REACH CODE NEWS BRIEF: JULY 2022

ENERGY COMMISSION APPROVES REACH CODES FOR FOUR CITIES

At its monthly Business Meeting on July 13, 2022, the Energy Commission approved reach codes adopted by four communities. The approved ordinances included:

City of Emeryville

- Residential new construction must be all-electric
- New hotels/motels and high-rise multifamily must install solar photovoltaic systems

City of Encinitas

- Newly constructed residential and nonresidential buildings must be all-electric
- New and major alterations for nonresidential, high-rise residential, and motel/hotel buildings must install PV systems
- Existing single-family residential buildings include energy efficiency improvements where building permit valuations of alterations and additions exceeds $50,000
- Nonresidential, high-rise residential, and hotel/motel buildings include energy efficiency improvements where building permit valuations of alterations exceeds $200,000
- Expanded electric vehicle charging requirements in new buildings

City of Half Moon Bay

- Solar photovoltaic requirements for nonresidential and hotel/motel new construction
- All new single-family residential units, duplexes, triplexes, and ADUs shall be prewired for the installation of battery storage
- Expanded electric vehicle charging requirements in new residential buildings.

City of Solana Beach

- All newly constructed non-residential properties must install photovoltaic (PV) systems in accordance with sizing requirements
- In new residential and commercial construction, all space conditioning, water heating and clothes dryer systems will be electric only
- All new residential and non-residential construction must be pre-wired for battery storage.
- All new residential and non-residential construction must install sufficient electrical capacity for future electrification of all non-electric appliances.
- Expanded electric vehicle charging requirements in new buildings

Visitors can browse our website for detailed information about adopted reach codes throughout the state (map view or the adopted ordinances list).

UPCOMING EVENTS

August

August 9: 3C-REN webinar: Stay Cool This Summer with Higher-Performing Air Conditioning: Local residents share their experiences with heat pumps for space heating and cooling

August 10: Energy Commission Monthly Business Meeting

August 11: BayREN Training: Nonresidential New Construction

August 18: BayREN Training: Nonresidential Tenant Improvements and Alterations

August 25: BayREN Training: Nonresidential Lighting

August 30: Statewide Reach Codes Program webinar: Cost Effectiveness Explorer Update

August 31: 3C-REN webinar: The Value of Becoming a Certified Energy Analyst (CEA)



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NEW THIS MONTH!



FACT SHEET: EV CHARGING REQUIREMENTS FOR NEW CONSTRUCTION

CALIFORNIA ENERGY CODES & STANDARDS
A STATEWIDE UTILITY PROGRAM

As California moves forward with a newly-adopted statewide Building Energy Efficiency Standards, it also looks forward to a new version of the statewide Green Buildings Standards Code, or CALGreen. Approved by the California Building Standards Commission in mid-December, 2022 CALGreen will become effective January 1, 2023.

Some of 2022 CALGreen's most impactful provisions focus on electric vehicle (EV) infrastructure as a means of advancing the state's strategic goals of electrification as a primary driver towards decarbonization. These changes were also spurred by Executive Order N-79-20, which mandates 100% in-state sales of new zero-emission passenger vehicles (ZEV) by 2035.

This fact sheet focuses on 2022

2022 CALGreen includes several new requirements for EV charging in residential construction.

NEW EV CHARGING REQUIREMENTS IN CALGREEN 2022

The reach codes program is updating the residential fact sheet with a comprehensive overview of the new 2022 CALGreen requirements for EV charging for all new construction.

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2022 CALGreen now includes standardized definitions of key terms:

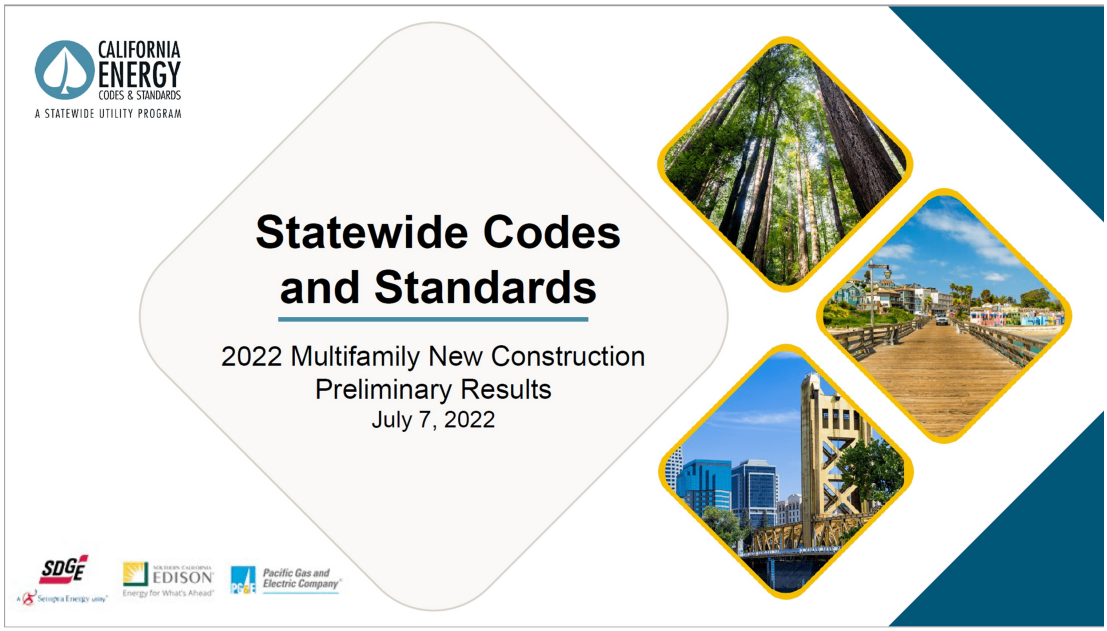
- Automatic Load Management System (ALMS)
- EV Capable Space
- EV Ready Space
- Level 2 EV Supply Equipment (EVSE)

- Low Power Level 2 EV Charging Receptacle

Residential construction includes single-family, multi-family, and hospitality (hotels and motels) housing. The 2022 Standard includes mandatory, Tier 1 and Tier 2 provisions based on occupancy type and number of parking spaces for both new construction and existing buildings (when parking lots are part of the alteration).

Nonresidential new construction requirements include new requirements for EV spaces based on the number of total parking spaces. CALGreen 2022 also establishes mandatory requirements for specific types of construction regarding future installation of medium- and heavy-duty EVSE. These building types include grocery stores, retail, and warehouse buildings with planned off -street loading spaces.

The new Fact Sheet is available here.



DRAFT RESULTS: MULTIFAMILY NEW CONSTRUCTION COST-EFFECTIVENESS ANALYSIS

The reach codes team hosted a webinar on July 7, 2022, to share draft results of the multifamily new construction cost-effectiveness analysis.

The 2022 Building Energy Code has consolidated all multifamily requirements together as well as providing newly updated and certified modeling software (CBECC) that handles all multifamily and nonresidential analyses.

The analyses focused on evaluating specific measures and packages for cost-effectiveness against two metrics: On-Bill and TDV (Time-Dependent Valuation). Two all-electric packages were evaluated (prescriptive and prescriptive + PV) as well as two mixed fuel packages (Efficiency, Efficiency + PV + Battery).

The prototypes used were the two most common designs of the four Energy Commission models:

- 3-story 36-unit loaded corridor
- 5-story 88-unit mixed use

Preliminary results showed the following:

- 3-story All-electric Prescriptive: cost-effective for most CZs under both metrics
- 3-story All-electric Prescriptive + PV: cost-effective for all CZs under both metrics
- 5-story All-electric Prescriptive: not cost-effective under either metric for nearly all CZs
- 5-story All-electric Prescriptive + PV: cost-effective under both metrics for nearly all CZs
- 3-story Mixed-fuel Efficiency packages: cost-effective under both metrics for CZs 1, 9-16
- 3-story Mixed-fuel Efficiency+PV+Battery packages: cost-effective under On-bill metric for most CZs, about half of CZs under TDV metric

Next steps for the analysis team will be to update results to the recently released certified version of the software (CBECC 2022.1.0) and conduct analyses for efficiency packages for the 5-story prototype.

Webinar materials are available for download here and the webinar recording is available on the LEC YouTube channel here.

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OTHER REACH CODE NEWS BRIEFS

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