The What, Why, Who, How, and When of Reach Codes *(in 15 minutes)*

March 11, 2019
What are we talking about today?
Title 24 is Composed of 12 "Parts," Described Below:

- Part 1 - California Building Standards Administrative Code
- Part 2 - California Building Code - Vol. I & II
- Part 3 - California Electrical Code
- Part 4 - California Mechanical Code
- Part 5 - California Plumbing Code
- Part 6 - California Energy Code
- Part 7 - No longer published in Title 24; see Title 8 CCR
- Part 8 - California Historical Building Code
- Part 9 - California Fire Code
- Part 10 - California Existing Building Code
- Part 11 - California Green Building Standards Code
- Part 12 - California Reference Standards Code
A **Reach** Code Goes Above the State Code

- Local jurisdictions are required to adopt the California Building Code each time it is updated.
- Local jurisdictions can **amend** the code to make it more stringent than the state code when they make certain findings.
Not all energy-related codes are reach codes

Energy Reach Codes
- Local amendment of the California Building Standards Code
- Require increased energy efficiency

Other Codes
- May not require amendment of Building Code
- May not require increased energy efficiency
WHY?

Why adopt an energy reach code?
Buildings, Energy Use, and Greenhouse Gases

Buildings Use a Lot of Energy and Produce a Lot of GHGs

- The 2019 California Building Standards will reduce energy and GHGs
- Local governments can do more!

California Energy Consumption by End-Use Sector, 2016

- Residential: 39.8%
- Commercial: 17.7%
- Industrial: 18.9%
- Transportation: 23.7%

Source: Energy Information Administration, State Energy Data System
New Buildings and Existing Buildings

New Buildings
- Will be around for 30-50 years
- Building them right is easier than retrofitting

Existing Buildings
- Make up most of California’s building stock
- Many are not energy efficient
Who is involved in developing and adopting a reach code?
Reach Code Actors & Stakeholders

Local Governments Adopt Reach Codes

- Elected Officials
- Staff may include people from several departments, such as:
  - City Manager’s Office
  - Sustainability Office
  - Building Department
  - Community Development Department
  - Public Works Department
Reach Code Actors & Stakeholders

External Reach Code Stakeholders include:
- Developers
- Architects and designers
- Contractors
- Environmental organizations
- And more!

State Agencies
- California Energy Commission (CEC) reviews and approves reach codes that require additional energy efficiency
- Building Standards Commission receives all amendments to the Building Code
When should reach codes be adopted?
Building Code Cycle

- State updates building code every 3 years
- Reach codes are amendments to that state building code
  - Only valid for time of underlying code: maximum 3 years
- 2019 Building Code will be in effect from 1/1/2020 to 12/31/2022
### Timing Options for Reach Codes

<table>
<thead>
<tr>
<th>Month</th>
<th>State Code</th>
<th>Local Code Options</th>
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<tbody>
<tr>
<td></td>
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<td><strong>Option 1</strong></td>
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<td>May</td>
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How does a local government start the reach code process?
Look at Options

Ways to Begin

- Options with potential political support
  - Check General Plans, Climate Action Plans, etc.
  - Talk with department heads
  - Consider neighboring jurisdictions

- Options with higher potential impact
  - What kinds of development are expected in the next 3 years?
  - Talk with Chief Building Official, Planning Department
State law requires that all local ordinances that increase energy efficiency demonstrate that the measures will pay for themselves within a reasonable amount of time.
Cost Effectiveness Studies

- Cost-effectiveness is usually shown with a study that examines the cost of the measure and compares that to projected savings due to energy savings

- Cost-effectiveness studies
  - Can be simple or complicated
  - Depend on assumptions – some of which are defined by the state in a manual or in software, and some of which are not
### Building Climate Zones

**California, 2017**

<table>
<thead>
<tr>
<th>County</th>
<th>Climate Zone(s)</th>
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<tbody>
<tr>
<td>Marin</td>
<td>2, 3</td>
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<tr>
<td>Sonoma</td>
<td>1, 2</td>
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<tr>
<td>Napa</td>
<td>2</td>
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<td>Solano</td>
<td>12</td>
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<tr>
<td>Contra Costa</td>
<td>3, 12</td>
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<tr>
<td>Alameda</td>
<td>3, 12</td>
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<tr>
<td>Santa Clara</td>
<td>4</td>
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<tr>
<td>San Mateo</td>
<td>3</td>
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<tr>
<td>San Francisco</td>
<td>3</td>
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*Source: California Energy Commission*
HELP?

Who can help?
# Support for reach code efforts

<table>
<thead>
<tr>
<th>Who</th>
<th>Where</th>
<th>What</th>
<th>How</th>
<th>Contact</th>
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</thead>
<tbody>
<tr>
<td>BayREN</td>
<td>Bay Area</td>
<td>All energy reach codes</td>
<td>• Events&lt;br&gt;• Resources, webpage&lt;br&gt;• BayREN county representatives</td>
<td><a href="mailto:codes@bayren.org">codes@bayren.org</a></td>
</tr>
<tr>
<td>IOU Reach Code Team</td>
<td>Statewide</td>
<td>All energy reach codes</td>
<td>• Cost-effectiveness studies&lt;br&gt;• Model ordinances&lt;br&gt;• Technical support</td>
<td><a href="mailto:info@localenergycodes.com">info@localenergycodes.com</a></td>
</tr>
<tr>
<td>Zero Emissions Buildings Task Force</td>
<td>Statewide</td>
<td>Reach codes with goal of decarbonizing buildings</td>
<td>• Networking&lt;br&gt;• Technical support&lt;br&gt;• Resources</td>
<td><a href="mailto:arider@archamy.com">arider@archamy.com</a></td>
</tr>
<tr>
<td>Bay Area CCAs</td>
<td>Service Area</td>
<td>Primarily building electrification &amp; EV codes</td>
<td>• Varies</td>
<td>Contact your local CCA</td>
</tr>
</tbody>
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For More Information

bayrencodes.org

bayrencodes.org/reachcodes

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