

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



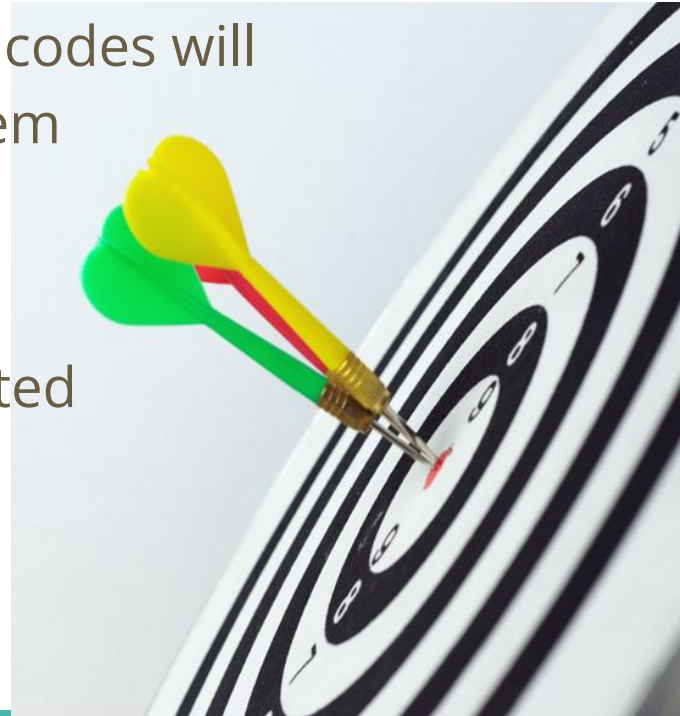
Purpose of this webinar series

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?



Review from Session 1

- 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)

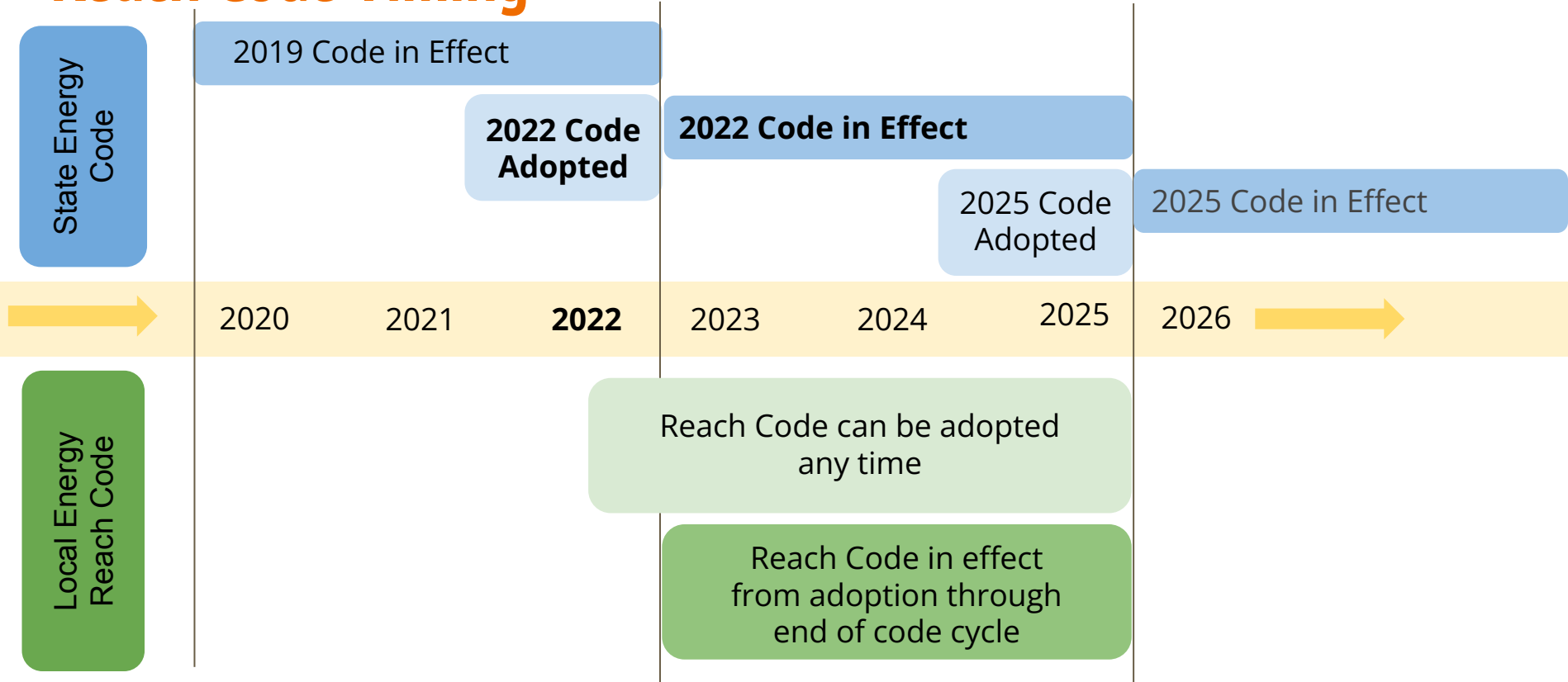
Subject to legal requirements for all building code amendments, and requirements specific to Energy Code

- 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



Reach Code Timing

2022

2023

2024

2025

Sept Oct Nov Dec

Jan Feb

Single
Start

Adopt

In effect

Single
Adoption

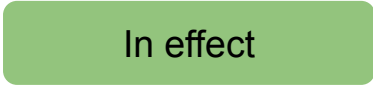
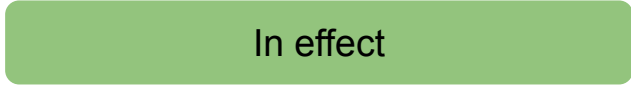
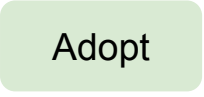
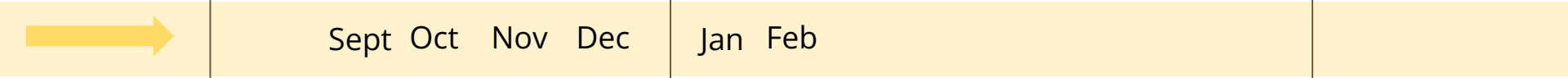
Adopt

In effect

Any time

Adopt

In effect



3 Choices for Reach Code Timing

Choices	Time of Action	Pros	Cons
Single start: Adopt to take effect at same time as updated state code	September or October of year before updated state code takes effect	<ul style="list-style-type: none">● Reach code in effect for longest period● Code changes occur simultaneously	<ul style="list-style-type: none">● Least time for code development & public process
Single adoption: Adopt at time of other local amendments to state code	November or December of year before updated state code takes effect	<ul style="list-style-type: none">● Easiest administratively	<ul style="list-style-type: none">● Can result in gap between existing and updated reach codes
Any time: Adopt during code cycle when makes sense locally	Any time!	<ul style="list-style-type: none">● Allows most time for development and public process	<ul style="list-style-type: none">● Reach code in effect for shortest period

Reach Code Process

Identify goal
and options
to explore

Technical
information
& analyses

Develop
proposed
reach code

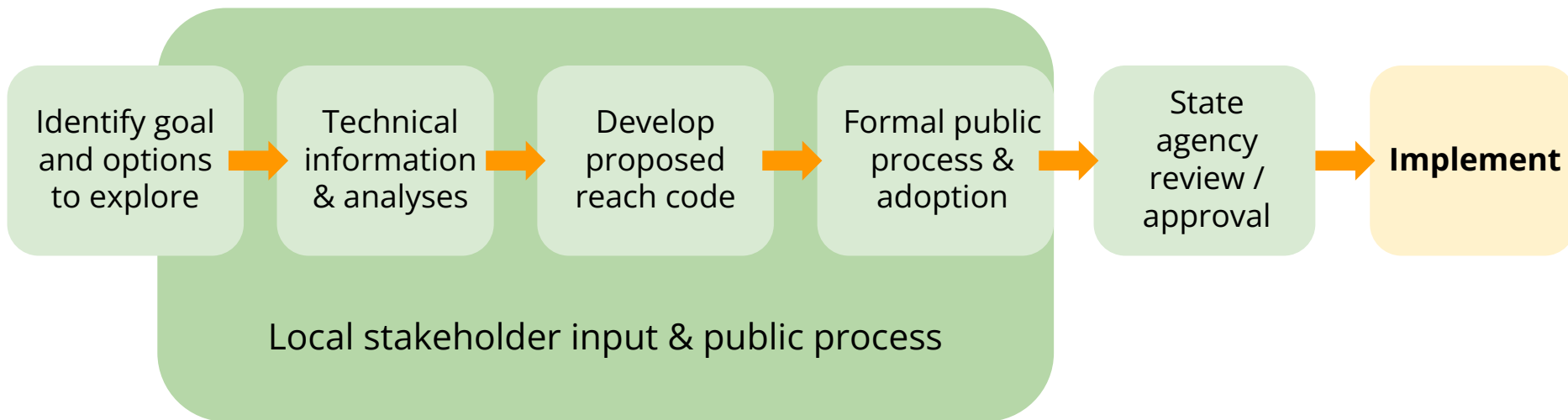
Formal public
process &
adoption

State
agency
review /
approval

Implement

Local stakeholder input & public process

Implementation



Reach codes need to be implemented

Adoption is just the beginning!

Barriers include:

- Time/staff constraints
- Lack of information/understanding

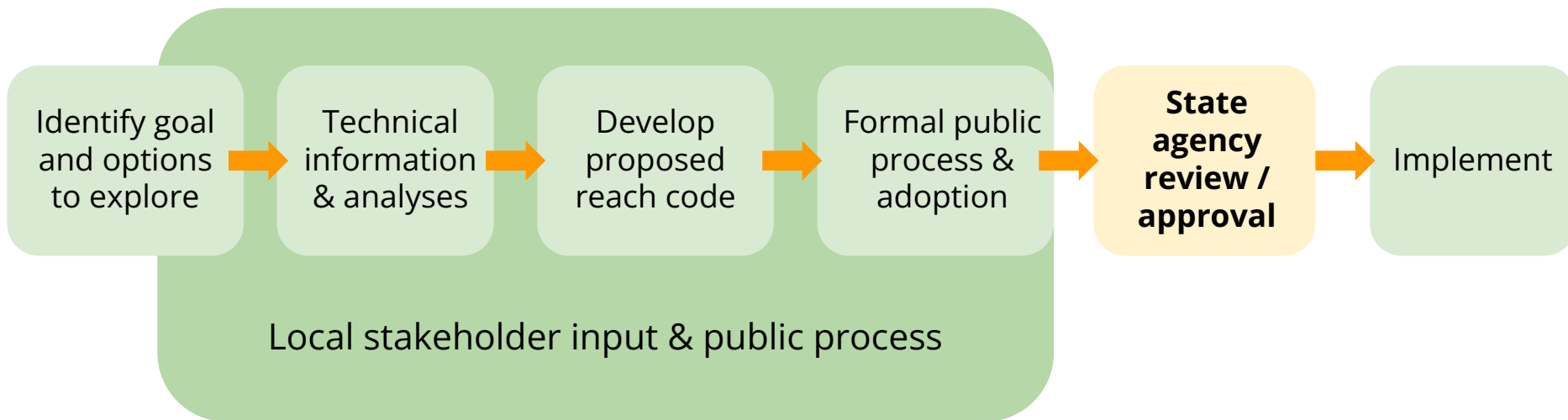
Ways to help

- Have a staff champion
- Provide information (training, handouts)
- Track results



More on implementation in Session 5!

State Agency Review/Approval



CEC Submittal & Review

- 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



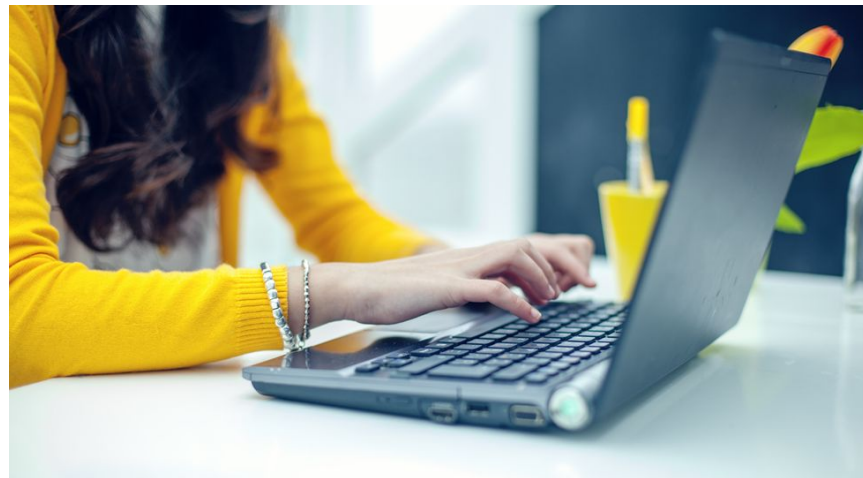
Thinking ahead

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



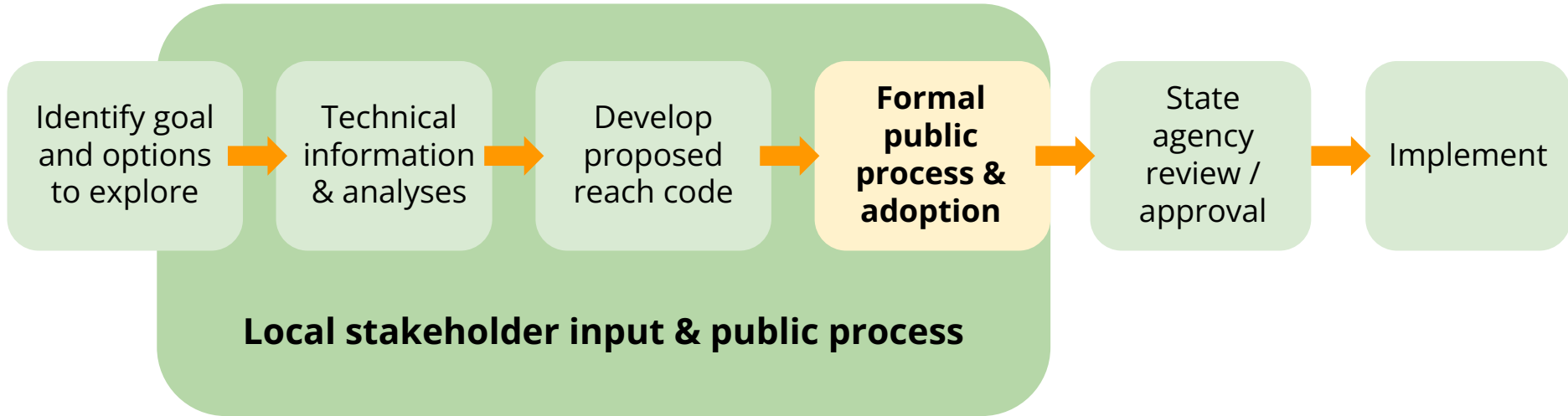
Submittal Resources

Links to:

- California Energy Commission: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-3>
- 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



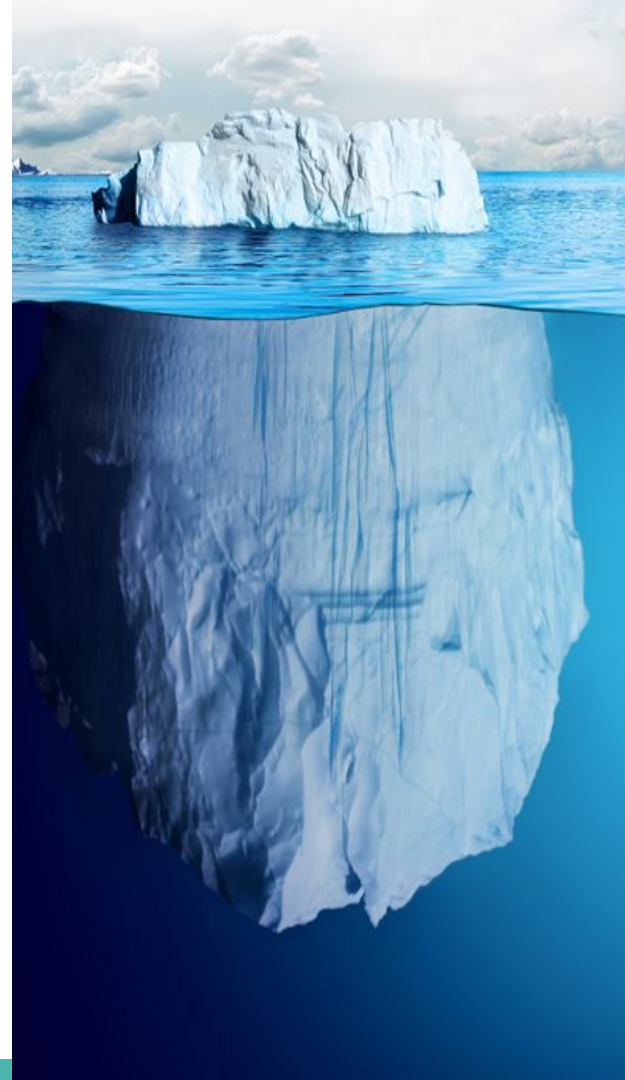
Formal Action

- 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

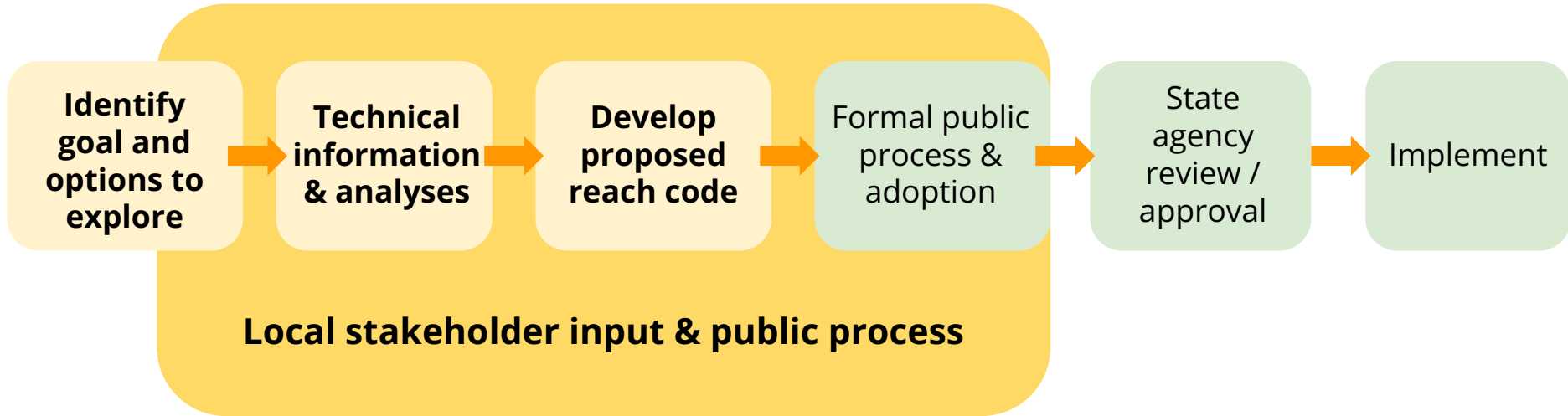
- What issues are Council/Board members concerned about?
- Who may come to speak?
- What issues could members of the public raise?
- Are you prepared to address questions that may be raised?
- Are all required findings included and supported?
- Are all local requirements addressed?



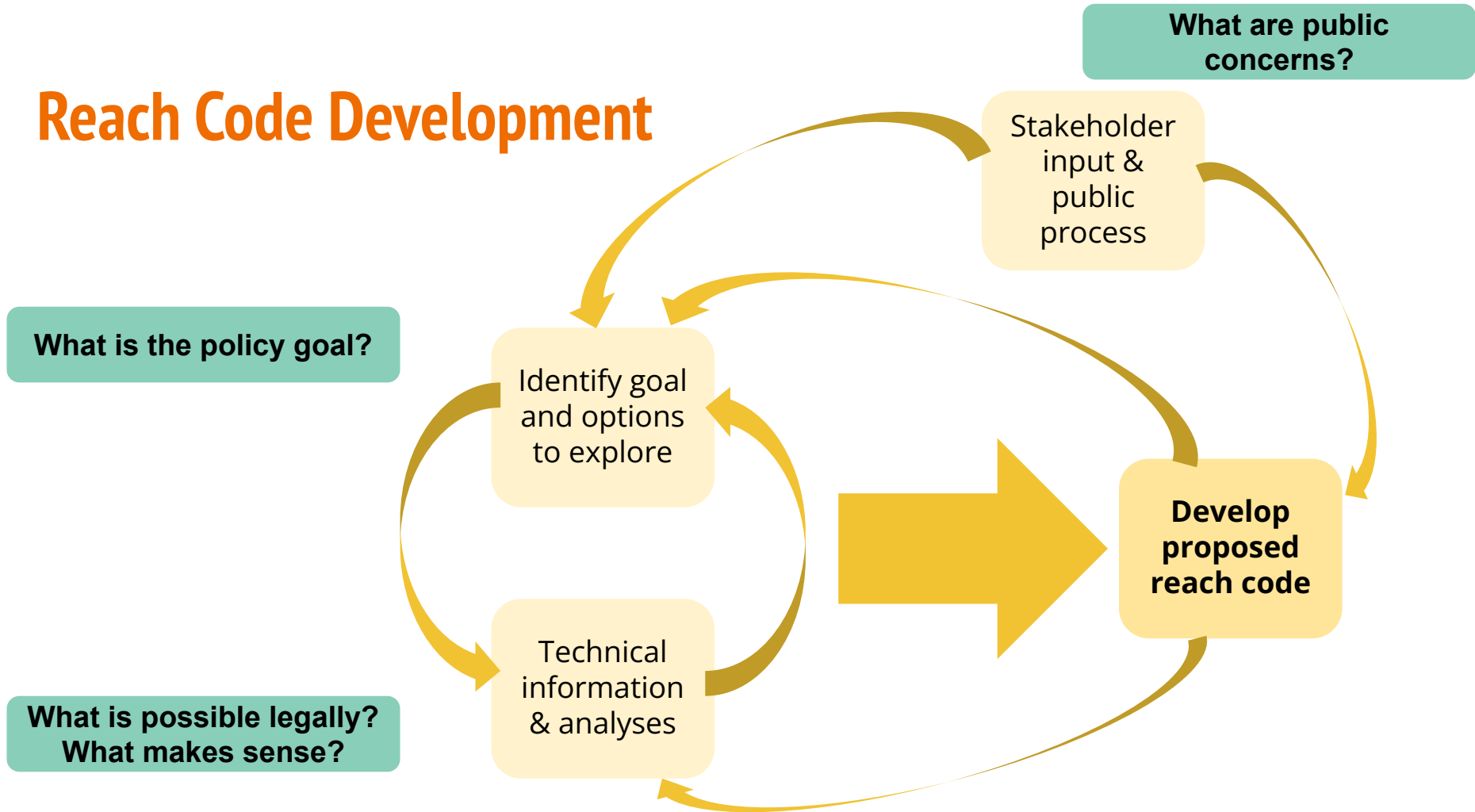
Any questions so far?



Reach Code Development



Reach Code Development



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

Identify goal
and options
to explore



What is possible?

Cost-effective

More on cost-effectiveness in Session 3!

- 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

Technical
Information
& Analyses

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

Technical
Information
& Analyses



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
Input & Public
Process



Stakeholder Engagement



Getting started

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



Stakeholders to Consider



Internal Stakeholders

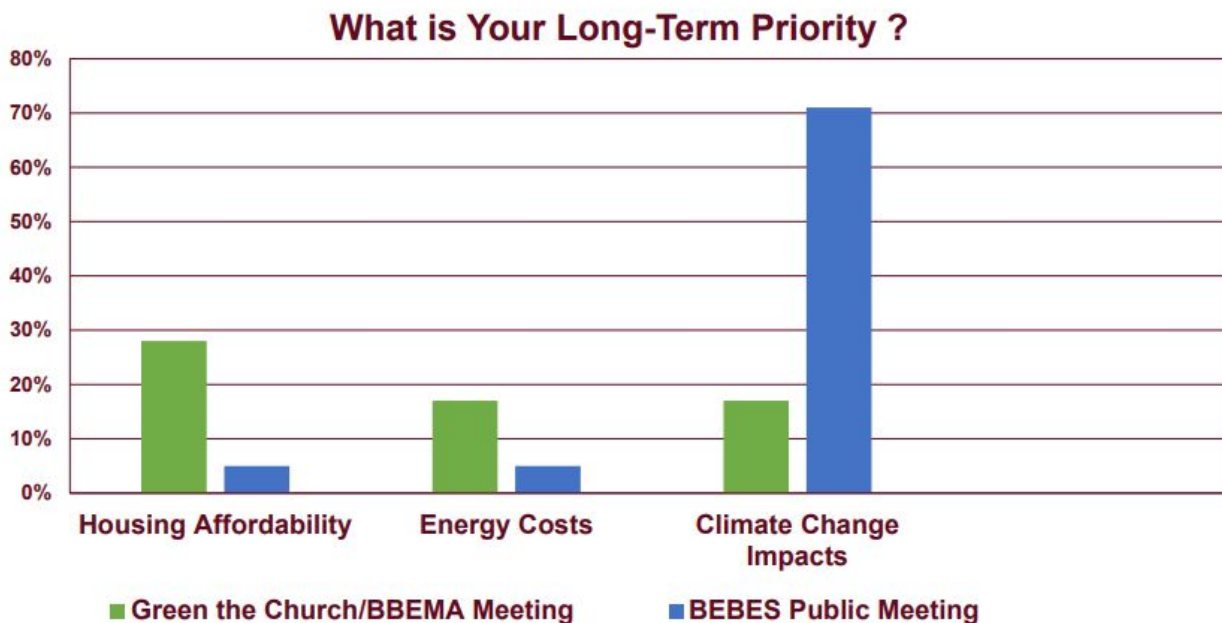
- Officials
- Staff

External Stakeholders

- Architects & Designers
- Developers & Contractors
- Realtors
- Environmental Organizations
- Residents & Businesses
- Property Owners

Procedural Equity

“Traditional” Outreach vs. Targeted Engagement



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:

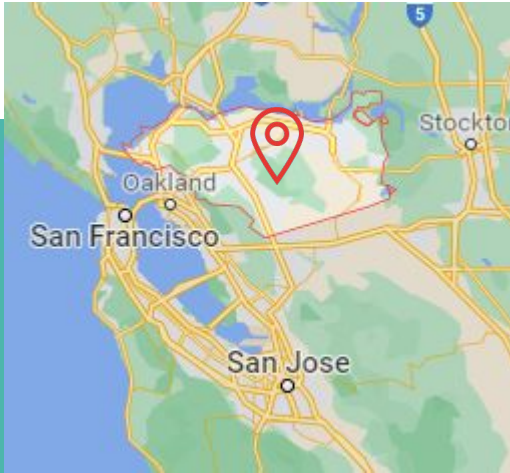
- Especially important for **existing building** reach codes
- Important to consider and address equity issues from the start



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

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**Climate Emergency Resolution
Adopted September 22, 2020 –
Included Policy for electrification
of new construction**

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)

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

Projects that trigger this requirement:



- Adding square footage
- Moving interior walls or other structural elements
- Adding or moving windows and doors

Projects that do NOT trigger this requirement:



- Adding new tile or flooring
- Bathroom fixtures
- Lighting fixtures
- Appliances
- Adding or moving a kitchen island
- Adding or changing counters
- Patio or landscaping
- Adding an Accessory Dwelling Unit (ADU/JADU)
- Projects that are medically necessary
- Repairing, without moving, structural elements



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>








Climate Zone 7	Building Vintage		
	Pre-1979	1979-1992	1993-2005
Air Sealing	--	--	--
Cool Roof	1	--	--
Duct Sealing	--	--	--
Lighting Measures (Exterior Photosensor & LED lamp)	Mandatory	Mandatory	Mandatory
Heat Pump HVAC	3	2	1
High Efficiency HVAC Heat Pump	4	2	2
High Efficiency Heat Pump Water Heater	13	13	13
Heat Pump Water Heater	12	12	12
New Ducts	2	1	--
Photovoltaic (PV) Solar System	12	12	12
PV + Battery	11	11	11
PV + Electric Ready Pre- Wire	12	12	12
R-13 Wall Insulation	1	--	--
R-49 Attic Insulation	3	1	--
Water Heating Package	1	1	1
Windows	1	1	--
Inductive Cooktop	2	2	2

San Francisco





- First reach code adopted 2008.
- Renewed each code cycle;
amended more frequently



San Francisco - Current Requirements

Requirement	Applicable to		Type of Code
	New Construction	Existing Building Major Alterations	
Solar PV, Thermal, or Living Roof			Reach (Energy requirement)
LEED/GPR			Reach (Energy requirement)*
Electric Vehicle Ready Construction			Building (Health and safety)
All-Electric New Construction			Building (Health and safety)
All-Electric preferred (10% compliance margin for mixed-fuel)			Reach (Energy requirement)
Onsite Nonpotable Water Treatment			Health/Utility

San Francisco - Other Requirements

Requirement	Applicable to		Type of Code
	New Construction	Existing Buildings	
Energy Benchmarking and Disclosure			Municipal (<i>Environment Code</i>)
Energy Audit, RCx, or Strategic Decarbonization Assessment (capital plan for electrification)			Municipal (<i>Environment Code</i>)
Mandatory 100% Renewable Electricity			Municipal (<i>Environment Code</i>)
Residential Energy Conservation, Residential Water Conservation (time of sale)			*

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

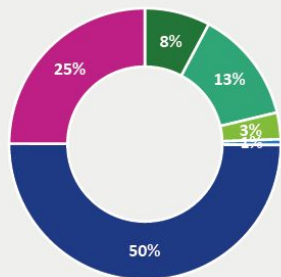
- Kickoff: 1 year in advance
- Public workshop(s)
- Monthly public meetings: Feb - June
- Multiple public meetings monthly: July-Sept
 - Code Advisory Committee (technical stakeholders)
 - Building Inspection Commission
- Board of Supervisors - Land Use Committee then full Board
 - 2 committee meetings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

2021 Q3 Housing Development Pipeline



Entitled	Net Units
Under Construction	5,131
Building Permits Approved	8,871
Building Permits Filed **	2,090
Building Permits Not Yet Filed	448
Major Multi-Phased Projects ***	32,891
Under Review	
Applications Filed	16,424



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

- California Energy Commission Local Ordinance page:
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-3>
- Local Energy Codes: <https://localenergycodes.com/>
- BayREN 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>



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Next Webinars in Series

Cost-Effectiveness Analyses – March 22

Reach Code Ordinance Options – April 26

Implementation – September 27

Thank you!

