Charting the Course for 2025 Reach Codes

Jurisdiction Workshop

Jan 30, 2025

Introduction

- This session is being recorded and will be available for sharing.
- Please follow these guidelines:
  - Stay on mute
  - Use the Q&A feature
  - Under "React", you can raise your hand to speak

Workshop Presenters:

Taylor Taylor

Senior Research Consultant, TRC

Tim Mensalvas

Senior Research Consultant, TRC

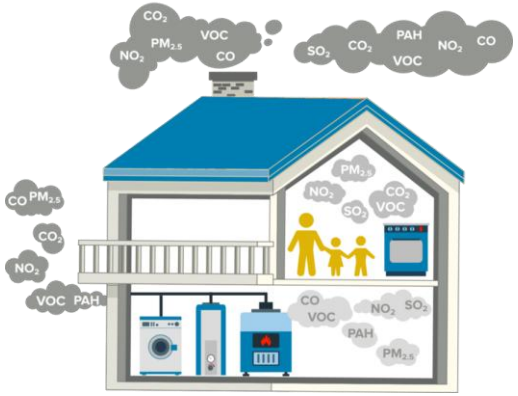
Farhad Farahmand

Associate Director, TRC

POLL

Workshop Purpose

1. Understand regular reach code opportunities.
2. Introduce potential alternative reach codes.
3. Foster opportunities for jurisdictions to connect, ask questions, and find alignment.
4. Identify jurisdiction reach code priorities and resource needs.



Workshop Agenda

Topics	Timing
Introduction	10 minutes
Reach Code Context & Massive Progress	10 minutes
Regular Reach Code Approaches	10 minutes
Alternative Reach Code Approaches	35 minutes
Survey	10 minutes
Discussion	10 minutes
Closing	5 minutes

Reach Code Context

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What are Reach Codes?

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Local ordinances adopted by the local government that exceed and enhance the state's building standards.

Types of Reach Codes:

Buildings:

New Construction

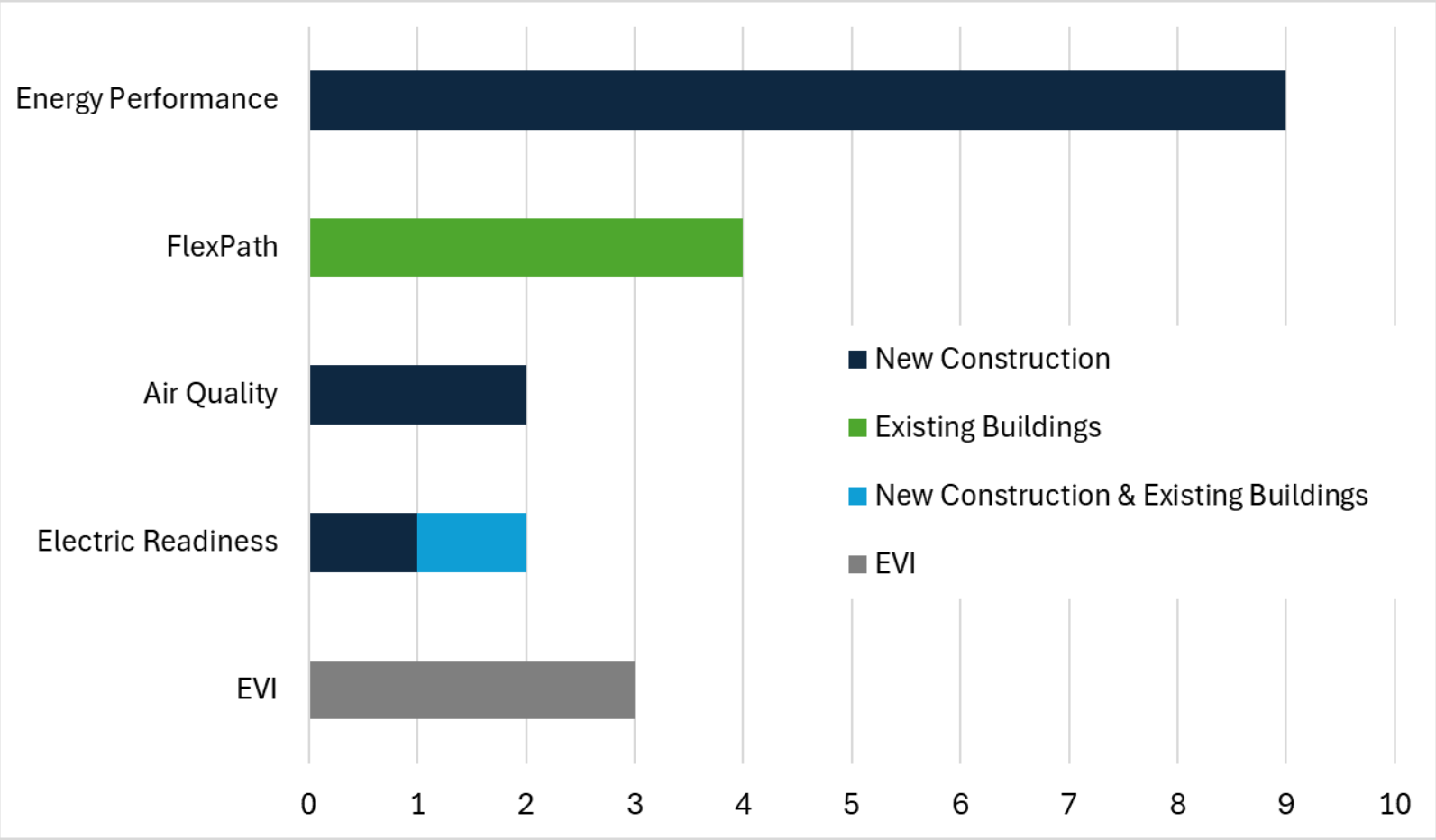
Buildings:

Existing Buildings

Electric Vehicle Infrastructure (EVI)

(New Construction & Existing Buildings)

2024 Statewide Reach Code Adoption



Jurisdictions That Adopted:

- Atherton
- Brisbane
- Brisbane
- Burlingame
- Campbell
- Corte Madera
- County of San Mateo
- Cupertino
- East Palo Alto
- Encinitas
- Goleta
- Hayward
- Los Altos Hills
- Mountain View
- Napa County
- Palo Alto
- San Luis Obispo
- San Rafael
- Santa Cruz
- Santa Monica

Massive Progress: 2016-2025

- How we got here
- 2022 vs. 2025 Statewide Code

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Statewide Progress...
...Thanks to Our Local Agencies!

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2016

Buildings

Almost impossible to build all-electric

Multifamily EV Charging

3% L2 EV Capable

2019

Buildings

Becomes easier to build all-electric

Multifamily EV Charging

10% L2 EV Capable

2022

Buildings

Heat pumps are promoted statewide

Multifamily EV Charging

10% L2 EV Capable +
30% EV Ready or EVCS

2025

Buildings

More heat pumps and existing buildings

Multifamily EV Charging

100% of units get access

What's new with the 2025 Energy Code?

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Heat Pump Adoption Emphasis

- Single-family: Use heat pumps for both space and water heating
- Multifamily: Wider use of heat pump for space heating, plus heat pump water heaters for individual units.
- Nonresidential: Expanded baseline from 2022

Electric-ready Emphasis

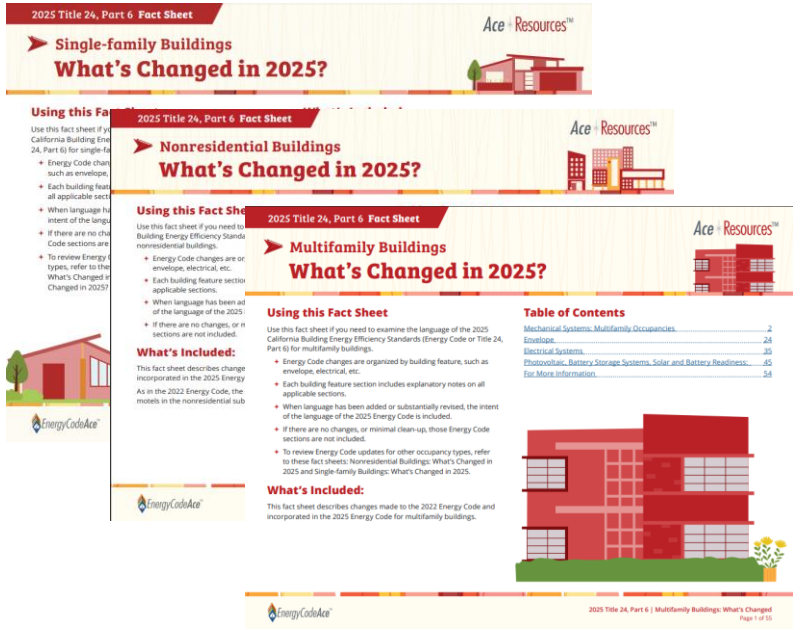
- Allows owners flexibility to upgrade to electric cooking and water heating when the investment works for them

Cost Effectiveness Change

- 2025 Calculations will switch from EDR and TDV to Longterm Systemwide Cost (LSC)

Summary Fact Sheets from Energy Code Ace:

- Single-family Buildings: What's Changed in 2025
- Multi-family Buildings: What's Changed in 2025
- Non-residential Buildings: What's Changed in 2025



The 2025 Energy Code is effective Jan 1, 2026.

2022 vs. 2025 Energy Code

New Construction (Climate Zones 3 & 4)

Key: Electrification | Gas Allowed | Electric Ready

Prescriptive Requirements	Space Heating		Water Heating		Appliances/ Other
Cycle	**2022**	**2025**	**2022**	**2025**	**2025**
Single Family	Heat Pump	Heat Pump	Gas/propane or HPWH	HPWH	N/A
Multifamily	Heat Pump	Heat Pump	**All systems**: Gas/propane or HPWH	**Individual**: HPWH **Central**: Gas/propane or HPWH	Building electrical system sizing for future electrification
Nonresidential	Single zone HPs required in most building types (retail, grocery, school, office, bank, library)	Same single zone requirement Multizone HPs required for offices and schools	HPWH in schools <25k ft2	HPWH in schools <25k ft2	Electric readiness requirements for commercial kitchens
All Buildings	N/A				Pools and spas heated by HP pool heaters or partially by renewable energy

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All Buildings	N/A				Pools and spas heated by HP pool heaters or primarily by renewable energy

Regular Reach Code Approaches

Reach codes with available information today

- **Existing Buildings**
  - AC to HP
  - SF FlexPath
  - Electric Readiness
- **New Construction**
  - Energy Performance

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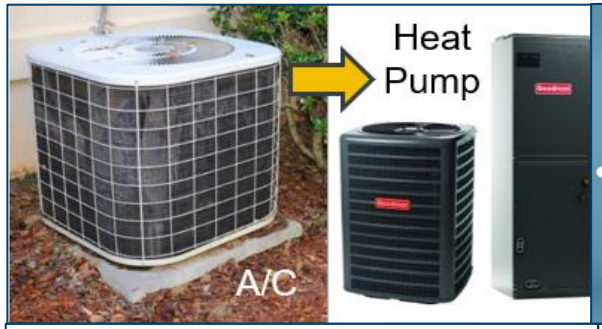
Overview of Approaches

Existing Buildings			New Construction
Single Family AC to Heat Pump	Single Family FlexPath	Electric Readiness	Energy Performance Approach
			
▪ A *"Time of Replacement"* reach code that requires property owners at the time of AC equipment replacement (upgrades or burnouts) to install either: 1. A heat pump 2. Efficiency measures ▪ Originates from the 2025 CALGreen Tier 1 Voluntary Pathway.	▪ A *"Time of Renovation"* reach code that requires applicants that are already pulling a permit to abide by a flexible menu of: 1. Energy efficiency measures 2. Electrification measures 3. Electric readiness requirements	▪ A *"Time of Renovation"* reach code that requires applicants that are completing a relevant addition or alteration to abide by electric readiness requirements.	▪ Requires a higher *Source Energy* compliance margin than what the state requires through the performance path of the Energy Code, Part 6.

Timeline to Adoption & Future Workshops

- CCAs, IOUs, and their consultants are collaborating to develop workshops and resources for jurisdictions
- Timeline is current best-guess

SF = Single Family
MF = Multifamily
NR = Nonresidential

Approach	Q1 2025	Q2	Q3	Q4	Q1 2026
Existing Building – Single Family AC to HP	CEC Building Electrification Summit	Cost-effectiveness workshop. Model code + resources published			
Existing Building – Flex Path	Model code and resources published (SF)	Cost-effectiveness workshop (NR)	Cost-effectiveness workshop (MF)	Model code and resources published (MF, NR)	
Existing Building – Electric Readiness		Model code and resources published (SF)		Model code and resources published (MF,NR)	
New Construction – Energy Performance Approach			Cost-effectiveness workshop (SF)	Cost-effectiveness workshop (NR)	Cost-effectiveness workshop (MF)

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Existing Building – Flex Path	Model code and resources published (SF)	Cost-effectiveness workshop (NR)	Cost-effectiveness workshop (MF)	Model code and resources published (MF, NR)	
Existing Building – Electric Readiness		Model code and resources published (SF)		Model code and resources published (MF,NR)	
New Construction – Energy Performance Approach			Cost-effectiveness workshop (SF)	Cost-effectiveness workshop (NR)	Cost-effectiveness workshop (MF)

Other Venues for Reach Code Learning

Visit your CCA's reach code website:

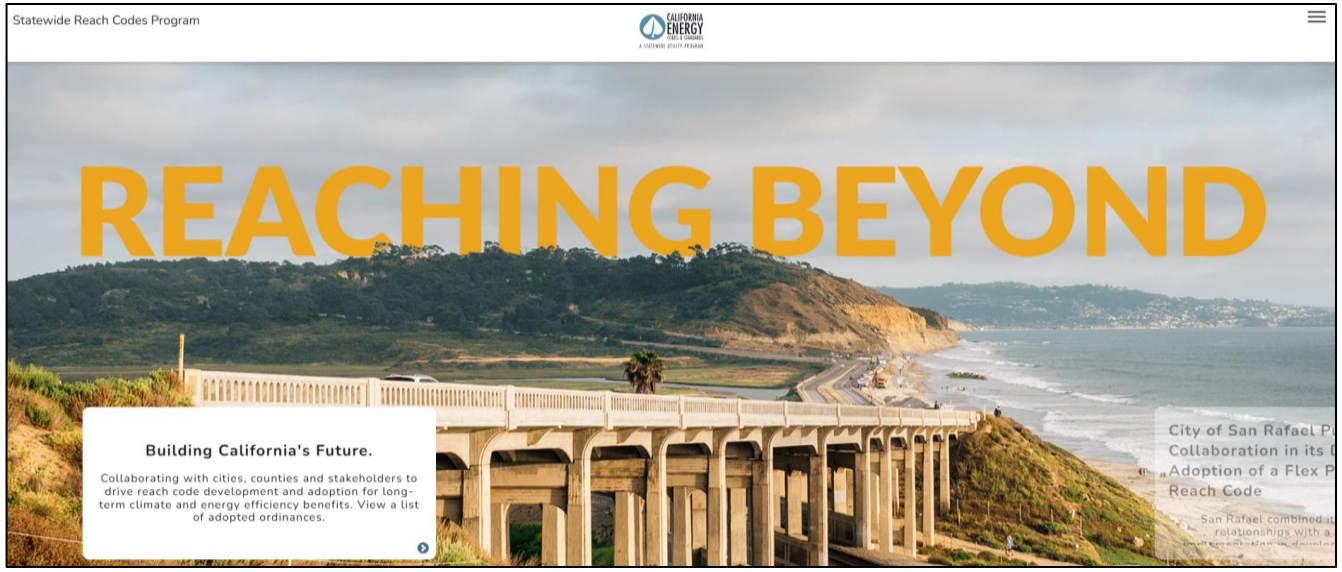
- ***UPDATED*** BayAreaReachCodes.org
- CentralCoastReachCodes.org
- CPAReachCodes.org
- Stay updated on educational sessions and potential working groups

Local Energy Codes

- LocalEnergyCodes.com

Opportunities for Engagement:

- RICAPS (PCE)
- MAWG (SVCE)
- California Local Energy Codes Team Monthly Meeting



CEC-EPRI Electrification Summit

- March 11, morning: Local Electrification Leaders
  - Bringing together a coalition of local leaders who are enthusiastic about exploring the CALGreen AC->HP reach code
- Link to register for summit
- Contact: Maggie Deng (maggie.deng@energy.ca.gov)

Alternative Reach Code Approaches

Reach codes that can be developed/adopted in 2025, and may contain more uncertainty

- Gas WH to HPWH
- Air Quality
- Zero Carbon Energy
- Green Building Ordinance

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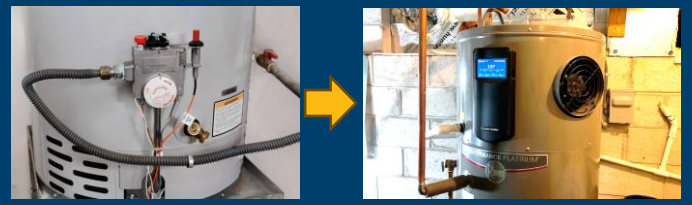
Gas WH to HPWH

Gas Water Heater to Heat Pump Water Heater



Description:

- For existing single family buildings
- Replace a gas water heater with
  - Heat pump water heater; OR
  - Like-for-like gas + solar thermal
- Cost effectiveness results available
- Amends the 2025 Energy Code
- Requires CEC approval

Pros:

- Widely LSC cost-effective under variety of existing conditions and equipment types (e.g. 120V)

Cons:

- While it's close, On-Bill cost-effective is challenging without some of these:
  - Incentives
  - Demand Response program participation
  - Solar PV installation
  - Rate increases for gas surpassing electricity
  - POU rates

Legal Considerations:

- Similar to AC to HP for DHW, which is promoted by the CEC
- Includes an energy-equivalent pathway for gas water heating when combine with a 50% solar fraction solar thermal system
- Work on-going for alternate gas pathways to mitigate risks

Air Quality

Description:

- Can capture new construction and/or existing buildings
- Regulates building or appliance nitrogen oxide (NOx) emissions
- Fuel-neutral; focus is on emissions
- Cost effectiveness not needed
- Amends CALGreen, Part 11
- Does not require CEC approval

Pros:

- Direct benefit to air quality / health
- High impact on emissions reduction
- Likely to result in all-electric construction (construction cost savings)
- Regulates all emitting equipment (including cooking, fireplaces, dryers, etc.)

Cons:

- Limited precedence on implementation and enforcement

Legal Considerations:

- Legally untested
- Relies on Clean Air Act authority rather than Energy Policy and Conservation Act
- NYC Local Law No. 154 - GHGs
- Litigation Against SCAQMD

Zero Carbon Energy

Description:

- Can capture new construction and/or existing buildings
- Buildings must utilize renewable energy through:
  - a) On-site renewable electricity;
  - b) Grid-sourced carbon free electricity;
  - c) Grid-sourced carbon free biogas;
  - d) Non-SOx-producing biofuels;
  - e) Renewably-produced hydrogen;
  - f) District system.
- Amends Municipal or Building Code
- Cost effectiveness not needed
- Does not require CEC approval

Pros:

- High impact on emissions reduction
- Regulates all emitting equipment (including cooking, fireplaces, dryers, etc.)
- Likely to result in all-electric construction (construction cost savings)

Cons:

- Limited precedence on implementation and enforcement

Legal Considerations:

- Legally untested
- Allows different fuel sources, as long as they are renewable

Green Building Ordinance

Description:

- Can capture new construction and/or existing buildings
- Projects must either:
  - a) be zero-emission; or
  - b) comply with a fuel-neutral certification program containing many green initiatives.
- Amends Municipal or Building Code
- Cost effectiveness not needed
- Does not require CEC approval

Pros:

- Municipal code updates require fewer updates (compared to Energy Code updates)
- Zero emission buildings are the easy option

Cons:

- Certification program compliance can be complex and costly for applicants not choosing the zero-emissions option

Legal Considerations:

- Precedence with many green building codes adopted 15 – 20 years ago
- Certification programs (e.g., GreenPoint Rated or LEED) can be fuel-neutral or not require the achievement of energy credits for certification
- Legally untested

Jurisdiction Survey

Menti.com

Code 6143 0005

Link in chat

Please take 10 minutes to fill out the survey!

We will resume at 11:48am to discuss the results.

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SURVEY RESPONSES

Jurisdiction Next Steps

- Start conversations with your key stakeholders.
- Identify questions to be answered.
- Reach out with your support needs.
- Stay tuned for more information in the coming months.
- PCE/SVCE tentatively planning an Elected Officials Workshop in June 2025.

Thank you!

Contact TRC:

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TMensalvas@trccompanies.com

FFarahmand@trccompanies.com

Contact PCE/SVCE:

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Anthony.Eulo@svcleanenergy.org

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