2025 Energy and Green Code Updates and Reach Code Options

Environment and Climate Commission

March 26, 2025

Agenda

Presentation Agenda

- Current Reach Code status
- Current Amendments to be carried forward
- 2025 Energy and Green update
- Reach Code options
- Code adoption process
- Summary & Staff recommendation

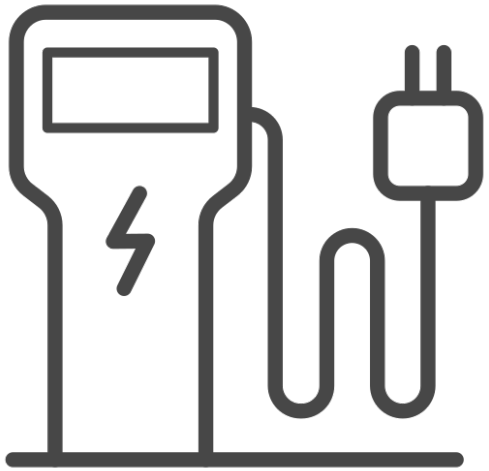
Current Status

Current Status

- No Reach Code for New Construction decarbonization
- Other Code Amendments since 2016 Code Cycle

Current Amendments to be carried forward

2022 Green Code Amendments in effect



- Low Carbon Concrete
- 100% Waste Diversion on select materials
- Nonresidential EV Charging 20% Capable 10% EVCS

2025 Energy and Green Code

2025 CA Energy Code - Highlights:

[1] Fuel source not specified (Mixed-Fuel design buildings allowed)

[2] Electric Heat Pump baseline increases difficulty for Mixed-Fuel compliance

[3] *New* compliance measure from building energy to statewide system costs

(Delays software release)

CALIFORNIA ENERGY COMMISSION

2025 CA Green Building Standards Code - Highlights

[1] No emission standards for appliances (allows combustion)

[2] 65% waste diversion, no low-Carbon concrete standard

[3] EV Charging requirements extended for Multifamily & Non-Residential

Decarbonization Reach Code Options

Why a 2025 Decarb Reach Code?

- *Neither* 2025 Energy Code nor Green Code *ensure* All-Electric Building Design
- *Yet* All-Electric Building Designs *reduce Climate Risk* for our community
- *Further* All-Electric Building Designs *provide better health outcomes* for building occupants

What are the Decarb Reach Code options?

Energy Performance Standard

= *Reduction in annual energy use*

Requires:

- CA Energy Compliance Software
- Cost Effectiveness Studies (3)
- CA Energy Commission approval

What are the Decarb Reach Code options?

Option #1

Energy Performance Standard without fuel bias

* = Amount energy State allows

Option #2

Appliance Emissions Standard

Zero Emissions HPWH

Option #3

Electric Readiness for Additions & Alterations

AB306 Possible Impacts

What other Decarb options?

Option #4
Passive House
Ultra Efficiency

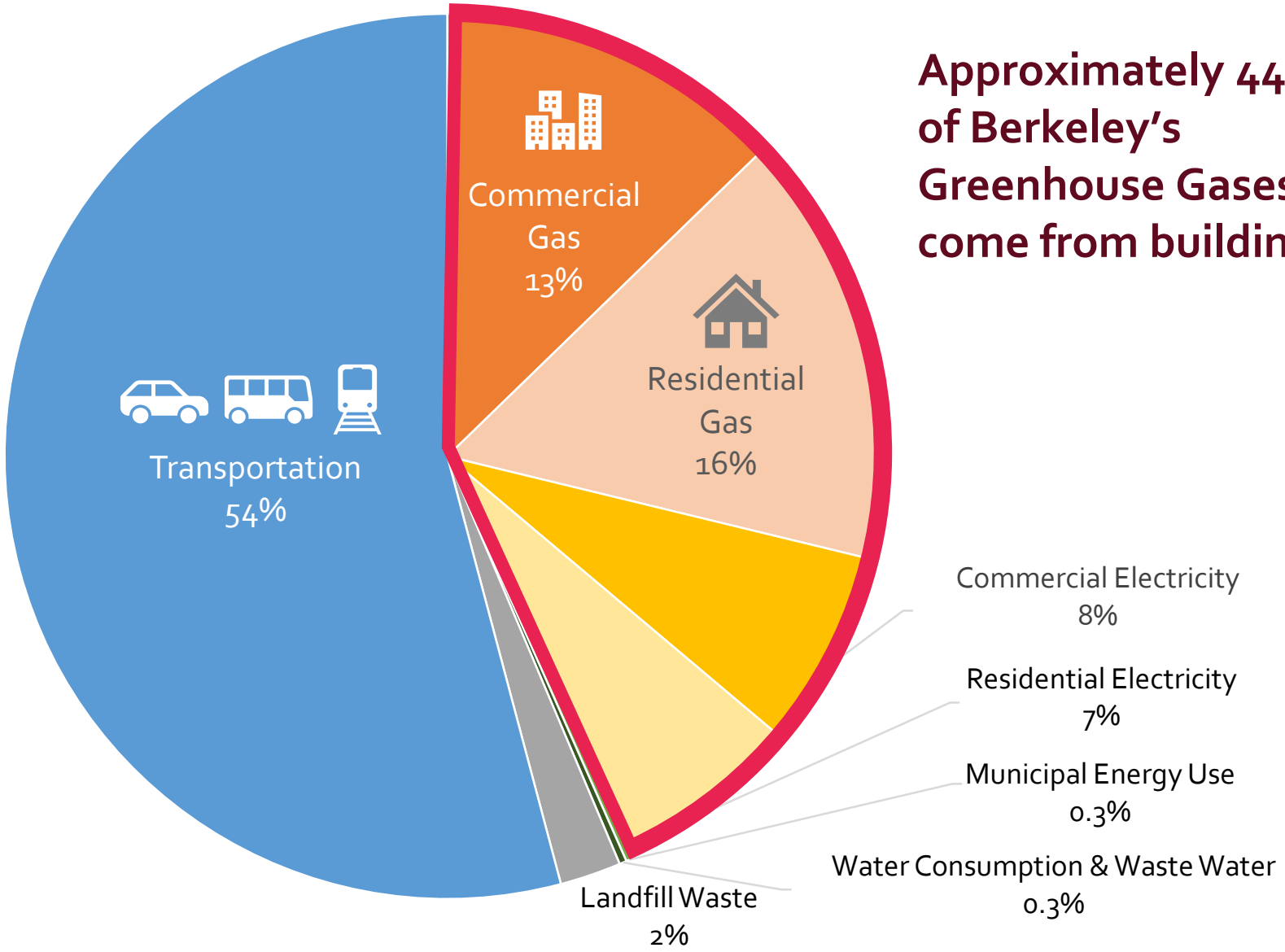
- Lowest footprint regardless of fuel type
- No special construction knowledge
- Premium comfort
- Can be cost neutral
- Long term maintenance reduced

AB368: Passive House Standards

May qualify as 'home hardening' under AB306

Greenhouse Gas Inventory

2021 Berkeley GHG Inventory



Approximately 44% of Berkeley's Greenhouse Gases come from buildings

Emissions footprint Mixed Fuel to All-Electric Bldg

Mixed Fuel Building emits 1.88 lbs per square foot of CO_2 emissions per year

An All-Electric building of the same size will emit 1.00 lbs CO_2 emissions per year

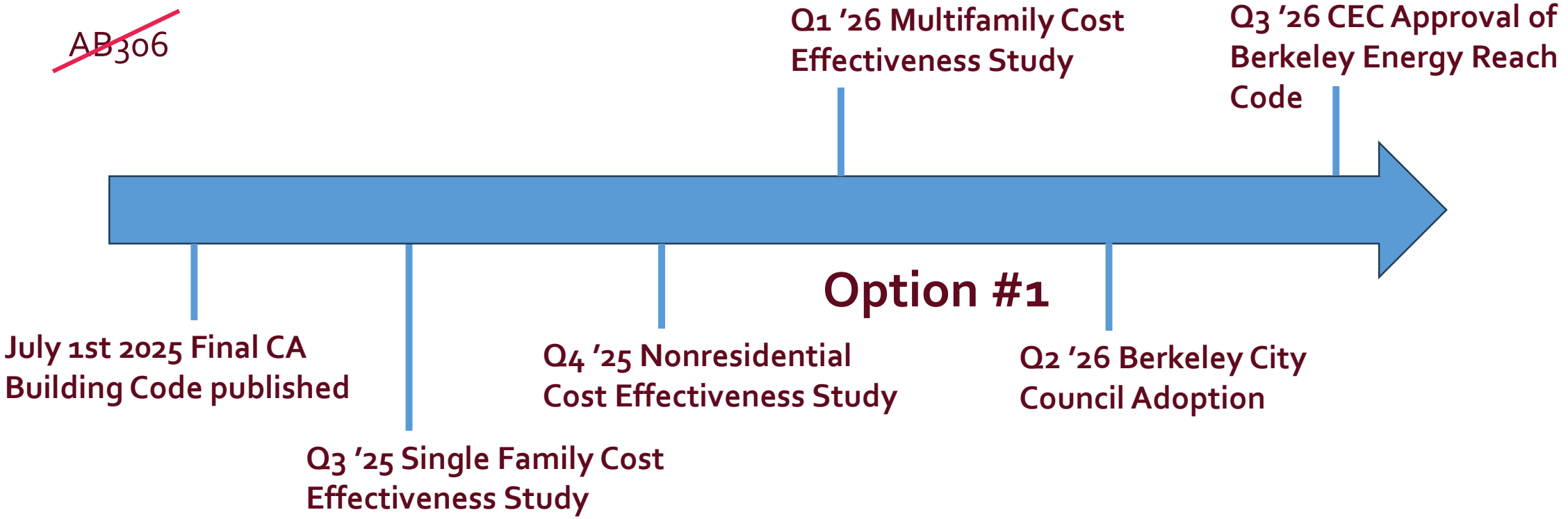
That is a 0.88 lbs per square foot reduction in emissions.

All-electric GHGs

Mixed Fuel GHGs

Code Adoption Timeline

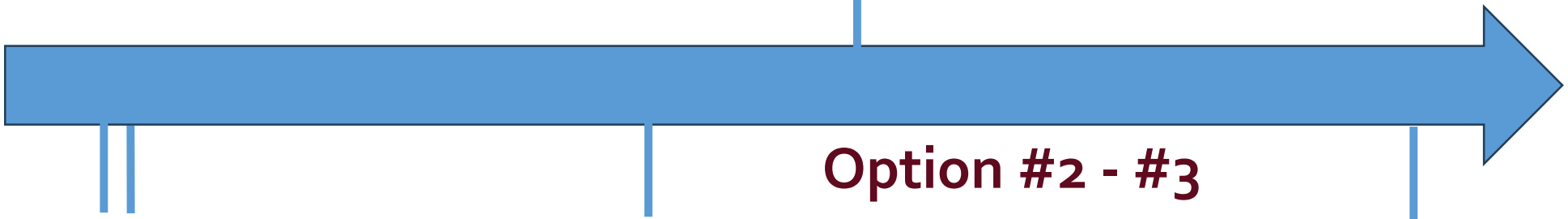
Berkeley Reach Code Option #1 Timeline



2025 Berkeley Code Adoption Timeline #2 #3

~~AB306~~

July 1st 2025 Final CA Building Code published
+ Finalize Reach Code approach



Option #2 - #3

Mar '25 Referral to develop Decarbonization Reach Code

Mar '25 Stakeholder Check-in

June '25 Developer Roundtable covering 2025 Reach Code

October '25 City Council 1st Reading for 2025 Code w/Local Amendments

Request for Referral

Consider an ECC recommendation to City Council:

Refer to the City Manager to research and develop a Building Decarbonization Reach Code proposal for City Council consideration

Summary

Summary & Key Takeaways

- Provided current Reach Code status
- Reviewed current Amendments
- Overview of 2025 CA Energy & Green Codes
- Provided Reach Code options
- Reviewed Code adoption process & anticipated challenges
- Requested Referral

Thank You!

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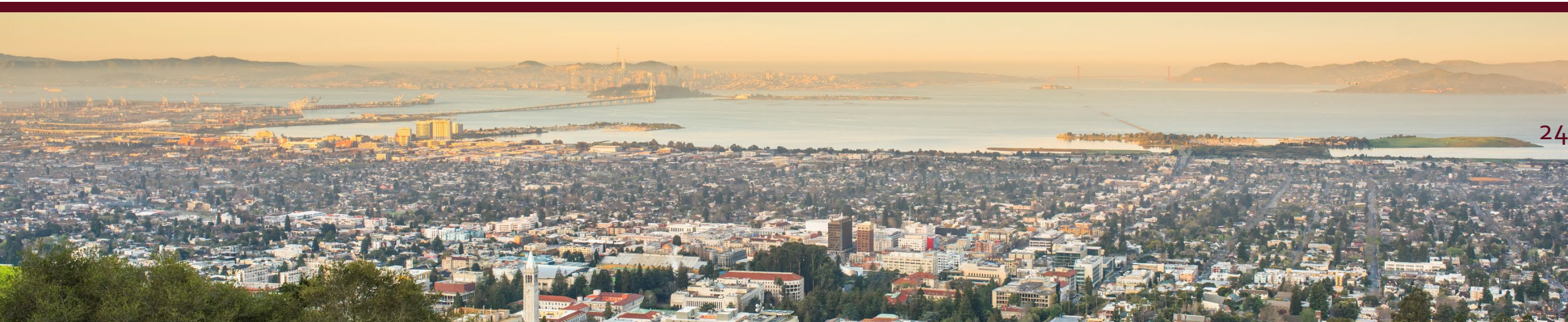

2025 *CAL*Green EV Charging Infrastructure

Building Type / Feature	2022 Berkeley Mid-Cycle Green Reach Code	2025 CA Green Building Standards Code	Option A	Option B
Multifamily EV Capable EV Ready EVCS	*40% EV Ready* *10% EVCS* *Required projects*	*Every dwelling unit EV Ready* *25% EVCS w/Dedicated Circuit*	*Add EVCS Reliability Standard*	*Adopt Model Code*
Hotel / Motel EV Capable EV Ready EVCS	*40% EV Ready* *10% EVCS* *Required projects*	*40% EV Ready* *25% EVCS w/Dedicated Circuit*	*Add EVCS Reliability Standard*	*Adopt Model Code*
Non Res EV Capable EV Ready EVCS	*20% Capable* *0% EV Ready* *10% EVCS all projects*	*20% Capable (with half EVCS)*	*20% Capable* *0% EV Ready* *10% EVCS all projects +* *EVCS Reliability*	*20% Capable* *0% EV Ready* *10% EVCS all projects*