

U.S. DEPARTMENT OF
ENERGY

Office of
ENERGY EFFICIENCY &
RENEWABLE ENERGY

Resilient and Efficient Codes Implementation Infrastructure Investment & Jobs Act

National Energy Codes Conference
July 20, 2022



Infrastructure Investment and Jobs Act (IIJA)

Section 40511: Cost-effective Codes Implementation for Efficiency & Resilience

Highlights:

- \$225 million for implementation activities supporting updated energy codes
 - Encourages “partnerships” comprised of states and other key stakeholders
 - Intended to support code updates—not limited to only the latest codes (currently the 2021 IECC and Standard 90.1-2019)
 - Amplifies technical assistance supporting code implementation, and builds on many traditional activities, while scaling these efforts significantly
- > DOE engaged stakeholders and the general public to seek feedback on priorities and activities of the program

Where are we today?

Progress made by DOE toward Section 40511 execution:

- **Request for Information (RFI)** issued on April 18 (comments due May 20)
 - Received comments from over 70 entities
 - DOE has reviewed and considered all comments received
- **Public workshop** held on April 27
 - Over 200 participants across a wide range of interests
 - Learn more about the workshop at energycodes.gov

> We'll be talking more about Section 40511 during today's session, including summarizing key topics, feedback received, and next steps



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Overview: Section 40511 of the IIJA

Cost-Effective Codes Implementation for Efficiency & Resilience

Section 40511: Eligible Entities

ELIGIBLE ENTITY.—The term ‘eligible entity’ means— “(A) a relevant State agency, as determined by the Secretary, such as a State building code agency, State energy office, or Tribal energy office; and “(B) a partnership.

(A) State agencies

- To be determined by the Secretary of Energy
- Examples: State energy offices, Tribal energy offices

(B) Partnerships

- More on this momentarily...

> What state agencies are most relevant to the initiative?

- Energy, code administration, resilience, safety, others?

Section 40511: Partnerships

PARTNERSHIP.—The term ‘partnership’ means a partnership between an eligible entity described in paragraph (1)(A) and 1 or more of the following entities: “(A) Local building code agencies. “(B) Codes and standards developers. “(C) Associations of builders and design and construction professionals. “(D) Local and utility energy efficiency programs. “(E) Consumer, energy efficiency, and environmental advocates. “(F) Other entities, as determined by the Secretary.

Partnership between:

- Local building code agencies
- Codes and standards developers
- Associations of builders, design and construction professionals
- Local and utility energy efficiency programs
- Consumer, energy efficiency, and environmental advocates
- Other entities as determined by the Secretary of Energy

> What “other entities” should be considered or emphasized?

> What can (and should) constitute an effective partnership?

Section 40511: Code Updates

UPDATED BUILDING ENERGY CODE.—An update to a building energy code under this section, including an amendment that results in increased efficiency compared to the previously adopted building energy code, shall include any update made available after the existing building energy code, even if it is not the most recent updated code available.

Updates:

- Increase energy efficiency compared to the previously/currently adopted code
- Can be any update more recent than the existing/currently adopted code
- Are not constrained to the most recent code editions (e.g., 2021 IECC and 90.1-2019)

- > How should DOE evaluate and prioritize the impact of a proposed update?
- > How should DOE balance recent vs. planned vs. aspirational updates?

Section 40511: Criteria and Priorities

CRITERIA; PRIORITY.—In awarding grants under subsection (b), the Secretary shall—

1. Consider:

- Impact: Prospective energy savings and plans to measure the savings
- Long-term sustainability of measures and savings
- Prospective benefits, and plans to assess benefits, including resilience and peak load reduction, occupant safety and health, and environmental performance
- Demonstrated capacity to carry out the proposed project
- Need for assistance

2. Prioritize *partnerships*

- > What methods are appropriate for measuring and determining savings impacts?
- > How should DOE evaluate the sustainability and long-term effects of a project?
- > Are there additional benefits that should be considered/prioritized?

Section 40511: Sample Activities

Examples specified in the IIJA:

- Create or enable state or regional partnerships to provide training and materials
 - Collect and disseminate data on construction and code implementation
 - Develop and implement a plan for effective implementation, including measuring compliance
 - Address implementation needs in rural, urban, suburban areas
 - Implement updates in energy codes
- > What types of partnerships can help DOE maximize its technical assistance activities supporting building energy codes?
- > What additional activities should be considered?



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Feedback: Request for Information (RFI)

Cost-Effective Codes Implementation for Efficiency & Resilience

Request for Information (RFI) and Public Workshop

DOE issued an RFI and held a public workshop to better understand current implementation needs, as well as to help guide this new initiative.

The RFI and public workshop featured several key areas of interest:

1. Adoption
2. Workforce Development
3. Implementation and Compliance
4. Innovative Approaches
5. Energy and Environmental Justice (EEJ)
6. Partnerships

> DOE asked a number of questions across each of these topics

What outcomes are targeted under this initiative?

The RFI also emphasized several desired outcomes:

1. Develop the next-generation workforce
2. Facilitate energy code updates
3. Advance new and innovative policies and tools
4. Increase equity in code-related policies and planning
5. Improve energy code compliance

See the official RFI and full list of questions at:

<https://www.energycodes.gov/RECI-codes-workshop>

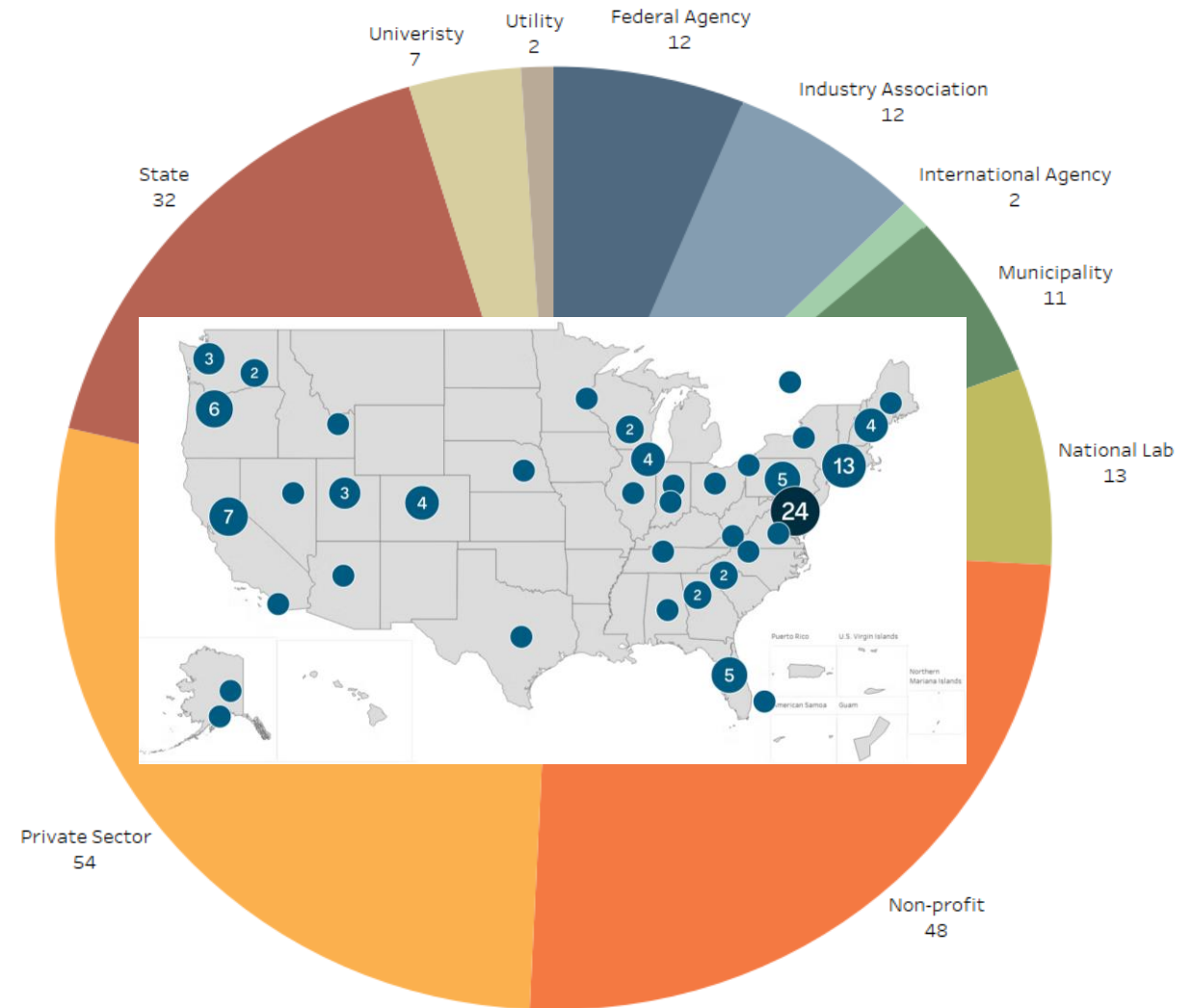
Feedback on Key Topic Areas

Who participated in the RFI and Public Workshop?

Diversity of Voices:

- RFI comment period over 30 days
- DOE held workshop to gather additional input
- Nearly 200 attended the workshop
- DOE received over 70 sets of RFI comments

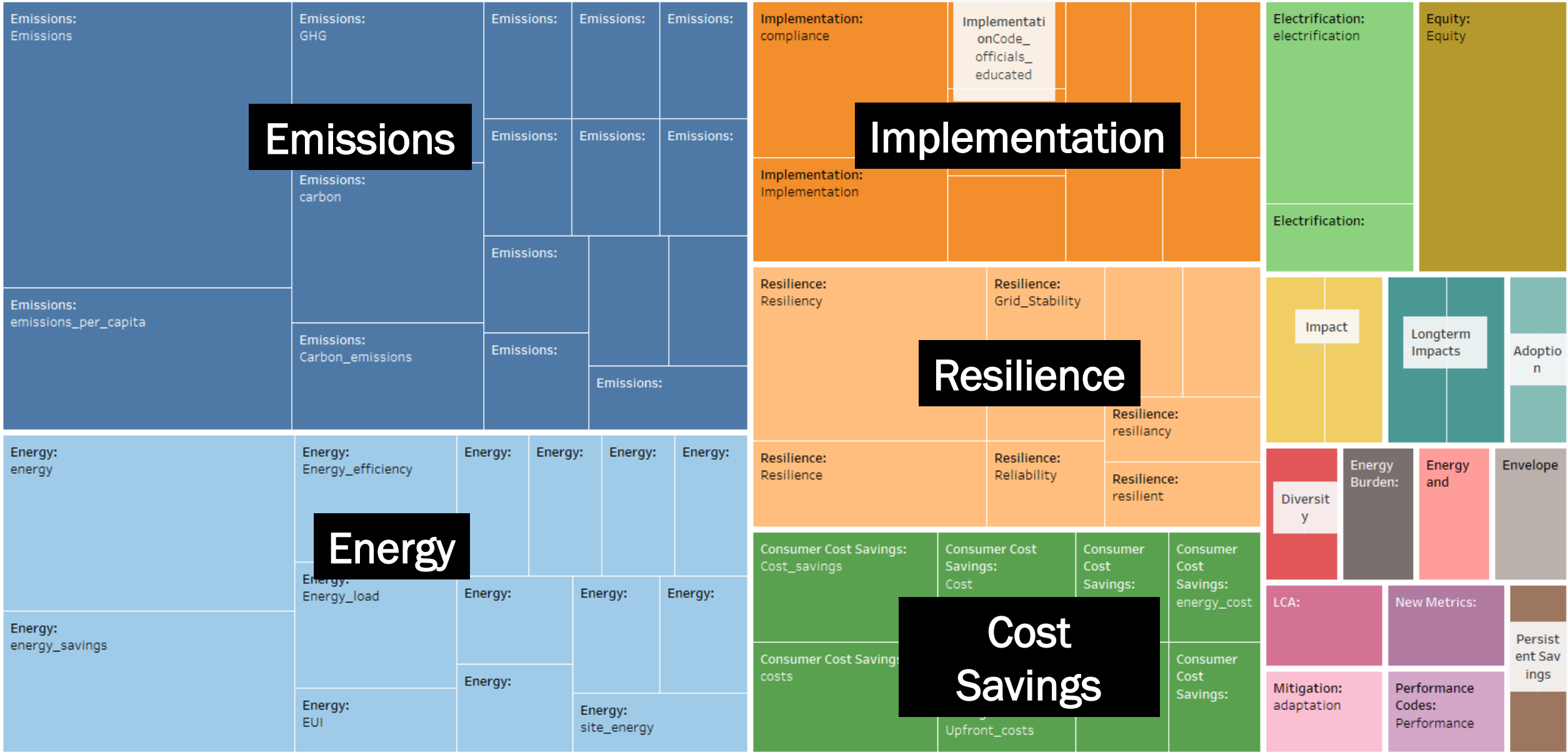
Workshop Attendee Summary



Key Themes: Energy Code Adoption

- How should code updates be evaluated?
 - Emissions reduction, energy savings, estimated impact (e.g., construction starts, percentage improvement, etc.), implementation potential
- What is considered a code update?
 - Latest model code, at least 2018 IECC, any improvement, no weakening amendments, count recent & future code updates (e.g., 1-3 yrs.)
- How can model code adoption and updates be sustained over time?
 - Require or prioritize implementation plans, compliance support (tools, training, tech. support), legislation, funding tied to actual adoption

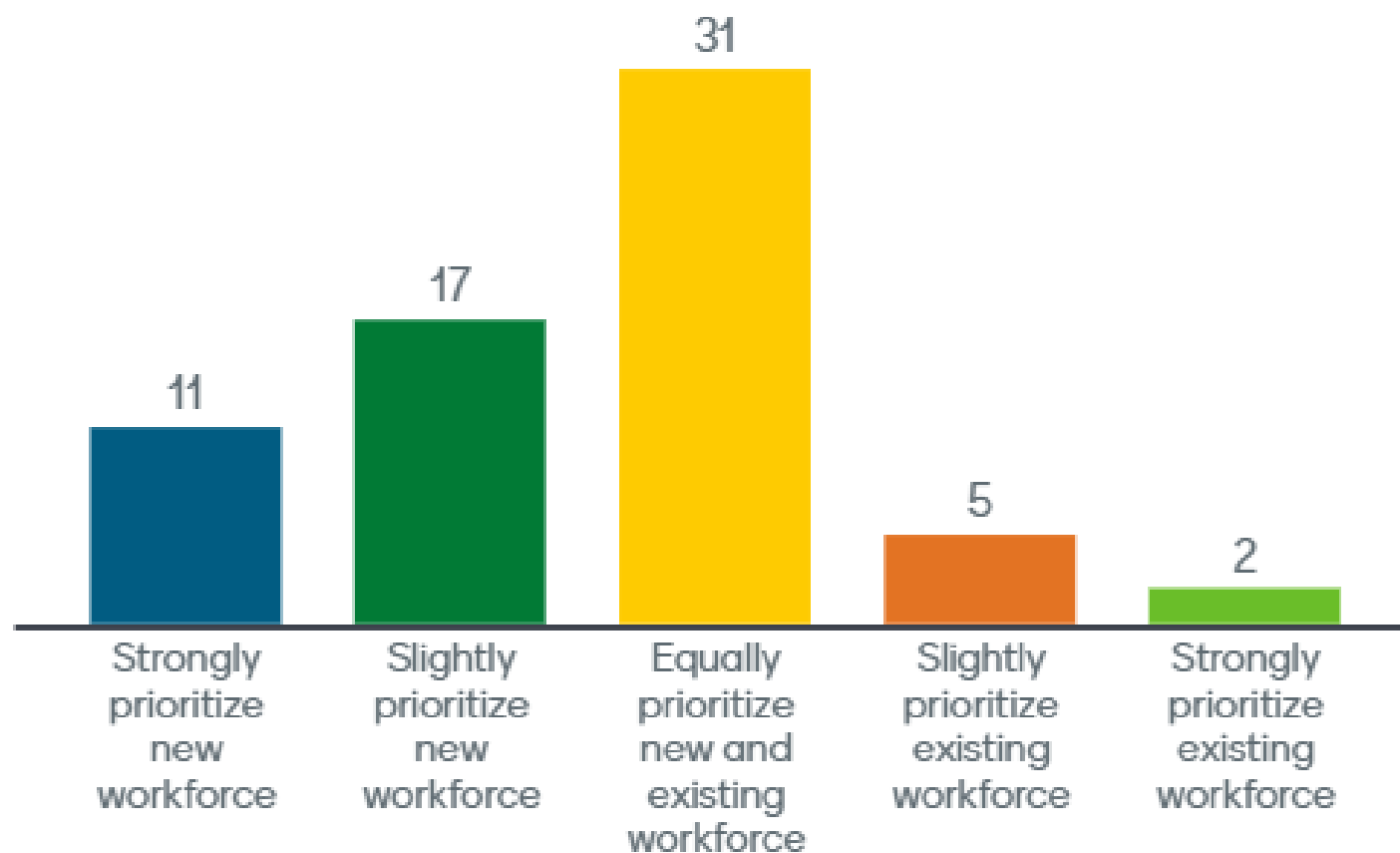
Adoption: What metric should DOE prioritize when assessing impacts of an updated state or local energy code (e.g. energy, emissions, etc.)?



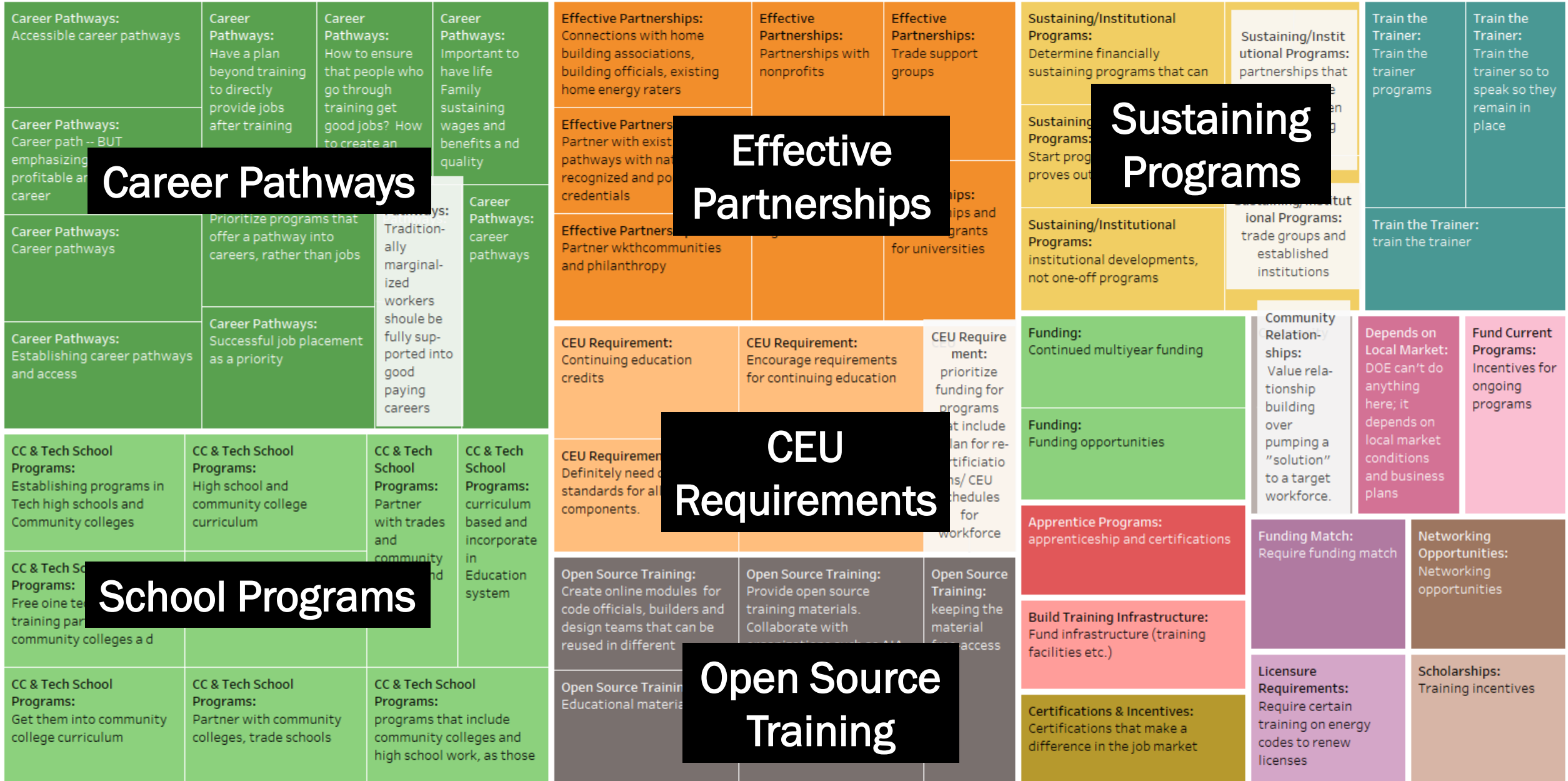
Key Themes: Workforce Development

- How should DOE balance support for the new vs. existing workforce?
 - Prioritize both with a call to “widen the tent” (e.g., increased diversity, career pathways, high school programs)
- How can DOE best support an equitable workforce?
 - Community outreach and accessible training, secondary and higher-ed partnerships, free training programs, career pathways, scholarships
- What are the most effective training methods and tools?
 - Training: In-person and online training, certification programs, code consultants, compliance collaboratives
 - Tools: COMcheck/REScheck updates, remote/virtual tools, inspection software, energy modeling, automated plan review, electronic permitting and digitization

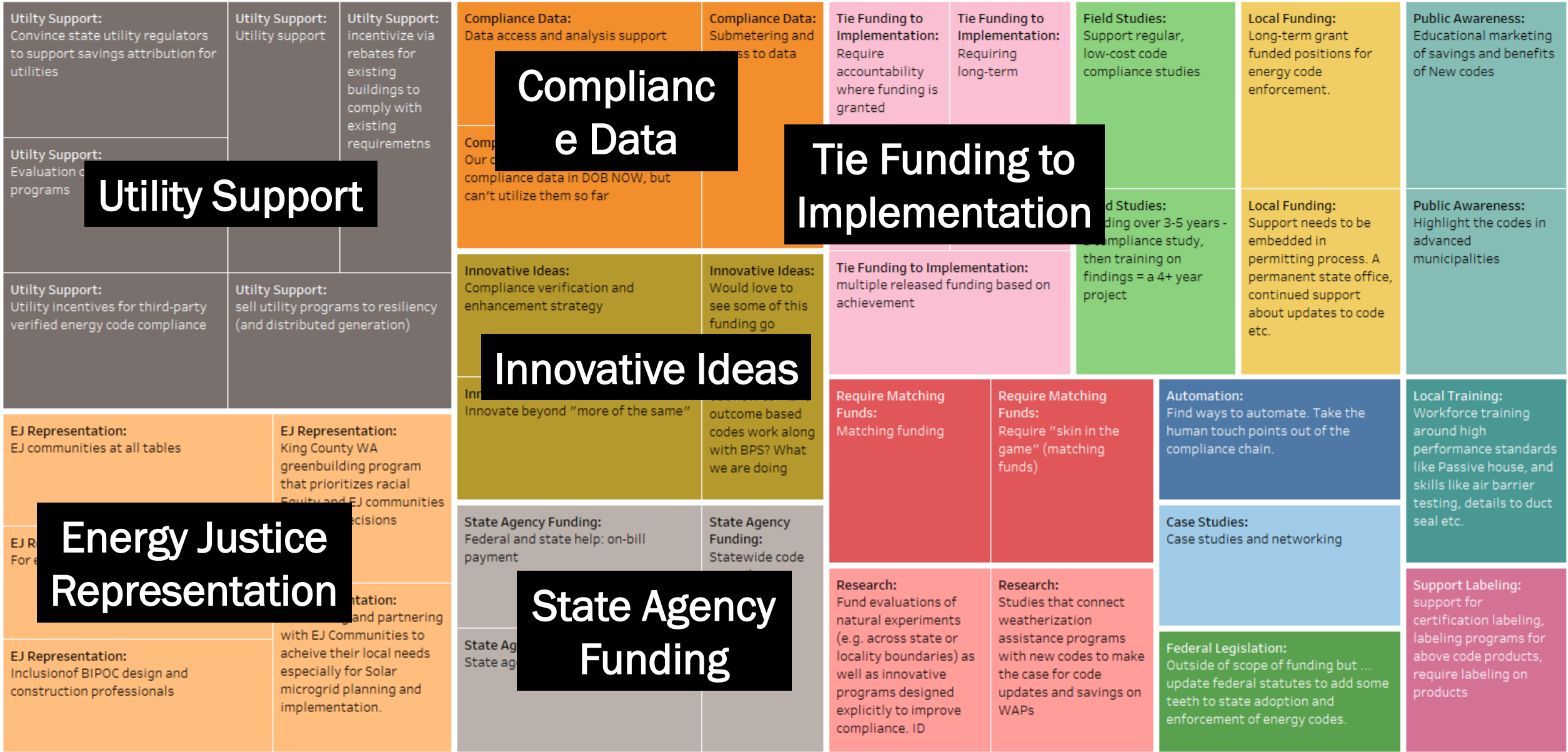
How should DOE prioritize training a new workforce entering the job market versus training the existing workforce on the latest energy code ?



Workforce: How can DOE encourage workforce training programs to be sustained long-term, beyond the period of funding?



Implementation: How can DOE effectively support long-term compliance improvements? (e.g., field studies, compliance collaboratives, utility code support programs)

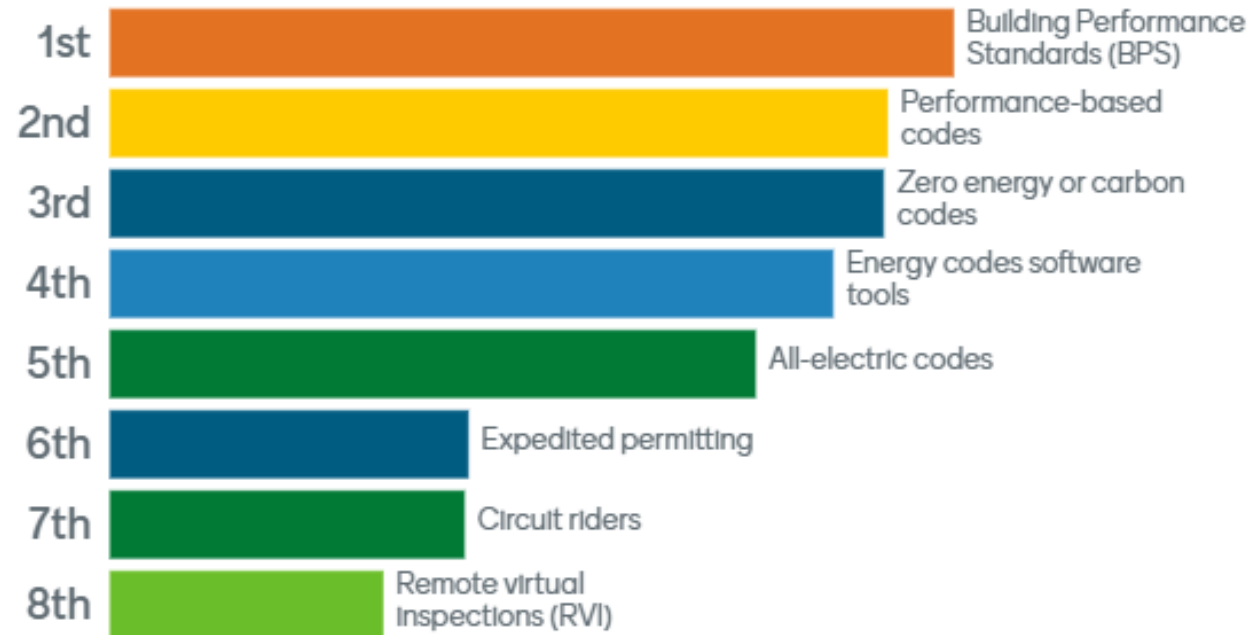


Key Themes: Innovative Approaches

How can DOE foster innovation in energy code implementation?

- Encourage partnerships between regions, states, local governments, and other local governmental bodies (e.g., councils of governments)
- Encourage partnerships with utilities
- Provide flexibility and don't be overly prescriptive to the type of innovation
- Cities are uniquely positioned to test innovative approaches; fund cities
- Better understand how codes need to change to adapt to climate change
- Incentivize adoption of an energy code and BPS together to ensure alignment
- Deploy a circuit rider (code consultant) in each state to support code updates and stretch code development

Please rank innovative approaches covered in this presentation by importance to resilient and efficient codes implementation.



Key Themes: Innovative Approaches (continued)

- How can DOE create alignment between building codes and BPS?
 - Align code and BPS metrics, require commissioning in codes, benchmarking, industry education, analyze how new buildings perform against BPS
- How can DOE improve implementation in existing buildings?
 - Expand code reqs. during retrofit, adjust threshold when code applies, Streamline compliance in existing buildings (e.g., RVI, expedited permitting)
- What other complementary policies should be considered?
 - Implement time of sale disclosures, develop more robust incentives, expand EE appraisals

Innovative Approaches: What are other key innovative approaches that were not yet covered in the discussion?

Appraisal

Solar & Storage

Embodied Carbon

Existing Bldgs

Passive House

Key Themes: Energy and Environmental Justice (EEJ)

- What EEJ concerns are most relevant to the initiative?
 - Funding and benefits to EEJ Communities, community engagement, energy burden, affordable housing, indoor air quality, resilience
- How can DOE best support disadvantaged communities?
 - Accessible engagement (e.g., stipends, childcare, direct outreach), removing barriers to entry, workforce development, community partnerships
- What strategies can best support EEJ goals?
 - Digital and streamlined compliance tools, require DEI plan & EEJ project partners, measurement and evaluation of project outcomes, fund projects at local level, reduce program application burden

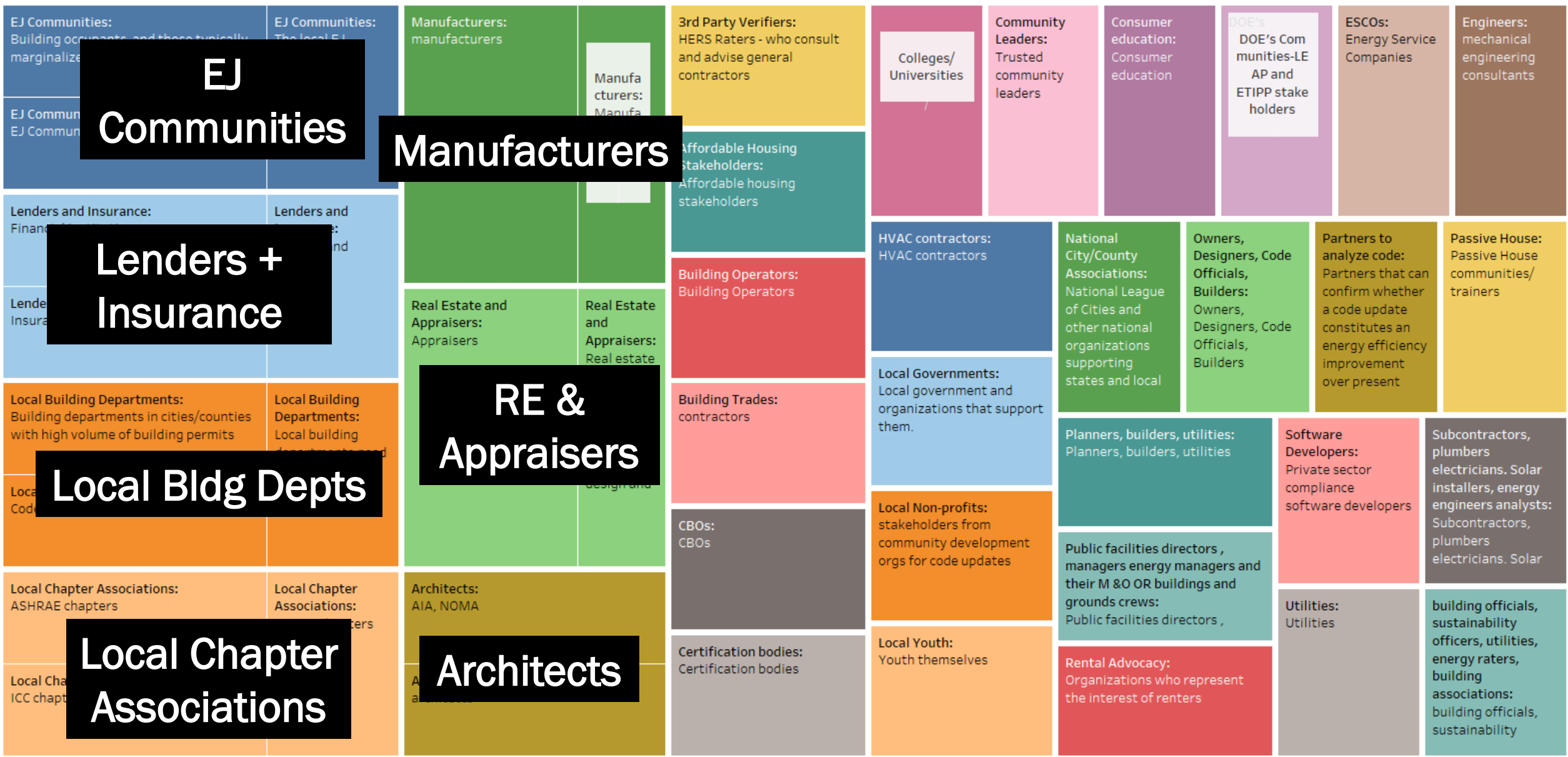
EEJ: How can we ensure that environmental justice concerns are mitigated through the development of effective building energy codes?



Key Themes: Strategic Partnerships

- The IIJA specifies that partnerships should be prioritized
- How can DOE encourage successful partnerships?
 - Interests commonly cited include: Federal, state, local agencies (especially those involved in code adoption and implementation), regional organizations, National Labs, industry and practitioners (e.g., builders, designers, engineers, manufacturers, trade organizations), NGOs, universities and academia
- What is the appropriate role for local governments?
 - Local governments should be an active partner, local building departments are critical, EEJ happens at local level, areas for innovation

Partnerships: Which stakeholders are critical to a successful partnership? Are there additional (non-project) partners and stakeholders who should be emphasized?



Feedback on Prioritization and Evaluation

How should DOE prioritize different criteria when evaluating applicants? [1 = heavily favor of option one, 5 = heavily favor option two.



Partnerships: What other criteria should DOE prioritize when evaluating applicants?



Partnerships: How should DOE track overall outcomes from this funding? What metrics should DOE request from each project team?



Next Steps

Planned next steps in executing Section 40511 of the IIJA:

- Next Step: **Notice of Intent (NOI)** with additional details
- **Funding Opportunity Announcement (FOA)** in Fall 2022
- > Teaming list available on [EERE Exchange](#)—get added by emailing becp@pnnl.gov with the subject “RECI FOA: Teaming Partner Information”
- > Sign-up for BECP updates at www.energycodes.gov/subscribe
- > Keep an eye out for more information soon!

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