarding EV infrastructure and deployment with a special focus on delivering benefits to under-resourced communities. Members of the Subcommittee currently include tribal groups, faith leaders, and EV owners representing minority subsets of the population, amongst other groups.[25]

The Equity Considerations Subcommittee recommends focusing on the following metrics to measure the benefits to under-resourced communities:

1. Improving clean transportation access through the installation of charging stations;
2. Decreasing the transportation energy cost burden by enabling reliable access to affordable charging;
3. Reducing environmental exposures;
4. Increasing parity in clean energy access technology and adoption; and
5. Increasing gallons of petroleum displaced by the availability of chargers[26]

In February 2022, Colorado Governor Jared Polis and the State Energy Office—the Colorado Energy Office (CEO)—collaborated with two nonprofit research institutes to release a study, Pathways to Energy Affordability in Colorado, that includes a detailed analysis of existing energy cost burdens across the state and recommendations to reduce energy cost burdens for low- and moderate-income households while also supporting the state's clean air and climate goals. The study found high energy burdens for Colorado's rural communities, low-income households, renters, populations of color, mobile home residents and propane users and found that the expansion of energy efficiency, community solar gardens, demand response, and increased access to low- and no-cost financing in heavily energy-burdened communities can simultaneously improve energy affordability and support state energy goals. CEO is collaborating with state agencies, utilities, and other partners to realize the recommendations of the study, including through supporting utility on-bill financing program authorization. More recently, Governor Polis signed two bills into law: the Electric Grid Resilience And Reliability Roadmap (HB22-1249) and the Microgrids For Community Resilience Grant Program (HB22-1013), which will be administered by the Department of Local Affairs. A grid resilience roadmap will help the state prioritize investments, including for communities disproportionately impacted by climate change and without access to affordable and reliable energy sources. The creation of the microgrid grants program will help pilot the use of microgrids as one solution, focused particularly on rural municipal utilities and cooperative.[27]

## *Case Study: The Maryland Perspective*

In 2019, **Maryland** then-Governor Hogan established the Governor's Task Force on Renewable Energy Development and Siting through Executive Order 2019.09. According to the Governor's Task Force on Renewable Energy Development and Siting Final Report, there are several ways that the state is working to reduce the disparity in renewable energy benefits amongst communities, such as eliminating upfront energy costs through community solar, providing Strategic Energy Investment Fund (SEIF) grants to small,

minority, and women-owned businesses related to clean and renewable energy, and expanding efforts to develop microgrids, which can help protect under-resourced communities, particularly low-to-moderate income Marylanders, who may not be able to relocate to hotels or other centralized emergency shelters.

The Maryland Energy Administration (MEA), the State Energy Office, advises the Governor and general assembly on all energy matters. Below are a few incentives that MEA has created to help achieve a more equitable deployment of DERs.

- Resilient Maryland Planning Program: This is a competitive grant program that provides funds to help offset the costs of analyzing, planning, and designing clean and resilient DER systems, such as microgrids and resiliency hubs that benefit Maryland's under-resourced communities.
- Resiliency Hubs Program: In FY19, MEA also initiated a Resiliency Hubs Grant Program. The program provides an incentive to developers to install solar plus energy storage systems at facilities that can provide critical services to low-and moderate-income neighborhoods during a grid outage. These resiliency hubs are installed in easily accessible locations and serve as a safe, trusted space to gather until power is restored. The hubs provide lighting, outlets for recharging small battery-operated electronics and portable medical equipment, refrigeration for temperature-sensitive medication, and sufficient heating/cooling to prevent people from needing medical services. With funds from MEA, the city of Baltimore was able to critically advance progress on its Community Resiliency Hub Program by partnering with a nonprofit clean energy and community building nonprofit to identify 26 ideal sites across the city to serve as resiliency hubs, as well as to complete crucial preconstruction feasibility analysis and planning for the solar and battery storage systems to power them.
- Community Solar LMI-PPA Grant Program: Community solar is one way to allow low-income and minority populations to participate in solar by eliminating the upfront costs. The Community Solar Low-and Moderate-Income Power Purchase Agreement Grant Program (commonly called the Community Solar LMI-PPA Grant Program) provides grants to developers to reduce customer acquisition costs while providing significant, long-term savings to subscribers. According to the Funding Announcement for the FY 23 Community Solar LMI-PPA Grant Program, "Given the large up-front costs associated with an ownership model, a PPA model (little or no up-front cost, pay monthly per kWh used) with sufficiently favorable financial terms will likely be more appealing to the LMI community."[28]

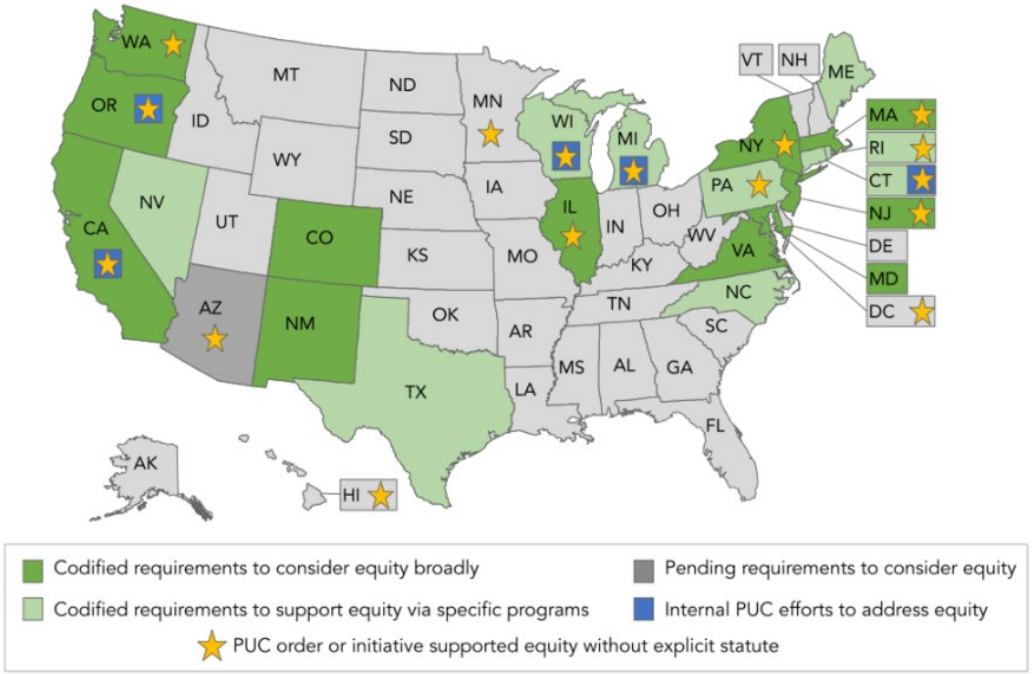
## 5. *Work With State and Territory Public Utility Commissions (PUCs) to Consider Equity in Ratemaking, Utility Planning Processes, and Other Regulatory Decisions*

Governors can influence how public utility commissions (PUCs) (sometimes known as public service commissions) operate. In most states and territories, Governors are responsible for appointing commissioners – public utility commissioners are elected in 12 states and territories and appointed in 41.[29] Governors with appointment power can be intentional about those who fill these important roles, such as choosing those who consider equity concerns in decision-making.

Governors can set state energy goals that may result in regulator's approval of costlier energy infrastructure measures or rates that have unintentional consequences such as subsidizing other customers.[30] This is sometimes done to advance goals that are in the public interest. For example, utility rates that subsidize low-income renewable energy programs to help meet state decarbonization goals may be necessary and lead to better outcomes for all residents.

Governors also have a role in establishing equity mandates and equitable planning requirements in utilities integrated resource plans (IRPs); see Michigan example below. Governors can also ensure that any state legislation they sign into law has enforcement provisions for failing to meet state energy policy goals and can propose legislation granting utility commissions additional powers, increasing oversight and accountability of utilities.[31]

Below is a map of equity mandates and programming at U.S. public utility commissions.[32]



In 2015, **Hawaii** then-Governor David Ige signed into law SB No. 1050, which requires Hawaii's electric utilities to create a tariff to enable customers to join community renewable energy programs. One such program is the Community-Based Renewable Energy (CBRE) Program, established in 2015 by Hawaii Public Utilities Commission (PUC). This program sets out to make the benefits of renewable energy more accessible to community groups, Hawaii residents, and small businesses. The legislation acknowledges that despite the growing use of residential solar energy in the state, many residents and businesses were unable to participate in renewable energy generation planning and decision-making because of their location, building type, inaccessibility to the electric utility grid, and other impediments. With this consideration in mind, the legislation requires electric utilities to collaborate with state agencies, stakeholders from the renewable energy industry, and the environmental advocacy community on the development of a community-based renewable energy tariff prior to filing the tariff with Hawaii's Public Utilities Commission (PUC).[33]

The Oregon Public Utility Commission responded to **Oregon** then-Governor Kate Brown's recommendations within Executive Order 20-04 to address affordability and environmental justice concerns. In collaboration with Oregon Housing and Community Services, the Oregon PUC established a public process to address and mitigate energy burdens through rate design and other programs.[34] Additionally, the Oregon PUC adopted utility distribution system planning (DSP) guidelines through a cooperative process with utilities and stakeholders in December 2020. The guidelines directly support GHG emission reduction and measurement, foster greater community outreach and engagement, and require utilities to file DSP reports beginning October 15, 2021, and August 15, 2022. Regarding community outreach, the PUC held an initial workshop on March 1, 2021, for communities and stakeholders to discuss the development of voluntary community-wide green tariffs.[35]

In **Michigan**, Governor Gretchen Whitmer's Executive Directive 2020-10 requires the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to expand the environmental advisory opinion they provide to inform the Michigan Public Service Commission's (MPSC) Integrated Resource Plan to also include climate and environmental justice impacts for the MPSC to consider.[36]

Additionally, Governors have considered how to alleviate costs of DER technologies. Governors can establish state financial incentive programs, such as on-bill repayments, or bill financing. Through this mechanism, utilities or another program administrator often cover all or a portion of the upfront costs of DERs such as solar and/or energy efficiency projects for their customers. In April 2019, **Hawaii** launched an innovative on-bill financing program for renewable energy and energy efficiency retrofits called the Green Energy

Money $aver Program for homeowners, renters, nonprofits, small businesses, and multifamily rental projects. This program ties the repayment obligation for energy improvements to the utility meter rather than an individual or organization. Approval is not based on applicant credit and the on-bill repayment obligation is transferable to the next owner or tenant.[37]

## CONCLUSION: WHERE DO WE GO FROM HERE?

This coming year presents a key opportunity for states to embed energy justice considerations into their state energy policies and programs. There are 39 gubernatorial seats on the ballot in 2022—in 36 states and three U.S. territories. There is also significant federal funding available to states through the Infrastructure Investment and Jobs Act (IIJA) and other federal legislation[38] to help the energy sector transition to one that is cleaner, more diverse, reliable, and equitable. Governors set state policy priorities, and in many states are responsible for key appointments, including directors of State Energy Offices and Public Utility Commissioners. To ensure equitable access to DERs as the U.S. energy sector transitions, Governors can lead. Governors can require that energy justice considerations be included in state energy policies and priorities, including in the development of state energy plans. Governors can build not only diverse offices but also provide diversity, equity, and inclusion (DEI) training as well as guidance to state policymakers and administrators on how to increase access to DERs and how to incorporate principles of energy and environmental justice in all their decisions.[39]

# APPENDIX A: WHAT IS ENERGY JUSTICE?

The Initiative for Energy Justice (IEJ) defines *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 disproportionately harmed by the energy system." Furthermore, IEJ defines *marginalized communities* that we refer to in this paper as "*under-resourced" communities* as "vulnerable populations and groups that have been excluded from the power, rights and prosperities enjoyed by others in a society, including communities at the frontline of pollution and climate change as well as those historically and presently disenfranchised on the basis of race or other social identity." [40] The under-resourced communities we will be discussing in this paper include environmental and energy justice communities, low-income communities, tribal communities, communities of color, and other groups of people who bear a disproportionate share of negative environmental consequences, higher energy costs based on a percentage of household income, and often lack access to affordable energy or clean energy resources due to price, availability, and other constraints.

In addition to laying out key terms and principles on the subject, it is important to understand the difference between environmental justice and energy justice. The term *environmental justice*, as IEJ defines it, involves the "recognition and remediation of the disproportionately high and adverse human health or environmental effects on communities of color and low-income communities." *Energy justice* examines the social, economic, and health burdens of the existing energy system through the lens of racial and social justice and is an emerging policy concept. Both movements prioritize under-resourced communities and seek to create an inclusive policymaking process for communities of color, low-income communities, rural communities, and others. [41]

It is important to reiterate that energy justice is a modern branch of environmental justice and is an emerging policy concept, whereas the term environmental justice has been used by climate advocates and policymakers for much longer. Because of this, Governors and state policymakers use the term "environmental justice" more frequently than they do "energy justice" to describe the adoption of principles in decision-making, proposed legislation, and executive orders that support communities overlooked in energy decision making. Governors and state policymakers sometimes use the terms "environmental justice" and "energy justice" interchangeably, therefore this paper addresses both environmental and energy justice policies and programs.

## Recent Federal Equity Investments

In addition to state energy justice initiatives, several federal investments have been made to address the needs of under-resourced communities in the transition to clean energy. The Trump administration invested primarily in rural energy infrastructure through the U.S. Department of Agriculture (USDA), including some in renewable and energy efficiency projects in rural locations.[42] The Biden-Harris 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 requires that 40 percent of the overall benefits of federal climate, clean energy, affordable and sustainable housing, clean water, and other investments must go to communities that have endured the deleterious effects of pollution. As part of this initiative, the Biden-Harris administration has prioritized the deployment of distributed and community-scale energy resources in the most vulnerable communities throughout the country.[43] The Fact Sheet also underscored that the Biden-Harris administration's National Climate Task Force formed a Distributed Energy Resources Working Group to ensure that the cost-saving opportunities that DERs provide are accessible for families.

There have also been multiple efforts led by the U.S. Department of Energy (DOE). DOE's Office 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 fiscal year 2019 to present (2022).[44] The Office supports DOE's capacity to deliver Justice40, partners with program offices, and develops working groups to advance equity across the agency. In January 2022, the Office of Economic Impact and Diversity established an Office of Energy Justice Policy and Analysis focused on reducing energy burdens through policy and increasing access to low-cost clean energy capital in low-income households.[45] Building on the Department's equity goals, in March 2022, 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 (PNNL) as part of the lab's broader Energy Storage for Social Equity initiative (ES4SE).[46]

# APPENDIX B: STATE ENERGY JUSTICE EXPERTS ROUNDTABLE

The paper incorporates research performed by NGA staff along with lessons learned from an April 2022 *State Energy Justice Experts Roundtable*, co-hosted by NGA, the National Association of State Energy Offices (NASEO), and the National Association of Regulatory Utility Commissioners (NARUC). In preparation for the Roundtable, NGA, NASEO, and NARUC prepared a brief backgrounder on energy justice, which served as an introduction to the four themes that were explored over the course of two days: (1) participation in decision-making, (2) customer arrearages and affordability, (3) equity in clean energy research, development, and deployment, and (4) energy justice metrics. NGA's brief written contribution focused on the equitable deployment of distributed energy resources.

Roundtable attendees included NGA, NASEO, and NARUC state members by invitation, energy justice experts, community group leaders, and representatives from the federal government. This paper addresses some of the challenges discussed in the roundtable and provides opportunities and best practices for Governors and their staff as they consider diversity, equity, and inclusion (DEI) principles in energy policy and increase access to distributed energy resources.

## Broader Energy Justice Challenges Raised at the Experts Roundtable

1. *Educating Stakeholders, State Staff, and Decision-makers on Energy Justice Issues*: How might Governors use their power to increase access to DER? What learning/training mechanisms are in place and/or needed in Governors' Offices?
2. *Analyzing Data and Information*: How can Governors encourage utility companies to provide compelling evidence and metrics of success for equitable investments?
3. *Tracking Metrics*: Who is and is not receiving funding? What groups are most often turned away from state funding opportunities and why? What is success and how is it best measured? What trusted organizations provide equity metrics to Governors' Offices? How can Governors integrate results into decision-making?
4. *Increasing Access to Funds*: How can Governors ensure that under-resourced communities' needs are reflected in state programs? How do Governors' Offices extend access to grant applications to under-resourced communities?
5. *Defining Energy Justice*: How do Governors define equity in their state agencies and offices? How is this translated into practice (i.e., state laws, executive orders, etc.)?
6. *Creating Genuine Engagement*: How can Governors meaningfully engage with under-resourced and under-resourced groups to understand and address their needs?

## Proposed Solutions at the State Energy Justice Roundtable for Governors and Their Advisors

1. Establish an Office of Energy Justice, cabinet-level position, or other authority with broad state powers, and identify a lead person or director to lead equity considerations.
2. Implement clean energy workforce training programs that invite community-based organizations to enter and complete the career pipeline for clean energy jobs.
3. Create a public energy justice mapping tool to examine environmental and health impacts on under-resourced communities.
4. Organize community listening sessions (with virtual components) to gather public input in developing state and territory clean energy plans.
5. Connect with a variety of stakeholders (i.e., nonprofit organizations, community groups, national laboratories, university research centers, etc.) as the first step in developing plans that will increase access to distributed energy resources.
6. Design an online-web tool that allows community groups to submit comments, questions, and statements to state agencies regarding energy justice concerns.

# Appendix C: Recent Federal Legislation: Infrastructure Investment and Jobs Act (IIJA)

**Infrastructure Investment and Jobs Act (IIJA):** The federal Infrastructure Investment and Jobs Act (IIJA) has already begun to transform the energy sector. Current and incoming Governors could influence how to leverage federal dollars in the IIJA to help shape the energy sector with energy justice components. States and territories have an abundance of opportunities to deploy DERs and some of the largest amounts of funding will be distributed through federal agencies, such as the U.S. Department of Energy, U.S. Department of Transportation, and the U.S. Environmental Protection Agency.

NGA created an IIJA Implementation Resources page with the latest information from the federal government, updates from associations, and NGA analysis on how Governors can lead on implementing the historic bipartisan Infrastructure Investment and Jobs Act (IIJA). Through online resources, virtual and in-person convenings, and timely guidance and updates, NGA is committed to providing energy policy advisors and other key staff in Governors' offices with the information they need to navigate IIJA programs, secure funding, and optimize program delivery.

Below are select funding provisions and programs, cooperative agreements, and grant opportunities referenced in the White House Guidebook that states and territories can leverage.[47][48] As stated in the White House Infrastructure Guidebook, the IIJA "presents a once-in-a-generation opportunity to make long overdue investments in local infrastructure, while narrowing the racial and gender wealth gap, expanding economic opportunity, and advancing climate justice."[49]

- **Energy Improvement in Rural or Remote Areas:** "This new Department of Energy program will provide $1 billion to entities in rural or remote areas (defined as cities, towns, or unincorporated areas with fewer than 10,000 inhabitants) to increase environmental protection from the impacts of energy use and improve resilience, reliability, safety, and availability of energy."
- **Solar Research and Development Cooperative Agreements:** "This existing program at the Department of Energy received $40 million under the law to fund research, development, demonstration, and commercialization activities to improve solar energy technologies. The law prioritizes projects in economically distressed areas or areas disproportionately affected by pollution, as well as those carried out in collaboration with Tribal organizations, minority-serving institutions, and others."

- **Low-Income Home Energy Assistance Program:** "This existing Department of Health and Human Services program received $500 million ($100 million / year for five years) to help assist eligible low-income households with their heating and cooling energy costs, bill payment assistance, energy crisis assistance, weatherization, and energy-related home repairs. *State allocations for fiscal year 2022 were announced on January 24 and came on the heels of historic funding for this program in the American Rescue Plan*."
- **40101(d):** The Section 40101(d) Formula Grant Program sets the stage for setting objectives and establishing a strategic planning process that will affect infrastructure investments proposed under other IIJA sections, most notably Section 40101 (awards for grid resilience projects), Section 40103 (awards supporting grid resilience and reliability research, development, and demonstration), and Section 40107 (qualified investments for improving smart grid functionality). Through this Program, DOE intends to have States and Indian Tribes develop and apply objectives and performance metrics based on their needs and policies for reliability, resilience, quality jobs, and equity that are additional to DOE reporting requirements. DOE believes that setting such objectives will most effectively guide the formulation of holistic strategies for determining near-term and longer-term grid investments.

# APPENDIX D: SELECT ENERGY JUSTICE RESOURCES

- NASEO's "Designing Equity-Focused Stakeholder Engagement to Inform State Energy Office Programs and Policies" paper describes how State Energy Offices can play a crucial role in advising Governors to change the inception and design of energy policies, programs, and investments to reflect the needs of community groups.
- NARUC's "Public Utility Commission Stakeholder Engagement: A Decision-Making Framework" guide on public utility commission stakeholder engagement suggests how Governors can take an initiating role in the stakeholder engagement process.
- The Electric Power Research Institute's (EPRI), "Equity and Environmental Justice Considerations for a Clean Energy Transition," presents key areas of decarbonization with equity dimensions and the role of research in informing policy, technology, and program development.
- Courageous Conversation is a protocol for effectively engaging, sustaining, and deepening interracial dialogue. Through their Framework for Systemic Racial Equity Transformation, they help individuals and organizations address ongoing racial disparities.
- The Environmental Council of the States' Green Report on State Approaches to Community Engagement and Equity Considerations in Permitting provides selected examples of how various states consider equity and environmental justice issues in permitting.
- EPA's environmental justice mapping and screening tool, EJScreen, is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports.
- EPA's Power Plants and Neighboring Communities mapping tool combines power plant data with demographic data from EJScreen. The power plant data is from two different data sets available from EPA's Clean Air Markets Division (CAMD).
- EPA's Energy Savings and Impacts Scenario Tool (ESIST) is a customizable and transparent Excel-based planning tool for analyzing the energy savings and costs from customer-funded energy efficiency programs and their impacts on emissions, public health, and equity.
- The Energy Zones Mapping Tool is a free, map-based tool for identifying areas within the U.S. that may be suitable for power generation and energy corridors.
- The Climate Advocacy Lab's Comprehensive Building Blocks for a Regenerative & Just 100% Policy document is authored by frontline, Black, Indigenous, and people of color leaders across the nation. This is a comprehensive approach to achieving 100 percent regenerative energy that is centered on justice.

- Movement Generation provides various just transition framework resources that will deepen understanding and use of the framework.
- The National Utilities Diversity Council conducts research and shares best practices to encourage diversity in the utility industry.
- Blacks in Green's (BIG) 8 Principles of Green-Village-Building seek to reverse the whole-system problem: communities and people of color are disproportionately burdened by pollution and changing climate.
- *Revolutionary Power: An Activist's Guide to the Energy Transition*, by Shalanda Baker.
- The Spectrum of Community Engagement to Ownership charts a pathway to strengthen and transform our local democracies, titled The Spectrum of Community Engagement to Ownership.

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