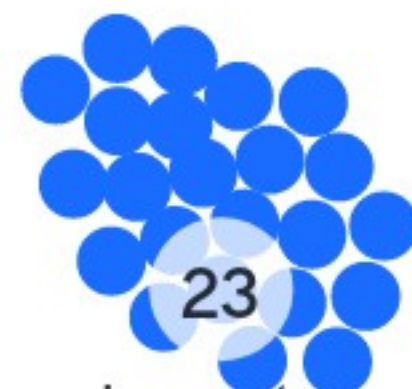


# Emerging State & Local Goals: From Zero Energy to Electrification to Decarbonization

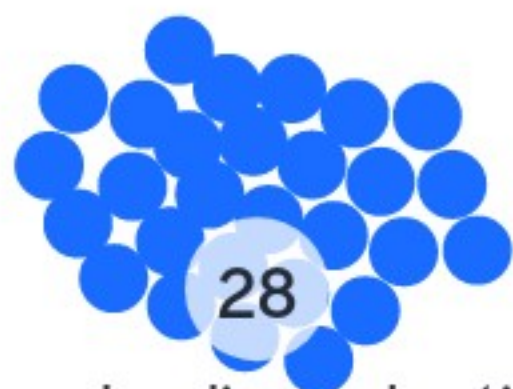
Compliance



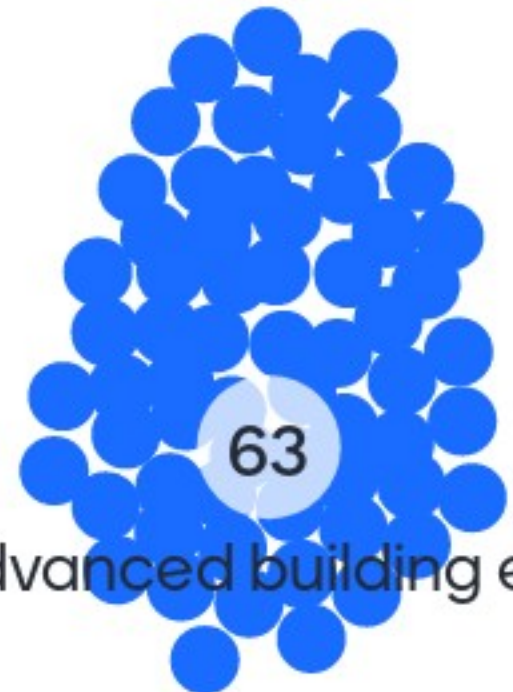
# What is your biggest concern with adapting energy codes to meet decarbonization targets? (Select all that apply)



Model energy codes not aggressive enough



Restrictions on local policy adoption (e.g., min/max codes)



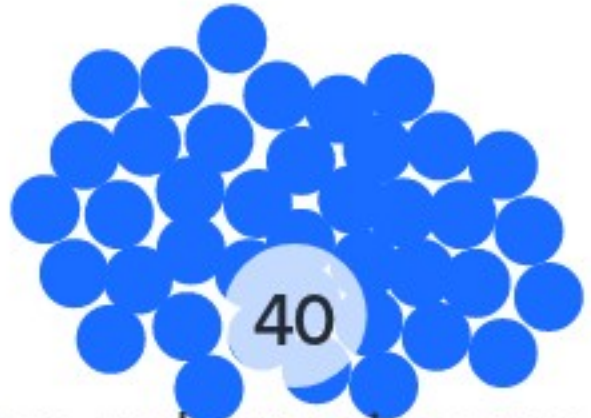
Enforcing advanced building energy codes



Implementation resources (funding, training, etc.)



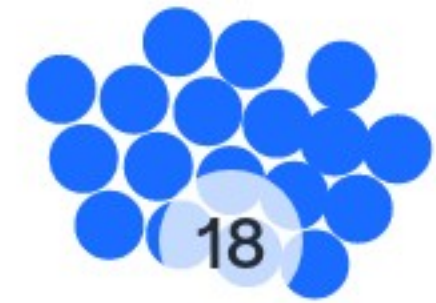
Technical knowledge of builders



Undue burden on lower-income households



Energy codes do not address existing buildings well enough to have enough impact



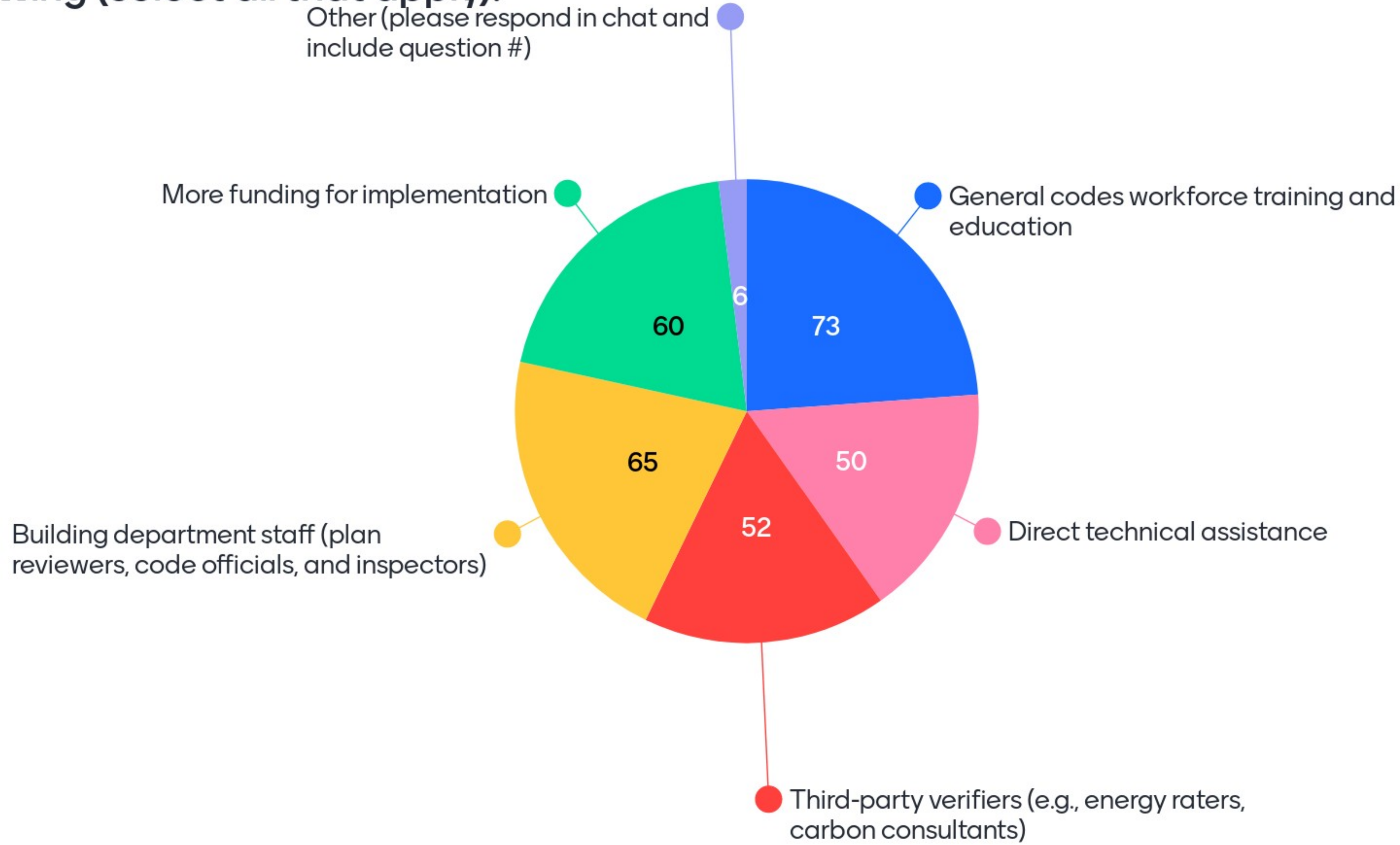
Stakeholder participation in code adoption process



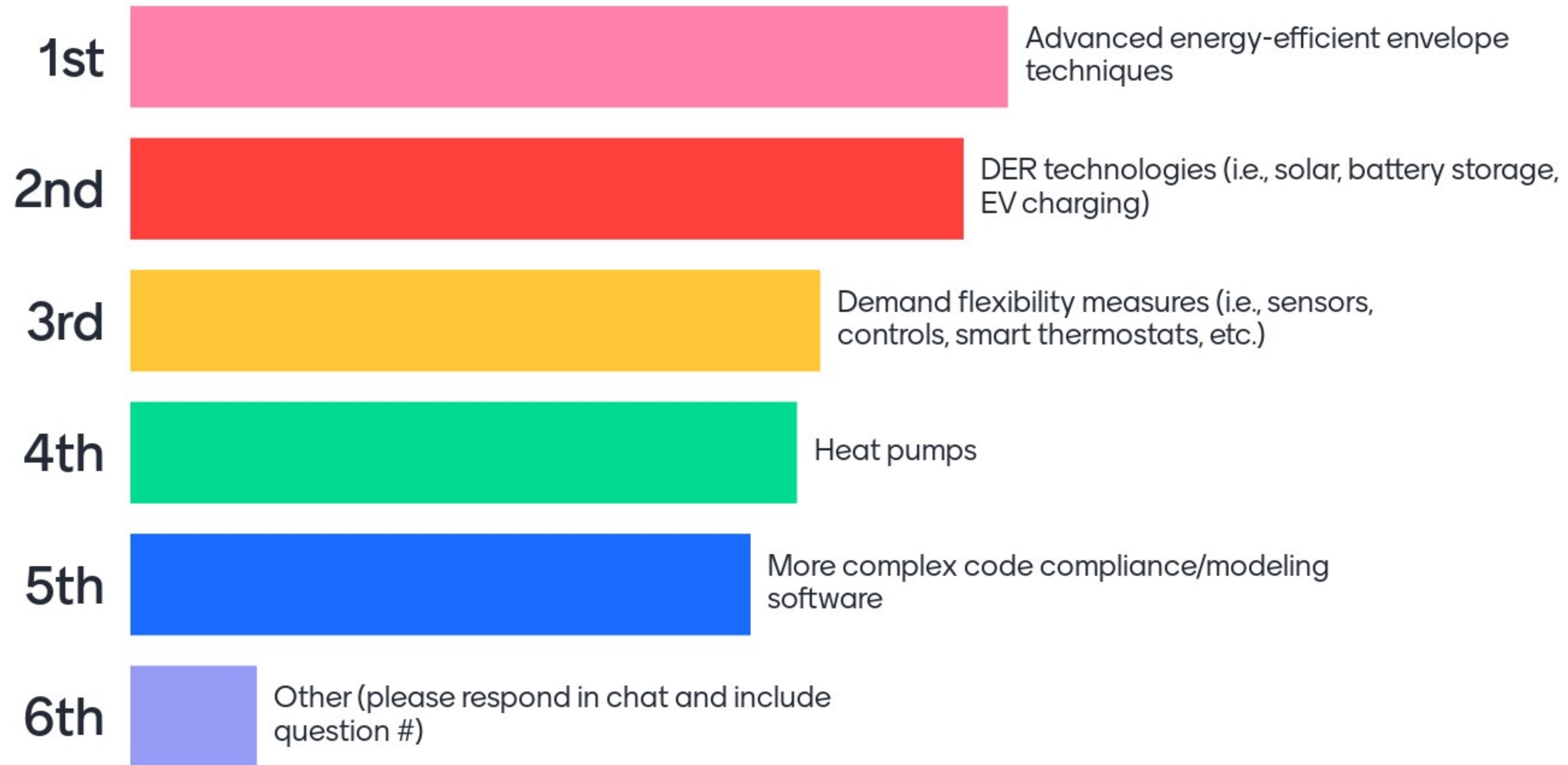
Other (please respond in chat and include question #)

# In order to achieve better compliance with zero carbon energy codes, we need more of the following (select all that apply):

Other (please respond in chat and include question #)



# Rank the need for more energy code compliance training and education to effectively implement decarbonization or zero energy codes:



# If you were a band that only sang about energy codes, what would your band name be, and what would be the title of your #1 hit song?

Make it tight and vent right!

FREE

CarbonKillersDecarb I love you

Energy Lovers

Electrify My Soul

The Killer Watts

Red Hot Chili Peppers

The REEO's .... i've got techncial  
assitance for you babe

Broke - please give me food

# If you were a band that only sang about energy codes, what would your band name be, and what would be the title of your #1 hit song?

Zero is my hero (kudos to Schoolhouse Rock)

Band name is It takes a Village and the song is We only have one Planet

Electro CUTE.....Power On

e-Zero

Are you READY?

Energy Codes are so 1990, Carbon Codes are 2021

Door Blower -- Netzero

The Kilowatt-hours, Saving energy every day and night

Let's Do It Together.....:)

# If you were a band that only sang about energy codes, what would your band name be, and what would be the title of your #1 hit song?

Band: z-minus; Song: saved by zero (remake)

Some like it hot

Do you know what you do for a living?

The dewpoints / remember to give condensation its dew

Still Warming Morning... That Hopeless feeling.

Saving just for you

Red Tag

Nothing

Band: Pump Rock Band

If you were a band that only sang about energy codes, what would your band name be, and what would be the title of your #1 hit song?

Lights Out/The power of Loads

Design it right, install it better!

Comply with Me

One World, Watts NOT Up

ELO - Electric Lights On

B.T.U's - Better Together United. Save and don't be Naive.



# Emerging State & Local Goals: From Zero Energy to Electrification to Decarbonization

Equity Breakout Session

# What is bringing you to this breakout session?

To learn!

Incorporating equity considerations into BEPS policy

Equity is vital in energy and climate change issues.

Protecting most vulnerable communities from bill increases or renovations as we electrify.

Facilitating retrofits in the affordable housing stock

Building equity within building performance policies.

Identify appropriate equity metrics related to climate issues

desire to learn how to incorporate equity and achieve more equitable outcomes in our state energy policy

interested in learning about how equity is examined in energy efficiency. How are disparate outcomes measured/studied, what are proposed policy remedies?

# What is bringing you to this breakout session?

My agency is undergoing strategic planning with a large lens toward equity.

To understand our role integrating equity and building policies

Understand the definition of Equity in context of Energy codes

How energy codes can be more equitable

How to better focus my work on ensuring equitable outcomes rather than focus on purely on climate.

to learn and discuss how we can make bldg electrification affordable and available to everyone.

To see how equity might be integrated into codes

Protecting those that don't have a voice

Incorporating equity measures in building simulation tools.

# What is bringing you to this breakout session?

Ensure building decarbonization transition is equitable

Looking for strategies to engage audiences that are underserved.

I work with a non-profit that is tryin to bring affordable housing to my neighborhood. They are committed to making environmental metrics a part of that.

Would like to figure out what the leading strategies are to understand how targeted universalism can be wrapped into building code

learn more about addressing equity in policy goals

Bridging a gap in labor force with communities that have historically shut out of living and family wage careers in the building and energy trades

Importance of equity considerations during decarbonization efforts

Equity is becoming a larger part of the conversation as we move toward electrification and decarbonization - I'm interested in how others are approaching this topic and solutions to become more equitable...

how to center equity in buildings federal policies and programs

# What is bringing you to this breakout session?

We need equity for democracy.

Ensuring most vulnerable communities are receiving the most benefits compared to other populations.

To learn more about energy codes and how it is affected by equity

Broadly: social justice. Specifically: concern about how the policies we work on impact people who are usually forgotten or disregarded.

Learning what SEOs across the country are doing to promote equitable EE

Building performance can address racial and social justice

Connect with others trying to solve for equity in this topic.

Ensure benefits of regulation are equitably distributed across the population

Interested to learn how to successfully integrate equity into building codes and influence development toward better neighborhood/community outcomes.

# What is bringing you to this breakout session?

How is equity weighed in transitioning to electrification?

To Learn

Critical importance of this topic!

I manage the Codes Advocacy Program for the American Institute of Architects. Equity is a crucial consideration for the AIA. Healthy and equitable communities, in fact, is one of three planks of our national policy platform:  
<https://bit.ly/3xVdKRm>

Since the IECC just shut down a more equitable process for a less representative one...

Equity in operation costs for low income homeowners - filters, fans, etc. for ventilation

how to communicate non-energy benefits of building decor

To learn about outcome equity

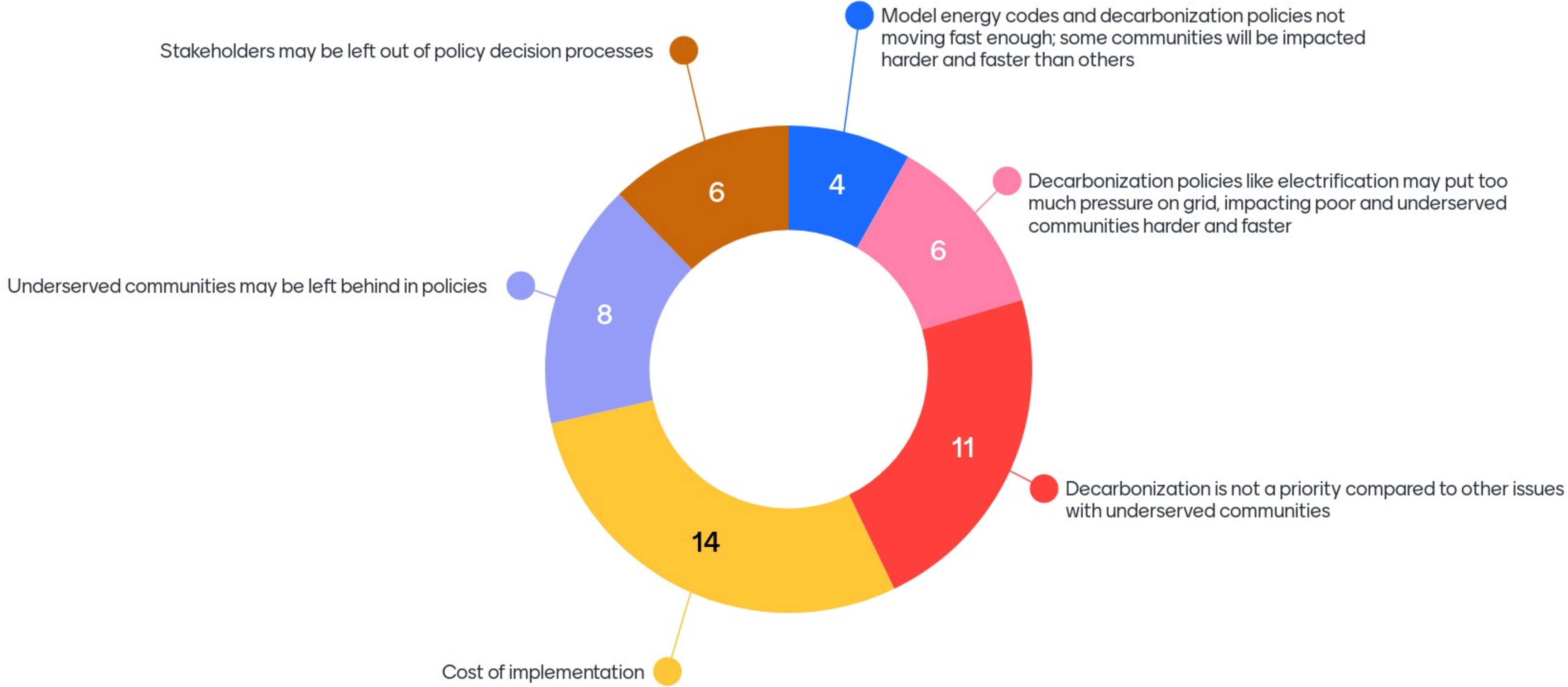
I want to see what this mostly privileged group thinks equity would look like, what some equity indicators are, and HOW we could achieve true climate justice. AND how EQUITY can be achieved by only 40% investment --- shouldn't it be continuous ?

# What is bringing you to this breakout session?

Involved in equity initiatives in NJ

cost of implementation

# What is the biggest challenge with equity and decarbonization? (Select all that apply)





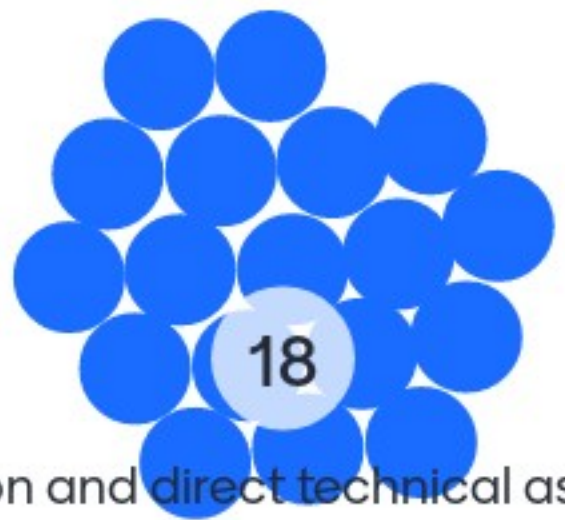
# Who is missing from the conversations that should be included?



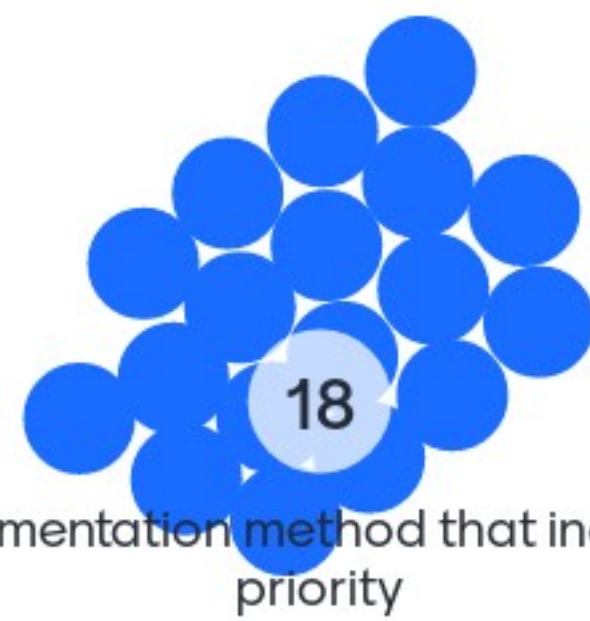
# What is needed from the DOE to address equity and decarbonization in an equitable manner?



Specific funding and resources



Education and direct technical assistance



Standardized implementation method that includes equity as a top priority



Regular convenings of Environmental and Social Justice (ESJ) community stakeholders during building decarbonization discussions



Initiative to focus on non-energy benefits (i.e., health) and occupant experience



Other (please respond in chat and include question #)

# How do we reflect the non-energy benefits of codes that better capture occupant needs?

Indoor Air Quality

Better health outcomes

Thermal comfort

standardization of non-energy benefits

long-term affordability/livability

public health considerations

Comfort and convenience

Lower asthma rates

Ambient air quality

## Decarb - Resilience Breakout

# How do we reflect the non-energy benefits of codes that better capture occupant needs?

reliability of new appliances

Comfort, durability, lower maintenance costs, IAQ

Water usage.

Focus on indoor air quality, heat island effect, and comfort in a changing climate

productivity

Comfort and resilience from adoption the new energy code.

Staying connected to resources of power, water, waste services

Health, access, jobs, equity, and quality of life

quality of life

# How do we reflect the non-energy benefits of codes that better capture occupant needs?

Create social cost of inefficiency to be included in cost-effectiveness tests.

Eliminate carbon monoxide risks

Occupant resilience (IAQ, overheating, etc.)

Data showing asthma in homes

Resilience of energy services.

Less sound pollution

Passive survivability

lower asthma rates

Provide accurate statistics that relay impacts of buildings that have poor IAQ.

# How do we reflect the non-energy benefits of codes that better capture occupant needs?

Access to air conditioning as temperatures rise

Cheaper to operate

demonstrate impact of codes on other policy objectives and engage other agencies/advocates working toward those policy goals

opportunity for local economic development/ jobs

lower energy bills

Educate elected officials re: health and buildings

Simple self-assessment tools. Community health data. Show home economic data for different income levels (% of income paying for all energy use).

Maintenance costs

Make Human health and environmental health (climate justice) the driver

# Are there cities, states or counties that have successfully incorporated equity in decarb efforts? Please share any initiatives, projects, or ideas.

No. Denver has done better than average, but average is pretty bad for this topic.

Energy Trust of Oregon has equity and DEI requirements embedded in RFP.

CA is starting to address-- but still imperfect

Seattle: giving grants for EE retrofits with the agreement that building owners don't raise rents for a certain # of years

Philadelphia has an initiative underway to streamline assistance to low income communities around ALL health/safety including weatherization to ONE portal

City of Berkeley Existing Building Electrification Plan (to some degree)



**Are there cities, states or counties that have successfully incorporated equity in decarb efforts? Please share any initiatives, projects, or ideas.**

fd

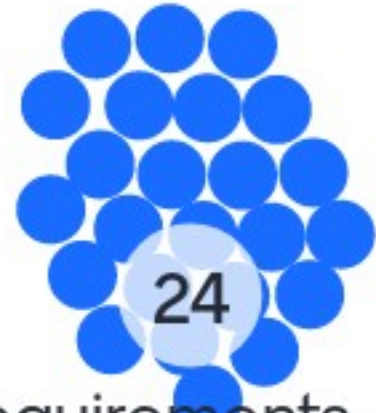
# 1. What words or phrases best capture what "resilience" means to you?



## 2. What is the biggest challenge of incorporating resilience into local and state decarbonization efforts?



# 3. Where do model energy codes have the strongest potential to address resilience?



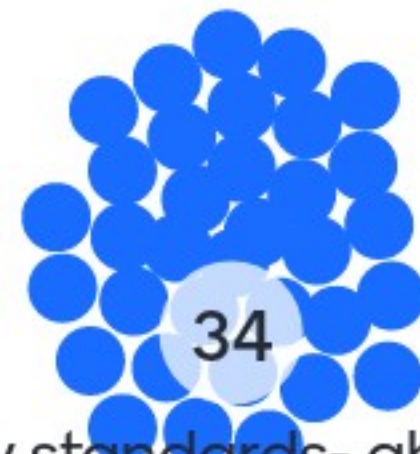
Back-up power requirements- individual on-site renewable energy, battery storage



Energy efficiency levels- stabilizing the power needs for electricity, heating, and cooling



Grid-enabled technologies- demand response and flexibility during peak loads



Passive survivability standards- ability to maintain safe indoor temps during heatwave or cold spell



Other (include in chat with question #)

# 4. What are other opportunities for states and cities to design programs and policies that address both building resilience and decarbonization?

Alternative Energy Sources

Time of use pricing

Identifying the overlaps

Demand Flexibility

Ground source heat pumps

Adopt current energy codes

regulations that ensure compliance

tackle new construction first

Require battery backup

# 4. What are other opportunities for states and cities to design programs and policies that address both building resilience and decarbonization?

Passive survivability standards

POLICY

micro grid, community solar

Affordability and choice of energy

Don't limit ability of batteries to charge from grid or PV

Community education and advocacy as well as addressing the existing building stock.

Address existing buildings

solar and storage as standard in new construction

Public awareness of personal impact

# 4. What are other opportunities for states and cities to design programs and policies that address both building resilience and decarbonization?

Grid-connected-ready new construction

VRE, alternative energy sources, micro-grid

Everything - education and advocacy

programming/funding to address existing building stock

Funding for State Governments for compliance to codes. State legislators need to be on board.

Normalize and integrate carbon pricing

Using business modelling will assist that, coding and other dt

Site PV

push towards passive house models

# 4. What are other opportunities for states and cities to design programs and policies that address both building resilience and decarbonization?

offer tax benefits or public funding for resilience-minded projects

smart technology

Integrate "hours of safety", energy, and carbon into all real estate listings

Educate people on the values, demonstrate it in selected residences and commercial sites

Internships and co ops for sustainable building systems students to help Climate corps!

ground source heat pumps

stop siloing these efforts. Climate + energy + regenerative ag + equity + water... ALL

work with utilities

Support standardized communications and control strategies for DERs



# 4. What are other opportunities for states and cities to design programs and policies that address both building resilience and decarbonization?

Complete integration of EE + PV + ESS + EV Charging + decarbonization addresses resilience as well as decarbonization.

incentivize energy and thermal storage

Funding to resilience and decarbonization projects

Support ICC zero energy project

thermal storage

Adaptable National codes, t

Cost effective retrofits.

Interoperability agreements. Just look at what happened in Texas.

update current structures