Reach Codes 101: Process

Reach Code Newcomers Series 2022
Agenda

- Welcome
- Review from Session 1
- Reach Code Process & Timing
- Stakeholder Engagement & Equity
- Local Government Experiences
- Panel Discussion/Q&A
- Conclusion
Logistics

Recordings

- We will be recording today
- Recordings of the presentations will be available online

Questions

- Raise hands during presentations to ask for clarifications
- We will pause for quick questions throughout
- Put comments or more involved questions in the chat
Purpose of this webinar series

To provide background and technical information that local government staff who are new to reach codes will need in order to understand and work on them

**NOT** intending to:

- Encourage any particular reach code
- Discuss how to advocate to get one adopted
- Go into technical calculations and details
- Discuss how to comply with a reach code

*Poll: Who’s in the room?*
A reach code is an amendment to the building code.
- Must be re-adopted when the Building Code is updated (every 3 years),
- Must be more restrictive than the state code
- Local governments must make findings that reach code is needed for local climatic, geological, topographical, or environmental reasons
- Must file with CA Building Standards Commission

Other policy tools are available that have different legal bases & requirements
Review from Session 1

- Energy reach codes amend the California Energy Code (Title 24, Part 6)
  Subject to legal requirements for all building code amendments, and requirements specific to Energy Code
  - Must result in a reduction in energy usage
  - Must be cost-effective (Session 3 to focus on cost-effectiveness analyses)
  - May not preempt federal appliance standards
  - Must receive CEC approval prior to filing with CBSC

- The reach code process can take 6-12 months
Reach Code Timing
Reach Code Timing

State Energy Code

2019 Code in Effect

2022 Code Adopted

2022 Code in Effect

2025 Code Adopted

2025 Code in Effect

Local Energy Reach Code

2020 2021 2022

Reach Code can be adopted any time

2023 2024 2025 2026

Reach Code in effect from adoption through end of code cycle
## Reach Code Timing

<table>
<thead>
<tr>
<th>Year</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
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<td>2022</td>
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<td>Single Start</td>
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<td>Adopt</td>
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<tr>
<td>Single Adoption</td>
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<td>Adopt</td>
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<td>In effect</td>
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<td>In effect</td>
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</table>
## 3 Choices for Reach Code Timing

<table>
<thead>
<tr>
<th>Choices</th>
<th>Time of Action</th>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td><strong>Single start:</strong></td>
<td>September or October of year before updated state code takes effect</td>
<td>● Reach code in effect for longest period</td>
<td>● Least time for code development &amp; public process</td>
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<tr>
<td>Adopt</td>
<td></td>
<td>● Code changes occur simultaneously</td>
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<tr>
<td><strong>Single adoption:</strong></td>
<td>November or December of year before updated state code takes effect</td>
<td>● Easiest administratively</td>
<td>● Can result in gap between existing and updated reach codes</td>
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<tr>
<td>Adopt at time of other local amendments to state code</td>
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<tr>
<td><strong>Any time:</strong></td>
<td>Any time!</td>
<td>● Allows most time for development and public process</td>
<td>● Reach code in effect for shortest period</td>
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<tr>
<td>Adopt during code cycle when makes sense locally</td>
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## A More Detailed Look

<table>
<thead>
<tr>
<th>Task</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
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<tbody>
<tr>
<td>Develop idea for draft ordinance</td>
<td>Nov Dec</td>
<td>Jan Feb Mar</td>
<td>May Nov Dec</td>
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<tr>
<td>Obtain cost-effectiveness study</td>
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<td>Apr May Jun</td>
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<tr>
<td>Work with stakeholders</td>
<td>Dec Nov</td>
<td>Apr May</td>
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<tr>
<td>Develop &amp; draft ordinance</td>
<td></td>
<td>Jun Aug Sep</td>
<td>Oct Nov Dec</td>
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<tr>
<td>Review by local committees</td>
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<tr>
<td>Public process &amp; revisions</td>
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<tr>
<td>First reading of ordinance (introduction)</td>
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<td>Second reading of ordinance (adoption)</td>
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<tr>
<td>Application to CEC</td>
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<tr>
<td>CEC review, comment &amp; scheduling</td>
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<td>Approval from CEC at business mtg</td>
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<tr>
<td>File with BSC</td>
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<tr>
<td>Reach code takes effect</td>
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</tbody>
</table>
Reach Code Process

1. Identify goal and options to explore
2. Technical information & analyses
3. Develop proposed reach code
4. Formal public process & adoption
5. State agency review / approval
6. Implement

Local stakeholder input & public process
Implementation

1. Identify goal and options to explore
2. Technical information & analyses
3. Develop proposed reach code
4. Formal public process & adoption
5. State agency review / approval

Local stakeholder input & public process

Implement
Reach codes need to be implemented

Adoption is just the beginning!

**Barriers include:**
- Time/staff constraints
- Lack of information/understanding

**Ways to help**
- Have a staff champion
- Provide information (training, handouts)
- Track results

*More on implementation in Session 5!*
State Agency Review/Approval

- Identify goal and options to explore
- Technical information & analyses
- Develop proposed reach code
- Formal public process & adoption
- State agency review / approval
- Implement

Local stakeholder input & public process
Once adopted, local governments need to submit reach codes, supporting materials, and findings to the California Energy Commission (CEC).

CEC submittal materials:
- The adopted reach code
- Findings and supporting analyses on the reach code’s energy savings and cost effectiveness
- A statement or finding by the local jurisdiction that the local energy standards will require buildings to be designed to consume no more energy than permitted by Part 6
- Relevant CEQA (California Environmental Quality Act) documents

CEC will have a comment period & act on the reach code at a Business Meeting.
BSC Submittal & Review

- Local governments also need to send adopted reach codes to the Building Standards Commission (BSC)
- BSC submittal materials:
  - Cover letter with reference to code section granting authority for reach code
  - Adopted ordinance
  - Findings (including finding that amendment is necessary because of local climatic, geological, or topographical conditions and justification)
    - Findings may be part of the ordinance
    - Justification may be in the ordinance or staff report
- BSC does not act on reach codes but will notify jurisdictions of any problems
Thinking ahead

Required findings

- Reach code is cost-effective
- Reach code will not allow buildings to use more energy than the California Energy Standards
- Reach code is necessary because of local climatic, geological, or topographical conditions

This means:

- These findings need to be formally acted on by the Council/Board
- Findings are usually in the reach code ordinance
- Findings need to be supported in the staff report and by the record
Don’t reinvent the wheel

- Look at materials from other jurisdictions
  - Available through the CEC and localenergycodes.com websites
- Consult with CEC staff
- Reach out for help – BayREN, localenergycodes.com, etc.
- Talk with your City or County Attorney, Building Official, and other staff
Submittal Resources

Links to:

- Building Standards Commission: https://www.dgs.ca.gov/BSC/Codes/Local-Amendments-to-Building-Standards---Ordinances
- Information & Templates: https://www.bayren.org/how-adopt-reach-code/process
Formal Public Process & Adoption

1. Identify goal and options to explore
2. Technical information & analyses
3. Develop proposed reach code
4. Formal public process & adoption
5. State agency review / approval
6. Implement

Local stakeholder input & public process
Formal Action

- Requirements usually include:
  - Two hearings before City Council or Board of Supervisors
    - Staff report
    - Presentation
  - Public noticing for each hearing
- Check with City/County Clerk and Attorney for exact requirements and local variations
Preparing for public hearings

- What issues are Council/Board members concerned about?
- Who may come to speak?
- What issues could members of the public raise?
- Are you prepared to address questions that may be raised?
- Are all required findings included and supported?
- Are all local requirements addressed?
Any questions so far?
Reach Code Development

Identify goal and options to explore

Technical information & analyses

Develop proposed reach code

Formal public process & adoption

State agency review / approval

Implement

Local stakeholder input & public process
Reach Code Development

What is the policy goal?

Identify goal and options to explore

Technical information & analyses

Develop proposed reach code

Stakeholder input & public process

What are public concerns?

What is possible legally? What makes sense?
What is the policy goal?

- Relevant policy goals could include:
  - Climate, lower utility costs, energy reliability, resilience, health

- Sources
  - Direction from Local Committees, Commissions, Councils/Board
  - Climate Action Plan, Climate Urgency Ordinance, General Plan
What is possible?

Cost-effective

- Something is cost effective if it saves more money over its life than it costs
- There are no legal or state requirements regarding how to demonstrate something is cost effective
- Local governments need to make a finding that the reach code is cost effective based on reasonable evidence in the record
- Many choices! Can use a completed cost-effectiveness study for the climate zone, request or pay for a new cost-effectiveness study, or develop own evidence and supporting information

More on cost-effectiveness in Session 3!
What is possible?

Federal pre-emption
- Dept. of Energy establishes minimum energy standards for many types of appliances
- Reach code cannot require the use of appliances that are more efficient than the federal standard – even indirectly

What makes sense given local conditions?
- Building stock
- Anticipated projects
- Demographics
What are public concerns?

● How can public input affect the process?
  ○ Identify where more information is needed
  ○ Shape the reach code
  ○ Outline what is politically possible

● Common concerns
  ○ Cost
  ○ Real-world feasibility
  ○ Resilience (for certain types of reach codes)

● Stakeholder engagement is essential for hearing public concerns
Stakeholder Engagement
Getting started

- Start early!
- Identify possible stakeholders
  - Who could be affected?
  - Who might come to public hearings?
  - Individuals and organizations
- Think how best to engage with them
- Leverage other city/county employees’ experience
Stakeholders to Consider

**Internal Stakeholders**
- Officials
- Staff

**External Stakeholders**
- Architects & Designers
- Developers & Contractors
- Realtors
- Environmental Organizations
- Residents & Businesses
- Property Owners
Procedural Equity

“Traditional” Outreach vs. Targeted Engagement

What is Your Long-Term Priority?

- Housing Affordability
- Energy Costs
- Climate Change Impacts

Green the Church/BBEMA Meeting
BEBES Public Meeting

from Katie Van Dyke, Presentation on City of Berkeley Existing Buildings Electrification Strategy
Distributional Equity (Outcomes)

Important considerations

● How could different people be affected?
● Would some groups be more impacted than others?
● Can the reach code be structured to minimize impacts on historically disadvantaged populations, low income households, seniors, people with disabilities, and others?

Key points:

● Especially important for existing building reach codes
● Important to consider and address equity issues from the start
Any questions?
Local Government Reach Code Experiences

Demian Hardman-Saldana  
Contra Costa County  
Climate Zones 3 & 12

Cory Downs  
City of Chula Vista  
Climate Zone 7

Barry Hooper  
City & County of San Francisco  
Climate Zone 3
Building Electrification
Ordinance for New Construction

Demian Hardman-Saldana
Department of Conservation and Development
Contra Costa County
925-655-2816 · Demian.Hardman@dcd.cccounty.us
Outreach Efforts and Public Input

Board of Supervisor’s Sustainability Committee
- September 23, 2019 – Request from Committee to research building electrification for new construction
- February 3, 2020 – Initial Research compiled on other jurisdictions
- May 24, 2021 – Full Report on Options to Consider to BOS on August 3, 2021

Board of Supervisors
- August 3, 2021 – To Consider Development of Ordinance for New Construction
- December 14, 2021 – Ordinance First Reading (discussion item)
- January 18, 2022 – Ordinance Second Reading (discussion item)

Outreach to Other Interested Parties
- Building Industry Association (BIA)
  - Concerns of grid reliability, refuting cost-effectiveness, request there not be localized codes and ensure if adopted, building industry has time to adapt to changes.
- East Bay Leadership Council (EBLC)

Climate Emergency Resolution
Adopted September 22, 2020 – Included Policy for electrification of new construction
Overview of All-Electric Buildings Ordinance for New Construction – Operative June 1, 2022

Ordinance No. 2022-02 Adopted by BOS on January 18, 2022, requires the following newly constructed buildings be an all-electric building (any of these buildings may also use solar/thermal heating in their project):

• Residential (including single-family and multi-family buildings);
• Detached Accessory Dwelling Unit;
• Hotel;
• Office;
• Retail.

• Allows use of emergency backup power sources to be fossil-fuel operated.
• Exempts projects with vesting rights (i.e. projects deemed complete by Planning prior to the operative date of the ordinance)
Major Issues Discussed

1. Grid Reliability

2. Allow use of emergency backup power sources to be fossil-fuel operated.

3. Allow installation of natural gas to any existing buildings, including any existing all-electric buildings.

4. Exempt projects with vested rights (legal requirement)
Chula Vista’s Existing Home Sustainability Ordinance

- Require homes built before 2006 that are performing additions or major remodels to also perform energy efficiency upgrades in existing portion of the home.
  - www.chulavistaca.gov/departments/clean/retrofit
  - Various exemptions reviewed by Conservation Staff
Chula Vista’s Existing Home Sustainability Ordinance

- In process of updating ordinance to allow for more flexible compliance.
  - Included language about changing measures in ordinance so should not need to go back to City Council.
  - [https://explorer.localenergycodes.com](https://explorer.localenergycodes.com)

<table>
<thead>
<tr>
<th>Climate Zone 7</th>
<th>Building Vintage</th>
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<tbody>
<tr>
<td>Air Sealing</td>
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<tr>
<td>Cool Roof</td>
<td>1</td>
</tr>
<tr>
<td>Duct Sealing</td>
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<tr>
<td>Lighting Measures (Exterior Photosensor &amp; LED lamp)</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Heat Pump HVAC</td>
<td>3</td>
</tr>
<tr>
<td>High Efficiency HVAC Heat Pump</td>
<td>4</td>
</tr>
<tr>
<td>High Efficiency Heat Pump Water Heater</td>
<td>13</td>
</tr>
<tr>
<td>Heat Pump Water Heater</td>
<td>12</td>
</tr>
<tr>
<td>New Ducts</td>
<td>2</td>
</tr>
<tr>
<td>Photovoltaic (PV) Solar System</td>
<td>12</td>
</tr>
<tr>
<td>PV + Battery</td>
<td>11</td>
</tr>
<tr>
<td>PV + Electric Ready Pre-Wire</td>
<td>12</td>
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<tr>
<td>R-13 Wall Insulation</td>
<td>1</td>
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<td>R-49 Attic Insulation</td>
<td>3</td>
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<tr>
<td>Water Heating Package</td>
<td>1</td>
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<tr>
<td>Windows</td>
<td>1</td>
</tr>
<tr>
<td>Inductive Cooktop</td>
<td>2</td>
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San Francisco

- First reach code adopted 2008.
- Renewed each code cycle; amended more frequently
# San Francisco - Current Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>New Construction</th>
<th>Existing Building Major Alterations</th>
<th>Type of Code</th>
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</thead>
<tbody>
<tr>
<td>Solar PV, Thermal, or Living Roof</td>
<td>🔵</td>
<td>🔵</td>
<td>Reach (Energy requirement)</td>
</tr>
<tr>
<td>LEED/GPR</td>
<td>🔵</td>
<td>🔵</td>
<td>Reach (Energy requirement)*</td>
</tr>
<tr>
<td>Electric Vehicle Ready Construction</td>
<td>🔵</td>
<td>🔵</td>
<td>Building (Health and safety)</td>
</tr>
<tr>
<td>All-Electric New Construction</td>
<td>🔵</td>
<td></td>
<td>Building (Health and safety)</td>
</tr>
<tr>
<td>All-Electric preferred</td>
<td>🔵</td>
<td></td>
<td>Reach (Energy requirement)</td>
</tr>
<tr>
<td>(10% compliance margin for mixed-fuel)</td>
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<tr>
<td>Onsite Nonpotable Water Treatment</td>
<td>🔵</td>
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<td>Health/Utility</td>
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</tbody>
</table>
## San Francisco - Other Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Applicable to</th>
<th>Type of Code</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>New Construction</td>
<td>Existing Buildings</td>
</tr>
<tr>
<td>Energy Benchmarking and Disclosure</td>
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<tr>
<td>Energy Audit, RCx, or Strategic Decarbonization Assessment <em>(capital plan for electrification)</em></td>
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<tr>
<td>Mandatory 100% Renewable Electricity</td>
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<tr>
<td>Residential Energy Conservation, Residential Water Conservation <em>(time of sale)</em></td>
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San Francisco - Process for New Reach Code

- **Sponsor/Direction**
- **Stakeholder Input**
  - Task Force/Work Group
  - Public agency buy-in
  - Public workshop(s)
- **Public meetings:**
  - Code Advisory Committee (technical stakeholders - 2 to 5 meetings)
  - Building Inspection Commission
  - Board of Supervisors - Land Use Committee
  - Board of Supervisors

**Minimum of 7 noticed public meetings**

- California Energy Commission if ordinance directly influences energy use
- Building Standards Commission
San Francisco - Reach/Building Code Renewal Process

- Kickoff: 1 year in advance
- Public workshop(s)
- Monthly public meetings: Feb - June
- Multiple public meetings monthly: July-Sept
  - Code Advisory Committee (technical stakeholders)
  - Building Inspection Commission
- Board of Supervisors - Land Use Committee then full Board
  - 2 committee meetings
  - 2 readings
- Mayor

Minimum of 10 noticed public meetings (17 in 2019), then

- File with Building Standards Commission
- Apply to California Energy Commission
  - Posting for public comment (?): 15 to 60 additional days!
  - Commission decision
San Francisco - Transferable Lessons

Any type of building can be regulated

- San Francisco new construction includes all types and sizes of buildings

Representative cost-effectiveness is acceptable to CEC

- Public and officials should be informed by studies of the uses and scales that are most important locally
Panel Discussion / Q&A
Resources

- Local Energy Codes: [https://localenergycodes.com/](https://localenergycodes.com/)
- BayREN Energy Policies & Reach Codes: [https://www.bayren.org/local-government-resources/energy-policies-reach-codes](https://www.bayren.org/local-government-resources/energy-policies-reach-codes)
- California Building Standards Commission Local Amendments page: [https://www.dgs.ca.gov/BSC/Codes/Local-Amendments-to-Building-Standards---Ordinances](https://www.dgs.ca.gov/BSC/Codes/Local-Amendments-to-Building-Standards---Ordinances)
Contact Information

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eecoordinator@lgc.org
Next Webinars in Series

Cost-Effectiveness Analyses – March 22
Reach Code Ordinance Options – April 26
Implementation – September 27
Thank you!