

# Santa Monica's 2020 Energy Reach Code Promoting Healthy, Safe Homes & Buildings



## What are Reach Codes?

Reach codes provide an opportunity for local governments to amend the 2019 State Building Code for new homes and commercial buildings. The amendments or “Reach Codes” are designed to encourage low-cost all-electric new construction of healthier, safer, and zero emission buildings while making it easier to charge electric vehicles.

## Why Reach Codes?

- Incentivize lowest-cost construction options
- Encourage development of healthier, safer, lower emission buildings
- Reflect the sustainability-related values of our community
- Improve indoor air quality and reduce risk of fires

**New all-electric homes and apartments can save thousands!**

**Adding EV chargers upfront prevents costly future retrofits!**

## Reach Code Options

Builders and developers can choose between an all-electric or mixed-fuel construction option. The code encourages the all-electric option as it is less expensive, provides a healthier, safer building while significantly reducing pollution. The new EV charging requirements ensure greater future access to EV charging at a lower cost for EV drivers. See the next page for code compliance options.

Effective January 1, 2020  
 Santa Monica New Construction  
 Energy & Green Building Reach Codes  
 See SMMC 8.36 & SMMC 8.106

### Code Compliance Pathways\*

	All-Electric	Mixed-Fuel (Electric & Natural Gas)
<b>New Single Family &amp; Multi-Family (3 stories or less)</b>	<b>Efficiency + Solar:</b> Meet State Code (no local reach code)	<b>Efficiency + Solar:</b> Must meet CalGreen Tier 1 1. Achieve a Total Energy Design Rating of $\leq 10$ 2. Complete Quality Insulation Installation (QII) 3. Plus one of the following: <ul style="list-style-type: none"> <li>• Roof deck insulation or ducts in conditioned space; or</li> <li>• High-Performance Walls; or</li> <li>• HERS-Verified Compact Hot Water Distribution with Drain Water Heat Recovery</li> </ul>
<b>New Multi-Family (4+ stories) &amp; Hotel</b>	<b>Efficiency:</b> Meet State Code <b>Minimum Solar:</b> 2 watts/sq. ft. of bldg. footprint	<b>Efficiency:</b> 5% better than State code <b>Minimum Solar:</b> 2 watts/sq. ft. of bldg. footprint
<b>All Other Non-Residential</b>	<b>Efficiency:</b> Meet State Code <b>Minimum Solar:</b> 2 watts/sq. ft. of bldg. footprint	<b>Efficiency:</b> 10% better than State code <b>Minimum Solar:</b> 2 watts/sq. ft. of bldg. footprint
<b>New Heated Pools</b>	Heat-pump and/or Solar	N/A, Gas Pool Heating Prohibited
<b>Major Additions</b>	<b>Solar for Single Family/Duplexes:</b> 1.5 watts/sq. ft. of addition <b>Solar for all others:</b> 2 watts/sq. ft. of addition's footprint	

\* **All Projects:** Title 24 Certificate of Compliance must be authored by a Certified Energy Analyst (CEA).



# Solar Requirements

	Code Compliance Pathways	
	All-Electric	Mixed-Fuel
<b>Single Family &amp; Multi-Family (3 stories or less)</b>	<b>Solar:</b> Minimum photovoltaic system size determined in the Title 24 Energy Modeling Software.	<b>Solar:</b> Photovoltaic system size determined in the Title 24 Energy Modeling Software. PV must be sized to achieve a Total Energy Design Rating (EDR) of $\leq 10$
<b>Non-Residential, Multi-Family (4+ stories), Hotel/Motel</b>	<b>Minimum Solar:</b> 2 watts/sq. ft. of bldg. footprint	<b>Minimum Solar:</b> 2 watts/sq. ft. of bldg. footprint
<b>Major Additions</b>	<b>Solar for Single Family/Duplexes:</b> 1.5 watts/sq. ft. of addition <b>Solar for all others:</b> 2 watts/sq. ft. of addition's footprint	

## Additional Notes:

Title 24 Certificate of Compliance must include on-site PV details such as kW, tilt, azimuth, minimum inverter efficiency. The future permit for PV must have matching details.

**Footprint** -The horizontal area, as seen in plan view, of a building or structure, measured from the outside of exterior walls and supporting columns, and excluding eaves and subterranean and semi-subterranean levels.

**Major Additions** – Adding a story or a cumulative addition of 50% of the existing floor area.



# EV Requirements

	State: EV Capable	EV Chargers Installed	EV Ready	Raceway/Conduit Equipped	Total Potential EV Spaces
<b>Single Family, Duplex</b>	1 per unit	--	1 per unit	--	1+
<b>Multifamily</b>	10%	10%	20%	70%	100%
<b>Hotel/Motel*</b>	6% avg	10%	--	30%	40%
<b>Office*</b>	6% avg	10%	20%	30%	60%
<b>All other nonresidential*</b>	6% avg	10%	--	30%	40%

## **Additional Notes and Definitions:**

**EV Charger Installed:** Full circuit (208/240V 40-amp) electric vehicle supply equipment (EVSE) + EV Charger

**EV Ready:** Full-circuit EVSE; ready for the charger

**EV Capable:** Full-circuit without charger or breaker (required by CALGreen, not included in Santa Monica's reach code categories)

**Raceway/Conduit Equipped:** The parking space is served by raceway or conduit to support a future EV charger; no additional EVSE or panel capacity required

\***DCFC Option:** 1 DC Fast Charger (480V; min 50 kW) may replace up to 5 required level 2 (240V) chargers



# Resources

## Build your Team

- Energy Modeling must be prepared by a Certified Energy Analyst (CEA).  
Find a CEA here: <https://cabec.org/find/cea-current/>
- Design and building professionals can be found through the U.S. Green Building Council:  
<https://www.greenhomeguide.com/>
- Find professionals and products: <https://zeroenergyproject.org/>
- Find a solar contractor: [www.solarsantamonica.com](http://www.solarsantamonica.com)

## Know the Code

### State Standards

- [2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings](#)
- [2019 California Green Building Standards Code \(CAL Green\)](#)
  - [Requirements for Mixed-Fuel Low-Rise Residential - 2019 CalGreen - Appendix A4 \(pg. 103-104\)](#)
  - Requirements for EV Charging Residential – Chapter 4 (pg. 20-21)
  - Requirements for EV Charging Nonresidential – Chapter 5 (pg. 35)

### [Santa Monica Municipal Code](#)

- See Article 8 Building Regulations, Chapter 8.36 Energy Code & Chapter 8.106 Green Building Standards Code  
[Santa Monica Green Building](#)

