




Justice in 100 Metrics

Tools for Measuring Equity in 100% Renewable Energy Policy Implementation

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initiative for energy justice

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Acknowledgements

This report arose out of a partnership with Front and Centered. Front and Centered is a coalition of communities of color-led groups across Washington state, whose diverse missions and work come together at the intersection of equity, environmental justice, and climate justice. While advocating for the just implementation of Washington's Clean Energy Transformation Act, Front and Centered identified the need for equity metrics to guide the regulatory process. The Initiative for Energy Justice's research to support Front and Centered in that effort led to this report for broader use by policymakers and advocates around the country.

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Introduction

Purpose

This report reviews existing literature and compiles equity metrics for the implementation of 100% renewable energy policy. We created this literature review for energy regulators and communities engaged in energy rulemaking proceedings in particular. The content may also be adapted to address equity initiatives within utilities, and used by advocates in independent efforts to hold utilities accountable to equity standards. The resources provided are meant to provide a flexible basis from which to expand systems of accountability regarding equity goals in the implementation of 100% renewable energy (or 100% clean energy) policy.

Methods

This document was produced by conducting a review of existing resources regarding the measurement of equity, within and beyond the energy sector. After collecting these resources, the strategies and indicators they propose were distilled and synthesized into an original framework composed of *equity indicators* and *utility actions*.

- **Equity indicators** are quantitative measures of equity in a given community, municipality, state, or country. They are metrics which can be used to establish the state of equity at a given point in time, and are therefore effective tools for collecting baseline measurements and setting long and short-term goals regarding equity.
- **Utility actions** are specific steps that electric utilities can take to advance equity in the energy system and in the implementation of 100% renewable energy policy.

Utility actions may be used to further develop **utility equity targets**—metrics of "how much" and "how well" the actions are carried out. These are measurements of the outputs of utility actions and their overall progress. "How much" a utility carried out an action may be measured through metrics such as the amount of people reached or amount of money spent on a certain project or program, while "how well" an action was completed can function as a way of linking the utility actions and equity indicators by identifying which equity outcomes a specific action intends to improve and measuring the actual change observed as a result of the action[1]. Beyond this introduction, the document below does not further elaborate on utility equity targets as they would be specific to each utility.

The compiled utility actions and equity indicators were divided across four categories: Energy Access and Affordability, Procedural Justice and Democracy, Community Ownership and Economic Participation, and Health and Environmental Impacts. More information on the functionality of these categories is provided below.

Each indicator and action included in the framework is drawn from one of thirty sources included in an expanded bibliography. This portion of the literature review provides an overview of each source, as well as recommendations for how they may be used to further the development of accountability mechanisms pertaining to equity.

A Just Transition: Justice in 100% Renewable Energy Policy

Our current energy system in the United States is unsustainable in more ways than one. It is based upon an extractive economy, depleting the Earth and polluting our environment.[2] The social, health, and economic burdens the system creates are disproportionately allocated to poor communities, Black Americans, Indigenous Peoples, and communities of color.[3] The climate justice, environmental justice, and energy justice movements have each sought to remediate these harms and build a system that is livable and beneficial to all people.[4] A product of these efforts has been the concept of a "just transition."[1] A just transition means an equitable transition from the extractive fossil fuel economy to a regenerative economy, and it is necessary to confront the climate crisis and build a future that is livable for all. Because the current system is unsustainable, a transition is inevitable, but there is no guarantee that it will be just. In order to ensure that it is, we must center justice.

Energy justice, or "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 marginalized communities," must be at the forefront of renewable energy policy considerations.[3] Justice depends on equity, and equity depends on history.[3] In order for climate policy to be equitable, it must address and remediate historic harms.[3]

The implementation of 100% renewable energy policies at the state and local level has begun across the country.[5] These policies are a powerful tool at our disposal in the fight for a just transition. By reducing carbon emissions, air pollution, and destructive mining practices while diversifying the energy supply and boosting the economy,[6] 100% policies benefit our environment and our communities, but only if they are done right. Measurable targets are often established in the implementation of these policies to ensure that clean energy goals are being met. In order to ensure these policies are implemented equitably, it is necessary to measure equity as well.

Measuring Equity

There already exists a significant body of literature supporting the role of equity in sustainability initiatives and energy policy. This includes tools developed by advocacy groups taking the shape of guides and scorecards for assessing and enacting equitable policies; academic articles addressing the history and present state of environmental justice, the role of equity in sustainability initiatives, and the need for restorative justice in today's energy system; maps and data collection tools developed by state and local governments to analyze discrepancies in environmental health on a geographic and demographic scale; and a growing number of metrics and schemes to establish quantitative measures of environmental and energy justice and resiliency that can be compared across cities, states, and countries. It is also useful to look beyond the bounds of the energy sector for guidance, drawing lessons from disciplines with well established procedures for measuring equity, such as the health sciences.[7]

This report offers an overview of the existing resources that can help to inform the development of systems of accountability regarding equity in 100% renewable energy policy implementation by proposing measurable outcomes and actions for which utilities can be held accountable. Some of these sources help to establish equity's place in the energy conversation, others offer models for

the construction of frameworks or schemes to measure equity, and some provide concrete equity indicators and metrics which can be used by regulatory agencies to track progress and ensure that equity goals are being met. Informed by the literature and for ease of use, we have catalogued the actions and indicators included in these sources into four categories:

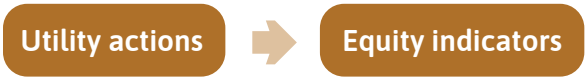
1. **Energy Access and Affordability,**
2. **Procedural Justice and Democracy,**
3. **Economic Participation and Community Ownership, and**
4. **Health and Environmental Impacts.**

The Accountability Framework: Actions and Indicators

Each of the four categories in this report consists of a compilation of potential "utility actions" and "equity indicators" that can further the pursuit of equity in the implementation of 100% renewable energy policy. Here's what we mean by these terms:

- **Utility actions** are interventions to advance equity in our energy system in the implementation of 100% renewable energy policy. These are concrete steps that electric utilities can take to meet equity standards. The actions can be tracked to hold utilities accountable.
- **Equity indicators** are quantitative measures of equity more broadly in a given community, municipality, state, or country. They are metrics which can be used to establish the state of equity at a given point in time, and are therefore effective tools for collecting baseline measurements and setting long and short-term goals regarding equity. The equity indicators are important tools for assessing whether and to what degree utility actions are effective.

These two components work together to ensure implementation and accountability (by the public and state regulatory bodies) of utility action and progress in regards to equity standards.



Utility actions and equity indicators can be thought of as the two ends of a logic model to ensure success in achieving a state's strategy for equitable climate action in the electric sector. On one end, equity indicators are measurements of the ultimate outcomes a state is trying to achieve, such as the share of household income spent on fuel and electricity (energy burden). On the other end, utility actions are the steps or interventions an electric utility is able to take itself, within its authority and jurisdiction, to make progress toward the equity goal that the equity indicator is measuring. For example, a utility action to address energy burden might include expanding net energy metering (NEM) programs to reduce customer bills.

Example:

In between these two ends are measurements of the outputs of utility actions and their overall progress. We'll call this step "utility equity targets".

Example:

While we offer general guidance for developing utility equity targets, we don't focus on them in this report given that they would be specific to each utility. Utility equity targets would need to be set either after selecting an equity indicator (e.g., energy burden) and determining the utility-specific objective that furthers this metric (e.g., bill reductions), or starting from the other direction, looking at the intended output of utility actions in a specific area (e.g., expanding NEM) undertaken to achieve a certain equity goal (e.g., alleviating energy burden).

Therefore, the two categories, utility actions and equity indicators, are presented as parallel approaches for assessing progress towards equity goals: requiring certain utility actions will ensure that utilities are held accountable for meeting equity standards, and equity indicators will determine what kind of impact these actions have on existing equity measures, such as income inequality, access to energy, and health burdens. Through the implementation of this framework, it may become clear that certain actions affect individual metrics, while others may influence a broader range of metrics, or have a tangible impact on equity that is not captured by the metrics provided. The combination of actions and indicator metrics is offered as a tool and a starting place for developing mechanisms of utility accountability by providing concrete ways that utility actions influence equity outcomes.

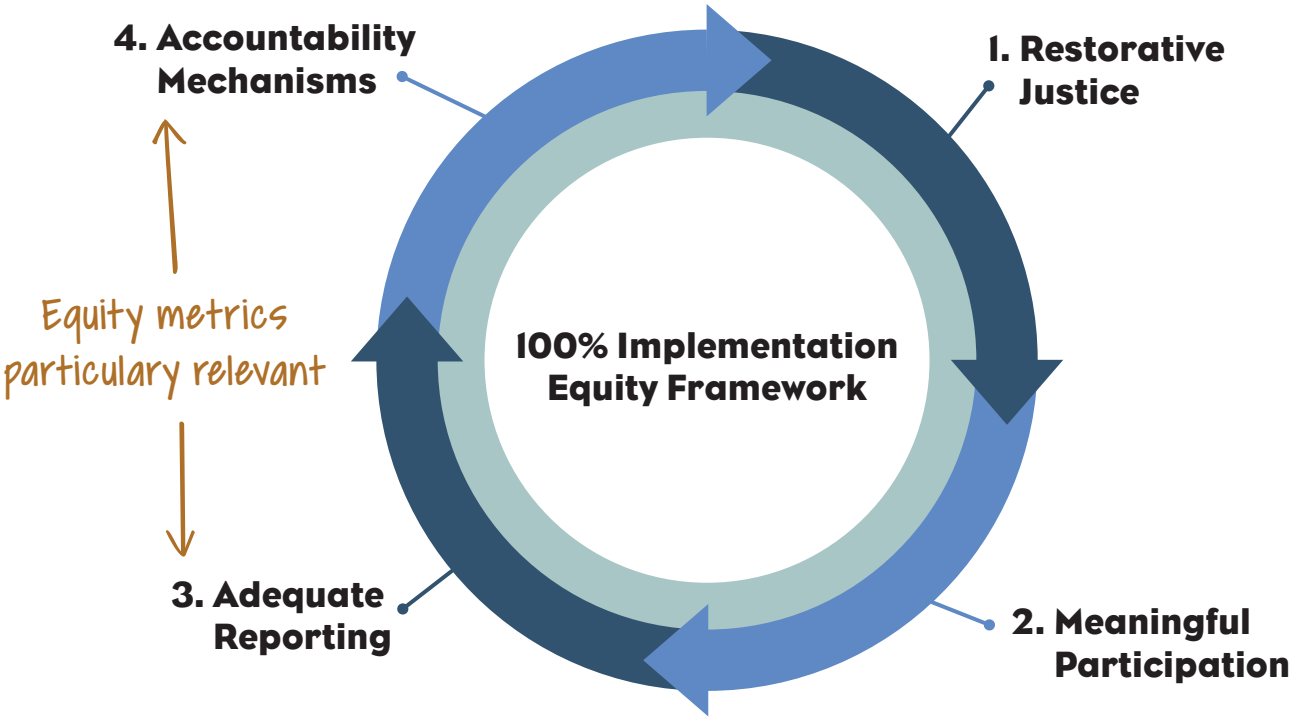
The Role of Accountability Mechanisms in 100% Implementation

Equity metrics can be used to hold utilities to an enforceable standard regarding equity in the implementation of 100% policies. Stakeholders, regulators, and utility leaders will need metrics to develop accountability mechanisms tailored to the needs of a specific policy and jurisdiction.

The regulatory and utility implementation of a state law requiring a transition to 100% renewable energy will require more than just accountability mechanisms. However, it is such a vital component. There is high demand among advocates, regulators, and utility managers for concrete resources to help them in the measurement and evaluation of equity goals. These are some of the reasons why we magnify our attention toward the role of equity metrics for this report.

Still, before we dive in, it is important to step back and zoom outward to orient ourselves to the context and requirements of a holistic approach to equity in in 100% policy implementation. Through conversations with Front and Centered, an equity-centered coalition in Washington State, we developed the following four-part equity framework for 100% policy implementation. Each component feeds into and depends on the others to ensure the equitable distribution of benefits throughout the process.

1. **Restorative Justice**: A holistic understanding of equity that recognizes past and current energy injustices should guide the implementation plans to advance energy justice and confer benefits to communities most burdened by these injustices. Restorative justice should underlie all aspects of the implementation process, and in particular help frame, ground and clarify the definitions and parameters of the process overall.
2. **Meaningful Participation**: The development, evaluation, iteration, and enforcement of implementation plans is a cyclical process. This sequence must begin with robust, equitable, inclusive, and accessible public participation in the development of periodic clean energy implementation plans, with special attention given to the barriers that prevent certain communities and populations from being able to engage in this process.
3. **Adequate Reporting**: Once an implementation plan has been finalized, regulators and the public will only be able to meaningfully evaluate and respond to actions undertaken during the implementation period if there is sufficient and appropriately detailed reporting.
4. **Accountability Mechanisms**: Structures must be put into place to properly hold the utility accountable to the goals and actions outlined in its implementation plan. This final stage of the cycle leads to the process restarting once again by reaffirming a commitment to restorative justice, and actively engaging public participation to respond to progress made as well as inequities that remain to be addressed in the development of the next stage of implementation.



A note on terminology:

For in-depth working definitions of common terms used in this report and energy justice literature generally, see the glossary in our publication "The Energy Justice Workbook," page 60. For example, by "frontline" we mean those at the frontline of pollution and climate change. Where this report references an underlying source for a given policy recommendation or metric, that source may offer a different definition of terms. Moreover, the actions and indicators often name various customer groups, populations, or communities. Given the variety of sources citied, this report does not synthesize group identity terms into a comprehensive nomenclature. Nevertheless, at times, the report refers to "all customer groups" or "marginalized communities" or "marginalized and vulnerable populations" to indicate the most-inclusive level of reference to all the various groups that should be considered.

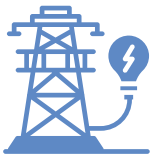
The resources and metrics provided in this report are relevant to each component of this framework. The measurement of equity is a project rooted in the theory and practice of **restorative justice**, as an equitable distribution is informed by current and historic conditions and intends to remediate existing injustice, as discussed further below. In addition, **meaningful participation** is relevant in the development and implementation of these metrics and also as a facet of procedural justice which these metrics can help measure. **Adequate reporting** is necessary for the enforcement of targets that can be developed using these resources and for identifying which metrics will be most relevant and effective. Adequate reporting will aid in the establishment of clear baseline measurements, allowing reasonable and actionable goals to be set based on current circumstances. Finally, the resources presented in this literature review fall most clearly under the fourth component, **accountability mechanisms** as outlined earlier.

We hope *Justice in 100 Metrics* will provide valuable guidance for incorporating justice and equity in the implementation of 100% laws, specifically by informing the creation of reporting, evaluation, and accountability systems to achieve equity goals.

Energy Access and Affordability

Energy access and affordability are crucial elements of achieving equity in the implementation of 100% renewable energy policy. Energy is a human right;[8] in order for the implementation of a renewable policy to be equitable, it must ensure and expand access to energy for all people, particularly those historically harmed by the energy system. Energy is not accessible if it is unaffordable, and unaffordable energy creates unique harms. Households that are unable to pay their electricity bill often face the "heat or eat" dilemma, forgoing other necessities in order to keep the lights on. Energy assistance programs at the federal, state, and utility level can help to alleviate unaffordable energy costs, and can align with clean energy goals by increasing access to energy efficiency and weatherization programs.[9]

However, it is critical that we look beyond patchwork solutions and expand access to and ownership of renewable energy resources that will ensure affordable, accessible, and reliable energy to the communities that have been deprived of quality service by the current and historic energy system. The implementation of 100% renewable energy policy has the potential to expand energy access, make energy more affordable, and create a more reliable and resilient energy system.[10] The following utility actions and equity indicators will help to ensure that these benefits are distributed equitably.



Utility Actions

Utilities can take the following actions to ensure equity in the accessibility and affordability of energy:

Energy Assistance

- Fund energy assistance programs[11]
- Establish or support programs that reduce the costs of basic needs for low-income households[12]
- Establish a Percentage of Income Payment Plan available for low-income consumers[13]
- Limit household energy bills (including fuels for space and water heating and cooking) to the percentage of gross income using the Low-Income Energy Affordability Data Tool[14]
- Decouple revenue in order to prevent the under-funding of energy assistance programs[15]
- Simplify energy assistance for seniors and ensure an accessible application process[16]
- Inform customers of all energy assistance programs and payment options on calls seeking help paying a bill[17]

Energy Assistance (continued)

- Ensure that energy is affordable for frontline, Black, Indigenous, and people of color households[18]
- Provide assistance and inclusive financing for deep investments particularly for energy efficiency programs in low-income communities and frontline communities[19]
- Shift the entire energy assistance system towards clean energy assistance programs that provide long-term renewable energy and efficiency benefits, and away from annual fuel subsidies[20]
- Expand or modify the deployment of local energy assistance programs and services to reduce disparities[21]
- Develop public education campaigns to inform residents about how to enroll in available service programs to help meet basic needs[22]

Reliability

- Target investments to help underserved communities prepare for and recover from disasters[23]
- Equitably link the grid to disaster preparedness[24]
- Make demand response programs available to households of all income levels and ensure that renters have the same types of opportunities as homeowners[25]
- Provide strong, accessible public education about demand response programs[26]

Energy Efficiency

- Provide energy-reduction programs specifically targeted to assist low-income residents[27]
- Fund low-income energy efficiency upgrades[28]
- Establish utility and on-bill financing programs to lower barriers to financing energy efficiency projects[29]
- Fund energy efficiency assistance programs[30]
- Ensure that the process for applying for energy efficiency assistance is simple, clear, and speedy[31]
- Invest in underserved communities, including weatherization assistance and rebates for energy-efficient products[32]
- Improve access to energy-management systems for commercial and residential customers[33]
- Establish a public benefits fund[34] supported through a percentage of contributions from a utility's gross operating revenue[35]
- Fund energy efficiency and low-income weatherization services[36]
- Focus energy efficiency programs on structural change rather than placing the burden on frontline communities to change their behavior[37]
- Weatherize homes and buildings[38]
- Provide opportunities for renters to be prioritized and receive economic benefits in energy efficiency[39]
- Limit incentives to efficient electric systems, with the amount of the incentive calibrated to the efficiency of the system[40]

Renewable Energy

- Expand net metering programs to customers who participate in offsite solar generation, such as community solar, through virtual net metering[41]
- Improve access to distributed generation and distributed storage[42]
- Fund the development of new renewable energy[43]
- Create a plan for establishing and managing a network of distributed energy generation, including how to connect distributed energy resources into the grid, maximize data flow throughout the grid between consumers and generators, and resolve technical barriers to increased distributed energy generation[44]
- Enable community solar projects[45]
- Provide a variety of clean energy options to achieve the 100% goal including energy efficiency, rooftop solar, solar thermal, and community solar[46]
- Advance microgrids[47]
- Provide opportunities for renters to be prioritized and receive economic benefits in local renewable energy[48]

Renewable Energy (continued)

- Utilize a "community benefits" framework for renewable energy development[49]

Internet and Telecommunications

- Provide access to information technology for people without connection to the Internet[50]
- Provide assistance in accessing subsidies that may be available for low-income members of the community to obtain Internet access in their homes[51]
- Improve access to broadband in rural communities[52]

Transportation

- Develop programs specifically targeted to assist low-income residents[53] that cater to making electric vehicles more accessible and affordable to low-income communities[54]
- Develop programs that cater to making electric vehicles more accessible and affordable to frontline communities[55]
- Provide a variety of transportation choices beyond electric vehicle programs[56]
- Prioritize a range of clean mobility options in frontline communities[57]
- Prevent displacement with any transit-oriented development elements[58]

Equity Across Communities

- Establish a Tribal Infrastructure Fund to finance energy infrastructure and projects that increase energy access in Tribal communities[59]
- Establish procedures for reparations and/or redress for Indigenous lands, territories, and resources that have been taken, confiscated, or occupied by utility operations[60]
- Ensure there is not uneven attention given to urban and rural communities[61]
- Consider varying rural contexts and provide alternatives such as rideshare and van pools, access to affordable EV options and infrastructure, healthy homes, energy efficiency, and rooftop solar that is appropriate for homes in rural communities[62]
- Staff contact centers with representatives that meet the language needs of the utility's customer base[63]

Equity Indicators

The effectiveness of these actions may be demonstrated through changes in the following equity indicators:

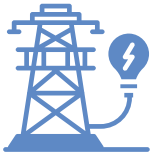
- ↓ (Decrease in) share of households (or population) without electricity or commercial energy, or heavily dependent on non-commercial energy[64]
- ↓ (Decrease in) share of household income spent on fuel and electricity[65] (energy burden)[66]
- ↓ (Decrease in) household energy use for each income group and corresponding fuel mix[67]
- ↑ (Increase in) access and proximity to community facilities, services, and infrastructure in neighborhoods with the highest percentage of low-income residents and people of color[68]
- ↓ (Decrease in) utility rate individual equity score[69]
- ↑ (Increase in) customer cost savings in $ saved (total and by customer class)[70]
- ↑ (Increase in) percent of population living within a reasonable distance from a heat island mitigation feature that provides localized cooling through tree canopy cover, green roofs or green walls; white roofs or cool roofs; and/or light-colored pavement or groundcover[71]

In addition, equity indicators could be established to track the parity or disparity of benefits and burdens, across different populations, related to energy access and affordability. For example, some benefits and burdens relevant to this category include:

- Percent of eligible customers enrolled in an assistance or benefit program, disaggregated by all customers groups (e.g., income level, frontline community, senior citizens, medically vulnerable, rural/urban, renter/homeowner, race, gender, ability/disability, language spoken, etc.)
- Number/percent of marketing and education interactions with customers by customer groups, particularly about assistance or benefit programs (e.g., financial assistance, energy efficiency, demand response, disaster prevention/response assistance programs, etc.)
- Amount ($) and percent of financing, rebates, or other incentives (e.g., for energy efficiency upgrades) accessed, by customer groups
- Costs of disasters borne by customer, by customer group (such as injury, health impacts, death, lost/damaged buildings or property, lost jobs/wages, duration of power outages, etc.)
- Ratio of program applications successfully completed to levels of interest or open rates (i.e., to measure ease/simplicity of application), by customer groups
- Percent with access to renewable energy (including breakdown for access to distributed renewable energy, access to microgrids), by customer groups

Procedural Justice and Democracy

Just outcomes rely on just processes. Those most impacted by the energy system should have proportional access to decision-making power and agency in their energy future. The utility actions and equity indicators included in this section work to ensure that all utility projects and investments involved in the implementation of renewable energy policies are developed equitably and that marginalized communities have access to their fair share of decision-making power.



Utility Actions

Utilities can take the following actions that support deep democracy and procedural justice in order to ensure equity in the implementation process:

Community Engagement

Relationship Building and Collaboration

- Hold community planning and visioning workshops[72]
- Invite all parties affected by environmental decisions to contribute to all stages of the decision-making process[73]
- Include all parties affected by environmental decisions in all stages of the decision-making process[74]
- Establish partnerships that engage key community groups and stakeholders in activities to advance equitable access and proximity to facilities, services, and infrastructure[75]
- Make involvement in the decision-making process possible, the experience valuable, and act on the advisement and feedback given[76]
- Contract with community-based organizations (CBOs) already working on issues of racial equity to host community events[77]
- Become familiar with the communities of color in the utility's generation and service territory, the history of oppression, and its impact on these communities, and build ongoing, mutually respectful, and beneficial relationships with these communities (i.e., no one-off meetings or processes that only serve the utility's needs)[78]
- Determine what level(s) of engagement will be employed for each project, be clear upfront about the level of decision-making the community will have in each process, and use appropriately matched method(s) and tool(s)[79]
- Provide opportunities for tribes to manage and co-manage projects[80]
- Work with local Tribal communities under Memorandums of Agreement (MOA)[81]
- Engage community at all major decision points (e.g., program and service policy changes, budget and resource allocation decisions, development and planning, etc.)[82]
- Identify possible budget allocation, policy, procedural, and practice solutions – be prepared to bring this information to the table when engaging the community[83]
- Ensure community engagement in the renewable development process by collaborating with communities where renewable energy is being sited[84]

Relationship Building and Collaboration (continued)

- Collaborate with frontline, Black, and Indigenous communities, people of color, and community-based organizations[85]
- Establish processes for co-governance and collective accountability with frontline, Black, and Indigenous communities and people of color[86]
- Identify the group of stakeholders and affected parties – including those who have historically not been/felt included or engaged – and their roles in decision-making[87]
- Communicate with communities, stakeholders and employees about how the action will be implemented[88]
- Learn with the community to adjust plans as their priorities and concerns shift[89]
- Communicate progress to all stakeholders[90]
- Plan to incorporate community feedback into future planning[91]
- Measure and evaluate intended outcomes of all programs, projects, and initiatives in collaboration with affected communities[92]

Equitable Participation

- Ensure that those affected by the outcome of decisions have control of those decisions proportional to how much they would be affected[93]
- Engage with affected communities and employees to guide successful implementation[94]
- Engage people of color most impacted by racial inequities to establish the utility's broader vision for racial equity and theory of change to achieve it[95]
- Apply relevant rules and procedures consistently, with regard to all parties[96]
- Hold all parties accountable, that is, responsible to answer for their actions and decisions and to remedy them if necessary[97]
- Ensure that all environmental decisions are made publicly and free from external coercion[98]
- Ensure that decision-making is deliberative, that is, free from any authority of prior norms or requirements[99]

Oversight and Consultation

- Appoint an advisory board to provide oversight on equity in the distribution of programs and services and in future development and planning initiatives[100]
- Establish and maintain an office or interdepartmental working committee to ensure access, equity, and inclusion in programs and service delivery[101]
- Establish an Equity & Environment Initiative to lead the effort to shift the utility's approach so those most affected by the combined impacts of hazardous pollutants, climate change, racial and socioeconomic conditions will lead on designing solutions and directly benefit from utility's investments[102]
- Set up an Environmental Justice (or Climate Justice) Board or Accountability Board comprised of frontline communities that can set processes and structures in place for the accounting of investments and disinvestments in energy programs that impact environmental justice and frontline communities[103]
- Consult tribes prior to developing projects, programs, activities, and initiatives,[104] particularly if renewable energy projects are proposed to be built on or directly impact Indigenous lands, with the goal of obtaining free, prior, and informed consent for the project[105]
- Consult with leadership from Tribal nations[106]
- Consult with communities to determine if there are sufficient monitoring and accountability systems in place to identify unintended consequences, and establish how course corrections will be handled if unintended consequences are identified[107]

Education and Training

- Provide staff with advanced equity, inclusion, and/or cultural disparity training[108]
- Train staff in how to provide meaningful consultation to tribes to identify and address concerns[109]
- Use existing community-produced reports as research material[110]

Education and Training (continued)

- Learn about affected communities', employees', and/or stakeholders' priorities and concerns[111]

Accessibility

- Conduct outreach and education that is linguistically- and culturally-appropriate on the utility's plan to reach the 100% renewable requirement and proposed projects[112]
- Provide all parties with access to sufficient skills and material resources to enable them to participate on an equal footing[113]
- Compensate community participants, advocates, and experts for their consultation[114, 115]
- Provide child care and language translation services[116]
- Hold meetings after regular working hours[117]
- Hold meetings in a space that is ADA accessible[118]

Assessments and Tools

Evaluation and Accountability

- Use a community impact assessment early on and throughout all major decision points (e.g., program and service policy changes, budget and resource allocation decisions, development and planning, etc.)[119]
- Incorporate equity impact assessments into the development and evaluation of program and services[120]
- Integrate racial equity into routine decision-making processes through the use of a Racial Equity Tool and the development and implementation of measurable actions[121]
  - Use Racial Equity Tools in the planning and implementation of all projects, including policies, practices, programs, and budgets[122]
  - Designate a team to review policy documents and other products through a justice lens and support employees who are using Racial Equity Tools through the process[123]
- Evaluate whether utility actions appropriately respond to community priorities and concerns[124]
- Implement a Results Based Accountability framework[125]
- Create a utility wide Racial Equity Action Plan[126]
  - Identify a lead or two co-leads who will oversee the planned development project[127]
  - Form a Racial Equity Action Team to shepherd the utility through the entire development and implementation process[128]
- Utilize the Mobility Equity Framework for all projects that impact the transportation system[129]
  - Identify the mobility needs of a specific low-income community of color[130]
  - Conduct a mobility equity analysis to prioritize transportation modes that best meet those needs while maximizing benefits and minimizing burdens[131]
  - Place decision-making power in the hands of the local community[132]

Cost-Benefit Analysis

- Consider externalities such as environmental and system benefits in the valuation of renewable energy projects such as distributed PV and utility-scale solar generation[133]
- Consider the full cost of environmental impacts and pollution in planning, as well as benefits such as economic values, improved health outcomes, reduced indoor air pollution, housing security, and energy affordability[134]
- For every project proposal, conduct an analysis of the best use of public land and the local impacts of proposed projects[135]
- Identify how utility actions will affect/serve people and places using demographic information, considering in particular low-income populations, communities of color, and limited-English speaking residents[136]
- Determine which known disparities and determinants of equity will be affected by your proposed course of action and intended outcomes – both directly and indirectly[137] (use quantitative data and/or gather new information)[138]

Cost-Benefit Analysis (continued)

- Identify potential unintended equity-related outcomes of this action[139]
- Project or map out how key alternatives will affect community and employee priorities and concerns[140]
- Evaluate each alternative for who will be disproportionately burdened or benefited, considering whether, now and in the future, alternative actions differ in improving or worsening current equity conditions[141]
- Include upstream alternatives (and related costs) that target root causes to eliminate disproportionate impact[142]
- Prioritize alternatives by equitable outcomes and reconcile with functional and fiscal policy drivers[143]

Data and Information

- Ensure that data and information regarding ongoing community changes are accurate and accessible (e.g., culturally, linguistically, and physically) and transparent to all[144, 145]
- Provide quality demographic data on pilots and programs by identifying the benefits and burdens associated with our energy system[146]
- Track data and provide public reports that outline which communities benefit from energy efficiency and renewable energy programs[147]
- Track and report on the progress of the Racial Equity Action Plan[148]
- Disaggregate all data collected by race[149]
- Quantify performance measures to achieve clarity in progress towards equity goals[150]
- Identify, analyze, and report inequities and disparate impacts of the utility's programs and services[151]
- Develop mechanisms for collecting data and evaluating progress to measure whether racial equity is being advanced[152]
- Collect and report robust data on emissions[153]
- Protect customers' data privacy through voluntary adherence to the DataGuard Energy Data Privacy Program's standards[154]

Recognition Justice and Framing

- Publish a recognition of the Indigenous land on which the utility operates and the Indigenous Peoples within its service and generation areas[155]
- Recognize past and current harms to Indigenous communities related to the control and domination of energy and as well as Tribal sovereignty and rights[156]
- Respect sacred sites, such as ancient villages sites and burial sites, on Indigenous lands and mark them as off-limits for energy projects[157]
- Provide a written recognition that people of color, immigrants and refugees, people with low incomes and individuals with limited English proficiency tend to be overburdened by health impacts from pollution and environmental issues[158]
- Review policy and practices through a justice lens[159]
- Center social equity and community power as primary values in all transportation planning and decision-making[160]
- Seek to align utility mission with environmental and social goals, such as environmental performance, resilience, expanded choice, and innovation, instead of capital investments[161]
- Clearly identify the desired impacts or goals of frontline, Black, and Indigenous communities and people of color to be achieved by all proposed programs and projects[162]

Equity Indicators

The effectiveness of these actions may be demonstrated through changes in the following equity indicators:

- (Increase in) local survey responses indicating that residents believe they are able to have a positive impact on their community[163]
- (Increase in) appointments to local advisory boards and commissions that reflect the gender, racial, and ethnic diversity of the community[164]
- (Increase in) diversity of racial, ethnic, [gender], and geographic composition of planning organization boards[165]
- (Increase in) percent of community members in a population engaged in energy policy rule-making proceedings
- (Increase in) funding for participants of rule-making proceedings, particularly marginalized and vulnerable communities
- (Increase in) percent of community recommendations that were meaningfully incorporated into final energy rules, policies, and/or decisions
- (Increase in) percent of utility actions and projects engaged in with prior consent and consultation with Indigenous communities

In addition, equity indicators could be established to track the parity or disparity of benefits and burdens, across different populations, related to procedural justice and democracy. For example, some benefits and burdens relevant to this category include:

- Percent of customers involved in various decision-making points regarding utility actions (including attendance of meetings), disaggregated by all customers groups (e.g., income level, frontline community, senior citizens, medically vulnerable, rural/urban, renter/homeowner, race, gender, ability/disability, language spoken, etc.)
- Communication to customers regarding decision-making opportunities and progress updates regarding those activities, by customer groups
- Outreach (e.g., for education, input, collaboration, and other purposes) to specific addresses, number and frequency of community meetings, frequency of one-on-one conversations, types and frequency of social media outreach, and which languages materials are translated into[166] (broken down by customer groups where applicable)

Economic Participation and Community Ownership

Renewable energy policies boost the economy and increase job growth.[5] These benefits, which extend beyond the energy sector, must be equitably distributed. Utilities must take a proactive role in expanding community ownership and economic opportunities within the communities they serve. The utility actions and equity indicators in this section are useful in assessing and ensuring diversity and inclusion within a utility's workforce, the utility's impact on the economic vitality of the community in which it operates, as well as community ownership of energy infrastructure and its economic consequences.

Utility Actions

Utilities can take the following actions to ensure equity in the economic participation in the energy system and community ownership of energy infrastructure:

Hiring, Recruitment, and Compensation

Data and Reporting

- Collect and track data, especially to determine if frontline, Black, and Indigenous communities, people of color, women of color, and LGBTQ workers are able to maintain employment[167]
- Provide and report detailed data and tracking of employment; including salaries, wages, promotions, and new hires;[168] disaggregated by race, gender, income, and all other relevant determinants[169]
- Track who is hired, whether a worker comes from a frontline, Black, or Indigenous community or community of color, particular zip code or census tract, and any other key information related to local hire[170]
- Set gender targets in recruitment, hiring, and retention[171]
- Conduct evaluations to determine what factors impact retention and recommendations for retention of these (frontline, Black, and Indigenous communities, people of color, women of color, and LGBTQ) workers[172]

Hiring and Promotions

- Hire people who live near their place of work[173, 174]
- Ensure equitable access to a broad range of careers in the renewable energy sector that are high wage with comprehensive benefits[175]
- Advance women, women of color, and LGBTQ individuals to positions of leadership[176]
- Provide frontline communities access to high quality, high wage jobs in the renewable energy sector that can bring them out of poverty and support their families[177]
- Ensure that African Americans are brought into the clean energy sector, especially as it relates to union apprenticeship opportunities[178]
- Prioritize the recruitment, retention, and advancement of women within the labor force[179]

Hiring and Promotions (continued)

- Institute organizational hiring thresholds to encourage the recruitment of women for employment within the utility[180]
- Invest in a Race and Social Justice Program Manager position[181]
- Implement programs that create pathways for higher-paying positions and address areas of bias that may affect promotions or hiring[182]

Compensation and Benefits

- Ensure equitable wages and benefits across genders[183]
- Provide good family-sustaining benefits including healthcare, dental, retirements, and other elements of a comprehensive benefits plan[184]
- Ensure worker safety and protections, rights to meal breaks and rest periods, and universal labor rights including the right to organize in the workplace and the right to collective bargaining for better wages and working conditions[185]

Education, Training and Development

- Recruit in communities of color and partner with academic institutions such as community colleges to ensure that applicants have access to the training and certifications needed for specific internships[186]
- Increase connections to entry-level opportunities including streamlining applications for paid internships and examine internships to ensure that they are entry-level appropriate, provide mentoring and on-job training, and pay a living-wage[187]
- Implement classroom-based education, workforce development, trade skills-building programs and supplier diversity practices that help ensure equitable opportunities[188]
- Promote job creation, including the development of "green jobs"[189]
- Implement training and workforce development programs, including preparation for filling "green jobs"[190]
- Fund education and workforce development programs with a priority focus on those that serve communities facing historic or systemic barriers to equitable outcomes[191]
- Pay trainees participating in apprenticeship programs high wages and include benefits[192]
- Establish clear certification processes for trainings, which should be relevant and related to long-term careers in the green sector[193]
- Ensure that job trainings lead to actual jobs[194]
- Promote potential job opportunities that can be created in the retirement of old fossil fuel infrastructure[195]
- Ensure that professional development opportunities extend to women employees[196]
- Increase accessibility to training and apprenticeship programs for women, women of color, and LGBTQ communities[197]
- Develop a Green Jobs Initiative to increase utility workforce diversity to reflect the communities that the utility serves[198]
- Create high road careers that are linked to the infrastructure development of local distributed generation[199]
- Establish robust apprenticeship and pre-apprenticeship programs so that workers can gain the skill set needed for a long-term high road career in the renewables industry[200]
- Create mid-level opportunities that accelerate leadership such as a fellowship specific to those most-affected by environmental and racial inequities[201]
- Cover the cost of expenses for jobs skills training programs, such as equipment expenses[202]

Utility Culture

- Create an annual Race and Social Justice Initiative work plan[203]
- Develop and lead annual events centering social justice, racial justice, and equity[204]

Utility Culture (continued)

- Commit to providing training to all staff to deepen understanding of institutionalized racism and how to apply this learning to work at the utility[205]
- Provide intern orientations that include racial justice and social justice-oriented activities[206]
- Provide employees with information on implicit gender biases within the workplace and the energy sector, as well as trainings on complying with human resources policies and national gender policies[207]
- Ensure access to support services for women and families in the workforce including child care, paid family leave, funding for work required equipment and protective clothing, and on-site breastfeeding space[208]
- Implement protections for employees in the workplace, including sexual harassment and antidiscrimination policies, as well as enforcement protocols[209]
- Update human resources policies to be sensitive and respond to the needs of women employees, such as offering flexible time, parental leave, and childcare benefits[210]

Supply and Contracting

- Require contractors to provide a living wage for employees[211]
- Require contractors to provide health insurance for employees[212]
- Implement supplier diversity programs to ensure opportunity in all competitive bid events for qualified minority-owned, women-owned, disabled veteran-owned and emerging small business enterprises suppliers[213]
- Encourage prime contractors and major suppliers to provide opportunities for diverse supplier subcontractors and businesses[214]
- Commit to community outreach in order to provide the consultant and construction community with information about upcoming business opportunities within the utility[215]
- Ensure supplier diversity in contracting[216]

Women and Minority Business Enterprise (WMBE) Program[217]

- Prioritize people of color-owned and women-owned business enterprises via a systematic method for developing an inventory of certified minority and women's business enterprises, marketing to promote MBEs and WBEs, and procurement procedures for MBEs and WBEs to participate[218]
- Establish a Women and Minority Business Enterprise (WMBE) Program to lift barriers confronting WMBE firms that aspire to do business with the utility[219]
  - Encourage businesses to register in a regional Online Business Directory[220]
  - Encourage women and minority-owned businesses to bid on blanket contracts, consultant request for proposals (RFPs), and public works solicitations[221]
  - Share information regarding the utilities procurement policies and procedures[222]
  - Create increased awareness and promote the inclusion of women and minority-owned firms in the utility's day-to-day procurement opportunities[223]
  - Ensure that utility units make a good faith effort to utilize women and minority-owned firms[224]
  - Ensure prime contractors on utility projects provide subcontracting opportunities to women and minority-owned businesses through use of an inclusion plan[225]
- Establish requirements for a certain percentage of the dollar amount spent on construction, professional services, materials, supplies, equipment, alteration, repair, or improvement by a state governmental entity to go toward WMBEs[226]
- Report on WMBE expenditures by procurement type and dollars paid to WMBE firms by race, ethnicity, and gender of the firm's ownership[227]
- Notify WMBEs of utility business opportunities[228]
- Set-aside funds for WMBEs[229]
- Demand support for women-led enterprises[230]

Community Ownership

- Offer well-designed community shared solar programs[231]
- Enable low income access to community shared renewable programs[232]
- Make solar PV-market participation available to low-income customers through arrangements like community solar[233]
- Alleviate the up-front cost barrier to community shared solar programs through "pay as you go" options[234]
- Ensure that community shared solar programs operated by the utility maximize the benefits of going solar, including increasing community control and expanding the opportunity to use community energy projects to accomplish social goals such as quality employment for disadvantaged populations[235]
- Cooperate with non-utility owned community shared solar programs and collectives[236]
- Identify ways to extend financing to customers with otherwise higher credit risk, including on-bill repayment programs[237]
- Size renewable energy projects to ensure siting in frontline, Black, and Indigenous communities and communities of color[238]
- Utilize the "solarize" approach to allow groups of homeowners or businesses to work together to collectively negotiate rates, competitively select an installer, and increase demand through a creative limited-time offer to join the campaign[239]
- Invest in research and development of microgrids in frontline, Black, and Indigenous communities and communities of color[240]
- Advance and incentivize community ownership and procurement among frontline, Black, and Indigenous communities and communities of color[241]

Community Impact

- Adopt a community-wide plan to reduce poverty[242]

Equity Indicators

The effectiveness of these actions may be demonstrated through changes in the following equity indicators:

- ↓ (Decrease in) Gini coefficient[243]
- ↓ (Decrease in) income inequality "95/20" ratio[244]
- ↓ (Decrease in) percentage of residents living below the poverty line[245]
- ↓ (Decrease in) percentage of women, men, children, and additional subgroups of residents living below the poverty line[246]
- ↑ (Increase in) local energy generation in GWh generated per year[247]
- ↑ (Increase in) percent of energy resources/assets owned or controlled by women and equity business enterprises
- ↑ (Increase in) percent of energy resources/assets owned or controlled by the local community

In addition, equity indicators could be established to track the parity or disparity of benefits and burdens, across different populations, related to economic participation and community ownership. For example, some benefits and burdens relevant to this category include:

- Average annual receipts per firm[248] by all customers groups (e.g., income level, frontline community, senior citizens, medically vulnerable, rural/urban, renter/homeowner, race, gender, ability/disability, language spoken, etc.)
- Number of firms[249] by all customers groups
- Earned income growth by income-level percentile for full-time wage and salary workers[250] and by all customers groups

- Growth in jobs and earnings by wage level[251] and by all other customers groups
- Direct annual jobs created in full-time equivalents (FTEs)[252] by all customers groups
- Labor wage impacts in direct job wages ($/hour)[253] by all customers groups
- Number of job trainees; job placements; and new hires retained after 2, 5, or x years – by all customer groups
- Percent of employees, by all customer groups, in mid-level and senior-level positions
- Value ($) of energy assets owned by all customer groups

Health and Environmental Impacts

The environmental benefits of renewable energy are well established on both the local and global scale. Reductions in carbon emissions, air pollution, water contaminants, and destructive mining practices are just a few of the environmental benefits which the transition to renewable energy brings with it. These benefits make an impact on both the global and local scale and directly affect the health of community members. It is crucial that the environmental benefits realized through the implementation of renewable energy policies are equitably distributed, and that no benefits come at the cost of communities and populations which have disproportionately suffered the negative health impacts of the energy system. The actions in this category work to ensure that no further harm is done to these communities and populations, and that environmental health benefits and burdens are equitably distributed. Equity indicators in this category help to determine who is being impacted by a transition to renewable energy, and who has borne the brunt of our energy system in the past, in order to make informed decisions about the implementation of renewable energy policy.

Utility Actions

Utilities can take the following actions to ensure equity in the health and environmental impact of the transition to 100% renewable energy:

Project Development

- Construct new facilities and infrastructure in locations that reduce existing disparities[254]
- Incorporate environmental justice criteria and priorities into zoning, land use planning, permitting policies, and development of new projects[255]
- Create community benefit agreements (CBAs) for environmental justice site remediation projects and/or proposed development projects with environmental justice concerns[256]
- Invest in comprehensive electric vehicle (EV) programs and infrastructure,[257] and fund the electrification of public transportation[258]
- Incorporate environmental equity principles into projects and programs[259]
- Include the impacts and costs related to road creation, recycling of old vehicles parts such as tires, and how and where various modes of transportation will be created and dumped in transportation goals[260]
- Do No Harm: Ensure that wherever renewable energy is sited and energy efficiency upgrades are made, these projects do not create further harm in frontline, Black, and Indigenous communities and communities of color[261]
- Reduce reliance on bridge fuels such as gas plants[262]

Evaluation of Needs

- Identify the community's priority environmental justice conditions and priority neighborhoods[263]
- Conduct a comprehensive environmental justice assessment[264]
- Define and set strong public health goals, such as
  - Improved air quality through the elimination of GHGs and co-pollutants in frontline, Black, and Indigenous communities and communities of color
  - Improved water quality related to the impacts of energy infrastructure
  - Eliminating legacy environmental hazards
  - Improving mental health through local renewable energy[265]

Environmental Justice

- Reduce the risks and exposure to priority environmental justice conditions for priority neighborhoods[266]
- Monitor and enforce environmental standards for existing facilities that impact prioritized environmental justice sites and overburden neighborhoods[267]
- Implement projects to reduce exposure to contaminants and risks associated with environmental justice conditions[268]
- Demonstrate a measurable reduction in vulnerability and/or increase in resiliency to community wide risks and at-risk population groups[269]
- Ensure that public health benefits continue in the transition to renewable energy[270]
- Compensate communities that are most impacted by pollution from fossil fuels for the healthcare necessary to treat cancer, asthma, and other diseases resulting from fossil fuels[271]

Equity Indicators

The effectiveness of these actions may be demonstrated through changes in the following equity indicators:

- ⬇ (Decrease in) accident fatalities per energy produced by fuel chain[272]
- ⬇ (Decrease in) in metric tons (MT) of criteria pollutants[273]
- ⬇ (Decrease in) GHG emissions in metric tons of CO_2 ($MTCO_2$), GHG intensity ($MTCO_2$/MWh)[274]

In addition, equity indicators could be established to track the parity or disparity of benefits and burdens, across different populations, related to health and environmental impacts. For example, some benefits and burdens relevant to this category include:

- Share of population and pollution burden, by race/ethnicity, geography[275] and all customer groups (e.g., income level, frontline community, senior citizens, medically vulnerable, rural/urban, renter/homeowner, race, gender, ability/disability, language spoken, etc.)
- Air pollution exposure index, by race/ethnicity[276] and all other customer groups
- Percent of adults with asthma by race/ethnicity[277] and all other customer groups
- EJSCREEN composite score for environmental vulnerability (proximity to fossil fuel power plants, extraction sites, hazardous waste, incinerators, pollution point sources)[278]
- EJSCREEN Environmental Indicators[279]
  - National-Scale Air Toxics Assessment (NATA) air toxics cancer risk

- NATA respiratory hazard index
- NATA diesel PM
- Particulate matter
- Ozone
- Traffic proximity and volume
- Lead paint indicator
- Proximity to Risk Management Plan (RMP) sites
- Proximity to hazardous waste facilities
- Proximity to National Priorities List (NPL) sites
- Wastewater Discharge Indicator (Stream Proximity and Toxic Concentration)

- CalEnviroScreen Pollution Burden Indicators[280]
  - Drinking water contaminants
  - Pesticide use
  - Toxic releases from facilities
  - Cleanup sites
  - Groundwater threats
  - Impaired water bodies
  - Solid waste sites and facilities

- EJSCREEN composite score for demographic vulnerability (combination of household income, race/ethnicity, linguistic isolation)[281]
- EJSCREEN Demographic Indicators[282]
  - Percent low-income
  - Percent minority
  - Linguistic isolation
  - Individuals under age 5
  - Individuals over age 64
- CalEnviroScreen Population Characteristics[283]
  - Asthma
  - Cardiovascular disease
  - Low Birth Weigh (LBW) infants
  - Educational attainment
  - Housing burdened low-income households
  - Poverty
  - Unemployment

Notes & Resources

References Cited

In the order sources appear

Just Transition
Climate Justice Alliance

Principles of Climate Justice
Environmental Justice Leadership Forum on Climate Change

The Energy Justice Workbook
The Initiative for Energy Justice

Ready for 100 Commitments
Sierra Club

Advancing Social Equity as an Integral Dimension of Sustainability in Local Communities
James Svara, Tanya Watt and Katherine Takai, Cityscape, Vol. 17, No. 2, Affordable, Accessible, Efficient Communities (2015), pp. 139-166

*Identifies the three "Es" of sustainability, **E**nvironmental protection, responsible **E**conomic growth, promotion of **E**quity. Recognizing that equity has been sidelined by the others, it "considers what equity means as a dimension of sustainability and examines what local governments are doing to advance social equity" (139). In analyzing the results of a 2010 national survey to review social equity in local governments, the article provides a number of potential resources for indicator development.*

- Exhibit 2: Activities that Promote Social Equity (144)
- Exhibit 9: Local Government Actions Targeted to Low-Income Populations (150)
- Exhibit 10: Local Government Actions To Create Jobs (151)
- Exhibit 11: Local Government Actions To Promote Social Inclusion (152)

The article presents both a "three-legged" and "nested" model of the three Es of sustainability, and notes that while existing equity metrics leave much to be desired, the most fully developed exist in community and public health.

The Human Right to Access Electricity
Stephen Tully, The Electricity Journal Volume 19, Issue 3, (April 2006), Pages 30-39

Bringing the Benefits of Energy Efficiency and Renewable Energy to Low-Income Communities
United States Environmental Protection Agency

Benefits of Renewable Energy Use
Union of Concerned Scientists (Jul 14, 2008; updated December 20, 2017)

Creating an Equitable Energy Future

Portland General Electric

Report from Oregon utility, Portland General Electric, on progress towards equity within the utility's operations and service and generation territory.

The Electricity Sector

U.S. Department of Energy

Report on the changing energy landscape and its equity implications, provides guidance on the implementation of DG and DS programs as well as energy efficiency and demand response.

Comprehensive Building Blocks for a Regenerative & Just 100% Policy

The 100% Network

Tool for advocates of transition to 100% clean regenerative energy to design comprehensive policy. Authored by frontline, Black, Indigenous, and people of color leaders across the nation, the document presents a "comprehensive approach to achieving 100% regenerative energy that is centered on justice."

STAR Communities Rating System

"Menu-based" rating system for communities integrating economic, environmental, and social sustainability goals.

Built Environment	Climate & Energy	Economy & Jobs	Education, Arts, & Community	Equity & Empowerment	Health & Safety	Natural Systems	Innovation & Process
BE-1: Ambient Noise & Light	CE-1: Climate Adaptation	EJ-1: Business Retention & Development	EAC-1: Arts & Culture	EE-1: Civic Engagement	HS-1: Active Living	NS-1: Green Infrastructure	IP-1: Best Practices & Processes
BE-2: Community Water Systems	CE-2: Greenhouse Gas Mitigation	EJ-2: Green Market Development	EAC-2: Community Cohesion	EE-2: Civil & Human Rights	HS-2: Community Health	NS-2: Biodiversity & Invasive Species	IP-2: Exemplary Performance
BE-3: Compact & Complete Communities	CE-3: Greening the Energy Supply	EJ-3: Local Economy	EAC-3: Educational Opportunity & Attainment	EE-3: Environmental Justice	HS-3: Emergency Management & Response	NS-3: Natural Resource Protection	IP-3: Local Innovation
BE-4: Housing Affordability	CE-4: Energy Efficiency	EJ-4: Quality Jobs & Living Wages	EAC-4: Historic Preservation	EE-4: Equitable Services & Access	HS-4: Food Access & Nutrition	NS-4: Outdoor Air Quality	IP-4: Good Governance
BE-5: Infill & Redevelopment	CE-5: Water Efficiency	EJ-5: Targeted Industry Development	EAC-5: Social & Cultural Diversity	EE-5: Human Services	HS-5: Health Systems	NS-5: Water in the Environment	
BE-6: Public Parkland	CE-6: Local Government GHG & Resource Footprint	EJ-6: Workforce Readiness	EAC-6: Aging in the Community	EE-6: Poverty Prevention & Alleviation	HS-6: Hazard Mitigation	NS-6: Working Lands	
BE-7: Transportation Choices	CE-7: Waste Minimization				HS-7: Safe Communities		

Each "goal area" (built environment, climate & energy, etc.) contains itemized "objectives" which correspond to evaluation methods via community level outcomes and local actions. The Equity and Empowerment objectives are as follows.

Objective Number	Objective Title and Purpose	Available Points
EE-1	**Civic Engagement:** *Facilitate inclusive civic engagement through the empowerment of all community members to participate in local decision-making*	15
EE-2	**Civil & Human Rights:** *Respect, protect, and fulfill the civil and human rights of all members of the community*	10
EE-3	**Environmental Justice:** *Ensure no neighborhoods or populations are overburdened by environmental pollution*	15
EE-4	**Equitable Services & Access:** *Establish equitable spatial access to foundational community assets within and between neighborhoods and populations*	20
EE-5	**Human Services:** *Ensure that essential human services are readily available for the most vulnerable community members to ensure all residents receive supportive services when needed*	20
EE-6	**Poverty Prevention & Alleviation:** *Alleviate the impacts of poverty, prevent people from falling into poverty, and proactively enable those who are living in poverty to obtain greater, lasting economic stability and security*	20
	Total Points Available:	100

Public Benefit Funds

Center for Climate and Energy Solutions

Energy Indicators For Sustainable Development: Guidelines And Methodologies

International Atomic Energy Agency, United Nations Department Of Economic And Social Affairs, International Energy Agency, Eurostat And European Environment Agency, 2015

Provides a set of indicators as a starting point to establish a widely used and comprehensive collection of indicators for sustainable development. Social dimension includes:

- SOC1: Share of households (or population) without electricity or commercial energy, or heavily dependent on non-commercial energy
- SOC2: Share of household income spent on fuel and electricity
- SOC3: Household energy use for each income group and corresponding fuel mix
- SOC4: Accident fatalities per energy produced by fuel chain

The Southeast Sustainability Directors Network classifies each of these indicators as follows, respectively: Accessibility, Affordability, Disparities, Health Safety

How Do We Measure Equity in Energy Efficiency?

Southeast Sustainability Directors Network

Highlights energy burden as a measure of equity, proposing three thresholds for high-burden or unaffordable energy:

- 6% of gross household income
- 11% of household annual gross income
- Medium income household energy burden (threshold for low-income energy burden)

Measuring Fairness: Assessing the equity of municipal water rates

Manuel P. Teodoro, Journal (American Water Works Association), Vol. 97 No. 4 (April 2005), pp. 111-124

Presents a single value measure of equity in municipal water rate setting, with a higher value indicating a higher level of inequity:

- Equity Score: $e_i=((a_i-\tau_i) / \tau_i)$ where e_i represents the equity score of an individual's water rates, a_i represents their actual rate charged based on class cost pools, and τ_i represents the tailored rate of the individual (or how much their water bill would be based on individual consumption data rather than assignment to a class cost pool)

Local Development Business Plan 2018

East Bay Community Energy

Includes a set of "categories" and "performance metrics" for the measurement of benefits focusing on employment and economic benefits and environmental effects.

Category	Performance Metric (Units)
Direct Annual Jobs Created	Full-time Equivalents (FTE's)
Labor Wage Impacts	Direct Job Wages ($'s/hour)
Fiscal Impacts	Costs ($'s spent), Cost Savings ($'s saved), Surplus Revenue ($'s/year)
Customer Cost Savings	$'s saved (Total and by Customer Class)
Local Energy Generation	GWh's Generated per Year
GHG Emission Reductions	Metric Tons of CO2e (MTCO2e) reduced, GHG Intensity (MTCO2e/MWh)
Criteria Air Pollution Reductions	Metric Tons (MT) of Criteria Pollutants reduced

Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice, and Equitable Development

Megan McConville, EPA, Office of Sustainable Communities, Office of Environmental Justice

Offers strategies to shape development that responds to the needs and reflects the values of low-income, minority, tribal, and overburdened communities. Defines environmental justice, smart growth, and equitable development and outlines a set of goals and principles, titled "Common Elements," that connect the three:

- Facilitate Meaningful Community Engagement in Planning and Land Use Decisions
- Promote Public Health and a Clean and Safe Environment
- Strengthen Existing Communities
- Provide Housing Choices
- Provide Transportation Options
- Improve Access to Opportunities and Daily Necessities
- Preserve and Build on the Features That Make a Community Distinctive

The Concept and Measurement of Environmental Justice

Karen Bell, *Achieving environmental justice: A cross-national analysis*

Provides a short history of environmental justice and its associations with the academic elite and considers the theoretical necessity of its definition. Outlines considerations and concerns with distributive, substantive, and procedural justice culminating in a definition of EJ that includes a healthy environment (substantive), equitable distribution of environmental "goods" and protection from harms (distributive) and inclusive participatory processes and structures (procedural). Introduces an original EJ Indicator Framework:

Table 2.1: The Environmental Justice Indicator Framework

Substantive justice indicators
Universal access to sanitation
Universal access to adequate waste disposal
Universal access to safe drinking water
Universal access to adequate and sufficient food and nutrition
Universal access to clean air
Universal access to adequate and safe transport
Universal access to green space for recreation and leisure
Universal access to sufficient energy for cooking and heating
Adequate housing for all
Safe working and living environments for all
Universal protection from environmental disruptions (for example, hurricanes, flooding)
Universal protection from potentially hazardous substances: harmful chemicals, genetically modified organisms (GMOs), radiation, electric and magnetic fields (EMFs)
Distributive justice indicators
Equal access to sanitation
Equal access to adequate waste disposal
Equal access to safe drinking water
Equal access to adequate and sufficient food and nutrition
Equal access to clean air
Equal access to adequate and safe transport
Equal access to green space for recreation and leisure
Equal access to sufficient energy for cooking and heating
Equally adequate housing for all
Equally safe working and living environments for all
Equal protection from environmental disruptions (for example, hurricanes, flooding)
Equal protection from potentially hazardous substances: harmful chemicals, GMOs, radiation, EMFs
Procedural justice indicators
All parties that were affected by environmental decisions were invited to contribute to the decision-making process
The relevant rules and procedures were applied consistently, with regard to different people and at different times
Those affected received accurate and accessible information – that is, timely, honest, easy to understand, digestible and easily available
A fair outcome resulted from the process, in terms of substantial and distributional EJ
There was authentic, accessible and honest communication
All parties were accountable, that is, responsible to answer for their actions and decisions and to remedy them if necessary
All parties would have access to sufficient material resources to enable them to participate on an equal footing
Those affected were included in all stages of decision making
Sufficient skills and personal resources have been available for those affected to participate on an equal basis
All participants in the environmental decision-making process were treated with equal respect and value
All environmental decisions were made publicly
The environmental decision-making process was open to all questions and alternatives
All affected had an equal right and an equal chance to express their point of view
There was a lack of external coercion
Decision making was deliberative, that is, free from any authority of prior norms or requirements
Freedom of association
Right to peaceful protest
Those affected had control of the outcome of decisions (ideally, proportional to how much they would be affected)
Consensus decision making was carried out, whenever this was practical
Use of a strong precautionary principle
Free access to legal redress
International, intergenerational and inter-species indicator
The above criteria have not been met through undermining the EJ of other species, nations and generations, as evidenced by the Ecological Footprint

Racial Equity Toolkit

City of Portland

City of Portland, OR adaptation of the Government Alliance on Race and Equity's Racial Equity Toolkit, to provide tools to "change the policies, programs, and practices that are perpetuating inequities, as well as to be used in the development of new policies and programs."

Racial Equity Action Plans

Government Alliance on Race and Equity

Developed for use by local governments, this manual outlines the process of developing a Racial Equity Action Plan in order to address racial inequities.

Annual Equity Report

Seattle City and Light

Report by Seattle City Light, a publicly owned utility, on progress towards equity and justice goals through the Race and Social Justice Initiative (RSJI) and the Women and Minority Business Enterprise (WMBE) Program as well as next steps.

Equity Impact Review

King County Government

Overview of the Equity Impact Review process. The process is designed to merge quantitative data with qualitative community engagement findings to inform the planning, decision-making, and implementation of actions that have an effect on equity.

Racial Equity Toolkit

Government Alliance on Race and Equity

Designed for use by local governments, this toolkit walks through the process of using a racial equity tool in decisions including policies, practices, programs, and budgets.

Mobility Equity Framework

Greenlining Institute

This guide calls for "an equitable deployment of investments and policy interventions to prioritize the mobility needs of low-income individuals of color and address the historical neglect they have experienced." It proposes a framework with which organizations can elevate these values and address inequities.

Just Energy Policies: Reducing Pollution and Creating Jobs

Jacqui Patterson, NAACP Environmental and Climate Justice Program

Provides recommendations for change in the energy sector with attention to environmental justice and impact on African Americans. Includes analysis of Renewable Portfolio, Efficiency Resource, and Net Metering and Equity (Local Hire and Minority Business Enterprise) standards for all 50 states. Catalogues benefits of energy efficiency and clean renewable energy.

- Energy Efficiency: Enterprise and Job Potential, Household and Consumer Savings, Worker Productivity, Health
- Renewable Energy: Enterprise and Job Potential, Community Savings, Asset Development Models, Community Development

Practical Guide to Women in Energy Regulation

National Association of Regulatory Utility Commissioners (NARUC)

Guide developed to support the inclusion of women in the energy sector, specifically energy regulation, in low- and middle-income countries.

Equity & Environment Agenda

City of Seattle

Report: Beyond Sharing – How Communities Can Take Ownership of Renewable Power

John Farrell, Institute for Local Self Reliance

Report detailing the promises and shortcomings of the community shared solar model, including case studies of investor-owned utility, municipal utility, and electric coop run programs. Covers the barriers to and benefits of shared renewables as well as various program structures.

National Equity Atlas

PolicyLink and the USC Program for Environmental and Regional Equity (PERE)

"Provides data on demographic change, racial inclusion, and the economic benefits of equity for the 100 largest cities, 150 largest regions, all 50 states, and the United States" to enable informed decisions around equity and guide policy "to build an equitable economy."

The tool includes indicators, research, and data in action. Each indicator is accompanied by a "why it matters" section as well as policy recommendations. Equity indicators are divided between demographics, economic vitality, readiness, connectedness, and economic benefits.

EJSCREEN: Environmental Justice Screening and Mapping Tool

EJSCREEN is an environmental justice mapping and screening tool by the EPA which provides demographic and environmental information for geographic areas as well as a method for using this information to form EJ indexes. The tool includes 11 environmental indicators and 6 demographic indicators, as well as methods of defining/assessing these indicators.

Environmental Indicators:
National-Scale Air Toxics Assessment (NATA) air toxics cancer risk, NATA respiratory hazard index, NATA diesel PM, Particulate matter, Ozone, Traffic proximity and volume, Lead paint indicator, Proximity to Risk Management Plan (RMP) sites, Proximity to Hazardous Waste Facilities, Proximity to National Priorities List (NPL) sites, Wastewater Discharge Indicator (Stream Proximity and Toxic Concentration)

Demographic Indicators:
Percent Low-Income, Percent Minority, Less than high school education, Linguistic isolation, Individuals under age 5, Individuals over age 64

CalEnviroScreen: A Critical Tool for Achieving Environmental Justice in California

Tiffany Eng, Amy Vanderwarker, Marybelle Nzegwu, California Environmental Justice Alliance (CEJA)

"CalEnviroScreen 3.0 (CES 3.0) is a place-based cumulative impact screening methodology that uses 20 indicators to provide a statewide ranking of California's 8,000 census tracts. In this context, a 'cumulative impact' assessment examines 'multiple chemicals, multiple sources, public health and environmental effects, and characteristics of the population that influence health outcomes.' Areas with high concentrations of these factors have a greater 'cumulative impact.'" Introduced in 2013, CalEnviroScreen is being used in policy-making across California, at both the state and local level.

- A list of indicators (grouped into Pollution Burden Indicators and Population Characteristics) can be found in Appendix B, pg. 46

Additional Resources

Resources for the development of additional utility actions and equity indicators

A Review of Solar PV Benefit & Cost Studies

Electric Innovation Lab, Rocky Mountain Institute

Assesses existing material on benefits and costs of distributed energy resources (DERs) generally, and distributed photovoltaics (DPV) specifically. Intends to address a lack of consistency in the quantitative tools and analysis used in DPV cost/benefit assessments. Defines benefit and cost categories and a net value system for measuring value which includes social and environmental impacts.

GEAR: Getting Equity Advocacy Results

PolicyLink

A system of benchmarks, methods, guiding questions, and tools for advocates, organizers, and allies to track success of equity campaigns that uses color coded gears to demonstrate ongoing components (grey) and stages (colored). It consists of three parts: Overview, GEAR Guide, and GEAR Snapshots. Snapshot section includes "equity benchmarks" for subsections of campaign "stages." Build, Advance, and Defend benchmarks may be particularly relevant.

Can Clean Energy Policy Promote Environmental, Economic, And Social Sustainability?

Felix Mormann, Journal of Land Use & Environmental Law, Vol. 33, No. 2 (Spring 2018), pp. 343-354

Expands the scope of sustainability to consider social sustainability in addition to economic and environmental. Rather than add another working definition of "sustainability" to the fray, it "draws on the existing literature to distill from it three somewhat interrelated criteria that most sustainability scholars seem to accept as proxy indicators for socially sustainable development" (349). They are:

- Access and Availability
- Allocation of Cost
- Program Externalities

"The framework of proxy criteria proposed in this essay is intended to help policymakers and scholars alike as they assess the social implications of today's policy landscape and consider improvements for the next generation of clean energy policies—a generation that, hopefully, will simultaneously promote environmental, economic, and social sustainability" (354).

Community Benefits

San Francisco Community Benefits Program

Through their Community Benefits Program, the San Francisco Public Utilities Commission partners with "local residents, leaders, and community organizations to build strong, sustainable and vibrant communities." To monitor progress, they collect data on Youth Workforce, Education, Land Use, and Arts.

Youth Workforce

- Youth served by zip code and by year
- Ethnicity/race, gender, and age of youth served
- Total organizations
- Total youth served

Education Programs

- Youth served by zip code, district, year, and program
- Total schools and organizations
- Total youth served

Land Use Programs

- Impervious surface removed by square footage (total and by year)
- Gardens planted (total and by year)
- Stormwater diverted in gallons

Arts

- Artwork theme and artwork type
- Artworks created by year
- Total artworks created
- Total artists

Community Benefit Agreement

Jarrid Green, The Next System Project

"The CBA is a legally binding product of negotiations between the developer and community members who have banded together to safeguard their community's interests... CBAs can be an effective tool for managing and sustaining the accountability mechanisms and public engagement needed to ensure that an investment's benefits are shared across the community, including by its most vulnerable populations."

Contracting for Equity

Government Alliance on Race and Equity (GARE)

This issue brief addresses governmental procurement and contracting processes, in particular, but could also be applied to the contracting practices of utilities and procurement of energy.

- Inclusive Contracting: the process of creating the environment for businesses owned by people of color and/or women to participate in a governmental procurement and contracting process.
- Strategies to promote fairness in the procurement and contracting process
  - Race and gender-conscious strategies
  - Small business enterprise (SBE) strategies
  - Local business enterprise strategies

Environmental Justice & Service Equity Division: Strategic Framework

Seattle Public Utilities, March 2015

The Environmental Justice & Service Equity division of Seattle Public Utilities established a plan composed of three Strategies, each supported by four goals with clear targets for when they will be reached. The first strategy is as follows:

1. **Embed race and social justice and service equity policies and practices across the utility.**
   - Position service equity as one of the primary filters for decision-making by Q1 – 2018.
   - Establish organizational standards for race and social justice practices by Q1 – 2017.
   - Establish organizational standards for environmental justice practices by Q2 – 2017.
   - Continue to increase WMBE utilization to reflect the area's WMBE availability by Q1 – 2018.

The remaining two also contain four targets pertaining to their strategy.

2. **Model and advocate for inclusive community engagement within the utility in partnership with communities.**
3. **Further align Environmental Justice & Service Equity team efforts within SPU, as well as city, county, and community efforts.**

Equity And The Colorado River Compact

Jason A. Robison and Douglas S. Kenney Environmental Law, Vol. 42, No. 4 (Fall 2012), pp. 1157-1209

Examines whether the Colorado River Compact (1922) apportionment scheme fulfils the commitment to equity explicitly contained in the document ("equitable division and apportionment of the use of the waters of the Colorado River System"(1157).)

III. Equity

- Substantive equity: 1) reciprocity, 2) fidelity, 3) reliability, 4) flexibility
- Procedural equity: 1) inclusivity, 2) diligence, 3) transparency

V. Realizing Equity: *Identifies key principles of equity, some substantive others procedural, and assesses the Compact based on these indicators using apportionment and actual usage statistics. Identifies discrepancies between apportionment and actual allocation.*

Lessons from environmental and social sustainability certification standards for equitable REDD+ benefit-sharing mechanisms

Januarti Sinarra Tjajadi, Anastasia Lucy Yang, Daisuke Naito and Shintia Dian Arwida Center for International Forestry Research, 2015

This report evaluates the "Benefit Sharing Mechanisms" (BSM) of four global private-sector certification standards to inform the development of the "reduce emissions from deforestation and forest degradation, and foster conservation" (REDD+) standard. After defining the scope of BSM, the report analyses the content of the standards as they pertain to procedural, contextual and distributive equity. While the paper is grounded in forestry discourse, it offers helpful definitions and examples of equity in implementation which could help to situate equity in 100% RE deployment in the larger sustainability conversation.

- Benefit sharing framework

Inclusive Outreach and Public Engagement Guide

Seattle Office for Civil Rights, 2009

Includes "Cultural Competence Continuum" developed by Reach Out for the purpose of assessing capacity for cultural responsiveness, as well as "Six Essential Strategies for Inclusive Engagement," "Key Steps to Inclusive Public Engagement," a "Public Engagement Matrix" and a method for "Evaluating Public Engagement."

Installing inequality: the racial disparities in solar deployment

Deborah Sunter (Tufts University), Sergio Castellanos and Prof Daniel Kammen (University of California, Berkeley)

Correcting for household income and homeownership, black- and Hispanic-majority census tracts (neighborhoods) have installed significantly less solar PV than no-majority (neighborhoods with no single ethnicity or race composing the majority), and white-majority census tracts have installed more. The proportion of black-majority census tracts with no rooftop solar systems is nearly double any other racial or ethnic group. Calls for more inclusive energy policy and outcomes.

- Rate of rooftop PV adoption by census tract

Measuring and Modeling Energy Resilience

Andrea Gatto, Carlo Drago Ecological Economics, Volume 172, June 2020

Drawing on the role of energy resilience in international Sustainable Development Goals, (SDGs), this paper presents the Global Energy Resilience Index (GERI) a composite indicator of energy resilience and builds on the World Bank's Regulatory Indicators on Sustainable Energy.

Pillars and sub-pillars, GERI.

Global Energy Resilience Index (GERI)		
Energy access	Energy efficiency	Renewable energy
Existence and monitoring of officially approved electrification plan	National energy efficiency planning	Legal framework for renewable energy
Scope of officially approved electrification plan	Energy efficiency entities	Planning for renewable energy expansion
Framework for grid electrification	Information provided to consumers about electricity usage	Incentives and regulatory support for renewable energy
Framework for minigrids	Incentives from electricity rate structures	Attributes of financial and regulatory incentives
Framework for stand-alone systems	Incentives & mandates: large consumers	Network connection and pricing
Consumer affordability of electricity	Incentives & mandates: public sector	Counterparty risk
Utility Transparency and Monitoring	Incentives & mandates: utilities	Carbon pricing and monitoring
Utility creditworthiness	Financing mechanisms for energy efficiency	
	Minimum energy efficiency performance standards	
	Energy labeling systems	
	Building energy codes	
	Carbon Pricing	

Metrics for the sustainable development goals: renewable energy and transportation

Jonathan J. Buonocore, Ernani Choma, Aleyda H. Villavicencio, John D. Spengler, Dinah A. Koehler, John S. Evans, Jos Lelieveld, Piet Klop & Ramon Sanchez-Pina

Builds on the United Nations (UN) Sustainable Development Goals (SDGs) to provide "credible objective metrics to measure progress."

Metrics of Regional Equity

M. Paloma Pavel, Alex Artaud and Jan Thomas, Race, Poverty & the Environment, Vol. 15, No. 2, Race and Regionalism (Fall 2008), pp. 70-71

Short overview of a variety of approaches to developing and using equity metrics. Argues for the use of hard data to strengthen regional equity policies.

- Residential segregation indices: dissimilarity indices, isolation indices, and exposure indices
- Community voice: composition of planning organization boards
- Inequality measures: Gini coefficient, Robin Hood Index
- GIS Mapping

Prioritizing Equity in Our Clean Energy Future

The Energy Democracy Alliance

Policy brief advocating for equity in the implementation of New York's "Reforming the Energy Vision" (REV) and "Clean Energy Fund" (CEF) initiatives. Recommends the development and use of "Race and Economic Equity Metric" (REEM) and Energy Asset Mapping tools, and the prioritization of the communities identified for investments and program development.

Recommended indicators include:

- Poverty rate is 1.5 times or more than that of the metropolitan statistical area (MSA), county, region, or state
- Median household income is half or less than that of the MSA, county, region, or state median.
- Unemployment or underemployment rate is 1.5 times or more than that of the MSA, county, region, or state average
- Percentage of jobs that are fossil fuel and nuclear dependent are higher than 10% of the MSA, county, region, or state average
- Percentage of residents that are African American, Latino, Asian, Native American or Hawaiian/ Pacific Islander exceeds the average for the MSA, county, region, or state
- Percentage of Li-Heap recipients is 1.5 times or more that of the MSA, county, region, or state
- Percentage of homes built before 1960 is 1.5 times or more than that of the MSA, county, region, or state
- Percentage of homes that have presence of lead, leaky roofs, and rely on oil furnaces that are 1.5 times more than the county, region, or state
- Percentage of mobile homes manufactured before 1976 is 1.5 times or more than that of the county, region, or state
- Percentage of energy shutoffs without reconnection of service for more than 30 days is higher than the MSA or county rate
- Percent of HEAP eligible residents is 1.5 times more than that of the MSA, county, region or state average
- Energy Efficiency and Renewable Energy program participation (and denial) numbers per census tract
- Air particulate matter is higher than the local average
- Child asthma rate is higher than the local average
- Blood levels of lead is higher than the local average
- Level of cancer caused by environmental factors is higher than the local average
- There are more brownfields, toxic release sites, and remediation sites in a neighborhood than the local average

- Broadband adoption rates are lower than the MSA, county, region, or state average

Assets and opportunities recommended for the energy mapping tool include:

- High numbers of homes or buildings that have not yet been weatherized or had energy efficient lighting or appliances installed, creating a high potential for energy savings
- Significant community assets (churches, nonprofits, schools, public space, abandoned property) that could be utilized in developing renewable resources
- Significant solar, wind, or geothermal potential as measured by the US Department of Energy;
- availability of public housing rooftops with strong solar potential
- Availability of warehouse or light industrial zoning that could house living wage jobs for renewable-energy-related industry
- The presence of civil society organizations that can drive community engagement and participation in energy projects and programs
- Job training or workforce development programs or centers that can help match local residents with employment opportunities

Renewable Energy

Hannah Ritchie, 2017

This collection of charts provides a variety of indicators to be taken into account in the deployment of renewable energy programs, that can help establish baseline and target measurements.

Resolving society's energy trilemma through the Energy Justice Metric

Raphael J. Heffron, Darren McCauley, Benjamin K. Sovacool, September 2015

The Energy Trilemma entails key issues from economics, politics, and the environment. This paper presents the three as emanating from the "Energy Law & Policy" triangle and argues that the system is unbalanced because programs tend to favor the "Economics" branch more heavily, offering energy justice as a solution. To that end, the author proposes an Energy Justice Metric (EJM) as a way to quantitatively analyze energy justice, influence policy and infrastructure development, and ultimately lead to an allocation of costs and benefits that is just and equitable. This metric is then modeled using the Ternary Plot which allows for the graphic representation of the metric and comparison between countries and energy sources.

Table 1
The parameters of the Energy Justice Metric.

	Parameters of the Energy Justice Metric
Economics	• Cost-Benefit Analysis for New Energy Infrastructure (X1) • Cost of Subsidies for Energy Source Extraction, Development and Operation (X2) • Cost of Energy to Disposable Income Ratio (X3) • Benefit from Employment Creation in the Short to Long-term for Energy infrastructure Development (X4)
Politics	• Cost of Fluctuation and Instability in Energy Supplies (Y1) • Cost (Benefit) of Import/Export of Energy Supplies (Y2)
Environment	• Cost (Benefit) to (from) Public Health Service from Energy Sources (Z1) • Cost of the effect of Environmental Pollutants from Energy Sources (Z2) • Cost of CO2 Tax (Z3) • Cost of Accidents (in. Fatal Accidents) to Workforce and Public (Z4) • Cost of Loss of Amenity to Local Communities Direct and Indirect from Energy Sources (Z5)

*Note: To properly value future generations, all costs inherent in the energy justice metric are undiscounted.

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217 Here and throughout this document we use the term "minority" in the context of Women and Minority Business Enterprise (WMBE) programs, given the language used in underlying references cited. However, we discourage the use of the term "minority" and recommend instead that states develop an alternative name for these programs, such as Women and Equity Business Enterprise (WEBE) programs.

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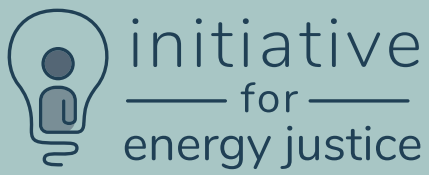

The Initiative for Energy Justice provides law and policy resources to advocates and policymakers to advance local and state shifts to equitable clean energy.

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