
(Change from 2016 Energy and Green Code requirements.)

City of Santa Clara Recommended Reach Code

Option #1

Mostly the same as the P. R. C. Recommendations for Climate Zone 4 + Flexibility in choosing (Mixed fuel)

New Single Family Residential

- Solar photovoltaics required, based on the day of the new house. For example, a new 2,500 s.f. house will require approximately 2.8 kwh of solar power.
- Quality Insulation installation (QI) is a prescriptive requirement. (May not be required in a performance energy analysis.)
- Home Energy Rating System (HERS) testing required for kitchen exhaust fans.
- HVAC systems required to be designed closer to AGCA Manual ( ), which may affect duct size.
- Insulation required to be MINV 13 instead of the former MINV 8.

Performance Path Requirements

1. All Electric. Demonstrate that the proposed building will be all electric, OR
Prescriptive Path Requirements

Build Efficiency and Meet 2019 Title 24 Part 6.

Mixed Fuel Building
a. Low-leakage ducts in conditioned space per 2019 Reference Appendices RA3.4.1.3 and RA4.6.4.6.
b. Install R-12/24/24 R-metal slab insulation at a depth of 6/8 inches.
c. Compact hot water distribution per 2019 Reference Appendices RA4.6.4.6.
- Maximum control fan integrated ventilation system efficiency of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3.
- Either 1) 1/2 kWh battery OR 2) A solar water heating system with a minimum solar savings fraction of 0.20.

(1) Building Division may consider equivalent alternative methods.
(2) 11th floor and up in high rise applications.

New Multi-Family Residential, New construction, 3 stories or less

- Quality Insulation Installation (QI) is a prescriptive requirement. (May not be required in performance energy analysis.)
- Home Energy Rating System (HERS) testing required for kitchen exhaust fans.
- HVAC systems required to be designed closer to AGCA Manual ( ), which may affect duct size.
- Insulation required to be MINV 13 instead of the former MINV 8.

Performance Path Requirements

1. All Electric. Demonstrate that the proposed building will be all electric, OR
Prescriptive Path Requirements

Build Efficiency and Meet 2019 Title 24 Part 6.

Mixed Fuel Building
a. Install R-20 perimeter slab insulation at a depth of 6/8 inches.
b. Compact hot water distribution per 2019 Reference Appendices RA4.6.4.
c. Maximum control fan integrated ventilation system efficiency of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3.
d. Either 1) 1/2 kWh battery OR 2) A solar water heating system with a minimum solar savings fraction of 0.20.

(1) All-electric demonstration that the proposed home will be all electric, OR
Prescriptive Path Requirements

Build Efficiency and Meet 2019 Title 24 Part 6.

Mixed Fuel Building
a. Low-leakage ducts in conditioned space per 2019 Reference Appendices RA3.4.1.3 and RA4.6.4.6.
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- Either 1) 1/2 kWh battery OR 2) A solar water heating system with a minimum solar savings fraction of 0.20.

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(2) 11th floor and up in high rise applications.

New Non-Residential Commercial, new construction, office or retail occupancy, or new multi-family residential over 3 stories:

Numerous changes:
- Changes to lighting prohibited
- Changes to air filtration, natural, mechanical, and exhaust ventilation
- Changes to air classification and recirculation
- Changes to economics
- Changes to cooling tower efficiencies
- Changes to exhaust system transfer air

Performance Path Requirements

1. All Electric. Demonstrate that the proposed building will be all electric, OR
2. Mixed Fuel Buildings Except Office and Mercantile. Demonstrate that the energy use of the proposed building is 24% more efficient than the 2019 State Energy Code.
State Energy Code
Prescriptive Path Requirements

Build All Electric and Meet 2019 Title 24 Part 6.

Mixed Fuel Building, Except Office and Mercantile
a. Install fenestration with a solar heat gain coefficient (U) no less than 0.35 in hotel/residential/high-rise multistory, or 0.4 or greater in all other space types.
b. Design Variable Air Volume (VAV) box minimum airflows to be equal to the source ventilation minimums.
c. Include economical and staged fan control in air handlers with a mechanical cooling capacity of 33,000 Btu/h.
d. Reduce the lighting power density (Watts/ft2) by ten percent (10%) from that required from Table 140.6-C.
- In common areas, improved lighting.
1. Control to daylight dimming plus (OFF) from Section 140.6-D.

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- In common areas, improved lighting.
1. Control to daylight dimming plus (OFF) from Section 140.6-D.

Peninsula Reach Code Initiative Recommended Reach Code for Climate Zone 4 (Santa Clara):

New Single Family Residential

- Solar photovoltaics required, based on the day of the new house. For example, a new 2,500 s.f. house will require approximately 2.8 kwh of solar power.
- Quality Insulation installation (QI) is a prescriptive requirement. (May not be required in a performance energy analysis.)
- Home Energy Rating System (HERS) testing required for kitchen exhaust fans.
- HVAC systems required to be designed closer to AGCA Manual ( ), which may affect duct size.
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Performance Path Requirements

1. All Electric. Demonstrate that the proposed building will be all electric, OR
Prescriptive Path Requirements

Build Efficiency and Meet 2019 Title 24 Part 6.

Mixed Fuel Building
a. Low-leakage ducts in conditioned space per 2019 Reference Appendices RA3.4.1.3 and RA4.6.4.6.
b. Install R-12/24/24 R-metal slab insulation at a depth of 6/8 inches.
c. Compact hot water distribution per 2019 Reference Appendices RA4.6.4.6.
- Maximum control fan integrated ventilation system efficiency of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3.
- Either 1) 1/2 kWh battery OR 2) A solar water heating system with a minimum solar savings fraction of 0.20.

(1) Building Division may consider equivalent alternative methods.
(2) 11th floor and up in high rise applications.

New Multi-Family Residential, New construction, 3 stories or less

- Quality Insulation Installation (QI) is a prescriptive requirement. (May not be required in performance energy analysis.)
- Home Energy Rating System (HERS) testing required for kitchen exhaust fans.
- HVAC systems required to be designed closer to AGCA Manual ( ), which may affect duct size.
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Performance Path Requirements

1. All Electric. Demonstrate that the proposed building will be all electric, OR
Prescriptive Path Requirements

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Mixed Fuel Building
a. Install R-20 perimeter slab insulation at a depth of 6/8 inches.
b. Compact hot water distribution per 2019 Reference Appendices RA4.6.4.
c. Maximum control fan integrated ventilation system efficiency of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3.
d. Either 1) 1/2 kWh battery OR 2) A solar water heating system with a minimum solar savings fraction of 0.20.

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(2) 11th floor and up in high rise applications.
### Electric Vehicle Charging Stations: New Single Family and Two Family Townhomes

<table>
<thead>
<tr>
<th>Change To 2020 Code:</th>
<th>No change to 2016 Code:</th>
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</thead>
<tbody>
<tr>
<td>New building with 1-7 units:</td>
<td>No change to 2016 Code:</td>
</tr>
<tr>
<td>3% of total parking spaces Level 2 EV capable (install conduit)</td>
<td>3% of total parking spaces Level 2 EV capable (install conduit)</td>
</tr>
<tr>
<td>New 20 units or less:</td>
<td>New 20 units or less:</td>
</tr>
<tr>
<td>1 Level 2 EV ready per unit</td>
<td>1 Level 2 EV ready per unit</td>
</tr>
<tr>
<td>New over 20 units:</td>
<td>New over 20 units:</td>
</tr>
<tr>
<td>25% of parking spaces Level 2 EV ready</td>
<td>25% of parking spaces Level 2 EV ready</td>
</tr>
<tr>
<td>75% of parking spaces Level 1 EV ready</td>
<td>75% of parking spaces Level 1 EV ready</td>
</tr>
<tr>
<td>Any additional space load management system permitted for EV parking space power</td>
<td>Any additional space load management system permitted for EV parking space power</td>
</tr>
<tr>
<td>Exemption: accessory dwelling units without additional parking</td>
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</tr>
<tr>
<td>Spaces accessible only by automated mechanical car parking systems are exempted from providing EV charging infrastructure</td>
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<tr>
<td>Load Management permitted for all EV parking spaces</td>
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### Electric Vehicle Charging Stations: New Multi-Family

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<tbody>
<tr>
<td>New building with 1-7 units:</td>
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<tr>
<td>6% of parking spaces install level 1 EV parking space power</td>
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<tr>
<td>New 20 units or less:</td>
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</tr>
<tr>
<td>1 Level 2 EV ready per unit</td>
<td>1 Level 2 EV ready per unit</td>
</tr>
<tr>
<td>New over 20 units:</td>
<td>New over 20 units:</td>
</tr>
<tr>
<td>25% of parking spaces Level 2 EV ready</td>
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### Electric Vehicle Charging Stations: New Non-residential/mixture

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<tr>
<th>Change To 2020 Code:</th>
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<tbody>
<tr>
<td>New buildings with at least 10 parking spaces</td>
<td>New buildings with at least 10 parking spaces</td>
</tr>
<tr>
<td>Level 2 capable (install conduit)</td>
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</tr>
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<td>Commercial excluding office use:</td>
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</tr>
<tr>
<td>- Install level 2 charging stations at 1% of parking spaces, install level 3 circuits at 5% of parking spaces</td>
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<tr>
<td>- One DC fast charger may substitute 4 level 2 chargers and 5 level 3 circuits if a min. number of stations have been installed</td>
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</tr>
<tr>
<td>- Any additional spaces can use load management system permitted for EV parking space power</td>
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</tr>
<tr>
<td>Commercial with office use:</td>
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</tr>
<tr>
<td>- Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 30% of spaces to be EV capable</td>
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<tr>
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### Notes:
1. The city of Santa Clara Code only applies to projects which have not yet applied for a Planning Division project review, unless no Planning Division project review is required for the proposed project.
2. For all electric vehicle charging stations, no changes to parking space dimensions are required other than dimensions already required by the California Building Code disabled access requirements, and the city of Santa Clara Zoning Code.
3. The city of Santa Clara Code does not apply to additions or alterations.
4. All common area bicycle storage rooms shall have adequate 110v outlets to charge all bicycle storage spaces.
5. Exclusions to electric vehicle charging stations requirements for affordable housing projects: 25% of the total parking spaces Level 3 Ready, 3% of the total parking spaces Level 2, 3% of total parking spaces Level 2 Ready.

### Exception to Electric Vehicle Charging Stations Requirements for Affordable Housing Projects:
- 25% of the total parking spaces Level 1 Ready, 3% of the total parking spaces Level 2, 3% of total parking spaces Level 2 Ready.
- All common area bicycle storage rooms shall have adequate 110v outlets to charge all bicycle storage spaces.
New Single Family Residential

- Solar photovoltaics required, based on a
  926 sq ft. house will require approximately
  2.8 kW of solar power.
- Solar photovoltaics installation (equipment
  for) can be purchased by the customer.
- Home Energy Rating System (HERS)
  testing required for kitchen exhaust.
- HVAC systems required to be designed
  closer to ACCA Manual J, which may
  affect duct size.
- R-10 slabs required to be installed in the
  top of the slab.
Exceptions to electric vehicle charging stations requirements for affordable housing projects:

2. For all electric vehicle charging stations; no changes to parking space dimensions are required other than dimensions already required by the California Building Code disabled access requirements, and the city of Santa Clara Zoning Code.

Note: for all classifications:

- New Non-residential/mixture
  - Commercial excluding office use
    - Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 30% of spaces to be EV capable. Exemption: Spaces accessible only by automated mechanical car parking systems are excepted from providing EV charging infrastructure. Load management permitted for all EV parking spaces.
    - Commercial with office use
      - Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 40% of spaces to be EV capable. Any additional spaces can use load management system permitted for EV parking space power.

- New Multi-Family
  - Commercial excluding office use
    - Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 30% of spaces to be EV capable. Any additional spaces can use load management system permitted for EV parking space power.
    - Commercial with office use
      - Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 30% of spaces to be EV capable. Any additional spaces can use load management system permitted for EV parking space power.

- New Single Family and Two Family
  - New residential
    - Commercial excluding office use
      - Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 30% of spaces to be EV capable. Any additional spaces can use load management system permitted for EV parking space power.
      - Commercial with office use
        - Install level 2 charging stations at 10% of parking spaces, install level 1 circuit at 10% of parking spaces, install 30% of spaces to be EV capable. Any additional spaces can use load management system permitted for EV parking space power.