

Statewide Codes and Standards

2022 v 2025 Energy Code:
Highlights of Changes
February 2025



Agenda

2025 Tentative Timelines

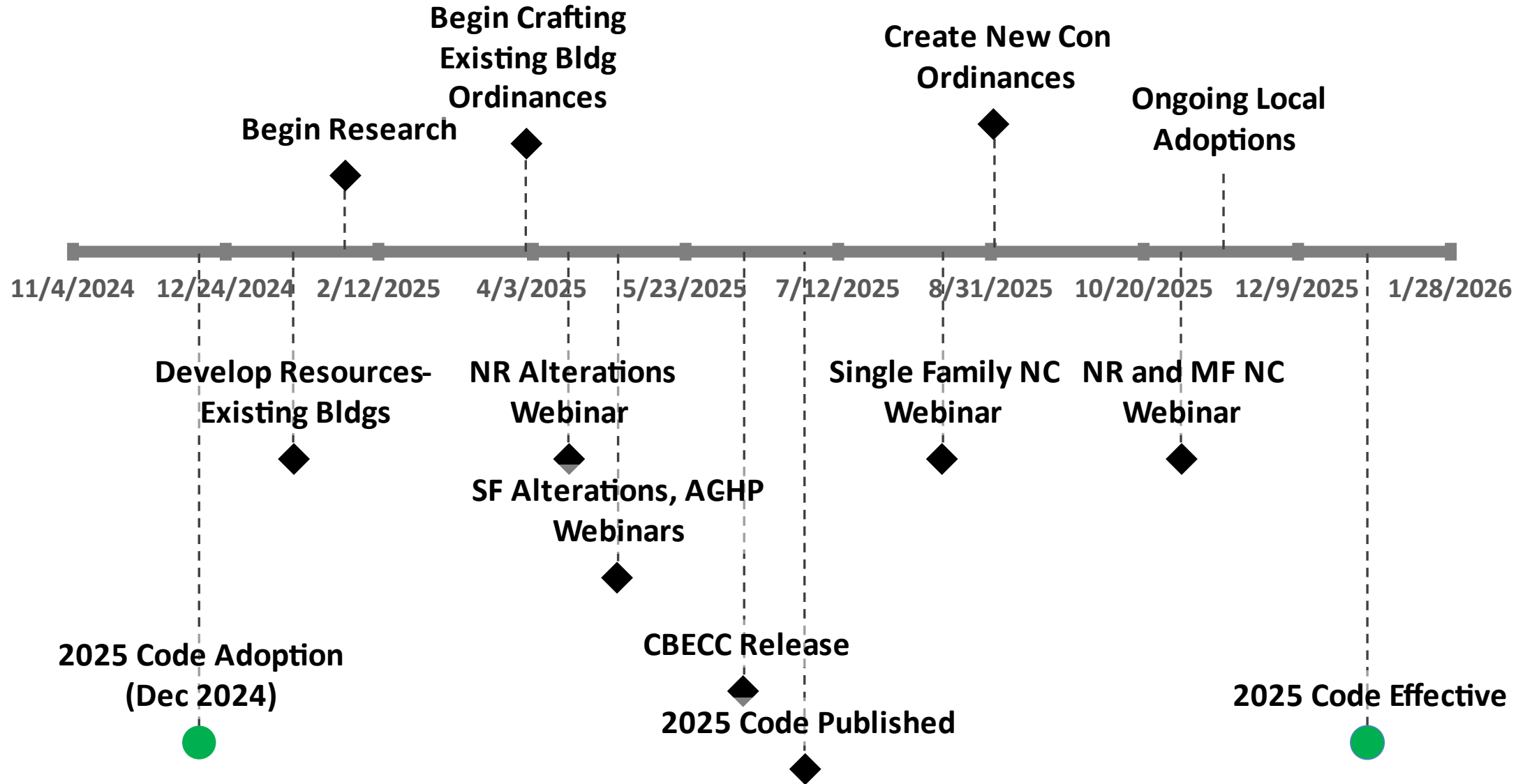
Potential Ordinance Opportunities

Getting Ready

Some Considerations



2025 Reach Codes Tentative Timeline



Operational Energy Savings and GHG Emissions Reductions:

Efficient Design Opportunities

Policy	Application	Impact	Considerations
Energy Performance Margin	New Construction Single Family Multifamily Nonresidential	<ul style="list-style-type: none"> Encourages efficiency and all-electric designs 	<ul style="list-style-type: none"> Opportunities to specifically encourage all-electric beyond the state code may be limited in the 2025 code cycle Limited potential in moderate climate zones
Prescriptive Requirements	New Construction, Existing Buildings All Occupancies	<ul style="list-style-type: none"> Efficiency improvements Additional renewables and storage 	<ul style="list-style-type: none"> Requires findings of cost-effectiveness Potential impacts on design flexibility
Major Renovations Defined as New Construction	Existing Buildings Primarily Single Family	<ul style="list-style-type: none"> More stringent standards for major renovations that meet the jurisdiction definition of new construction 	<ul style="list-style-type: none"> Must be adopted as part of New Construction local energy code Possible unintended impacts beyond energy, such as increasing the property tax burden or triggering a requirement for fire sprinklers Some additional permitting staff time
<u>FlexPath</u>	Existing Buildings	<ul style="list-style-type: none"> Provides compliance choices, including electrification 	<ul style="list-style-type: none"> Single family analysis available; analyzing multifamily and nonresidential versions Some additional permitting staff time
Equipment Replacements	Existing Buildings	<ul style="list-style-type: none"> Encourages heat pump installation at AC and water heater replacement/addition 	<ul style="list-style-type: none"> Handling exceptions Potential burden to tenants Potential permit avoidance Additional analysis needed Includes a compliance pathway for gas equipment
Air Quality Regulations	New Construction, Existing Buildings	<ul style="list-style-type: none"> Requires compliance with and building department enforcement of air district rules 	<ul style="list-style-type: none"> Some regulations are not final at time of publication. Confirm final regulation and implementation dates

Operational Energy Savings and GHG Emissions Reductions: Information Disclosure and Performance Improvement Opportunities

Policy	Application	Impact	Considerations
Benchmarking and Building Performance Standards	Existing Buildings Large multifamily and nonresidential buildings	<ul style="list-style-type: none">• Impacts existing buildings of certain size and occupancy	<ul style="list-style-type: none">• Implementation costs (to building owner and jurisdiction)• Complex implementation• Tenant protections are advisable• Court challenge pending in Colorado
Information Disclosure and Performance Improvements	Existing Single Family Homes	<ul style="list-style-type: none">• Require audits and/or improvements at Time of Sale/Listing, by Date-Certain, or in combination with permitted activities	<ul style="list-style-type: none">• Implementation Costs / Tracking Compliance• Education required for impacted stakeholders, such as realtors

Embodied GHG Emissions Reduction Opportunities

Policy	Application	Impact	Considerations
Embodied GHG Emissions Reductions	New and Existing Nonresidential	<ul style="list-style-type: none">• Higher deconstruction and reuse standards• Extension of life-cycle performance standards to smaller projects• Recycled & low-carbon content• Regional sourcing	<ul style="list-style-type: none">• Implementation challenges and costs• Widespread education effort required

Transportation and Mobility:

Electric Vehicle Charging Opportunities

Policy	Application	Impact	Considerations
Early Adoption of CALGreen 2025	New Construction Multifamily, Hotels/Motels Nonresidential	<ul style="list-style-type: none"> Requires more installations 	<ul style="list-style-type: none"> Could require design changes to projects entitlement phase
CALGreen 2025 Tier 1	New Construction Single Family Multifamily, Hotels/Motels, Nonresidential	<ul style="list-style-type: none"> Single Family EVSE Low Power Level 2 Receptacles upgradable to full power Additional EVSEs in common spaces 	<ul style="list-style-type: none"> Service capacity
Single Family Requirements	New Construction Single Family	<ul style="list-style-type: none"> Expand requirements to detached private garages Extend to 2nd space, if applicable 	<ul style="list-style-type: none"> Limited application depending upon development patterns

Water Efficiency Opportunities

Policy	Application	Impact	Considerations
Various Water Conservation Measures	All Indoor and Outdoor Water Use	<ul style="list-style-type: none">• Water neutrality requirements• Reduced consumption• Alternative sources, graywater, recycled water• Landscaping	<ul style="list-style-type: none">• Some measures require considerable investment
Water Demand Calculator (Pipe Sizing)	New Construction Residential	<ul style="list-style-type: none">• Construction/material cost savings• Operational savings	<ul style="list-style-type: none">• May require education to help system designers become familiar with the alternative calculation method.

Some Ways to Begin Preparing

Review	Review CAP and other guiding documents
Work	Work with Planning and other relevant staff to identify new construction projects in pipeline and/or anticipated
Review	Review existing building stock data
Analyze	Analyze recent permit data
Reach Out	Reach out to begin dialog on existing buildings



Some Considerations

Finding the Right Lever(s)



Intervention Points

- › Building permits
- › Time of Listing/Sale
- › License/Permit Renewals
- › Date-Certain
- › Zoning, Health and Safety Codes
- › Specific Plans / Project Negotiations

In Summary



- › There's still low-hanging fruit. (Ladders are helpful, but not necessary yet)
- › Variety of options to tailor ordinances that fit specific community objectives
- › Efficiency measures now support future electrification



Thank you!

LocalEnergyCodes.com

CALGreenInfo.com

Appendix



2022 Energy Code and 2025 Code Requirements

Residential Occupancies		
Occupancy Type	2022 State Code Base	2025 Code Base
Single Family	Either Space Heating or Water Heating: heat pump	Both space and water heating: heat pump
Low-rise Multifamily	Space Heating: heat pump Water Heating: gas	Water heating: Serving individual dwelling units: heat pump. Serving multiple units (central system): HP or gas PLUS electric ready
High-rise Multifamily	Space Heating: heat pump Water Heating: gas	Water heating: HP or gas PLUS electric ready

2022 Energy Code and 2025 Code Requirements (continued)

Nonresidential Occupancies		
Occupancy Type	2022 State Code Base	2025 Code Base
Nonresidential – Most Occupancies	Space Heating: <ul style="list-style-type: none"> • Single zone: heat pump • Multizone system: gas 	Space Heating: <ul style="list-style-type: none"> • Single zone: heat pump • Multizone system: gas
Offices and Schools smaller than 150k sf and five stories or fewer		Space Heating, Multizone Systems: Air-Water Heat Pump (aka heat pump boiler)
Hotels/Motels	Space Heating: gas Water Heating: gas	Water heating: Serving individual rooms: heat pump. Serving multiple rooms (central system): Gas PLUS electric ready
Quick-Service and Institutional Commercial Kitchens		Electric ready for cookline appliances; 800-amp minimum service capacity

Electric Vehicle Charging: 2022 and 2025 Requirements

Residential Requirements			
Occupancy Type	2022 State Code Base	2025 Code Base	2025 CALGreen Tier 1
Single Family with Attached Garage	EV Capable	No changes	
Multifamily	EV Ready: ~40% (Low Power Level 2) EVSE: ~10% Level 2	With Assigned Parking - EV Ready: 1 at assigned space in each dwelling unit (Low Power Level 2) With No Assigned Parking - EV Ready: 1 per dwelling unit (Low Power Level 2) EVSE: 25% of unassigned or common use spaces	EVSE: ~40% Level 2 sized to accommodate a 208/240-volt 40-ampere receptacle

Electric Vehicle Charging: 2022 and 2025 Requirements

Nonresidential Electric Vehicle Charging – Light Duty Vehicles

	2022 State Code Base	2025 Code Base	2025 CALGreen Tier 1
Nonresidential: Most Occupancies	EV Capable: ~20% of spaces EVSE: ~25% of EV Capable spaces OR Use Power Allocation Method	EV Capable: ~20% of spaces EVSE: ~50% of EV Capable spaces Office and Retail: 75% OR Use Power Allocation Method	EV Capable: ~30% of spaces EVSE: ~50% of EV Capable spaces Office and Retail: 75% OR Use Power Allocation Method
Hotels and Motels	EV Ready: ~40% (Low Power Level 2) EVSE: ~10% Level 2	EV Ready: ~40% (Low Power Level 2) EVSE: ~25% Level 2	EV Ready: ~60% (Low Power Level 2) EVSE: ~40% Level 2

Medium- and Heavy-Duty EV Charging

Nonresidential Electric Vehicle Charging – Medium and Heavy-Duty Vehicles			
	2022 State Code Base	2025 Code Base	2025 CALGreen Tier 1
Nonresidential: warehouses, grocery stores, and retail stores with planned off-street loading spaces	<ul style="list-style-type: none">• Transformer and main service equipment sized for future electric loads• Raceways or busways sized for future electric loads• Indicate equipment location on plans	Added office buildings and manufacturing facilities	None proposed

Pool and Spas

Pools and Spas			
Occupancy Type	2022 State Code Base	2025 Code Base	2025 CALGreen Tier 1*
Single Family	Gas or electric heating	Pool cover if mechanically heated; Either: <ul style="list-style-type: none">• Heat pump, or• Solar Thermal, collector area minimum 60% of surface area,• Min. 60% on-site renewable/recovered energy• Heat pump plus solar Several exceptions	None proposed
Multifamily and Nonresidential	Gas or electric heating	Pool cover if mechanically heated; Either: <ul style="list-style-type: none">• Heat pump, or• Solar Thermal, collector area minimum 65% of surface area• Min. 60% on-site renewable/recovered energy• Heat pump plus solar Several exceptions	Altered Systems Only. None proposed for new construction.