California Department of Housing and Community Development
Beth Maynard, District Representative II
Tom Martin, District Representative II
State Housing Law Program
Workshop Goals

• 2016 CALGreen changes (current code brief overview)

• Intervening code cycle changes (effective July 1, 2018)

• Future activities (2019 CALGreen effective January 1, 2020)

• Q&A throughout
Chapter 4
Residential Mandatory Measures
2016 CALGreen
Section 4.106.4 Electric vehicle (EV) charging for new construction

- Requires raceway, panel capacity, and area for charging station(s)

Exceptions:
- Where there is no commercial power supply
- Where there is substantiated evidence that compliance will alter the local utility infrastructure design requirements on the utility side of the meter, thereby, increasing the utility cost to homeowners or developers by more than $400 per dwelling unit
Section 4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages

- Install raceway
- Must be continuous at enclosed, inaccessible or concealed areas
- Service panel required to have capacity for installation of a 40-ampere minimum dedicated branch circuit
- Spaces for overcurrent protective device identified on the panel directory
Section 4.106.4.2 New multifamily dwellings

• 17 or more multifamily dwelling units

• 3% of parking spaces to have capability for future electric vehicle charging

• Proposed locations to be identified on construction plans

• Spaces for overcurrent protective device identified on the panel directory

• IMPORTANT: There is no mandatory requirement to build electric vehicle charging stations (EVCS), or identify the spaces on the ground, or to install chargers
Section 4.106.4.2.3 Single EV space required

- Requirements similar to one- and two-family dwellings
- Install raceway
- Raceway from service panel to listed box
- Construction documents identify raceway termination point
- Service panel shall have capacity for a 40-ampere branch circuit
- Reserved spaces for branch circuit overcurrent protective device (breaker)
Section 4.106.4.2.4 Multiple EV spaces required

- Construction documents identify raceway termination points, proper location of future EVCS and chargers, raceway methods, wiring schematics, amperage of chargers and load calculations

- Construction documents verify that the electrical panel service and electrical system have capacity to simultaneously charge all required EVCS at full-rated amperage of the chargers

- Plan design is based on a 40-ampere minimum branch circuit

- Underground, enclosed, inaccessible or concealed raceways are required to be installed at the time of original construction
• **Water closet** - 1.28 gallons per flush
• **Urinals** - 0.125 gallons per flush
• **Shower heads** - 2.0 gallons per minute @ 80 psi
• **Residential lavatory faucets** - 1.2 gallons per minute @ 60 psi
• **Metering faucets** - 0.25 gallons per cycle
• **Kitchen faucets** - 1.8 gallons per minute @ 60 psi
WATER EFFICIENCY AND CONSERVATION
Chapter 4 - Division 4.3 Outdoor Water Use

• Residential developments with landscape areas of 500 sq. ft. or greater

• Compliance with the Department of Water Resources’ (DWR) Model Water Efficient Landscaping Ordinance (MWELO) or a similar local ordinance

• Alternate prescriptive compliance method for landscapes 2500 sq. ft. or less (Appendix D)
Section 4.408.1 Construction waste management

- Recycle and/or salvage **65 percent** of the nonhazardous construction and demolition waste

Exceptions:
- Excavated soil and land-clearing debris.
- Alternate waste reduction methods
- Isolated jobsites

OR

- Meet a local construction and demolition waste management ordinance, whichever is more stringent
2016 Intervening Code Adoption Cycle
Effective July 1, 2018

- Division 4.1 Site Development
- Division 4.3 Indoor Water Use
- Division 4.3 Outdoor Water Use
- Division 4.4 Building Maintenance and Operation
Section 4.106.4.2. New hotels and motels
Requirements are similar to those for multifamily dwellings

- Proposed locations and dimensions of EVCS to be identified on construction plans

- IMPORTANT: There is no mandatory requirement to build EVCS, or identify the spaces on the ground, or to install chargers

Effective July 1, 2018
Table 4.106.4.3.1

<table>
<thead>
<tr>
<th>TOTAL NUMBER OF PARKING SPACES</th>
<th>NUMBER OF REQUIRED EV SPACES</th>
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<td>151-200</td>
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<tr>
<td>201 and over</td>
<td>6 percent of total</td>
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</table>

Effective July 1, 2018
Section 4.303.1.3.1 Single showerhead
- Maximum flow of 1.8 gallons per minute @ 80 psi (previously 2.0 gallons per minute at 80 psi)

Section 4.303.1.3. Multiple showerheads serving one shower
- Combined flow of multiple showerheads controlled by a single valve 1.8 gallons per minute @ 80 psi (previously 2.0 gallons per minute at 80 psi)

Effective July 1, 2018
Section 4.305.1 Recycled water supply systems

- New provision identifies possible requirement for installation of a recycled water system for qualifying areas identified in the California Plumbing Code, Chapter 15

Effective July 1, 2018
Chapter 1
Section 102.3 Verification
New requirement - Complete a Residential Occupancies Application Checklist
Chapter 3
Section 302.1 Mixed occupancy building
Two new exceptions clarify that accessory structures and live/work units shall comply with Chapter 4 and Appendix A4, as applicable
Chapter 4

Section 4.106.4 Electric vehicle charging for new construction

New exception clarifies that accessory dwelling units without additional parking do not need to comply with EV charging requirements for new construction
Proposed for 2019 CALGreen

Chapter 4
Section 4.106.4.2 New multifamily dwellings

- Removed the “17 or more dwelling units” requirement
- All multifamily projects must now comply
- Increased the number of required EV spaces from 3 to 10 percent
Chapter 4
Section 4.303.1.4.3 Metering Faucets
Metering faucets shall not deliver more than 0.2 gallons per cycle (down from 0.25)
Proposed for 2019 CALGreen

Appendix A4
Section A4.106.8.2 New multifamily dwellings

• Tier 1 required EV spaces increased from 5% to 15%
• Tier 2 required EV spaces increased from 5% to 20%
Proposed for 2019 CALGreen

Appendix A4

Section A4106.8.3 New hotels and motels

• **Tier 1** Table A4.106.8.3.1 shows required number of EV spaces

• **Tier 2** Table A4.106.8.3.2 shows required number of EV spaces
Contact Information

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FAX: (916) 327-4712
Website: www.hcd.ca.gov

Questions: Use “Questions, Comments, Feedback" form on our website.
HCD’s Website
www.hcd.ca.gov
Mandatory Energy Efficiency Targets
Title 24 Part 6

Voluntary Energy Efficiency
Title 24 Part 11
Appendix A4

**Residential** Voluntary Measures Proposed for 2019 CALGreen Code

- Section A4.203, Performance Approach for Newly Constructed
  - based on **target Energy Design Rating (EDR) scores**
    (no longer “Percent better than” mandatory Part 6 )

<table>
<thead>
<tr>
<th>2016 Energy Efficiency Target</th>
<th>2019 Energy Efficiency Target</th>
<th>PV Target</th>
<th>Tier 1 Target</th>
<th>Tier 2 (ZNE) Target</th>
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<tr>
<td>Example for CZ 12</td>
<td>EDR = 43</td>
<td>EDR = 25</td>
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Appendix 4.2
Residential Voluntary Measures Proposed for 2019 CALGreen Code

• Section A4.203, Performance Approach for Newly Constructed
  – based on target EDR scores
    (no longer “Percent better than” mandatory Part 6)

Mandatory
Energy Efficiency Targets
Title 24 Part 6

Voluntary
Energy Efficiency
Title 24 Part 11
• A4.203.1.3.1 Tier 1.

- meet or be less than a target Energy Design Rating (EDR), based on climate zone.

- Measures considered:
  - energy efficiency measures (e.g. triple pane windows)
  - Demand Management
  - on-site battery or thermal storage
A4.203.1.3.1 Tier 1

Modeled using:
- PV oversizing factors of 1.0 for mixed fuel and 1.1 for all-electric
- TOU battery controls

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<tr>
<th>CZ</th>
<th>Mixed Fuel</th>
<th>All-Electric</th>
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Appendix A4

Residential Voluntary Measures Proposed for 2019 CALGreen Code

• A4.203.1.3.2 Tier 2.
  ➢ meet or be less than a target Energy Design Rating (EDR), based on climate zone.
  ➢ Paths considered:
    • electrifying space and water heating
    • advanced electric battery controls
    • modest oversizing of the photovoltaic system
A4.203.1.3.2 **Tier 2**

Modeled using:
- PV oversizing factors up to 1.4 for mixed fuel
- PV sized to offset annual kWh for all-electric
- TOU battery controls

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<tbody>
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Appendix A4
Residential Voluntary Measures
Proposed for 2019 CALGreen Code

Required Prerequisites:

• A4.203.1.1.2 Quality Insulation Installation (QII)

AND Choose ONE of the Prerequisites below:

• A4.203.1.2.1 Roof deck insulation, or ducts in conditioned space
• A4.203.1.2.2 High Performance Walls (HPW)
• A4.203.1.2.3 HERS-Verified Compact Hot Water Distribution System (CHWDS-H) with Drain Water Heat Recovery (DWHR-H)
Appendix A4

Residential Voluntary Measures Proposed for 2019 CALGreen Code

• Section A4.204 Performance Approach for Additions has been struck
Local Ordinance Process

Local Jurisdictions submit an Application to the Energy Commission

- A copy of the ordinance.
- A study or analysis showing the expected energy savings and the cost effectiveness of the ordinance.
- The date the ordinance, energy savings and cost-effectiveness study were presented to and adopted by the Council/Board in a Publicly Noticed Meeting.
- A letter to the Executive Director
  - A statement/finding that the ordinance will require buildings to be “designed to save energy when compared to levels permitted by Title 24 Part 6.”
  - Evidence of CEQA compliance.

Title 24 Section 10-106
Questions?

Building Energy Efficiency Program 2019 Update

http://www.energy.ca.gov/title24/2019standards/rulemaking/

Contact Information

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