

U.S. Department of Energy
Building Energy Codes Program

2024 National Energy Codes Conference
May 7, 2024
Sacramento, CA

Inclusive Energy Codes: Bridging the Gap to Achieve Equity and Environmental Justice

AIA Provider # 1014
AIA Course # 24NECC-D1S2



AIA and ICC Continuing Education Provider

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Course Description

Dive into the intersection of energy codes, equity, and environmental justice in this engaging session. Experts from across the country will share insights on crafting energy codes that not only meet technical standards, but also address the needs of underserved communities, empower the workforce, and ensure Justice40 goals are being met. Learn about strategies that provide accessible and inclusive benefits throughout the entire lifecycle of energy codes—from development to enforcement and evaluation. This is a crucial conversation for those interested in how building energy policy can be a tool for positive change.



Learning Objectives

Identify key challenges underserved communities face in accessing and benefiting from energy codes and policies.

Examine strategies for crafting energy code policies and programs that prioritize the needs of underserved communities and close equity gaps.

Analyze the role of workforce empowerment in the development, enforcement, and evaluation of energy codes.

Evaluate existing approaches and best practices for ensuring energy codes deliver accessible and inclusive benefits throughout their lifecycle.



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Is English your primary spoken and written language?
How might your experience influence how you develop resources and communications materials?

Reflection #2

Do you have internet access at home or on a personal mobile device?

How might your experience influence how you think about reaching target audiences with key communications and/or opportunities?

Do you rent or own your home?

How might your experience affect your views on programs to support renters or homebuyers?

Reflection #4

Does your employer cover the cost of job-relevant training or conferences, and allow you to do those activities during paid time?

How might your experience influence how you view workforce training programs?

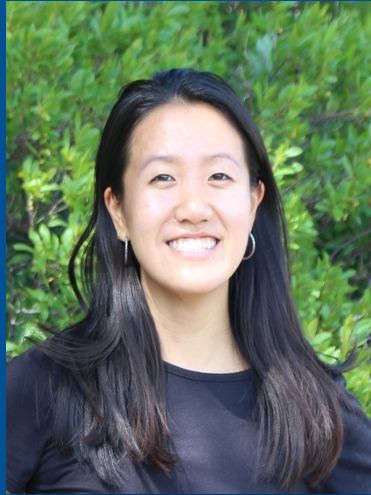
Learning Objectives

1. Explore the concept of **equity in the context of energy policy** and its importance in addressing disparities in energy access and affordability.
2. Identify **key challenges underserved communities face** in accessing and benefiting from energy codes and policies.
3. Examine **strategies for crafting energy code policies and programs** that prioritize the needs of underserved communities and close equity gaps.
4. Analyze the **role of workforce empowerment** in the development, enforcement, and evaluation of energy codes.
5. Evaluate **existing approaches and best practices** for ensuring energy codes deliver accessible and inclusive benefits throughout their lifecycle.



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ILLUME



Inclusive Energy Codes

An Equity Framework for Energy Codes

Bahareh van Boekhold
Senior Managing Consultant

May 7, 2024

About ILLUME

ILLUME offers a broad range of consulting and research services to help our clients make informed decisions, implement effective policies, and achieve their energy goals. We aim to advance, re-envision, and equitably transform the energy industry by combining community-forward solutions with technical ingenuity.

We help our clients reach their goals by serving as an additional team member with unique expertise, creative solutions, and a commitment to producing community, climate, and energy benefits.



Setting the Stage

Environmental Justice (EJ) communities' relation with building energy code.

- Building energy codes regulate new construction and do not directly affect many of the typical home types of EJ community residents. EJ communities view building codes as less of a priority.
- EJ communities view building initiatives that improve existing buildings as more relevant to their immediate health, well-being, and financial situation.



Advancing Equity Through Building Energy Codes

Start with Guiding Questions

Advance Meaningful Engagement

Plan for Success, Identify and Address Gaps

Measure Progress

Advancing Equity - Where to Start

“ *Equity is not a cut and paste concept. The causes and effects of inequity **must be sorted out locally.***

Local governments can learn from one another, but there is no substitute for working out solutions in collaboration with each, distinct impacted community. ”

—Equity and Buildings, USDN



Start with Guiding Questions

Start with an **inquisitive process centered** around asking **guiding questions**.

Work with your impacted communities to integrate equity into building energy code development, adoption, and implementation.

- Explore **intended outcomes** for impacted communities
- Understand the **inequities, needs, and goals** of your communities



Example of Guiding Questions

- *How can building energy codes address disparities or inequalities?*
- *How can they prevent introducing inequitable outcomes?*
- *How can state and local governments support building energy code policies or processes that include communities historically excluded from decisions on their built environment?*
- *What data do we need to inform policies and intervention, and how/where can we access that data?*
- *How can that data be used in the future?*

Advance Meaningful Engagement

“ Resource alignment is critical for community engagement. We resourced the communities and community partners, but if we could do it again, we would double the resources. ”

—USDN Zero Cities Project

“ The key to closing equity gaps and resolving climate vulnerability is the direct **participation by impacted communities** in the development and implementation of solutions and policy decisions that directly impact them. This level of participation unleashes much-needed capacity but also requires initial capacity investments across multiple sectors to achieve systems changes and culture shifts needed. ”

—USDN Zero Cities Project

Advance Meaningful Engagement

- **Establish a framework for community engagement** leveraging existing literature, such as *“The Spectrum of Community Engagement to Ownership.”*
- Plan for and allow the **time it takes to engage EJ communities** and **build trust** meaningfully.
- **Identify the right partners for community engagement** and work through those partners to understand and integrate the community’s needs within building energy code policies.
- Create and disseminate **resources and materials** on building energy codes that are easy to understand (and use) by local government staff, CBOs, and EJ communities.



Plan for Success, Identify and Address Gaps

Providing Support and Resources

- Support (or lead) **data collection on energy code compliance in EJ communities** to identify specific needs and strategies and address compliance gaps.
- Use outcomes from field studies to **address compliance disparities** in EJ and under-resourced communities.
- Promote coordinated shared resources for **providing code education, training, and compliance support**, including regional code “Circuit Rider” models and regional training and education resource hubs.



Other Considerations

Use a holistic cross-departmental approach to address equity in the building sector.

- Equity cannot be meaningfully addressed in a silo of building energy codes.
- Integrated into the larger state and regional energy, sustainability, or climate action plan.

“ Collaborate across departments and disciplines to produce policies and programs that better address equity issues. Working across silos allows policies to move beyond solely focusing on buildings’ greenhouse gas emissions to also providing critical health, resilience, environmental, and economic benefits for communities. ”

—City Energy Project Policy Guide



Measure Progress

- Assess progress against intended outcomes
- Continue to inform and engage with impacted communities
- Celebrate success!



Thank You!

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*National Association of
State Energy Officials*

Inclusive Energy Codes: State and Territory Energy Office Approaches

Jasmine Xie

Senior Program Manager, NASEO Buildings Program

May 7, 2024

Photo Courtesy of RL Martin



About NASEO

NASEO is the only national non-profit association for the governor-designated energy officials from each of the 56 states and territories. Formed by the states in 1986, NASEO facilitates peer learning among state energy officials, serves as a resource for and about State Energy Offices, and advocates the interests of the State Energy Offices to Congress and federal agencies.



Source: NASEO

**OPPORTUNITIES FOR
EQUITY-FOCUSED BUILDING
ENERGY CODE ACTIVITIES**

APRIL 2023

NASEO Publication

[Opportunities for Equity-Focused Building Energy Code Activities](#) (NASEO, April 2023)

Funded by the U.S. DOE Building Technologies Office (BTO), Building Energy Codes Program.

State Energy Code Activities for Equitable and People-Oriented Outcomes

Stakeholder Engagement

101 and primer resources

Public input sessions – the Spectrum of Community Engagement

Cost Effectiveness Assessments

Baseline Code Adoption

Building Performance Standards, Stretch Codes

Compliance Measures and Investments

Circuit riders

Field studies

Workforce Development

Supporting incumbent professionals

Workforce diversity and inclusion



The State of State Building Energy Codes: One Year Later

- Building energy codes remain a key building energy efficiency policy lever for states
 - Updated model code requirements for federally-backed homes
- \$1.2B in funding from IIJA and IRA
 - Intra- and inter-state collaborations
 - Justice40 and Community Benefit Plans

Requirements of the Community Benefits Plan

Community and Labor Engagement

- a) Building trust and demonstrating accountability through compensation and time commitments

Workforce Investment

- a) Creating jobs responsive to workforce needs, including fair wages, safe working conditions, and professional training

Diversity, Equity, Inclusion, and Accessibility

- a) Partnering with minority-, women-, and veteran-owned businesses
- b) Offering job and mentorship opportunities to local and underrepresented populations
- c) Ensuring easy access to research outputs and innovations

Justice40

- a) Having 40% of benefits accrue to Disadvantaged Communities, among other milestones and metrics

Other Resources

Federal Resources:

- [Building Energy Codes Program Activities Framework](#)
- [PNNL National and State Analysis](#)
- [DOE Energy Justice Mapping Tool](#)
- [White House Council on Environmental Quality Climate and Economic Justice Screening Tool](#)

Community Input:

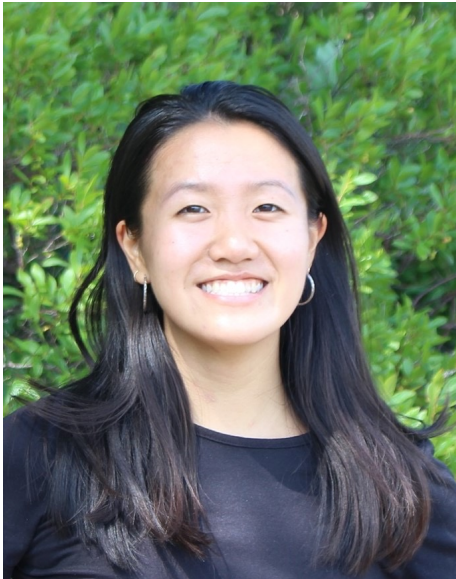
- [Spectrum of Community Engagement to Ownership](#) (Facilitating Power)
- [Designing Equity-Focused Stakeholder Engagement to Inform State Energy Office Programs and Policies](#) (NASEO)
- [Building Performance Standards – A Framework for Equitable Policies to Address Existing Buildings](#) (USDN)
- [Building Performance Standard Module: Housing Affordability](#) (IMT)
- [Equitable Approaches to Building Performance Standards](#) (BEI)

Compliance:

- [Falling Short: Does Energy Code Compliance and Enforcement Vary by Income?](#) (PNNL)

Workforce Development and Training:

- [University of Illinois Smart Energy Design Assistance Center \(SEDAC\) Building Energy Education \(BEE\) Fundamentals](#)



Thank You!

Jasmine Xie

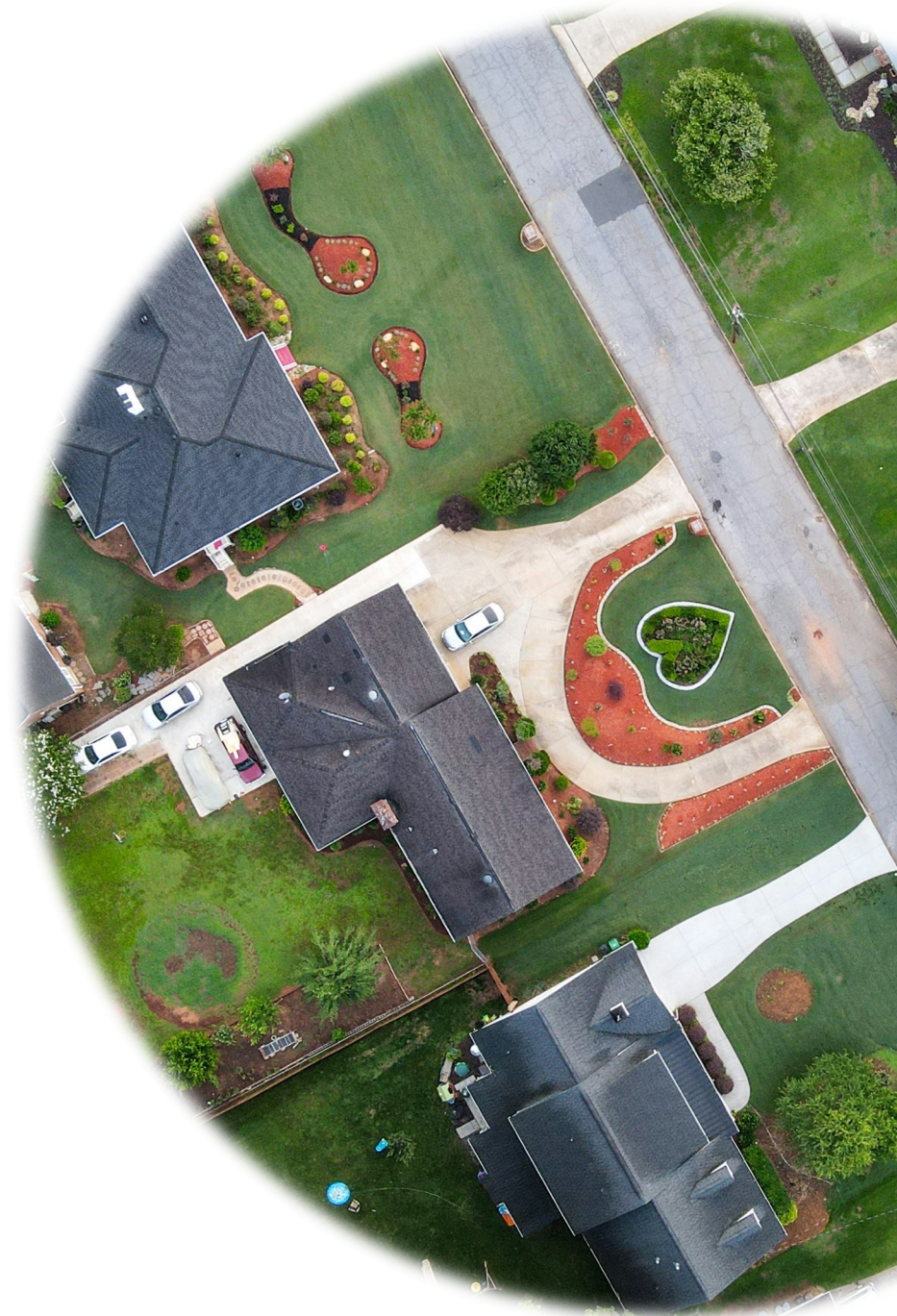
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Decarbonization for All: Paving the Way for Inclusive Solutions

Maggie Kelley Riggins

Senior Program Manager,
Southeast Energy Efficiency Alliance



OUR MISSION

To optimize the use and impact of energy to enhance the quality of life in the Southeast.

OUR VISION

All people in the Southeast live and work in healthy and resilient buildings, utilize clean and affordable transportation, and thrive in a robust and equitable economy.

OUR VALUES



Take Initiative

We take responsibility for realizing a better quality of life in the Southeast.



Earn Trust

We pursue our work with benevolence, competence, and reliability.



Value Others

We seek, respect, and promote diverse perspectives.



Pursue Equitable Solutions

We recognize, acknowledge, and account for a history of prejudice and inequality in Southeastern communities.

Pursuing Equitable Solutions

We recognize, acknowledge, and account for a history of prejudice and inequality in Southeastern communities and the role it plays in the issues we address.



Nashville grandmother and retired librarian Annie Pearl Patton considers her NES electric bill.
Source: Southern Alliance for Clean Energy

01

Procedural Equity

All affected communities have a voice in the decision-making process

02

Distributional Equity

Programs and policies are designed to equally distribute its benefits and burdens to the entire community

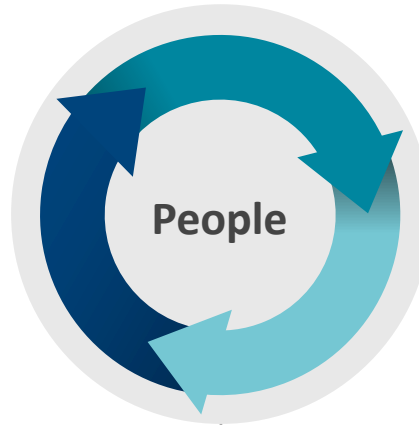
03

Intergenerational Equity

Programs and policies consider how future generations will be impacted by the decisions being made today

Shifting the Focus

Traditionally, we think of building energy codes as effective if, and only if, they don't increase the **initial cost** of a building, reduce **kWh** and **CO²**, save **jobs**, and are technically **feasible**.



All of those elements are important **and** we must remember the bigger why of buildings.

What are buildings if not for their occupants?

Occupant Outcomes

Higher efficiency can lead to better health and financial outcomes for households.

Support for Workforce

Supporting and resourcing the current workforce and preparing the individuals ready to learn.

Procedural Inclusion

Ensuring inclusion from all perspectives in all parts of the process from development to implementation.

Residential Energy Code Field Study + Equity

Goal: Understand **WHO** is affected by gaps in compliance and where there are gains for training, TA, etc.

Sample Plan Process

Adding overlays of people-centered data on top of provided sample plans



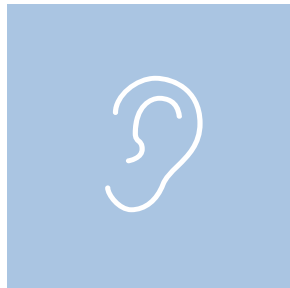
Equity Methodology

Designing additional metrics and analysis on data collected in the field based on DOE methodology



Stakeholder Engagement

Intentional and continued engagement with a variety of stakeholders before, during, and after data collection

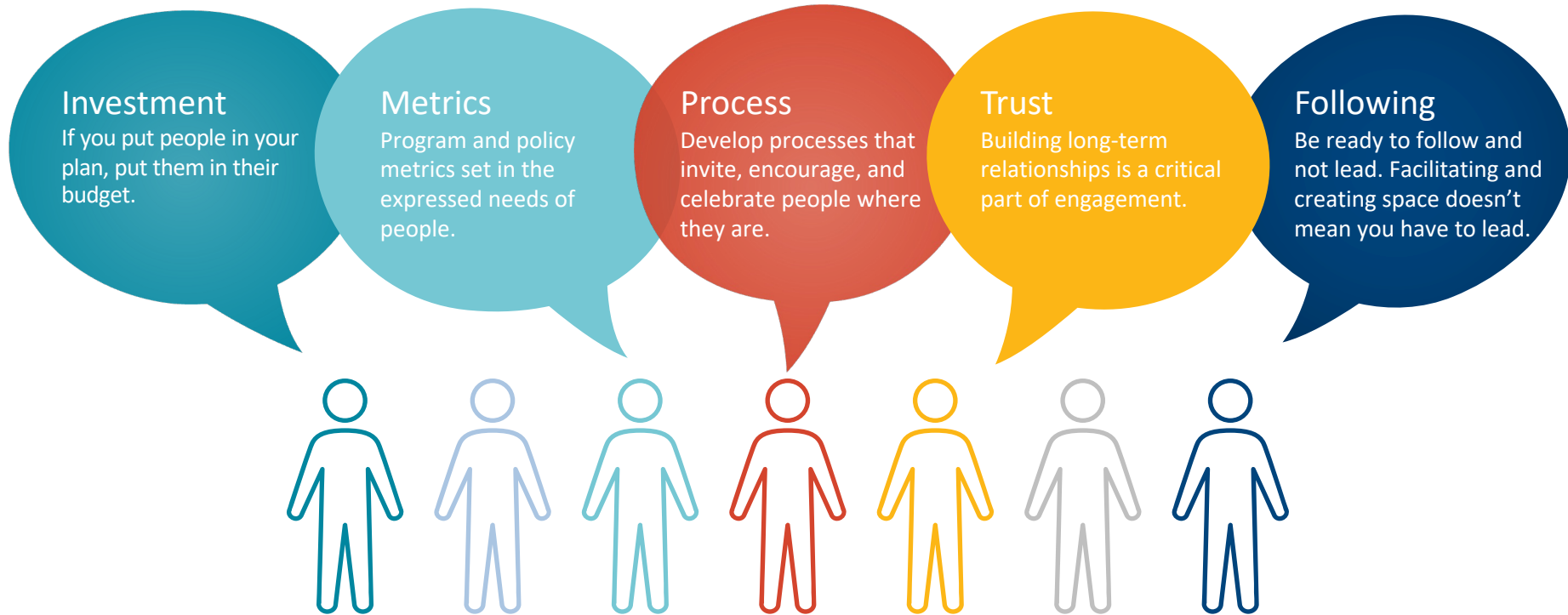


Additional data collection

Adding metrics to the data collection process that will support the work of community and labor stakeholders in reaching their energy and justice goals



Equity Engagement Considerations



Thank You



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Participate in PNPL's
Equitable Energy
Codes research!

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