



Reach Codes 2.0 Public Workshop

Environmental Commission Presenters

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Reach Codes

Presentation Overview

- ▶ Existing Los Altos Reach Codes & Climate Action Goals
- ▶ Reach Code Regional Efforts
- ▶ Common Concerns & Questions
- ▶ Code options
- ▶ Q&A



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Los Altos Reach Codes - Current

- “Reach” beyond 2019 Title 24 requirements
- Adopted by City Council in November 2020
- Development included community education/outreach efforts: surveys, webinars, and specific reach code informational webpage

Buildings-- Mostly-Electric	Water and space heating must be electric, exemptions for other appliances. Electrification-ready panel and wiring in mixed-fuel buildings.
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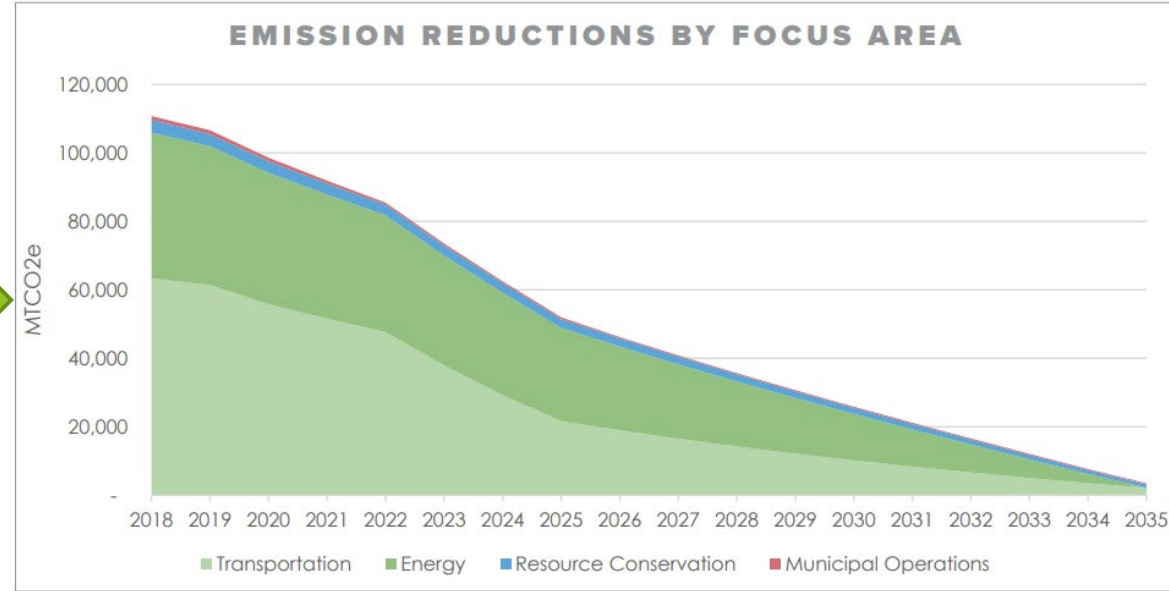
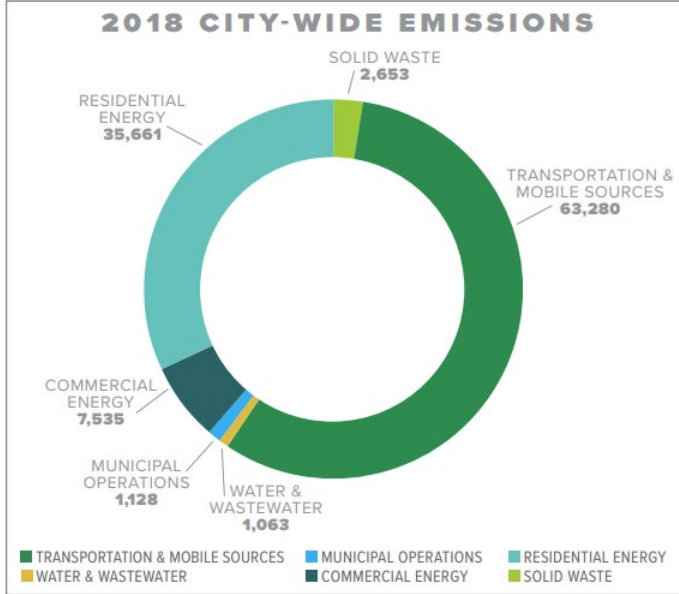
EV Charging	More charging infrastructure for a higher percentage of parking spaces.
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Without update, existing reach codes will expire and requirements will default to Title 24 on 1/1/2023

Los Altos Climate Action & Adaptation Plan

Adopted by Council March 8, 2022



Objectives

- **Reduce GHG/Carbon Neutrality by 2035**
- Increase climate resilience (SB 379 compliance)
- Prepare for future

Los Altos CAAP

Key Actions

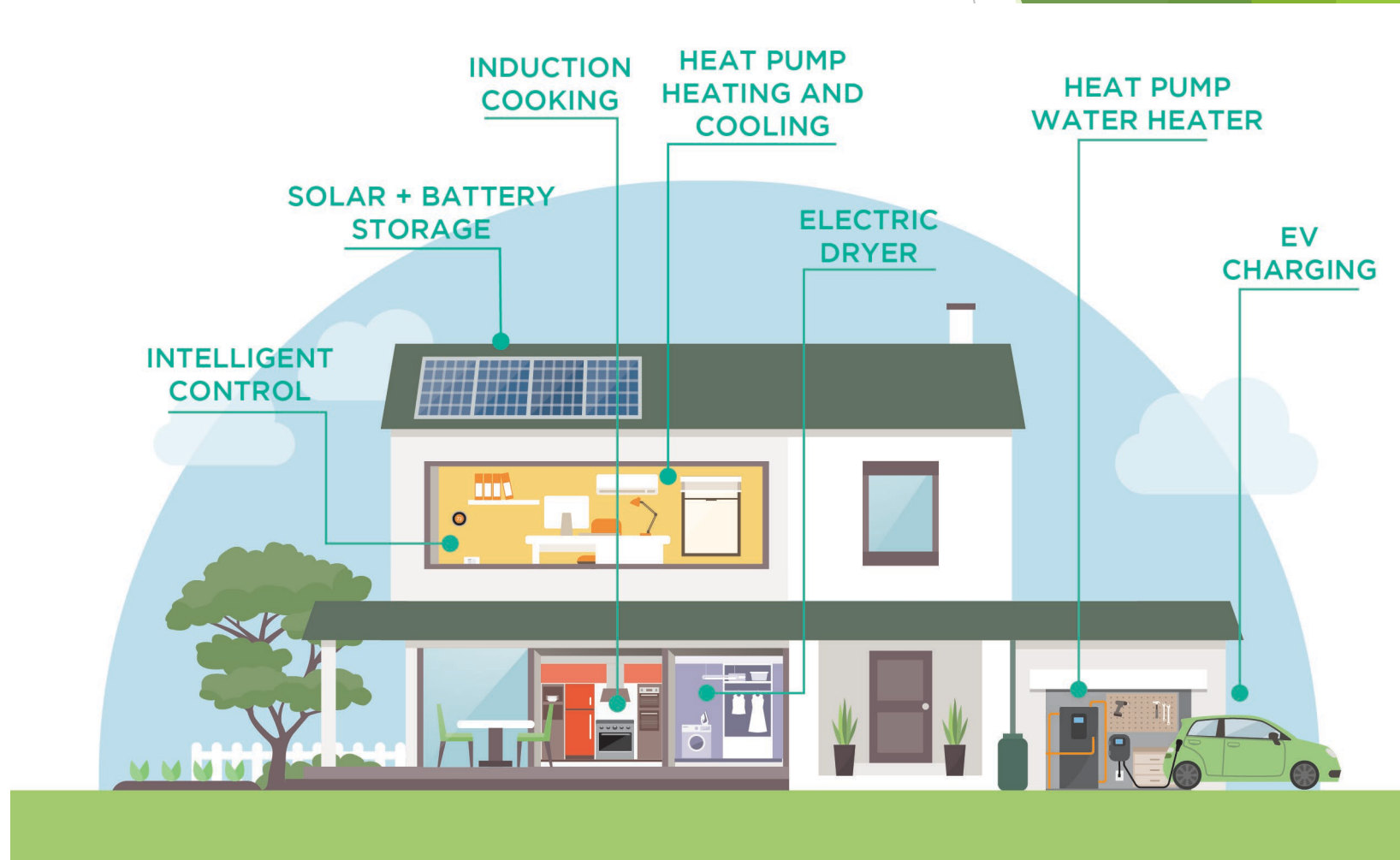
- Reduce the amount of electricity and methane gas used in homes and businesses 20% by 2035
- Reduce or eliminate methane gas use in homes and businesses by 2035
- Facilitate the installation of new solar capacity and expand battery storage on new and existing buildings community-wide
- Increase EV component of all light duty vehicles in Los Altos to 80% by 2035

2022 Los Altos Reach Code Goals

Goal	Action/Support
Hit Los Altos CAAP Objectives	<ul style="list-style-type: none">• Speed electrification/reduce natural gas usage• Encourage EV adoptions
Improve indoor air quality	<ul style="list-style-type: none">• Reduce natural gas emissions
Avoid reach code lapse	<ul style="list-style-type: none">• Implement new codes by EOY 2022
Ensure Los Altos aligns with California decarbonization goals	California goals <ul style="list-style-type: none">• GHG emissions of 40% below 1990 by 2030• Carbon neutrality by 2045
Align codes with best energy practices, appliance technology and scientific consensus	<ul style="list-style-type: none">• Encourage adoption of efficient and proven technologies

Building all-electric saves money.

- Reducing the need for new gas lines and hookups saves money.
- Building all-electric now reduces the need for costly retrofits later.



Installing EV charging during construction prepares communities for future demand.

- Sale of gas vehicles phased out by 2035
- 250,000 EVs sold in 2021 in CA, 12.5% of all vehicles
- Pervasive issues
 - Costs of electrical upgrades
 - Underserved multi-family housing occupants



2019 Success – Your Efforts Made a Difference

Type	How it works	SVCE Members
Electric Preferred	Allows mixed-fuel buildings with high energy performance. Electrification-ready panel and wiring in mixed-fuel buildings.	2 - Milpitas, Monte Sereno
Mostly-Electric	Water and space heating must be electric, exemptions for other appliances. Electrification-ready panel and wiring in mixed-fuel buildings.	4 - Campbell (res), Los Altos, Los Altos Hills (res), Saratoga
All-Electric	All appliances must be electric, with very limited exemptions.	5 - County of Santa Clara, Cupertino, Los Gatos (res), Mountain View, Sunnyvale
Gas Ban	No gas hookup (via municipal ordinance). Limited exceptions.	1 - Morgan Hill
No Reach	Meet state code minimum requirements.	1 - Gilroy

2022 CA Energy Code

New Construction

- Heat pumps are prescriptive baseline
 - Residential
 - Space heating in climate zone 3, 4
 - Water heating in climate zone 12
 - Nonresidential - water- and/or space-heating for most building types
 - Performance credit for all-electric design
- Residential
 - Pre-wiring required for gas appliances
 - Higher ventilation rate for gas stoves
 - Energy storage readiness
- Nonresidential - Solar PV and Battery Storage prescriptive

Existing Buildings

- Restricts newly installed electric resistance heating
- Simplified language for heat pump retrofits



Reach Codes

Common Questions & Concerns

- ❖ *Aren't many electric appliances inferior to their gas counterparts?*
- ❖ *Can the grid handle more load?*
- ❖ *Won't electric appliances be more susceptible to electricity interruptions?*
- ❖ *Aren't electric appliances more costly to run?*
- ❖ *Are there really carbon savings if electric appliances are running at peak times when renewable sources aren't available to power the grid? Isn't electrification a small impact on emissions?*



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New Construction Reach Codes

	<u>2022 CA ENERGY CODE</u>	<u>CURRENT LOS ALTOS CODE</u>	<u>PROPOSED BAY AREA MODEL CODE</u>
<u>Effective Date</u>	Effective 1/1/2023	Expires 1/1/2023	After City Adoption or State Filing
<u>New Buildings*</u>	(Not previously used/occupied)	(Not previously used/occupied)	(Applies if >50% foundation or framing modified)
Air Heating/Cooling	EHP or G if Water is EHP	EHP	EHP
Water	EHP or G if Air is EHP	EHP	EHP
Cooking	E or G	E or G	E
Clothes Drying	E or G	E	E
Fireplaces	E or G	E or G	E
<u>Exterior (Pool, SPA, Firepit)</u>	N/A	N/A	No G
<u>End of G Service</u>	N/A	N/A	1/1/2045
*Does not apply to Building Alterations, Renovations, Tenant Improvements EHP = Electric Heat Pump, E = Electric, G = Natural Gas (must be wired for replacement)			



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Existing Building Renovation and Alteration Reach Codes

- A Few CA Cities have Adopted
- Some CA Cities are Considering
- Model Bay Area Codes are Under Development
- Options Under Consideration Include Requirements
 - When construction permit issued
 - Upon appliance burnout or replacement
 - Upon property sale



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Single Family Residential Construction Permits (1/26/2021 - 5/11/2022)

<u>Permit Type</u>	<u>Number</u>	<u>Percent of Permits</u>
Single Family Residence	39	3.6%
Detached ADU	58	5.3%
Additions > 750 SF	39	3.6%
Additions < 750 SF	109	10.0%
Residential Alterations	419	38.3%
Water Heaters	109	10.0%
Furnace/AC	321	29.3%



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Electric Vehicle Infrastructure

	<u>2022 CAL GREEN CODE</u>	<u>CURRENT LOS ALTOS CODE</u>	<u>PROPOSED BAY AREA MODEL CODE</u>
<u>Effective Date</u>	Effective 1/1/2023	Expires 1/1/2023	After City Adoption or State Filing
<u>Single Family Residence</u>	1-L2 EV Ready	1-L2 EV Ready + 1-L2 EV Ready	1-L2 EV Ready + 1-L1 EV Ready
<u>Parking Addition, Alteration, Renovation</u>	N/A	N/A	Applies



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Questions, Answers & Feedback



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Thought Questions

- ▶ What appliance are you least likely to switch from gas to electric?
- ▶ What is your biggest concern about electric appliances or vehicles?
- ▶ Have you had a good or bad experience with new electric appliances?
- ▶ If you drive an electric car, do you have access to adequate charging?
- ▶ What, if any, new information did you learn during this webinar?



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*The Los Altos Environmental Commission
Thanks you for attending!*

Feedback/comments:

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