ADVANCING ENERGY EQUITY & JUSTICE IN PLANNING

CPUC Uniform R&D Impact Analysis Framework Kickoff

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Kamila Kazimierczuk, Systems Engineer
Jennifer Yoshimura, Advisor

Pacific Northwest
NATIONAL LABORATORY

Energy Justice Tenets & Energy Equity Principles

Energy Justice Tenets

Recognition Justice (who?)
The practice of cultural domination, disregard of people and their concerns, and misrecognition

Procedural Justice (how?)
The fairness of the decision-making process

Distributive Justice (where?)
The unequal allocation of benefits and burdens and unequal distribution of the consequences

Restorative Justice
The response to those impacted by the burdens of energy projects

Key Principles of Energy Justice

Availability

Affordability

Transparency & Accountability

Due Process

Intergenerational Equity

Intragenerational Equity

Sustainability

Responsibility

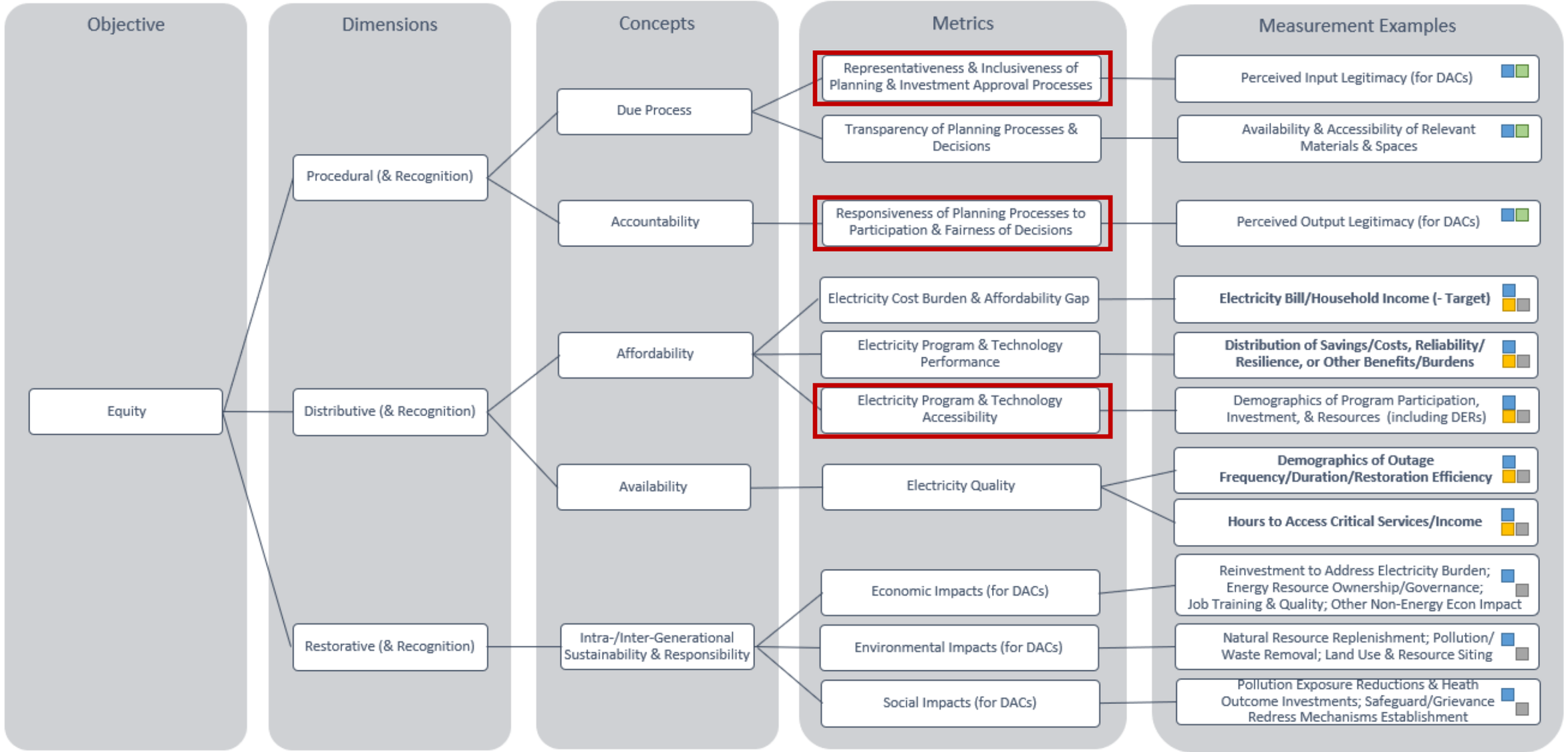
Energy Equity recognizes that disadvantaged communities have been historically overburdened by pollution, underinvestment in clean energy infrastructure, and lack of access to energy-efficient housing and transportation. **Energy justice** refers to the goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those historically harmed by the energy system.

https://iejusa.org/section-1-defining-energy-justice/

Achieving energy equity requires intentionally designing systems, technology, procedures, and policies that lead to the fair and just distribution of benefits in the energy system.

https://www.pnnl.gov/projects/energy-equity

Equity Objectives, Dimensions, Concepts, Metrics, and Measurement Approaches



Tarekegne B., Singhal A. (2022) PNNL MOD-Plan Publications

Definitions and Examples of Metrics

- A **metric** is a quantitative measurement for a qualitative phenomenon that can help measure a specific equity outcome.
  - **Tracking Metric-** Reports the state of a phenomenon

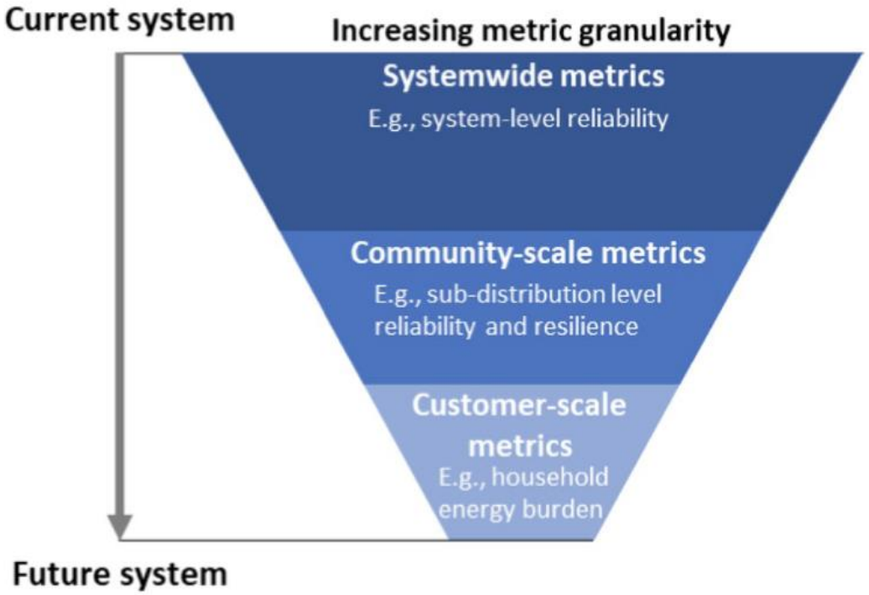
    Ex: System Average Interruption Duration Index (SAIDI) or SAIDI examined against a demographic overlay
  - **Performance Metric-** Quantitatively informs progress toward a target

    Ex: SAIDI with utility target value of X in Year
- Other metric examples:
  - **Qualitative** (from people, surveys, observations)
  - **Quantitative** (from system data or attributes, measurements)
- Metrics traditionally created ‘top down’ and focuses on Quantitative
- Opportunities to co-develop metrics with communities and incorporate Qualitative metrics

Barlow, J., Tapio, R., Tarekegne, B (2022), The Electricity Journal
Tarekegne, B (2021), Review of Energy Equity Metrics

Opportunities for new approaches in developing and managing metrics and increasing community stakeholder engagement

- **Increase pathways for multi-stakeholder and community collaboration & co-development**
- **Common understanding of terminologies and definitions when developing metrics**
  - Disadvantaged Community
    - ✓ Developing through DOE ED and Justice40:
    - ✓ 36 burden indicators (ex: Transportation burden, housing costs, fossil energy employment, job access, outage events, outage duration, climate hazards, etc.)
- **Data granularity**
  - Census tract data is used but may leave out customer level inequities
  - Move metrics from Utility Scale to Community Scale
  - Shift metrics from Solely Cost or Operations Measurements to Socioeconomic Factors
- **Consideration of uncontrollable socioeconomic factors**
  - Develop more Tracking Metrics to compliment Performance Metrics
- **Regulatory processes can be downscaled and accessible**



Barlow, J., Tapio, R., Tarekegne, B (2022), The Electricity Journal
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https://www.energy.gov/diversity/justice40-initiative
Parker, K., Barlow, J., Eisdorfer, J., Kazimierczuk, K., (2023) Springer Journal, Observations of an Evolving Grid: Resilience and Equity Performance Metrics

Example Metrics for EPIC

EPIC Program Areas	Description	Examples of Metrics
Applied R&D	Investments in applied energy science and pre-commercial technologies that provide public benefits.	**EPIC program participation**; % of participants at different income levels; % budget to intervenor funding; % budget accessed by DAC participants; change in customer rates (types of customers); health outcomes tied to investments
TD&D	Investments in technology demonstrations to increase commercialization.	**Clean energy development and access**; % electricity generation from renewables in project community; % DACs w/ access to renewable energy; DER hosting capacity in DACs,
Market Facilitation	Investments in market research, regulatory permitting, and workforce development to address non-price barriers to clean technology adoption.	**Clean energy workforce development**; amount allocated to diversity-certified contractors and subcontractors; identify (and remove) barriers (ex: educational requirements); % jobs accessed by DACs from program investments; CSR & ESG goals.

THANK YOU

Kamila Kazimierczuk
Systems Engineer, Energy Transitions
Kamila.Kazimierczuk@pnnl.gov

Jennifer Yoshimura
Advisor, Electricity Infrastructure
Jennifer.Yoshimura@pnnl.gov

Appendix

Energy Equity References

Review of Energy Equity Metrics

Advancing the state of energy equity metrics

Assessing the Current State of U.S. Energy Equity Regulation & Legislation

Multi-Objective Decision Planning

Incorporating Equity Objectives into Transmission Planning

IEJ Final Report

Energy Equity Project Report & Framework

Developing an Equity Framework for State Regulatory Decision Making