

2024 IECC Planning Government Forum

Codes for Climate™ Initiative

September 16, 2021

3-4:30pm ET / noon-1:30pm PT

Agenda

- Introductions
- Recap of activities to date
- ICC committee updates
- What is a “Code for Climate”?
- Overview of NBI public proposals for 2024
- Discussion





Introductions

Introductions

Introduce yourself (<15 seconds)

- Name
- Affiliation
- Location
- Top Priority for 2024 IECC
(just one for now!)

Pass it to someone else



A wide-angle photograph of a city skyline at dusk. In the foreground, a multi-lane highway with light trails from traffic curves through a grassy area. A green highway sign is visible on the left. The middle ground is filled with a dense cluster of skyscrapers and buildings, some with lights on. The sky is a deep blue with some light clouds. The text "Recap of Activities to Date" is overlaid in white, bold, sans-serif font in the center of the image.

Recap of Activities to Date

Kick-Off Convening

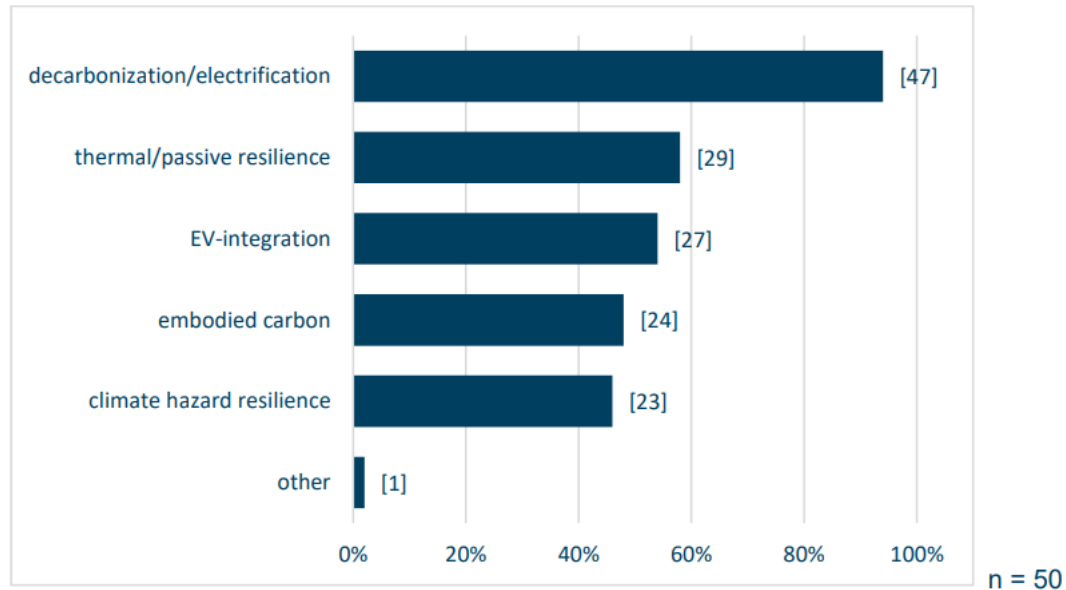
- On July 13, NBI and RMI convened over 80 stakeholders for a postmortem discussion of the 2021 IECC development process and the path forward for future code development cycles
- Session elevated the following priorities:
 - **Electrification** (vehicle charging and building systems)
 - Improvements to **existing buildings** (improving efficiency, distributed generation, electrification)
 - **Equity** (energy burden, affordable housing)
 - **Cost evaluation**
 - State and local code **development and adoption support**

Follow-Up Survey

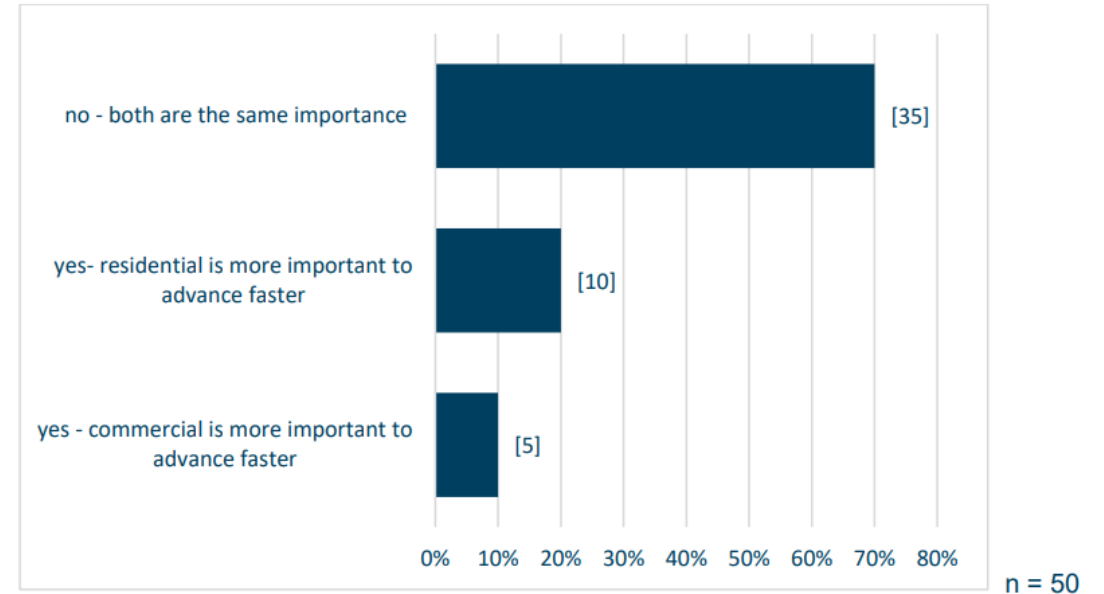
- Codes for Climate stakeholder community primarily works with city, county and state governments
- Most jurisdictions struggle with outdated energy codes and the slow pace of new code adoption
- Needs:
 - Climate-aligned code
 - Assistance with adoption
 - Assistance with enforcement

Key feedback

Climate-related priorities for the next model code



Importance of residential vs. commercial code development



IECC Committee Updates



IECC Consensus Committees

- **Residential** Committee kicked off August 30
- Upcoming meetings:
 - Full Committee [September 30, 1-3:30pm ET](#)
- **Commercial** Committee kicked off September 9
- Upcoming meetings:
 - Working group on Lifecycle Cost [September 17, 2-4pm ET](#)
 - Full Committee [September 29, 11am-1:30pm ET](#)

IECC Consensus Committees

- Interested stakeholders, whether or not they are official committee members, are able to participate in these committee meetings and join associated work groups
- Working groups will be made up of 11 committee members and 11 non-committee members
- **Join a working group:** <https://www.iccsafe.org/products-and-services/energy/iecc-work-group-form/>
- **Receive updates as an interested party:** contact Kris Stenger at kstenger@iccsafe.org

IECC Consensus Committees

- **Commercial** Subcommittees:
 - Envelope and Embodied Carbon
 - HVAC and Water Heating
 - Lighting, Electrical and Renewables
 - Modeling, Whole Building Metrics, Zero Energy
- **Commercial** Working Groups (temporary):
 - Admin and Integration
 - Multifamily and Hospitality
 - Environmental Justice
 - Construction Cost and LCC
 - Glide Path to 2030

IECC Consensus Committees

- **Residential** Subcommittees:
 - Envelope and Embodied Energy
 - HVAC and Water Heating
 - Lighting, Electrical and Renewables
 - Economics, Modeling, Whole Building Metrics
 - Consistency and Administrative Topics
 - Existing Buildings

Committee Timing*

Task	2021			2022												2023			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
→ Review code change proposals																			
New committee CCPs																			
Draft code (while simultaneously reviewing proposals)																			
→ Public comments																			
Review and modify																			
Cleanup comments																			
Incorporate cleanup																			

Follow the calendar: <https://www.iccsafe.org/news-and-events-calendar/category/codes-standards-calendar/>

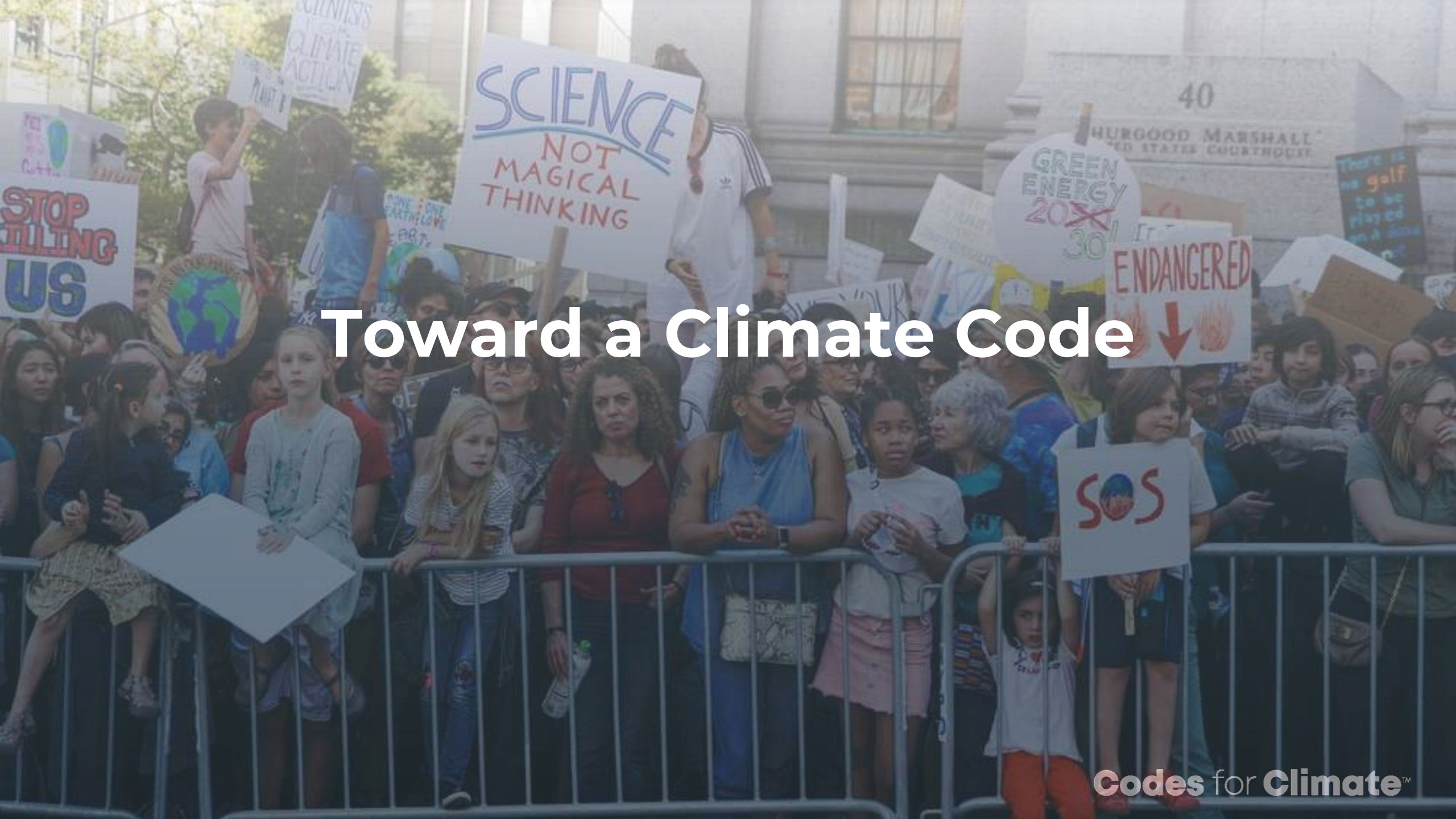
* As proposed by Commercial Committee Chairs

ICC Annual Conference 2021

September 19-26, 2021

- Pittsburgh, Pennsylvania
- Two key proposals to watch:
- IBC G66-21 EV Charging
 - IPC P87-21 Part I and Part II
Showerhead Efficiency
- Voting will open two weeks after close of PCH

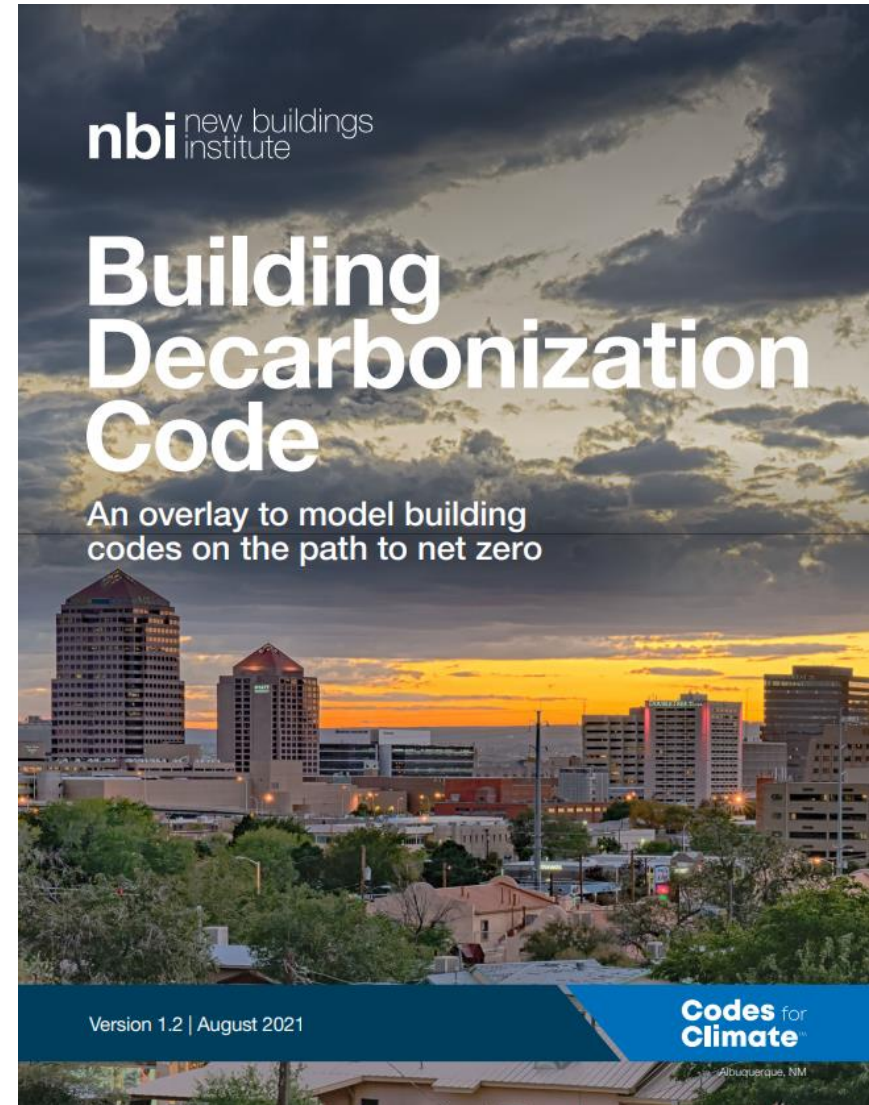




Toward a Climate Code






Updates to NBI's Decarbonization Code

- Addition of ASHRAE Standard 90.1 language
- Inclusion of key electrification technologies like solar energy production, electric vehicles, battery storage, and demand response
- Factsheets with details for policy makers



<https://newbuildings.org/resource/building-decarbonization-code/>

Code Framework and Goals

		Scope	Goal
	Efficiency	Base Codes / Building Systems	Highly Efficient / Passive Resilience
	Electrification	Building Systems + Vehicles	Eliminate on-site combustion
	Renewables	Onsite, Offsite + Procurement	Onsite resilience, Support RPS
	Grid Integration	Controls, Storage	TOU Carbon reduction, Support Grid Stability
	Lifecycle Impact	Embodied Carbon, Refrigerants + Deconstruction	Lifecycle GHG minimization
	Equity	IAQ, Materials + More	Just transition, Improve health, Local Jobs, Affordability



NBI Proposals

Kick-Off Convening (Repeat)

- Session elevated the following priorities:
 - **Electrification (vehicle charging and building systems)**
 - **Improvements to existing buildings (improving efficiency, distributed generation, electrification)**
 - Equity (energy burden, affordable housing)
 - Cost evaluation
 - State and local code development and adoption support

Proposals Commercial

Electrification

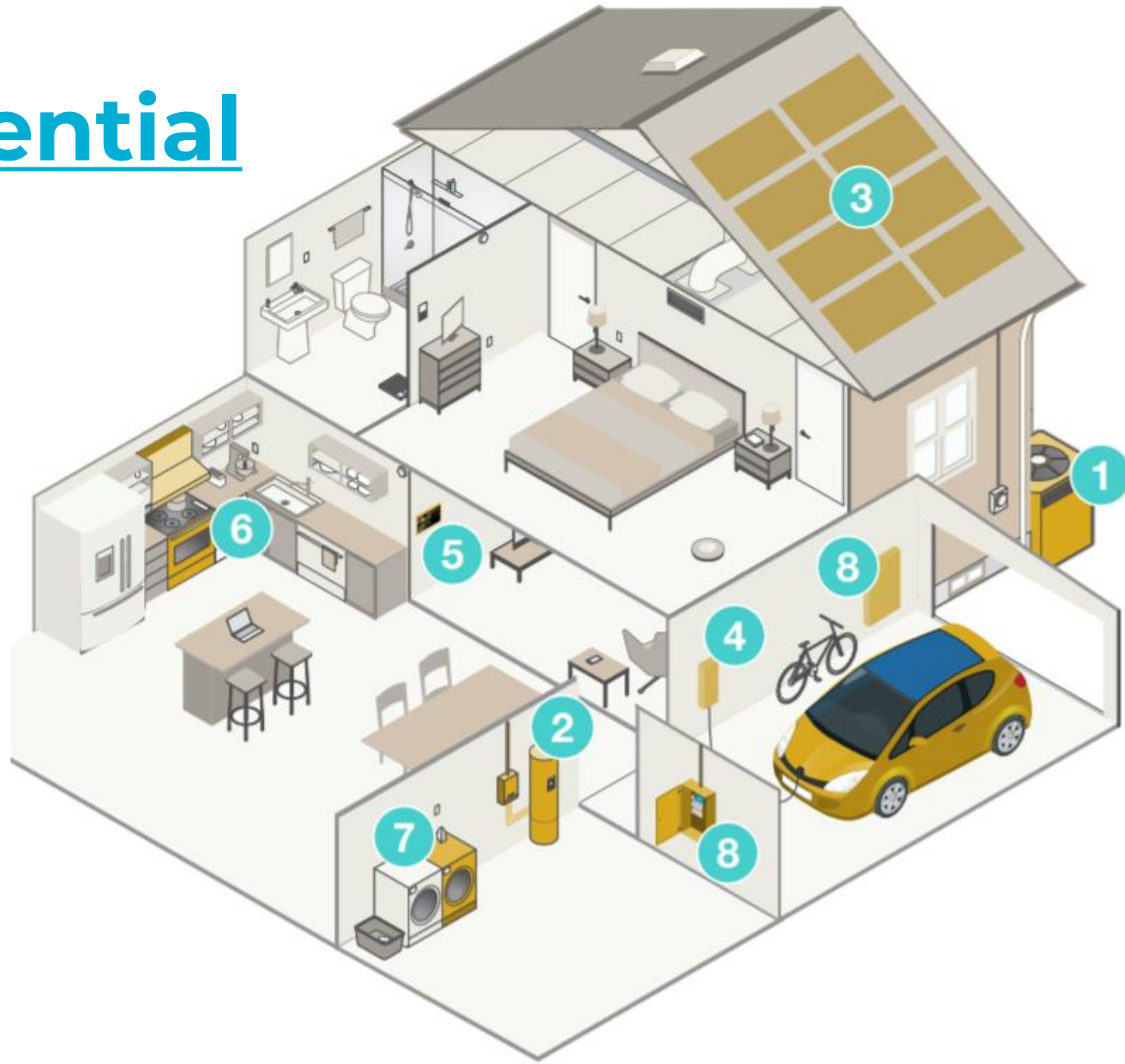
- Whole building electrification
- Demand-responsive thermostats
- Demand-responsive water heaters
- Electric vehicle charging
- Onsite renewable energy
- Energy Storage



Proposals Residential

Electrification

- Whole building electrification
- Demand-responsive thermostats
- Demand-responsive water heaters
- Electric vehicle charging
- Onsite renewable energy-ready
- Energy Storage-ready



Whole Building Electrification

Commercial

- Define all-electric buildings
- Require new construction be all-electric
- Clean up vestigial language in code to assist in enforcement

Residential

- Define all-electric buildings
- Require new construction be all-electric
- Clean up vestigial language in code to assist in enforcement

Demand-Responsive Thermostats

Commercial

- Define DR controls
- Require controls on thermostats
- Incorporate exceptions for healthcare and critical facilities

Residential

- Define DR controls
- Require controls on thermostats

Demand-Responsive Water Heaters

Commercial

- Define DR controls
- Require controls on water heaters
- Language has been vetted in CA, WA, DC, and ASHRAE 189.1

Residential

- Define DR controls
- Require controls on water heaters

Onsite Renewable Energy / Ready

Commercial

- Resurrect proposal from 2021
- Language has been vetted in 90.1, DC, MN
- Amount of solar is set for self-utilization
- Add appropriate enforcement language

Residential

- Move solar ready language from Appendix to body of code
- Add appropriate enforcement language

Energy Storage / Ready

Commercial

- Revise Appendix CB to remove storage ready
- Create new appendix to require storage, sized based on work in T24

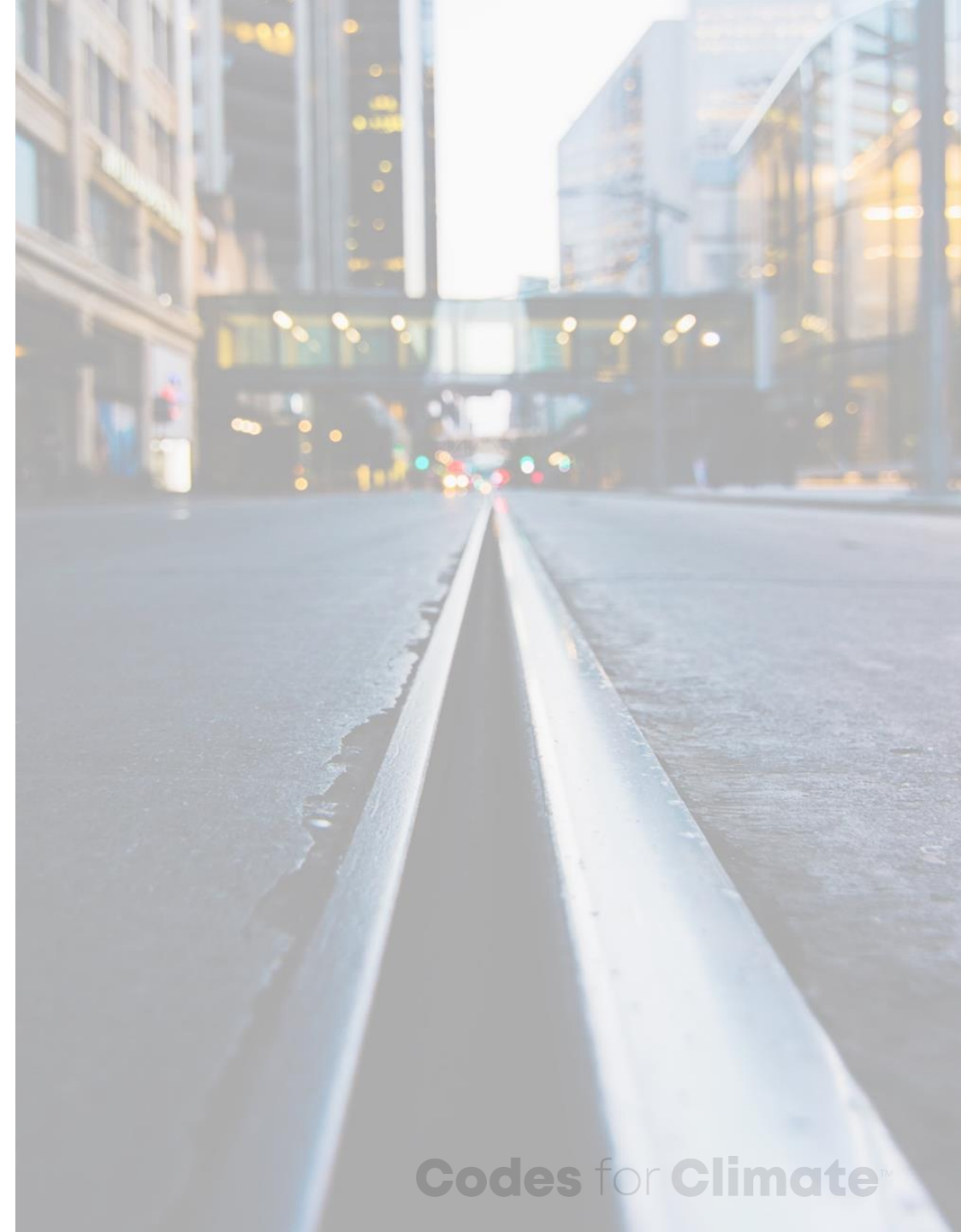
Residential

- Revise Appendix CB to be used in residential section
- Move energy storage ready to base code to ensure infrastructure is available

Proposal Topics

Existing Buildings

- Additional efficiency packages
- Planning for electrification
- (Commissioning for renovations)



Additional Efficiency

Commercial

- Use IEBC levels of alteration to define scopes of work for use of C406 points structure
- Will apply to common commercial alterations at a larger scale

Residential

- Present residential points structure with alterations to define scopes of work
- Will apply to common residential alterations at a larger scale

Planning for Electrification

Commercial

- Use related upgrades (installation of solar, replacement of heating/cooling system) to trigger necessary panel upgrades to plan for electrification

Residential

- Use related upgrades (installation of solar, replacement of heating/cooling system) to trigger necessary panel upgrades to plan for electrification

Discussion

Next steps

- Code change proposal submissions for the IECC and Chapter 11 of the International Residential Code (IRC) are open through 11:59 pm PT on Tuesday, October 12, 2021
- Stakeholders interested in supporting any or all provisions being proposed should contact the Codes for Climate team by **September 30, 2021**
- Interested stakeholders will get access to draft language for review

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<https://www.codesforclimate.org/>