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Equity Considerations in Grid Planning: Case Studies Overview

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Overview

Equity is an emerging objective for electric power system planning. The electric system must be affordable, reliable, safe, and efficient, while also requiring equitable outcomes for those who have been historically overburdened by pollution and neglected from energy decision-making processes. Electric energy is at the intersection of social, environmental, and climate resilience vulnerabilities. Thus, energy equity in grid planning must consider ways to enable the fair distribution of electricity system benefits while meeting existing objectives and emerging resilience needs.

The concept of energy equity has roots in energy justice, which may be evaluated through a framework of tenets: distributive, procedural, recognition, and restorative justice:

1. **Distributive justice:** The process of addressing the allocation of benefits and burdens in the electric system. This involves identifying **where** injustices occur in the electric system through the unequal allocation of impacts and benefits.
2. **Procedural justice:** The process of evaluating decision-making processes to assess whether all affected parties have been included in a nondiscriminatory way. This involves identifying **how** electric system governance has created inequities.
3. **Recognition justice:** The process of understanding different types of vulnerabilities and specific needs associated with electric services among social groups (especially marginalized communities). This involves identifying **who** has been systematically excluded and impacted in the electric system.
4. **Restorative justice:** The process of repairing harm and relationships with those impacted by the burdens of electric system operation. This involves identifying **what** can be done to address current harms and prevent them in the future.

Evaluating these aspects of energy justice can inform planning and practices to make a fairer and more equitable electric system. More and more states are beginning the journey towards energy equity integration. Equity considerations have been brought to the forefront by policymakers and grassroots movements alike, driven in response to broader pushes toward environmental justice, electricity decarbonization, and greater grid resilience.¹ With different electricity market structures, grid infrastructure, political priorities, and economic climates, the path toward creating a more equitable electric system will likely continue to differ state-by-state, but as more states and territories start this process, there is tremendous opportunity to learn from one another. With a focus on regulatory actions for equity-informed grid planning processes, this series of case studies identifies what states with varying progress in equity integration have done to begin enabling a fairer distribution of electricity system benefits.

Highlights

The case studies in this series highlight the approaches to energy equity taken by four states: Hawaii, Illinois, Virginia, and Wisconsin. These states were selected due to their varying electric market and policy structures, which have informed their approaches to the integration of energy equity in electric system planning and their current stage in this process. These approaches are generally categorized as top-down, or institutionally driven (informed by legislative or executive

¹ O'Neil, Rebecca. 2022. "Considerations for Planning for Resilience and Equity." Training Webinars on Electricity System Planning for New England Conference of Public Utilities Commissioners. PNNL-SA-173309.

action), and bottom-up, or community driven (informed by organizational activism). These categorizations are not mutually exclusive, as elements of both approaches are present in all cases but meant to broadly qualify the pathway for energy equity mobilization in electric planning.

State	Driver	Approach
Hawaii	The Energy Equity Hui mobilized an effective bottom-up approach to address statewide energy equity and justice matters in Hawaii's electric grids.	As a result of legislation passed by Hawaii's State Legislature, Hawaii's Public Utilities Commission (PUC) is taking a top-down approach to energy equity and justice.
Illinois	In the last decade, Illinois has taken legislative actions toward integration of equity in grid planning, but none as sweeping as the 2021 Climate and Equitable Jobs Act (CEJA).	CEJA focuses heavily on the procedural and distributive dimensions of energy equity, requiring robust public participation in utility planning and directing investments to benefit specific communities.
Virginia	Climate activism organizations contributed to a lobby day that heavily informed the Virginia Clean Economy Act, a critical piece of bottom-up equity action for grid planning.	Recent equity enabling factors, such as a sustainable community solar fund and pilot program, are examples of energy equity integration in grid planning.
Wisconsin	Executive action has driven consideration of equity and justice alongside clean energy goals in long-term energy planning.	Long-standing equity-enabling factors like intervenor compensation, low-income support, and a Citizens Utility Board have facilitated energy equity incorporation into the energy regulatory process.

Structural Themes

The case studies do not compare states one-to-one to account for the variations and uniqueness of each state's journey. Instead, the studies assess structural themes across the four states. The themes provide a frame of reference but are not meant as a rigid rubric of best practices for energy equity.

Enabling Factors: Each state has existing mechanisms that help facilitate equitable change in the energy sector. An example is Wisconsin's intervenor compensation program, which reimburses affected individuals or groups for their participation in utility regulatory proceedings.

Policy Approaches: States differed in which governmental branches drove or facilitated energy equity. Hawaii, Illinois, and Virginia had strong legislative action on energy equity, while Wisconsin primarily had regulatory and executive action. Regulatory bodies in all states are responding to these drivers with dockets related to energy equity.

Grid Planning Paradigms: Grid planning includes integrated resource, transmission, distribution system, reliability, energy efficiency and demand-side management, and integrated distribution system planning. Illinois' framework for ratemaking and performance incentive mechanisms in Multi-Year Integrated Grid Plans provides a strong connection between energy equity and distribution system planning. For other states, there is room within grid planning for increased consideration of energy equity.

Energy Equity Tenets: Established energy justice tenets can be a useful frame of reference for comparing equity approaches across states. They can also be useful for assessing the level of balance in states' approaches. However, actions do not always align one-to-one with energy

tenets. For example, Illinois' distribution system planning aims to improve reliability; it supports distributive equity by examining reliability at local scale, and simultaneously supports recognition equity by acknowledging disadvantaged communities. The Hawaii PUC's top-down approach addresses both distributive and procedural justice through energy affordability measures, improvements to consumer education, and improved access to proceedings.

What are states doing to address energy equity?

Though the four states examined in this series are taking different approaches to energy equity, some common actions were observed in all cases:

Addressing affordability. Several states are working on measuring and addressing energy burden, specifically, which is defined as the share of household income spent on energy bills.

Developing qualitative and quantitative approaches to characterizing community attributes. Several states are considering or developing mapping tools to evaluate different equity indicators. Metrics are under consideration or development in Hawaii, Illinois, and Wisconsin. Qualitative approaches benefit energy equity methodologies by contextualizing and adding information to quantitative data. For example, Hawaii's community-based Energy Equity Hui resolves to build a "pono" path toward energy equity, explicitly including aspects of Hawaiian culture that facilitate justice as recognition in its efforts to achieve energy equity goals.

What actions can states take at the beginning stages of addressing energy equity?

The states examined in this series have all taken actions on energy equity. Other states may be at the beginning stages of energy equity. Based on observations in this series of case studies, foundational energy equity actions could include:

Opening a regulatory docket on energy equity. This regulatory step can enable participation and use the regulatory body to establish a platform for integrating energy equity. Including communities and non-traditional stakeholders will allow users to meaningfully determine their outcomes as they relate to the energy system.

Establishing working groups that are tasked with energy equity and justice. Working groups that include broad public participation create an entry point for community-based organizations and individuals to receive institutional representation and engagement.

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