Unveiling and Explaining the Procedure Justice of Renewable Energy Siting Process in the U.S.

Xue Gao, PhD
Askew School of Public Administration and Policy

Abstract

Social justice is a fundamental value in public policy, but empirically examining this intricate concept remains a persistent challenge. Recent studies have made early attempts to examine how policy design choices consider distributive justice but have overlooked how procedural justice considerations have been integrated into policy designs. Drawing on policy design and participatory governance literature, this study develops a procedural justice score to empirically measure and compare policy design features of renewable energy siting policies across US states. We focus on policy goals, settings and calibrations of policy instruments, and the congruence between policy goals and instruments. We do not find consistent policy congruence, which implies that policymakers can perceive equity and efficiency as complementary and view procedural justice as both a normative goal associated with democratic ideals and an instrumental goal facilitating a successful energy transition. While most states fall short in designing a fair, inclusive, and participatory process, there is a growing trend toward adopting participatory approaches in renewable siting.

The Context of the Study: Renewable Energy Siting

Renewable energy siting refers to a series of decision-making processes and actions that determine the location and design of new wind, solar, or other clean energy generating facilities. Unlike fossil fuels, wind and solar can't be transported, and thus renewable facilities need to be located in areas with economically viable solar and wind resources and access to grid infrastructure. The land-intensive and selective nature of siting renewable projects implies that the siting locations may come into conflict with human activities, agricultural land, wildlife, recreation, or scenic views. In recent years, public opposition to renewable energy facilities has been widespread and growing in the U.S. These existing studies argue that public opposition to renewable energy projects cannot be simply interpreted as a "not in my backyard" (NIMBY) sentiment, but rather should be understood as a demand for procedural justice.

Data and Measurement

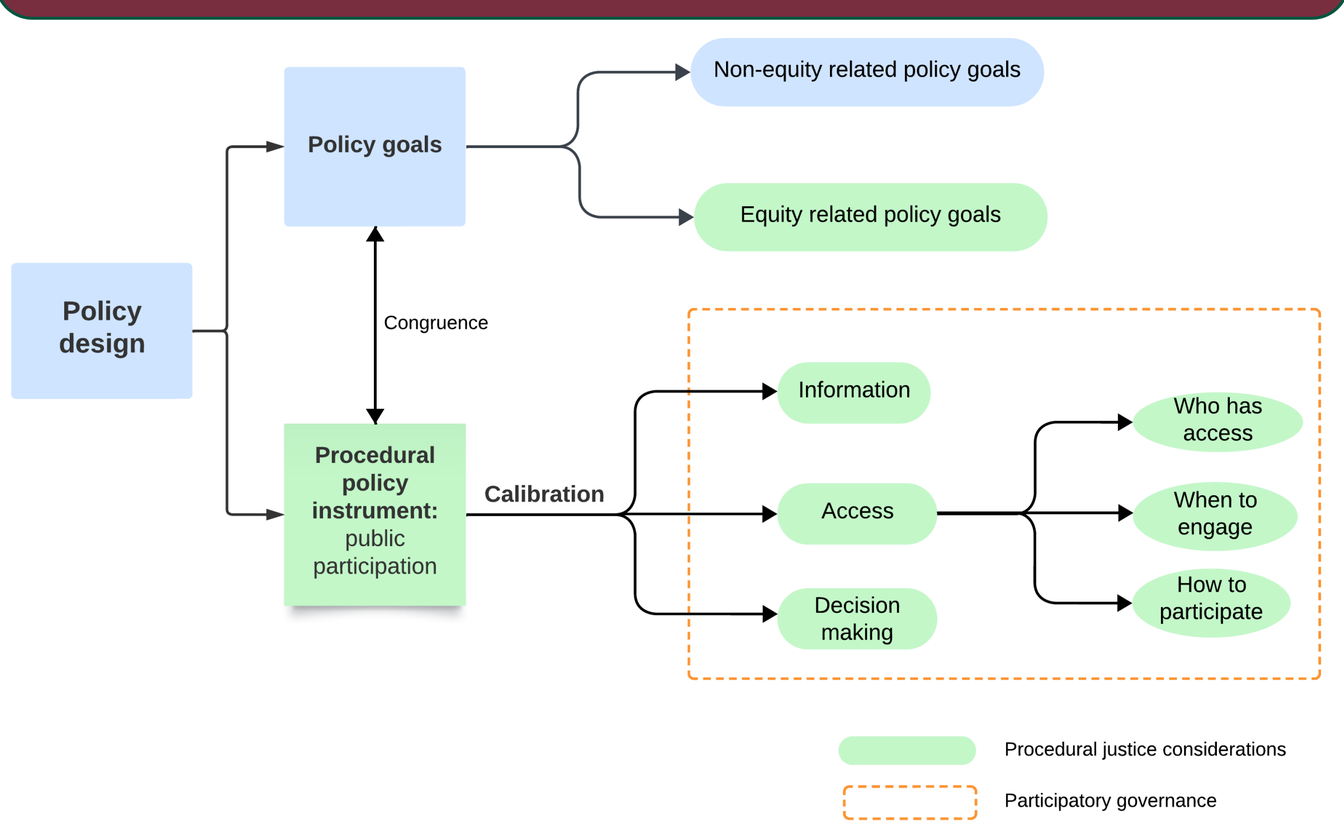
We collected the **original policy documents and laws** regarding the renewable energy siting process in each state.

To code policy goals, we extracted the policy texts that state, describe, or explain policy goals. Policy goals were categorized into two types: equity-related goals and non-equity-related goals.

The designs of policy instruments are coded across **three attributes**: information, access, and decision-making. **Each attribute is coded at four levels**, and a score ranging from 0 to 3 is assigned, with 3 indicating the highest standard, 1 the lowest, and 0 indicating no information. **The procedural justice score** is the sum of these three attributes, with a range from 0 to 9.

- **The "Information" attribute** is measured based on the types of information, and the availability and accessibility of information provided to the public.
- **The "Access" attribute** is measured by three sub-attributes: "who" can participate, "when" stakeholders are engaged, and "how" the public can participate.
- **Decision** measures whether and how public comments are incorporated into the siting decision-making process.

Framework



Results

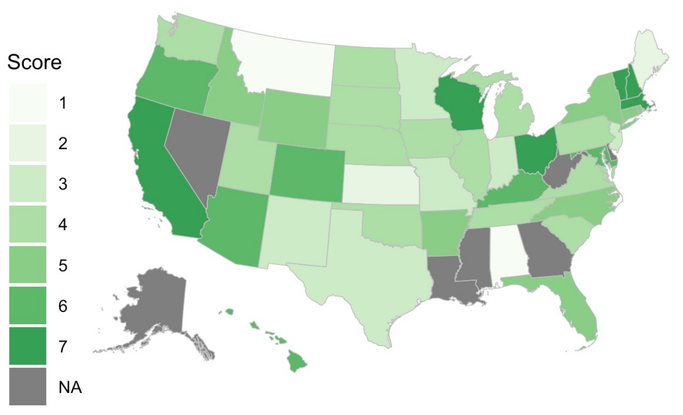


Fig 1. Geographic distribution of procedural justice scores

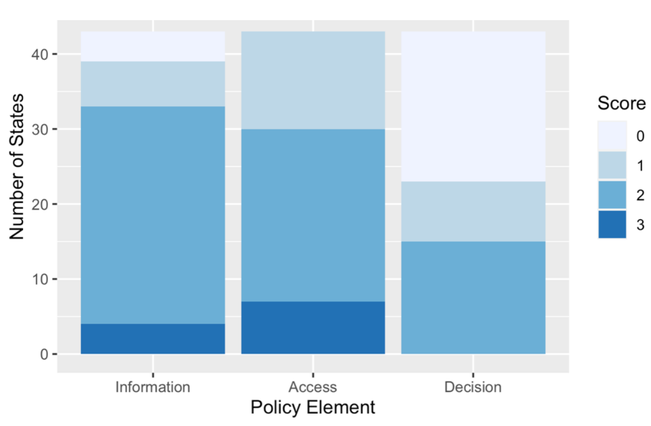
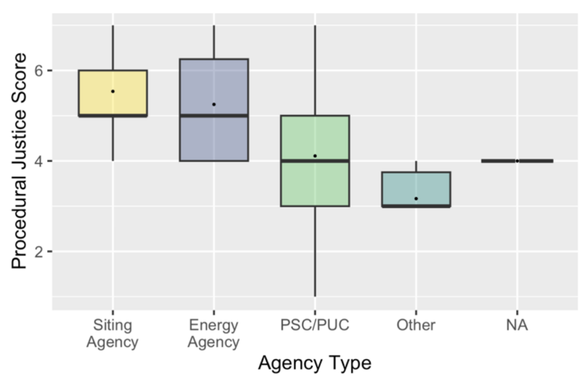


Fig 2. Score distribution by policy element attributes



Figs 3 and 4. Distribution of procedural justice scores by policy goal (left) and Agency Type (Tight)

Major Conclusions

- Approximately 20% of the states have equity goals, including encouraging public participation.
- Most states fall short in designing a fair, inclusive, and participatory process for public participation in renewable energy siting processes.
- We do not find clear and consistent policy congruence for renewable energy siting policies. Specifically, states with dominant equity-based goals and efficiency-based goals can both have well-calibrated public participation instruments and high procedural justice scores.

Policy Recommendations

- Offering a diverse set of engagement opportunities to ensure broader inclusion. This could involve small group meetings and separate sessions with different types of stakeholders, facilitating more in-depth discussions and encouraging contributions from a wider range of participants.
- Mandating outreach to communities before permit application submissions and hosting public information or Q&A sessions prior to public meetings and hearings.
- Implementing specific and transparent processes to demonstrate how public input will be considered and used in decision-making.
- Having a designated renewable energy siting office