



**SUSTAINABILITY COMMISSION**  
**Standing Subcommittee on Solar and Green Building**  
**CITY OF PALM SPRINGS, CALIFORNIA**

[www.palmsprings-ca.gov](http://www.palmsprings-ca.gov)

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**December 1, 2020**  
**10:30 AM**

**REGULAR**  
**MEETING AGENDA**

Via Teleconference

Pursuant to Executive Order N-29-20, this meeting will be conducted by teleconference and there will be no in-person public access to the meeting location.

To view/listen/participate in the meeting live, please use the following link: <https://us02web.zoom.us/j/86112748904> / call +16699006833,,86112748904# - Meeting ID: 861 1274 8904

- Written public comment may also be submitted to [cityclerk@palmspringsca.gov](mailto:cityclerk@palmspringsca.gov). Transmittal prior to the meeting is required. Any correspondence received during or after the meeting will be distributed to the Board/Commission as soon as practicable and retained for the official record.
- The meeting will be recorded and the audio file will be available from the Office of the City Clerk and will be posted on the City's YouTube channel, as soon as practicable.

**COMMISSION STANDING SUBCOMMITTEE**

**David Freedman**

**Jim Flanagan**

Staff representatives: Patrick Tallarico, Manager, Office of Sustainability; Dan DeGarmo, Program Coordinator.

*City of Palm Springs Vision Statement: Palm Springs aspires to be a unique world-class desert community, where residents and visitors enjoy our high quality of life and a relaxing experience. We desire to balance our cultural and historical resources with responsible, sustainable economic growth and enhance our natural desert beauty. We are committed to providing responsive, friendly, and efficient customer service in an environment that fosters unity among all our citizens.*

Please **MUTE OR TURN OFF** all audible electronic devices for the duration of this meeting. Thank you!

**CALL TO ORDER**

**ROLL CALL**

**ACCEPTANCE OF AGENDA**

**PUBLIC COMMENTS:** This time is for members of the public to address the Sustainability Commission on Agenda items and items of general interest within the subject matter jurisdiction of the Commission. The Commission values your comments but, pursuant to the Brown Act, cannot take action on items not listed on the posted Agenda. Three (3) minutes are assigned for each speaker.

**A. Council Agenda Items –**

1. Climate Action Roadmap
2. EV Charger Expansion Award
3. AB 1236 implementation
4. Sustainability Scholarship

**B. GHG Inventory Update**

**C. General Plan Update**

**D. Fees at Baristo Parking Structure**

**E. DCE Issues/Updates**

**F. Agenda Items for November Commission Meeting**

**G. ADJOURNMENT** - The meeting of the Sustainability Commission Solar and Green Building Subcommittee will adjourn to January 5, 2021, at 10:30 AM.

**Sustainability Commission Subcommittee on Solar and Green Building Regular Meeting Agenda  
December 1, 2020, 10:30 a.m. - Page 2**

It is the intention of the City of Palm Springs to comply with the Americans with Disabilities Act (ADA) in all respects. If, as an attendee or a participant at this meeting, you need special assistance beyond what is normally provided, the City will attempt to accommodate you in every reasonable manner. Please contact the Office of the City Clerk at (760) 323-8204 at least 48 hours prior to the meeting to inform us of your needs and to determine if accommodation is feasible.

Pursuant to G.C. Section 54957.5(b)(2) the designated office for inspection of records in connection with the meeting is the Office of Sustainability, City Hall, 3200 E. Tahquitz Canyon Way, Palm Springs, CA 92262. Agenda and staff reports are available on the City's website [www.palmspringsca.gov](http://www.palmspringsca.gov). If you would like additional information on any item appearing on this agenda, please contact the Office of Sustainability at 760-323-8214.

AFFIDAVIT OF POSTING: I, Patrick Tallarico, Manager, Office of Sustainability of the City of Palm Springs, California, certify this Agenda was posted at or before 10:30 a.m. on Friday, November 27, 2020, as required by established policies and procedures.



Patrick Tallarico, Manager, Office of Sustainability

### 2019 Code Cycle - Locally Adopted Energy Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Single Family and Low-rise Multifamily Requirement	High-rise Multifamily Requirement	Nonresidential Requirement	Cost-effectiveness Study	Municipal Code Link	Ordinance
Berkeley	EE	12/3/2019	2/20/2020	<u>New:</u> All-electric <b>OR</b> Mixed Fuel, Total EDR margin $\geq$ 10 <b>AND</b> electric-ready	<u>New HRR/Hotel:</u> All-electric <b>OR</b> Mixed-Fuel and >10% compliance margin	<u>New:</u> All-electric <b>OR</b> Mixed-Fuel: 10% compliance margin <b>AND</b> electric-ready Exception: Labs, industrial, manufacturing occupancies	2019 LR Res NC / 2019 Non Res NC	19.36.040	<a href="#">Ord. No 7.678-N.S.</a>
	PV	12/3/2019	2/20/2020	N/A	<u>New:</u> PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10	<u>New:</u> PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10		19.36.100.3	
Brisbane	PV	12/12/2019	2/20/2020	N/A (see All-electric sheet)	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft <b>OR</b> Solar thermal	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft <b>OR</b> Solar thermal	2019 LR Res NC / 2019 Non Res NC	15.81.050	<a href="#">Ord. No. 643</a>
Burlingame	PV	8/17/2020	10/14/2020	N/A (see All-electric sheet)	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. Alternative: Solar thermal > 40 sq.ft. collector area	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. Alternative: Solar thermal > 40 sq.ft. collector area	2019 LR Res NC / 2019 Non Res NC	110.0	<a href="#">Ordinances 1979, 1980, 1981</a>
Carlsbad	EE	3/12/2019	8/14/2019	<u>New:</u> HPWH <b>OR</b> solar thermal <u>Adds/Alts:</u> > \$60k: Presc. measures	<u>New:</u> HPWH <b>OR</b> increased solar fraction	<u>New:</u> Electric water heating <b>OR</b> solar thermal > 0.4 SF	<a href="#">Carlsbad Energy Conservation Ordinance CE Study</a>	18.30.170	<a href="#">Ord. No. CS-348</a>
	PV	3/12/2019	8/14/2019	N/A	<u>New/Alt:</u> 15 kW per 10,000 s.f.; min 5kW for < 10,000 s.f.	<u>New/Alt:</u> PV that offsets 80%; 15 kW per 10,000 s.f.; min 5kW for < 10,000 s.f.	<a href="#">2016 NR New Construction</a>	18.30.130	<a href="#">Ord. No. CS-347</a>
Davis	EE	10/8/2019	1/22/2020	<u>New SF:</u> All-electric <b>OR</b> Mixed Fuel, EDR margin of 9.5; <u>New LR MF:</u> Mixed fuel, EDR margin of 10; electric-ready	N/A	N/A	2019 LR Res New Construction	<a href="#">8.01.092</a>	<a href="#">Ord. No. 2565</a>

### 2019 Code Cycle - Locally Adopted Energy Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Single Family and Low-rise Multifamily Requirement	High-rise Multifamily Requirement	Nonresidential Requirement	Cost-effectiveness Study	Municipal Code Link	Ordinance
East Palo Alto	PV	10/20/2020		N/A (see All-electric sheet)	<u>New:</u> 15% of roof area OR PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft.	<u>New:</u> 15% of roof area OR PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft.	2019 LR Res NC / 2019 Non Res NC		Ord. 1413
Hayward	EE	3/17/2020	6/10/2020	N/A (see All-electric sheet)	<u>New:</u> All-electric OR 10% compliance margin	<u>New:</u> All-electric OR 10% compliance margin (15% for Office/Retail)	2019 LR Res NC / 2019 Non Res NC	<a href="#">9-1.02</a>	<a href="#">Ord. No. 20-05</a>
	PV	3/17/2020	6/10/2020	N/A (see All-electric sheet)	<u>New:</u> PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10	<u>New:</u> PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10			
Los Angeles County	EE	11/26/2019	4/8/2020	<u>New and Re-roof:</u> Low-slope Aged Refl. $\geq 0.65$ , TE $\geq 0.85$ , SRI $\geq 78$ Steep-slope: Aged Refl. $\geq 0.25$ , TE $> 0.85$ , SRI $\geq 20$	<u>New and Re-roof:</u> Low-slope Aged Refl. $\geq 0.65$ , TE $\geq 0.75$ , SRI $\geq 78$ Steep-slope: Aged Refl. $\geq 0.25$ , TE $> 0.75$ , SRI $\geq 20$	<u>New and Re-roof:</u> Low-slope Aged Refl. $\geq 0.68$ , TE $\geq 0.85$ , SRI $\geq 82$ Steep-slope: Aged Refl. $\geq 0.28$ , TE $> 0.85$ , SRI $\geq 27$	2016 Cool Roofs	Title 31	<a href="#">Ord No. 2019-0061</a>
Marin County	EE	10/8/2019	12/11/2019	<u>New:</u> All-electric OR Limited Mixed-Fuel prewire for induction, EE EDR Margin $\geq 3$ OR Mixed-Fuel, pre-wire for induction, EE EDR Margin $\geq 3$ and Total EDR Margin $\geq 10$	<u>New:</u> All-electric OR Limited Mixed-Fuel: 5% compliance margin, prewired for induction OR Mixed-Fuel: 10% compliance margin, pre-wired for induction	<u>New:</u> All-electric OR Limited Mixed-Fuel: 5% compliance margin, prewired for induction OR Mixed-Fuel: 10% compliance margin, pre-wired for induction	2019 LR Res NC / 2019 Non Res NC	<a href="#">19.04 Subchapter 2 - Green Building Requirements</a>	<a href="#">Ord. No. 3712</a>
	EV	10/8/2019	12/11/2019	<u>New SF:</u> Requires service panel capacity for Level 2 EV charging (240v) <u>New MF:</u> 1 EV charging space per dwelling unit	<u>New:</u> EV charging space per unit. <u>Add/Alt:</u> requirements	10% of spaces EV-Ready and build the remaining spaces to be EV Capable OR Build 20% of spaces to be EV-Ready and install EV Chargers in 5% of spaces <u>Add/Alt</u> requirements			

### 2019 Code Cycle - Locally Adopted Energy Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Single Family and Low-rise Multifamily Requirement	High-rise Multifamily Requirement	Nonresidential Requirement	Cost-effectiveness Study	Municipal Code Link	Ordinance
Menlo Park	PV	9/24/2019	12/11/2019	<u>N/A</u> (see All-electric sheet)	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. (some exceptions)	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. (some exceptions)	2019 LR Res NC / 2019 Non Res NC	<a href="#">12.16.110.10</a>	<a href="#">Ord. No. 1057</a>
Millbrae	PV	11/10/2020		<u>N/A</u> (see All-electric sheet)	<u>New:</u> PV on 50% of roof area	<u>New:</u> PV on 50% of roof area	2020 LR Res NC / 2019 Non Res NC	Section 140.0	Ord. No. 2020-
Mill Valley	EE	11/18/2019	4/8/2020	<u>New:</u> All-electric <b>OR</b> Limited Mixed-Fuel: prewire for induction, with EE EDR Margin $\geq 3$ <b>OR</b> Mixed-Fuel, pre-wire for induction, EE EDR Margin $\geq 3$ and Total EDR Margin $\geq 10$	<u>New:</u> All-electric <b>OR</b> Limited Mixed-Fuel: 5% compliance margin, prewired for induction <b>OR</b> Mixed-Fuel: 10% compliance margin, pre-wired for induction	N/A	2019 LR Res NC / 2019 Non Res NC	Chapter 14.48	<a href="#">Ord. No. 1313</a>
Milpitas	EE	12/3/2019	2/20/2020	<u>New:</u> All-electric <b>OR</b> Elec. Space and Water Heat: Eff. EDR Margin of 2 for SF and 1 for MF Mixed-Fuel: Total EDR Margin of 10 for SF and 11 for MF; <b>AND</b> electric-ready	<u>New HR MF/ Hotel:</u> All-electric <b>OR</b> > 6% compliance magin <b>AND</b> electric-ready	<u>New:</u> All-electric <b>OR</b> Office & Retail: >14% compliance margin; Industrial/ Manufacturing + 0%; All other NR occupancies > 6% compliance margin; <b>AND</b> electric-ready	2019 LR Res NC / 2019 Non Res NC	Chapter 11.2.02	<a href="#">Ord. No. 65 148</a>
	PV	12/3/2019	2/20/2020	N/A	N/A	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft.		Chapter 11.2.02	

### 2019 Code Cycle - Locally Adopted Energy Ordinances

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Mountain View	PV	11/12/2019	2/20/2020	N/A (see All-electric sheet)	<u>New</u> : PV on 50% of roof area	<u>New</u> : PV on 50% of roof area	2019 LR Res NC / 2019 Non Res NC	SEC. 8.20	<a href="#">Ord. No. 17.19</a>
	EV	11/12/2019	2/20/2020	<u>New</u> : Level 1 circuit + Level 2 EV-Ready	<u>New Multi-Unit/ Mixed Use</u> : 15% EV2 installed + 85% EV-Ready + Level 3 for every 100 spaces	<u>New + Hotel/Motel</u> : installed per CALGreen Tier 2 (Table A5.106.5.3.2)		SEC. 8.20	<a href="#">Ord. No. 17.19</a>
Pacifica	PV	11/25/2019	4/8/2020	N/A (see All-electric sheet)	<u>New</u> : PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft.	<u>New</u> : PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft.	2019 LR Res NC / 2019 Non Res NC	Section 8-6.01	<a href="#">Ord. No. 852-CS</a>
Palo Alto	EE	12/2/2019	2/20/2020	N/A (see All-electric sheet)	<u>New</u> : All-electric OR > 5% compliance margin AND electric-ready	<u>New</u> : All-electric <b>OR</b> Office & Retail: >12% compliance margin; Industrial/ Manufacturing + 0%; All other NR occupancies > 5% compliance margin; <b>AND</b> electric-ready	2019 LR Res NC / 2019 Non Res NC	Chapter 16.17.80	<a href="#">Ord. No. 5485</a>
	PV	12/2/2019	2/20/2020	N/A	<u>New</u> : PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10	<u>New</u> : PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10		Chaprer 16.17.70	
Redwood City	PV	9/21/2020		N/A (see All-electric sheet)	<u>New</u> : PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. <u>Alternative</u> : Solar thermal > 40 sq.ft. collector area (some exceptions)	<u>New</u> : PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. <u>Alternative</u> : Solar thermal > 40 sq.ft. collector area (some exceptions)	2019 LR Res NC / 2019 Non Res NC	Section 9.255	<a href="#">Ord. No.</a>

### 2019 Code Cycle - Locally Adopted Energy Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Single Family and Low-rise Multifamily Requirement	High-rise Multifamily Requirement	Nonresidential Requirement	Cost-effectiveness Study	Municipal Code Link	Ordinance
Richmond	PV	3/3/2020	6/10/2020	N/A (see All-electric sheet)	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. Alternative: Solar thermal ≥ 40 sq.ft. collector area	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. Alternative: Solar thermal ≥ 40 sq.ft. collector area	2019 LR Res NC / 2019 Non Res NC	Chapter 6.02.100	<a href="#">Ord No. 06-20 NS</a>
San Anselmo	EE	4/14/2020	9/9/2020	<u>New:</u> All-electric <b>OR</b> Limited Mixed-Fuel prewire for induction, EE EDR Margin ≥ 3 <b>OR</b> Mixed-Fuel, pre-wire for induction, EE EDR Margin ≥ 3 and Total EDR Margin ≥ 10	<u>New:</u> All-electric <b>OR</b> Limited Mixed-Fuel: 5% compliance margin, prewired for induction <b>OR</b> Mixed-Fuel: 10% compliance margin, pre-wired for induction	<u>New:</u> All-electric <b>OR</b> Limited Mixed-Fuel: 5% compliance margin, prewired for induction <b>OR</b> Mixed-Fuel: 10% compliance margin, pre-wired for induction	2019 LR Res NC / 2019 Non Res NC	Section 9-19.040	<a href="#">Ord. No. 1145</a>
	EV	4/14/2020	9/9/2020	<u>New SF:</u> Requires service panel capacity for Level 2 EV charging (240v) <u>New MF:</u> 1 EV charging space per dwelling unit	<u>New:</u> EV charging space per unit. <u>Add/Alt</u> requirements	10% of spaces EV-Ready and build the remaining spaces to be EV Capable <b>OR</b> Build 20% of spaces to be EV-Ready and install EV Chargers in 5% of spaces <u>Add/Alt</u> requirements		Section 9-19.020	<a href="#">Ord. No. 1145</a>
San Francisco	EE	1/7/2020	4/8/2020	<u>New:</u> All-electric <b>OR</b> Mixed Fuel- Total EDR Score ≤ 14	<u>New HRR/Hotel:</u> All-electric <b>OR</b> Mixed-Fuel and >10% compliance margin	-	2019 LR Res NC / 2019 Non Res NC	Section 4.201.3 Section 5.201.3	<a href="#">Ord. No 003-20</a>

### 2019 Code Cycle - Locally Adopted Energy Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Single Family and Low-rise Multifamily Requirement	High-rise Multifamily Requirement	Nonresidential Requirement	Cost-effectiveness Study	Municipal Code Link	Ordinance
San Jose	EE	10/1/2019	12/11/2019	N/A <b>(see All-electric sheet)</b>	<u>New HR MF/ Hotel:</u> All-electric <b>OR</b> > 6% compliance margin and electric-ready	<u>New:</u> All-electric <b>OR</b> Office & Retail: >14% compliance margin; Industrial/ Manufacturing + 0%; All other NR occupancies > 6% compliance margin; and electric-ready	2019 LR Res NC / 2019 Non Res NC	<a href="#">24.12.100</a>	<a href="#">Ord. No. 30311</a>
	EV	10/1/2019	12/11/2019	<u>New:</u> EV charging readiness and/or electric vehicle service equipment (EVSE)	<u>New:</u> EV charging readiness and/or electric vehicle service equipment (EVSE)	<u>New:</u> EV charging readiness and/or electric vehicle service equipment (EVSE)		24.10.200	<a href="#">Ord. No. 30311</a>
San Luis Obispo	EE	7/7/2020	8/11/2020	<u>New SF:</u> All-electric <b>OR</b> Mixed Fuel, EDR margin of 9; <u>New LR MF:</u> Mixed fuel, EDR margin of 9.5 AND electric-ready	<u>New:</u> All-electric <b>OR</b> Hotel/HRR > 9% compliance margin; <b>AND</b> electric-ready	<u>New:</u> All-electric <b>OR</b> Office/Retail 15% compliance margin, Others 5% compliance margin <b>AND</b> electric ready	2019 LR Res NC / 2019 Non Res NC	Chapter 15.50	<a href="#">Ord. No. 1684</a>
	PV	7/7/2020	8/11/2020	N/A	<u>New:</u> PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10	<u>New:</u> PV system to fill solar zone (>15% of roof area) as defined in Sec. 110.10		Chapter 15.04.110	<a href="#">Ord. No. 1684</a>
San Mateo (City)	EE			<b>(see All-electric sheet)</b> <u>New SF and Duplexes:</u> All-electric <b>OR</b> min Eff. EDR reduction of 2.5	N/A	<b>(see All-electric sheet)</b> <u>New Office Buildings:</u> All-electric <b>OR</b> Mixed-Fuel + 10% compliance margin	2019 LR Res NC / 2019 Non Res NC	23.23.040	<a href="#">Ord. No. 2019-9</a>
	PV	9/3/2019	12/11/2019	Prewire PV system for expansion to all-electric design	<u>New:</u> PV: ≥ 3 kW. Alternative: Solar thermal ≥ 40 sq ft collector area	<u>New:</u> <10,000 s.f.: min. 3 kW PV; 10,000+ s.f.: 5 kW PV Alternative: Solar thermal ≥ 40 s.f. collector area	2019 LR Res NC / 2019 Non Res NC	23.24.030	<a href="#">Ord. No. 2019-9</a>
	EE	10/5/2020		<b>(see All-electric sheet)</b> <u>New 100% Affordable LR MF:</u> All-electric <b>OR</b> at least .5 EDR less than Standard Design <b>OR</b> Prescriptive measures	<u>New 100% Affordable HR MF:</u> All-electric <b>OR</b> >5% compliance margin <b>OR</b> Prescriptive measures	<b>(see All-electric sheet)</b>	2020 LR Res NC / 2019 Non Res NC	23.24.020	<a href="#">Ord. No. 2020-17</a>



### 2019 Code Cycle - Locally Adopted Energy Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Single Family and Low-rise Multifamily Requirement	High-rise Multifamily Requirement	Nonresidential Requirement	Cost-effectiveness Study	Municipal Code Link	Ordinance
San Rafael	EE	11/18/2019	4/8/2020	<u>New:</u> CALGreen Tier 1: Mixed fuel, EDR ≥ 10, All-elec EDR ≥ 14	<u>New:</u> CALGreen Tier 1 (5% compliance margin)	<u>New:</u> CALGreen Tier 1 (10% compliance margin)	2019 LR Res NC / 2019 Non Res NC	Chapter 12.100	<a href="#">Ord. No. 1974</a>
Santa Monica	EE	9/24/2019	12/11/2019	<u>New:</u> All-electric <b>OR</b> Mixed-Fuel with CalGreen Tier 1	<u>New HRR/Hotel:</u> All-electric <b>OR</b> Mixed-Fuel and >5% compliance margin	<u>New:</u> All-electric <b>OR</b> Mixed-Fuel and >10% compliance margin	2019 LR Res NC / 2019 Non Res NC	<a href="#">8.36.020</a>	<a href="#">Ord. No. 2617</a>
	PV			<u>Major Additions:</u> PV system 1.5 watts per sq. ft.	<u>New and Major Additions:</u> 2 watts per sq. ft.	<u>New and Major Additions:</u> 2 watts per sq. ft.	2019 LR Res NC: PV + Additions Addendum	<a href="#">8.106.055</a>	<a href="#">Ord. No. 2617</a>
Sunnyvale	PV	<i>First Reading</i> 10/27/2020		N/A <b>(see All-electric sheet)</b>	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. Alternative: Solar thermal ≥ 40 sq.ft. collector area	<u>New:</u> PV of 3 kW min. for < 10,000 sq. ft. and 5 kW min. for > 10,000 sq. ft. Alternative: Solar thermal ≥ 40 sq.ft. collector area	2019 LR Res NC / 2019 Non Res NC	Section 16.42.090	Ord. No.
West Hollywood	EE, Cool Roofs	8/19/2019	12/11/2019	<u>New or Alteration</u> > 10,000 sq. ft.: PV to offset 15% of usage <b>OR</b> solar thermal with min. .5 solar fraction <b>OR</b> vegetative roof covering min. 30%	<u>New or Alteration</u> > 10,000 sq. ft.: PV to offset 15% of usage <b>OR</b> solar thermal with min. .5 solar fraction <b>OR</b> vegetative roof covering min. 30%	<u>New or Alteration</u> > 10,000 sq. ft.: PV to offset 15% of usage <b>OR</b> solar thermal with min. .5 solar fraction <b>OR</b> vegetative roof covering min. 30%	2019 NR+ Retrofits PV / 2019 Non Res NC	19.20.060	<a href="#">Ord. No. 19-1072</a>

This report was prepared for the California Statewide Codes & Standards Program. The program is funded by California utility customers and administered by Pacific Gas and Electric Company, San Diego Gas & Electric Company (SDG&E®), Southern California Gas Company, and Southern California Edison Company under the auspices of the California Public Utilities Commission and in support of the California Energy Commission.

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## 2019 Code Cycle - Locally Adopted All-Electric Only Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Scope			Municipal Code Link	Ordinance
				Single Family and Low-rise Multifamily	High-rise Multifamily	Nonresidential		
Berkeley	All-Electric	7/16/2019	N/A	New	New	New	Chapter 12.80	<a href="#">Ord. No. 7,672-N.S</a>
Brisbane	All-Electric	12/12/2019	2/20/2020	<u>New</u> : Exception for cooktops/fireplaces; pre-wire for electric	<u>New</u> : All-electric	<u>New</u> : Except Life science occupancies and gas specific for profit kitchen	15.83.060	<a href="#">Ord. No. 643</a>
Burlingame	All-Electric	8/17/2020	10/14/2020	<u>New</u> : Exception for indoor/outdoor cooking appliances and fireplaces; pre-wire for electric. <u>Adds/Alts</u> : > 50% valuation when HVAC included	<u>New</u> : All-electric	<u>New</u> : Exception for-profit kitchen cooking equipment; pre-wire for electric	110.0	<a href="#">Ordinances 1979, 1980, 1981</a>
Campbell	All-Electric	2/18/2020	N/A	<u>New</u> : All-electric space/water heating. Natural gas OK for other uses; pre-wire for electric	N/A	N/A	18.18.020	<a href="#">Ord. No 2,260</a>
Cupertino	All-Electric	1/21/2020	4/8/2020	<u>New</u> : All-electric (excluding ADUs)	<u>New</u> : All-electric	<u>New</u> : Exception for Fire, High-Hazard, Laboratory, and "Essential Facilities" occupancies; pre-wire for electric	16.54.100	<a href="#">Ord. No. 19-2193</a>
East Palo Alto	All-Electric	10/20/2020		<u>New</u> : Exception for ADUs; and cooktops/fireplaces; pre-wire for electric	<u>New</u> : Exceptions cooktops/fireplaces, gas water-heating for affordable housing; pre-wire for electric	<u>New</u> : Exception for Life Science buildings, Emergency operations, and for-profit cooking; prewire for electric	Chapter 15.25	Ord. 1413
Hayward	All-Electric	3/17/2020	6/10/2020	<u>New</u> : All-electric (including ADUs > 400 sq. ft.)	<u>New</u> : All-electric OR 10% compliance margin	<u>New</u> : All-electric OR 10% compliance margin (15% for Office/Retail)	<a href="#">9-1.02</a>	<a href="#">Ord. No. 20-05</a>
Healdsburg	All-Electric	12/16/2019	2/20/2020	<u>New</u> : Exception for cooktops, fireplaces, pool/spa; pre-wire for electric	<u>New</u> : Exception for cooktops, fireplaces, pool/spa; pre-wire for electric	<u>New</u> : Exception for cooktops, fireplaces, pool/spa, Essential Services, technical processes; pre-wire for electric	Section 15.04	<a href="#">Ord. No. 1196</a>

## 2019 Code Cycle - Locally Adopted All-Electric Only Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Scope			Municipal Code Link	Ordinance
				Single Family and Low-rise Multifamily	High-rise Multifamily	Nonresidential		
Los Altos Hills	All-Electric	2/20/2020		<u>New</u> : All-electric space/water heating (including ADUs). Natural gas OK for other uses; pre-wire for electric	N/A	N/A	Chapter 1.6	<a href="#">Ord. No. 589</a>
Los Altos	All-Electric	11/10/2020		<u>New</u> : Exception for cooktops/fireplaces; pre-wire for electric	<u>New</u> : All-electric for developments > 10 units	<u>New</u> : Exception for Scientific Laboratory/ Public buildings and for-profit cooking; prewire for electric	Chapter 12.22	<a href="#">Ord. No. 2020-470A-C</a>
Los Gatos	All-Electric	12/17/2019	2/20/2020	<u>New</u> : All-electric (including ADUs); pre-wire for battery storage	N/A	N/A	Chapter 6.70.020	<a href="#">Ord. No. 2299</a>
Menlo Park	All-Electric	9/24/2019	12/11/2019	<u>New</u> : All-electric space/water heating and clothes dryers. Natural gas OK for cooktops/fireplaces; pre-wire for electric	<u>New</u> : All-electric	<u>New</u> : All-electric	<a href="#">Chapter 12.16</a>	<a href="#">Ord. No. 1057</a>
Millbrae	All-Electric	11/10/2020		<u>New</u> : All-electric space/water heating and clothes dryers. Natural gas OK for cooktops/fireplaces; pre-wire for electric	<u>New</u> : All-electric	<u>New</u> : Exception for Life Science/ Public buildings. For-profit cooking may appeal for exception; prewire for electric	Section 100.0	<a href="#">Ord. No. 2020-</a>
Morgan Hill	All-Electric	10/23/2019	N/A	<u>New</u> : All-electric	<u>New</u> : All-electric	<u>New</u> : All-electric	Chapter 15.63.40	<a href="#">Ord. No. 2306 N.S.</a>
Mountain View	All-Electric	10/22/2019	2/20/2020	<u>New SF and Duplexes</u> : Exception for cooktops/fireplaces; pre-wire for electric. <u>New LR MF</u> : Exception for-profit kitchen cooking equipment	<u>New</u> : exception for F, H, and L occupancies and for-profit kitchen cooking equipment	<u>New</u> : Exception for Fire, High-Hazard, and Laboratory occupancies and for-profit kitchen cooking equipment	Sec. 8.20	<a href="#">Ord. No. 17.19</a>

## 2019 Code Cycle - Locally Adopted All-Electric Only Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Scope			Municipal Code Link	Ordinance
				Single Family and Low-rise Multifamily	High-rise Multifamily	Nonresidential		
Ojai	All-Electric	11/10/2020		<u>New</u> : Exception for ADUs, pool/spa, for-profit kitchen cooking equipment	<u>New</u> : All-electric	<u>New</u> : Exception for-profit kitchen cooking equipment	Section 9-1.1002	<a href="#">Ord. No.</a>
Pacifica	All-Electric	11/25/2019	4/8/2020	<u>New</u> : Exception for ADUs; and cooktops/fireplaces; pre-wire for electric. <u>New</u> LR MF: Exception for-profit kitchen cooking equipment	<u>New</u> : Exception for cooktops/fireplaces; pre-wire for electric	<u>New</u> : Exception for Fire and Police occupancies and for-profit kitchen cooking equipment	Section 8-6.01	<a href="#">Ord. No. 852-CS</a>
Palo Alto	All-Electric	12/2/2019	2/20/2020	<u>New</u> : All-electric	<u>New</u> : All-electric <b>OR</b> > 5% compliance margin; electric-ready	<u>New</u> : All-electric <b>OR</b> Office & Retail: >12% compliance margin; Industrial/ Manufacturing + 0%; All other NR occupancies > 5% compliance margin; pre-wire for electric	16.17.80	<a href="#">Ord. No. 5485</a>
Redwood City	All-Electric	9/21/2020		<u>New</u> : All-electric (excluding ADUs)	<u>New</u> : exception for Fire, High-Hazard, and Laboratory occupancies and for-profit kitchen cooking equipment; additional exceptions	<u>New</u> : exception for Fire, High-Hazard, and Laboratory occupancies and for-profit kitchen cooking equipment; additional exceptions	Section 9.249	<a href="#">Ord. No.</a>
Richmond	All-Electric	3/3/2020	6/10/2020	<u>New</u> : All-electric space/water heating and clothes dryers. Natural gas OK for cooktops/fireplaces; pre-wire for electric <u>Replace/Upgrade Equipment</u> : all-electric	<u>New</u> : All-electric	<u>New</u> : Exception for Fire/Police, Life Sciences, For-profit kitchen cooking equipment; pre-wire for electric	Chapter 6.02.100	<a href="#">Ord No. 06-20 NS</a>

### 2019 Code Cycle - Locally Adopted All-Electric Only Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Scope			Municipal Code Link	Ordinance
				Single Family and Low-rise Multifamily	High-rise Multifamily	Nonresidential		
San Francisco	All-Electric	11/17/2020		New	New	New	Section 106A	<a href="#">Ord. No.</a>
San Jose	All-Electric	9/17/2019	N/A	<u>New</u> : All-electric	N/A	N/A	Chapter 17.845	<a href="#">Ord No. 30330</a>
San Mateo City	All-Electric	10/5/2020		<u>New</u> : All-electric (including ADU's)	N/A	<u>New Office Buildings</u> : All-electric	Section 23.24	<a href="#">Ord. No. 2020-17</a>
San Mateo County	All-Electric	2/25/2020	9/9/2020	<u>New</u> : All-electric	<u>New</u> : All-electric	<u>New</u> : Exception for Laboratories, Emergency operations, and for-profit cooking (requires approval)	Section 9200	<a href="#">Ord No. 4824</a>
Santa Cruz	All-Electric	4/14/2020	N/A	<u>New</u> : All-electric	<u>New</u> : All-electric	<u>New</u> : All-electric	Chapter 6.100	<a href="#">Ord. No. 2020-06</a>
Santa Rosa	All-Electric	11/12/2019	2/20/2020	<u>New</u> : All-electric	N/A	N/A	Chapter 18-33.040	<a href="#">Ord. No. 2019-019</a>
Saratoga	All-Electric	12/4/2019	4/8/2020	<u>New</u> : All-electric space/water heating. Natural gas OK for cooktops/fireplaces/clothes dryer; pre-wire for electric	<u>New</u> : All-electric space/water heating; pre-wire for electric	<u>New</u> : All-electric space/water heating. Except public agency owned emergency centers; pre-wire for electric	Chapter 16.51.015	<a href="#">Ord. No. 366</a>
Sunnyvale	All-Electric	<i>First Reading 10/27/2020</i>		<u>New</u> : All-electric	<u>New</u> : All-electric;	<u>New</u> : Exception for Fire, High-Hazard, Laboratory occupancies and for-profit kitchen cooking equipment; prewire for electric	Chapter 16.42	<a href="#">Ord. No.</a>
Windsor	All-Electric	10/16/2019	2/20/2020	<u>New</u> : All-electric	N/A	N/A	Chapter 7.7.100	<a href="#">Ord. No. 2019-338</a>

## 2019 Code Cycle - Locally Adopted All-Electric Only Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	CEC Approval Date	Scope	Municipal Code Link	Ordinance
				Single Family and Low-rise Multifamily	High-rise Multifamily	Nonresidential

This report was prepared for the California Statewide Codes & Standards Program. The program is funded by California utility customers and administered by Pacific Gas and Electric Company, San Diego Gas & Electric Company (SDG&E®), Southern California Gas Company, and Southern California Edison Company under the auspices of the California Public Utilities Commission and in support of the California Energy Commission.

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## 2019 Code Cycle - Locally Adopted Electric Vehicle Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	Scope			Exceptions	Ordinance
			Single Family, Duplexes, and Townhouses	Multifamily	Nonresidential - Office	Nonresidential - Other	
Brisbane	EV	12/12/2019	<u>New:</u> Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New:</u> Level 2 EV-Ready space per unit / min. 50% required guest spaces EVCS spaces	<u>New Office:</u> >10 spaces- 15% equipped with Level 2 EVCS + 10 % Level 1 EV-Ready + 25% Level 1 EV-Capable	<u>New Other NR:</u> >10 spaces- 15% equipped with Level 2 EVCS + 10 % Level 1 EV-Ready	<a href="#">Ord. 643</a>
Burlingame	EV	8/17/2020	<u>New:</u> Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New:</u> 10% of units with Level 2 EV-Ready space ; remaining units with Level 1 EV-Ready	<u>New Office:</u> >10 spaces- 10% equipped with Level 2 EVCS + 10 % Level 1 EV-Ready	<u>New Other NR:</u> >10 spaces- 6% equipped with Level 2 EVCS + 5 % Level 1 EV-Ready	ADU/JADU without parking facilities <a href="#">Ord. 1979/1980/1981</a>
Carlsbad	EV	3/12/2019	<u>New:</u> Level 2 EV-Ready space per unit <u>Add/Alts:</u> >\$60k <b>OR</b> panel upgrade	<u>New:</u> 10% of units with Level 2 EV-Capable space <b>AND</b> 50% of those spaces installed with EVSE <u>Add/Alts:</u> >\$200k	<u>New:</u> 10% of units with Level 2 EV-Capable space <b>AND</b> 50% of those spaces installed with EVSE	ADU/JADU without parking facilities / utility service cost > \$400	Ord. CS-349
Cupertino	EV	1/21/2020	<u>New:</u> Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New:</u> < 20 units: Level 2 EV-Ready space per unit ; remaining spaces Level 1 EV-Ready / > 20 units: 25% of spaces Level 2 EV-Ready	<u>New Office:</u> >10 spaces- 20% equipped with Level 2 EVCS + 10 % Level 1 EV-Ready + 30% Level 1 EV-Capable	<u>New Other NR:</u> >10 spaces- 6% equipped with Level 2 EVCS + 5 % Level 1 EV-Ready	ADU/JADU without parking facilities <a href="#">Ord. 19-2193</a>
Davis	EV	4/23/2019	<u>New:</u> Level 2 EV-Ready space per unit	<u>New:</u> < 20 units: Level 1 charging at 5% of spaces / >20 units: Level 2 charging at 1% of spaces (min. 1)			<a href="#">Ord. 2554</a>
East Palo Alto	EV	<i>First Reading</i> 10/6/2020	<u>New:</u> Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New:</u> 10% of units with Level 2 charging + 90% of units with Level 1 charging. Outlets may be shared between two units.	<u>New:</u> Office: >10 spaces- 10% equipped with Level 2 EVCS + 10% Level 1 EV-Ready + 30 % EV-Capable	<u>New Other NR:</u> >10 spaces- 6% equipped with Level 2 EVCS + 5 % Level 1 EV-Ready	ADU/JADU without parking facilities + MF: utility service cost > \$4500 Ord. 1413
Encinitas	EV	11/13/2019	<u>New:</u> Level 2 EV-Ready space per unit	<u>New:</u> EVSE charging at 15% of spaces	<u>New NR + Hotel/Motel:</u> EVSE charging at 8% of spaces <u>Add/Alts:</u> > 10k sq. ft.	ADU/JADU without parking facilities / utility service cost > \$400 per unit	Ord. 2019-22
Hayward	EV	3/17/2020	<u>New:</u> Two Level 2 EV-Ready spaces for each unit (one Level 2 if only 1 space exists)	<u>New:</u> < 20 units: Level 2 EV-Ready space per unit/ > 20 units: 75% of spaces Level 2 EV-Ready ; remaining units Level 2 EV-Capable	<u>New:</u> Office: >10 spaces- 20% equipped with Level 2 EVCS + 30 % Level 2 EV-Ready Capable	<u>New:</u> Other NR: >10 spaces- 15% equipped with Level 2 EVCS	ADU/JADU without parking facilities <a href="#">Ord. 20-05</a>
Los Altos	EV	10/27/2020	<u>New:</u> Level 2 EV-Ready spaces for each unit (Two Level 2 if multiple spaces exist)	<u>New:</u> < 20 units: Level 2 EV-Ready space per unit/ > 20 units: 25% of spaces Level 2 EV-Ready + remaining spaces Level 1 EV-Ready	<u>New:</u> Office: >10 spaces- 10% equipped with Level 2 EVCS + 30 % Level 2 EV-Ready Capable + 10% Level 1 EV-Ready	<u>New:</u> Other NR: >10 spaces- 6% equipped with Level 2 EVCS + 5% Level 1 EV-Ready	ADU/JADU without parking facilities <a href="#">Ord. 2020-471</a>

**2019 Code Cycle - Locally Adopted Electric Vehicle Ordinances**

Jurisdiction	Ord. Type	Council Adopted Date	Scope				Exceptions	Ordinance
			Single Family, Duplexes, and Townhouses	Multifamily	Nonresidential - Office	Nonresidential - Other		
Marin County	EV	10/8/2019	<u>New:</u> Level 2 EV-Ready space per unit <u>Add/Alts:</u> Panel upgrade must include Level 2-Ready circuit	<u>New:</u> Level 2 EV-Ready space per dwelling unit <u>Add/Alts:</u> Panel upgrade must include capacity for 20% Level 2 EV-Capable spaces	<u>New:</u> 10% of spaces to be Level 2 EV-Ready + remaining spaces EV-Capable <b>OR</b> 20% spaces Level 2 EV-Ready + EVCS in 5% spaces (min. 2) <u>Add/Alts:</u> Panel upgrade must include capacity for 20% Level 2 EV-Capable		ADU/JADU without parking facilities	<a href="#">Ord. 3712</a>
Millbrae	EV	11/10/2020	<u>New:</u> Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New:</u> < 20 units: Level 2 EV-Ready space per unit / > 20 units: 25% of spaces Level 2 EV-Ready + remaining spaces Level 1 EV-Ready / Affordable MF: 10% spaces Level 2	<u>New Office:</u> >10 spaces- 10% equipped with Level 2 EVCS + additional 10 % Level 1 EV-Ready + additional 30% EV-Capable	<u>New Other NR:</u> >10 spaces- 6% equipped with Level 2 EVCS + additional 5 % Level 1 EV-Ready	ADU/JADU without parking facilities + MF: utility service cost > \$4500	Ord. No. 2020-
Mill Valley	EV	11/18/2019	<u>New:</u> Level 2 EV-Ready per unit <u>Add/Alts:</u> Panel upgrade must include Level 2-Ready circuit	<u>New:</u> One Level 2 EV-Ready space per dwelling unit	<u>Add/Alts:</u> Panel upgrade must include capacity for 20% Level 2 EV-Capable		ADU/JADU without parking facilities	<a href="#">Ord. 1313</a>
Milpitas	EV	12/3/2019	<u>New:</u> Level 1 EV-Ready circuit + Level 2 EV-Ready circuit per unit	<u>New:</u> < 20 units: Level 2 charging at 15% of spaces + Level 1 EV-Capable at 35% of spaces / >20 units: Level 2 charging at 20% of spaces + Level 1 EV-Capable at 35% of spaces	<u>New Office:</u> 5% equipped with Level 2 EVCS + 10 % Level 1 EV-Ready + 20% Level 2 EV-Capable	<u>New Other NR:</u> >10 spaces- 4% equipped with Level 2 EVCS + 3 % Level 1 EV-Ready; >100 spaces- 80kW fast charger per 100	MF Affordable Housing Projects	<a href="#">Ord. 65 148</a>
Mountain View	EV	11/12/2019	<u>New:</u> Level 1 EV-Ready circuit + Level 2 EV-Ready circuit per unit	<u>New:</u> Level 2 charging at 15% of spaces + remaining spaces EV-Ready + Level 3 EVCS for every 100 spaces	<u>New Mixed Use:</u> Level 2 charging at 15% of spaces + remaining spaces EV-Ready + Level 3 EVCS for every 100 spaces <u>New Commercial/Hotel/Motel :</u> < 10 spaces- Level 2 EVCS + EV-Ready remaining spaces / >10 spaces - 15% equipped with Level 2 EVCS + EV-Ready remaining spaces / >100 spaces - Level 3 DC EVCS			<a href="#">Ord. 17.19</a>
Redwood City	EV	9/21/2020	<u>New:</u> Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New:</u> <20 units- Level 2 EV-Ready space per unit ; remaining spaces Level 1 EV-Ready / >20 units- 25% of spaces Level 2 EV-Ready	<u>New Office:</u> >10 spaces- 10% equipped with Level 2 EVCS + additional 10 % Level 1 EV-Ready + additional 30% EV-Capable	<u>New Other NR:</u> >10 spaces- 6% equipped with Level 2 EVCS + additional 5 % Level 1 EV-Ready	ADU/JADU without parking facilities	<a href="#">Ord. No.</a>



## 2019 Code Cycle - Locally Adopted Electric Vehicle Ordinances

Jurisdiction	Ord. Type	Council Adopted Date	Scope				Exceptions	Ordinance
			Single Family, Duplexes, and Townhouses	Multifamily	Nonresidential - Office	Nonresidential - Other		
San Anselmo	EV	4/14/2020	<u>New</u> : Level 2 EV-Ready per unit <u>Add/Alts</u> : Panel upgrade must include Level 2-Ready circuit	<u>New</u> : Level 2 EV-Ready space per dwelling unit <u>Add/Alts</u> : Panel upgrade must include capacity for 20% Level 2 EV-Capable spaces	<u>New</u> : 10% of spaces to be Level 2 EV-Ready + remaining spaces EV-Capable <b>OR</b> 20% spaces Level 2 EV-Ready + EVCS in 5% spaces (min. 2) <u>Add/Alts</u> : Panel upgrade must include capacity for 20% Level 2 EV-Capable		ADU/JADU without parking facilities	<a href="#">Ord. 1145</a>
San Jose	EV	10/1/2019	<u>New</u> : Level 2 EV-Ready space per unit	<u>New</u> : EVSE charging at 10% of spaces + 20% of spaces EV-Ready + 70% EV-Capable	<u>New</u> : EVSE charging at 10% of spaces + 40% EV-Capable <u>New Hotel/Motel</u> : EVSE charging at 10% of spaces + 50% EV-Capable		ADU/JADU without parking facilities + Detached garages	<a href="#">Ord. 30311</a>
San Mateo County	EV	2/25/2020	<u>New</u> : Level 2 EV-Ready space per unit + Level 1 EV-Ready circuit (Level 2 if only 1 space exists)	<u>New</u> : 10% of units with Level 2 EV-Ready space + 40% of units Level 1 EV-Ready spaces	<u>New Office</u> : >10 spaces- 10% equipped with Level 2 EVCS + 10 % Level 1 EV-Ready + 30% Level 1 EV-Capable	<u>New Other NR</u> : >10 spaces; 6% equipped with Level 2 EVCS + 5 % Level 1 EV-Ready	ADU/JADU without parking facilities + <u>MF</u> : utility service cost > \$4500	<a href="#">Ord. 4824</a>
Santa Monica	EV	4/28/2020	<u>New</u> : Level 2 EV-Ready space per unit	<u>New</u> : EVSE charging at 10% of spaces + 20% of spaces EV-Ready + 70% EV-Capable	<u>New Office</u> : EVSE charging at 10% of spaces + 20% EV-Ready + 30% EV-Capable <u>New Hotel/Motel</u> : EVSE charging at 10% of spaces + 30% EV-Capable	<u>New Other NR</u> : EVSE charging at 10% of spaces + 30% EV-Capable	ADU/JADU without parking facilities / utility service cost > \$400 per unit	<a href="#">Ord. 2634</a>
Sunnyvale	EV	First Reading 10/27/2020	<u>New</u> : Level 2 EV-Ready + Level 1 EV-Ready space per unit (Level 2 if only 1 space exists)	<u>New</u> : < 20 units: Level 2 EV-Ready space per unit / > 20 units: 25% of spaces Level 2 EV-Ready + remaining spaces Level 1 EV-Ready / Affordable <u>MF</u> : 10% spaces Level 2	<u>New Office</u> : >10 spaces- 10% equipped with Level 2 EVCS + additional 10 % Level 1 EV-Ready + additional 30% EV-Capable	<u>New Other NR</u> : >10 spaces- 6% equipped with Level 2 EVCS + additional 5 % Level 1 EV-Ready / >100 spaces - Level 3 DC EVCS	ADU/JADU without parking facilities	Ord. No.

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## Summary Cost-Effectiveness Analysis<sup>1</sup>

Potential Action	Benefit	Cost	Benefit / Cost Ratio <sup>2</sup>
Require more stringent cool roofs for newly constructed buildings. <sup>3</sup>	\$2,536	\$237	10.7
Require more stringent cool roofs for alterations and additions to existing buildings. <sup>4</sup>	\$5,537	\$635	8.72
Require envelope and duct energy efficiency measures for major renovations of existing single-family and multifamily residential buildings. <sup>5</sup>	\$20,971	\$3,472	6.04
Require water heating energy efficiency measures for major renovations of existing single-family and multifamily residential buildings. <sup>6</sup>	\$509.60	\$208	2.45
Require solar PV for new non-residential buildings and major renovations of non-residential buildings. <sup>7</sup>	\$10,476	\$5,566	1.9

- <sup>1</sup> The prototypes for new residential buildings are 2,100 ft<sup>2</sup> for a single-family home and 6,960 ft<sup>2</sup> for an 8-unit multifamily building, and for existing residential buildings are 1,665 ft<sup>2</sup> for a single-family home and 960 ft<sup>2</sup> per unit for a multifamily building. The figures are derived from data for Climate Zone 15 (where Palm Springs is located) in cost-effectiveness studies issued by the statewide Codes and Standards Program under the auspices of the California Energy Commission. The on-bill data do not include either the social cost of higher GHG emissions leading to air and water pollution, droughts and wildfires or the non-energy benefits of improved public health and a sustainable economy.
- <sup>2</sup> Costs for initial installation and annual operation, and on-bill benefits from reduced energy costs, are calculated over the life cycle of the equipment (30 years unless otherwise noted). The benefit / cost calculations generally assume an escalation of utility rates, a real discount rate of 3 percent and first incremental costs are financed into a mortgage or loan of 30 years at a rate of 5% for single-family homes and 10 years at a rate of 4% for multifamily homes. Source: *2019 Cost-Effectiveness Study: Existing Low-rise Residential Building Efficiency Upgrade*, pages 11 – 12.
- <sup>3</sup> Incremental cost of adding a cool roof to a single-family home. Source: *2019 Cost-effectiveness Study: Low-Rise Residential New Construction*, Table 4, page 10. The benefits are calculated using the Energy Commission's Time Dependent Valuation (TDV) lifecycle cost methodology, which is intended to capture the "societal value or cost" of energy use. Source: *Cost-Effectiveness Study for Cool Roofs FINAL Report for All Climate Zones*, page 78. The benefit / cost ratio is 78.26 for a multifamily building.
- <sup>4</sup> Incremental cost of adding a cool roof to a pre-1978 single-family home already installing a new roof as part of the remodel. The benefit / cost ratio is 14.0 for a pre-1978 multifamily building. Source: *2019 Cost-Effectiveness Study: Existing Low-rise Residential Building Efficiency Upgrade*, Tables 47 and 48, page 51.
- <sup>5</sup> Envelope and duct package consisting of attic insulation, air sealing and duct sealing upgrades to a pre-1978 single-family home. The benefit / cost ratio is 9.67 for a multifamily building. Source: *2019 Cost-Effectiveness Study: Existing Low-rise Residential Building Efficiency Upgrade*, Table 3, page 10; Tables 47 and 48, page 51.
- <sup>6</sup> Water heating package consisting of a water heater blanket, hot water pipe insulation and low-flow shower and faucet fixtures upgrades to a single-family home (all vintages). The benefit / cost ratio is 2.92 for a multifamily building. Source: *2019 Cost-Effectiveness Study: Existing Low-rise Residential Building Efficiency Upgrade*, Table 3, page 10; Tables 47 and 48, page 51.
- <sup>7</sup> Based on adding a 3kW PV system to a 24,691 ft<sup>2</sup> medium retail building. Source: *2019 Nonresidential New Construction Reach Code Cost Effectiveness Study*, Figure 62, page 73.

Potential Action	Benefit	Cost	Benefit / Cost Ratio <sup>2</sup>
Require all-electric Code compliant home for new residential construction. <sup>8</sup>	\$5,349	\$3,090	1.7
Require a heat pump or solar thermal system for new residential pool construction, if the pool is to be heated. <sup>9</sup>	\$1,102	\$868	1.27
Require solar for major residential additions. <sup>10</sup>	\$5,935	\$5,783	1.03
As alternative to all-electric code compliant home, require new mixed-fuel residential buildings to have above-code energy performance. <sup>11</sup>	\$2,179	\$2,179	1.0
Require new mixed-fuel residential buildings to be prewired for future electric cooking and clothes drying and above-Code prewiring for heat pump water heater (HPWH). <sup>12</sup>	0	\$413	N/A
Require new mixed-fuel residential buildings to be prewired for future battery storage. <sup>13</sup>	0	\$100	N/A

<sup>8</sup> For a single-family home. The benefit / cost ratio is 6.4 for a multifamily building. Source: *2019 Cost-effectiveness Study: Low-Rise Residential New Construction*, Table 14, page 34; Table 16, page 38.

<sup>9</sup> 10-year life cycle. Source: *Cost Effectiveness Study: All Electric Heat Pump Pool Heating - Non-Preempted*, Page 7 and Table 4, page 11. The data are for Santa Monica; statewide data do not exist.

<sup>10</sup> Based on adding a 1.2kW PV system for an 800 ft<sup>2</sup> addition (1.5 watts per ft<sup>2</sup>) to a single-family home. The benefit / cost ratio for adding a 6.96 kW PV system for a 3,480 ft<sup>2</sup> addition (2 watts per ft<sup>2</sup>) to a multifamily building is 1.23. Source: *2019 Cost-effectiveness Study: Low-Rise Residential Addendum – Cost Effectiveness Study of Santa Monica Proposed Ordinance Requiring Photovoltaic (PV) Systems on Residential Additions*, Table 1, page 3. The data are for Santa Monica; statewide data do not exist.

<sup>11</sup> For a single-family home. The benefit / cost ratio is 1.35 for a multifamily building. Source: *2019 Cost-effectiveness Study: Low-Rise Residential New Construction*, Table 81, page 114; Table 82, page 115.

<sup>12</sup> For a single-family home. The cost estimate is \$313 per unit for a multifamily building. Source: *Ibid*, Table 6, page 16. The 2019 Energy Code already requires pre-wiring for a future HPWH for new homes with a gas water heater. A Codes and Standards representative estimates the cost of recommended above-Code prewiring for an HPWH would be \$13.

<sup>13</sup> Cost estimate provided by California Energy Commission Building Decarbonization Lead Mazi Shirakh, PE, at the Commission's October 6, 2020, staff workshop on the 2022 Building Energy Efficiency Standards. The Commission staff is proposing new residential mandatory battery storage ready requirements for the 2022 standards.

Potential Action	Benefit	Cost	Benefit / Cost Ratio <sup>2</sup>
Require electric heat pump water heaters in new mixed-fuel residential buildings. <sup>14, 15</sup>	0	0	N/A

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<sup>14</sup> 15-year life cycle. An HPWH is estimated to cost the same as a tankless gas water heater in both a single-family home and a multifamily building Source: *2019 Cost-effectiveness Study: Low-Rise Residential New Construction*, Table 6, page 16. Based on data from Los Angeles-area Climate Zone 9, having an HPWH instead of a tankless gas heater is estimated to have energy costs of approximately \$33 per year in a single-family home and energy savings of approximately \$19 per year in a multifamily building. Source: *Residential Building Electrification in California* prepared by Energy and Environmental Economics, Inc. (E3), Figure 3-11, page 60. The E3 report also shows 13-year lifecycle savings (total installation cost + total bill savings) in Figure 3-23 on page 72, and it is positive for all six studied climate zones. This is because E3 believes HPWHs are cheaper than tankless gas water heaters, unlike the statewide Codes and Standards team.).

<sup>15</sup> Through a program sponsored by Southern California Edison (SCE) also available to Palm Springs residents receiving electricity provided by Desert Community Energy, up to a \$1,000 discount may be available on an HPWH with a high Uniform Energy Factor. California tax credits may be available for residential energy efficiency equipment including most ENERGY STAR® certified Electric HPWHs. Source: <https://www.sce.com/residential/rebates-savings/rebates>. In addition, in a filing on October 9, 2020, with the California Public Utilities Commission (CPUC), SCE stated that it plans to propose an incremental baseline adjustment for residential customers with HPWHs after its new billing system is operational in 2022. SCE will be proposing to provide HPWH customers with an incremental baseline quantity in the amount necessary to keep the customer's average rate approximately unchanged by additional HPWH load. Southern California Edison Company's (U 338-E) Comments on Phase II Amended Scoping Memo and Ruling of Assigned Commissioner, CPUC Proceeding R.19-01-011, pages 7 – 9. The figures in footnote 14 do not include any equipment discounts, baseline allowances or tax credits.