



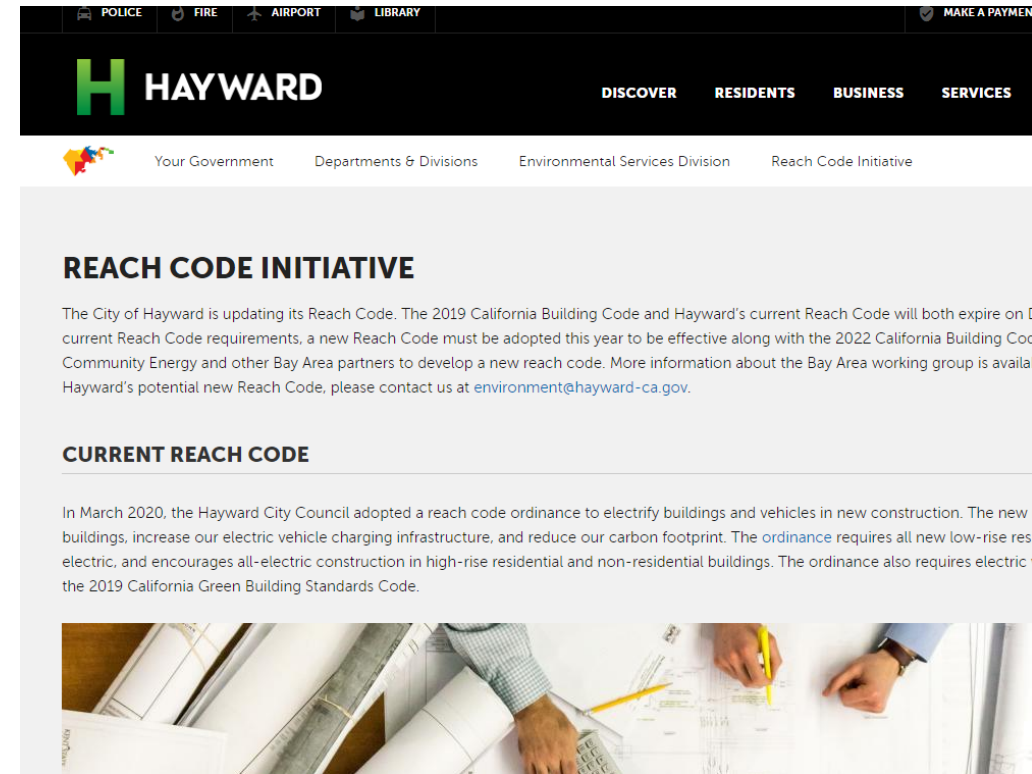
Planning Commission

2023 Reach Code

May 26, 2022

Hayward's Current Reach Code

- Modifies the California Building Code
- Adopted by Council March 3, 2020
- Approved by California Energy Commission on June 10, 2020



<https://www.hayward-ca.gov/reach-code>

Hayward Reach Code – Requirements

Single-family and Multi-family Residential (up to 3 stories)

- Must be all-electric

Non-residential and High-rise Residential

- Can be all-electric or mixed-fuel. Mixed-fuel buildings must have additional solar and energy efficiency.

Enhanced EV Charging required for all Building Types.

Current Reach Code Expiring

The 2022 California Building Code has been approved and will take effect January 1, 2023.

To continue Hayward's current Reach Code requirements, a new Reach Code must be adopted this year to be effective along with the 2022 California Building Code in January 2023.

Strategic Roadmap – Climate Change Projects

Reduce GHGs & Dependency on Fossil Fuels.

- C1 – Ban natural gas in new residential buildings
- C2 – Require EV charging infrastructure in new construction
- C10 – Explore feasibility of banning natural gas in non-residential (commercial) buildings



Regional Working Group

The screenshot displays the website for the Bay Area Reach Codes initiative. At the top, there are five logos: East Bay Community Energy (with wind turbines and a sun), Peninsula Clean Energy (with a leaf and lightbulb), Silicon Valley Clean Energy (with a leaf), Office of Sustainability County of San Mateo (with a circular arrow logo), and The County of Santa Clara (with a bridge and sun). Below the logos is a navigation menu with links: City Participation, Recommended Reach Codes, About Reach Codes, Process & Timeline, Resources, FAQ, Events, and Stay in Touch. The main content area features the heading "2022 Building Electrification & EV Infrastructure Reach Code Initiative" in bold black text. Below the heading is a photograph of a modern building with large glass windows and palm trees in the foreground.

<https://bayareareachcodes.org/>

Potential Reach Code Components

1. New Low-Rise Residential Buildings
2. New Non-residential & High-Rise Residential Buildings
3. New Accessory Dwelling Units
4. Existing Buildings (not addressed in Hayward's current code)
5. End of Flow
6. Existing Residential (not addressed in Hayward's current code)
7. EV Charging Requirements

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1 – New Low-Rise Residential Buildings

Staff recommends maintaining the current requirements:

- All new single-family homes and low-rise multi-family buildings (up to 3 stories) must be designed and constructed as all-electric.

2 – New Nonresidential & High-Rise Residential Buildings

Currently, new non-residential and high-rise residential buildings can be either all-electric or mixed-fuel.

Staff recommends eliminating the mixed-fuel option and is evaluating possible approaches:

1. Allow certain exceptions for industrial & restaurants.
2. Ban the use of gas only for water heating & space heating.
3. Rely on CA Energy Code to address non-residential.

3 – New Accessory Dwelling Units

Current reach code exempts ADUs less than 400 square feet, which means they can include natural gas appliances for water heating, space heating, etc.

- Staff still evaluating options.





CEQA Thresholds of Significance

- Adopted by Bay Area Air Quality District on April 20, 2022
- To meet state's goal of Carbon Neutrality by 2045, new buildings must either:
 1. not include natural gas; or
 2. be consistent with a local climate action plan (CAP).

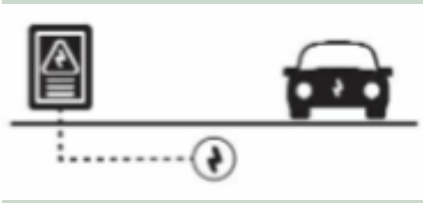
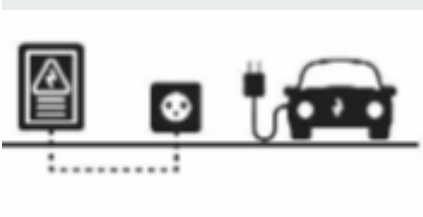

7 – EV Charging Requirements

1. Single-Family
2. Multi-Family
3. Non-Residential
 - Office
 - Non-Office

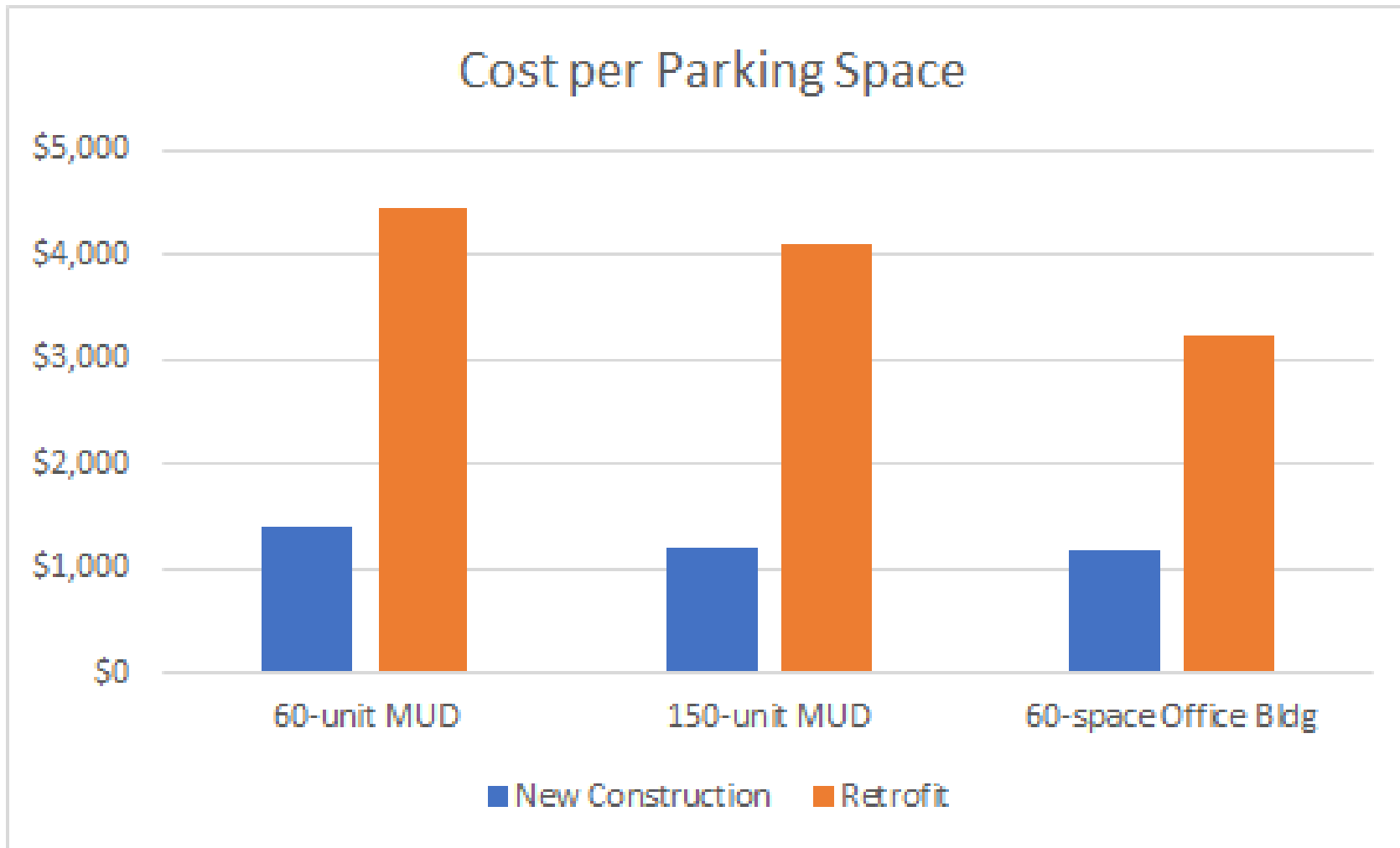
Electric Vehicle Charger Types

Level 1		15-20 Amp, 120 Volt (standard household outlet) Driving Distance provided: 3-4 miles/hour
Low Power Level 2		20 Amp, 208/240 Volt Driving Distance provided: 10-15 miles/hour
High Power Level 2		40+ Amp, 208/240 Volt Driving Distance provided: 25-30 miles/hour
DC Fast Charge		80-400 Amp, 200-600 Volt DC (direct current) Driving Distance provided: 125-1000 miles/hour

EV Charging Readiness

EV Capable		Raceway (conduit), electrical capacity (breaker space)
EV Ready		EV Capable + overcurrent protection devices, wiring and outlet (i.e. full circuit)
EVCI or EVSE		All equipment to deliver electricity to EV EVSE = Electric Vehicle Supply Equipment EVCI = Electric Vehicle Charger Installed

Electric Vehicle Charging - Cost of New vs. Retrofit



Electric Vehicle Infrastructure Cost Analysis Report for PCE and SVCE
Pacific Gas and Electric Company EV Charge Network Quarterly Report, Q1 2019

EV Charging – Non-Residential

	2019 CalGreen	Hayward's Current Reach Code	2022 CalGreen	<i>Recommended</i>
Non-Res Office	6% Level 2 EV Capable	20% Level 2 EV EVSE 30% EV Capable	5% Level 2 EVSE; 10% Level 2 EV Capable	20% Level 2 EV EVSE 30% EV Capable
Non-Res Non-Office		15% Level 2 EV EVSE		15% Level 2 EV EVSE

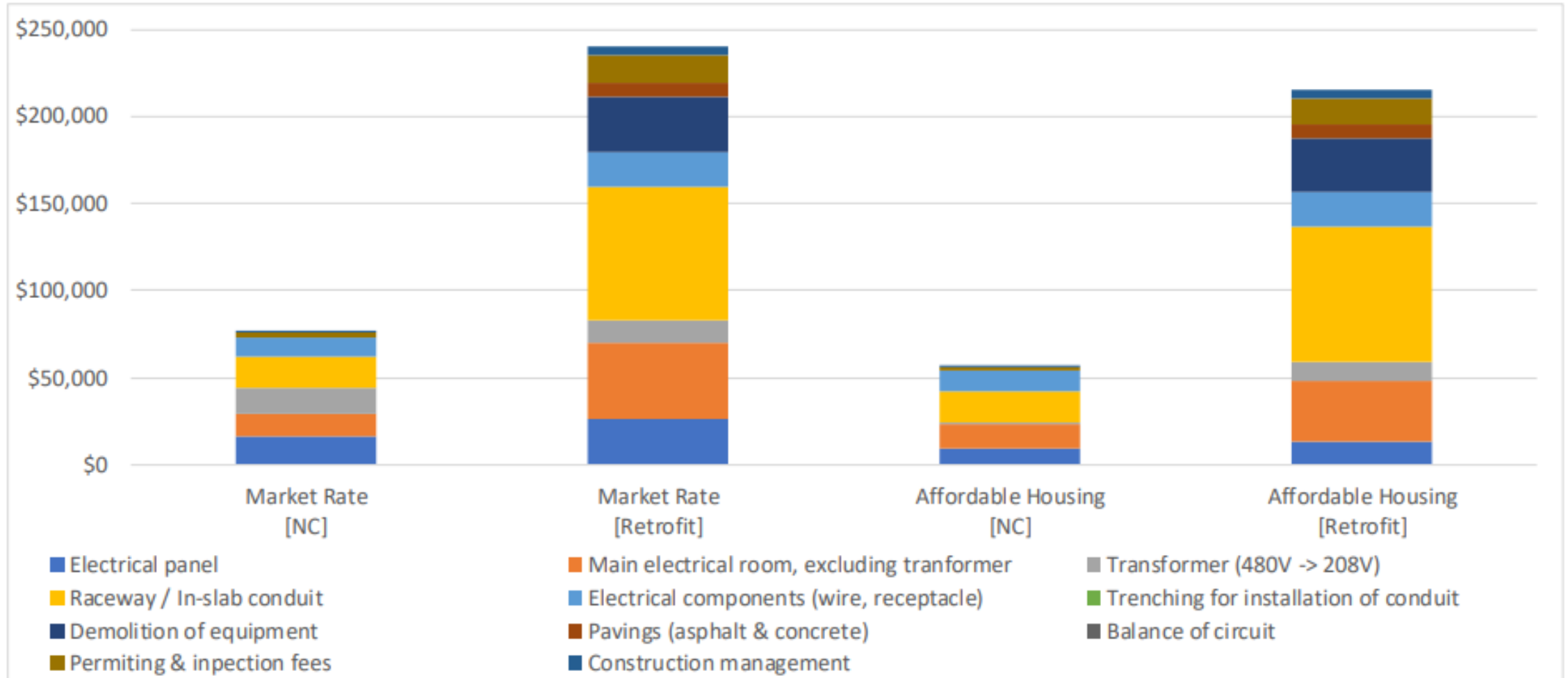
EV Charging – Single-Family

	2019 CalGreen	Hayward's Current Reach Code	2022 CalGreen	Recommended
Single Family & Townhome	One Level 2 EV Capable for one parking space per dwelling unit	Two Level 2 EV Ready spaces per dwelling unit	No changes	Two Level 2 EV Ready spaces per dwelling unit

EV Charging – Multi-Family

	2019 CalGreen	Hayward's Current Reach Code	2022 CalGreen	Option A	Option B
Multi-Family >20 dwelling units	10% of units must have one Level 2 EV Capable space	75% Level 2 EV Ready space; 25% Level 2 EV Capable space (100% total)	10% Level 2 EV Capable; 25% <u>low power</u> Level 2 EV Ready; 5% <u>high power</u> Level 2 EVSE (40% total)	60% <u>high power</u> Level 2 EV Ready; 40% <u>high power</u> Level 2 EVSE (100% total)	80% <u>low power</u> Level 2 EV Ready 20% <u>high power</u> Level 2 EVSE (100% total)

Cost for 60-unit Multi-family Residential Project



NC = New Construction

Costs for Multi-Family Charging

Costs for a 100-unit Multi-Family Project.

	Hayward's Current Reach Code	2022 CalGreen	Model Code	Option A	Option B
L1 Ready			60		
L2 Capable	25	15			
L2 Low Power Ready		38			80
L2 High Power Ready	75			60	
L2 High Power EVSE		8	40	40	20
Total Ports	100	61	100	100	100
Total Cost		\$146,421	\$194,185	\$397,801	\$273,079
Cost/Port		\$2,400	\$1,942	\$3,978	\$2,731
% of dwellings w/access	100%	40-60%	100%	100%	100%
% of total const. cost		0.3%	0.4%	0.8%	0.6%

Public Outreach

- Email to 658 builders and developers
- Regional Workshops on February 15 and 16
- Conversations with Affordable Housing Developers
- Conversations with Business Owners and Commercial/Industrial Developers

Next Steps

June 21, 2022	Council Work Session to consider draft Reach Code
July 11, 2022	Present draft Ordinance to CSC
October 2022	Council considers adoption of Ordinance
November 2022	File with CA Building Standards Commission
January 2023	Reach Code takes effect

Staff Recommendation

That the Commission reviews and comments on this report.

