CALIFORNIA ENERGY CODES & STANDARDS
A STATEWIDE UTILITY PROGRAM

Primer: Inside the Local Government Reach Code Process

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SDGE A Sempra Energy utility
SoCalGas A Sempra Energy utility
Southern California Edison An EDISON INTERNATIONAL Company
PG&E Pacific Gas and Electric Company

Acronym List

AB - Assembly Bill

CAP - Climate Action Plan

CARB - California Air Resources Board

CBECC - California Building Energy Code Compliance

CBSC - California Building Standards Commission

CEC - California Energy Commission

CEQA - California Environmental Quality Act

GHG - Greenhouse Gas

IOU - Investor Owned Utility

PV - Solar Photovoltaic

SB - Senate Bill

TDV - Time Dependent Valuation

USGBC - United States Green Building Council

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1. Purpose and Overview

Local Government agencies in California, with a few exceptions, have adopted Climate Action Plans (CAPs) for achieving ambitious greenhouse gas (GHG) emissions reductions. These plans rely on future policies triggering significant improvements in building energy efficiency. This will require the adoption of local *reach codes*, laws that require buildings to go beyond the efficiency levels required under the California Energy Code.

As more and more local governments take steps to implement these plans, we are seeing the beginning of a reach code wave. Less than five percent of local governments adopted a reach code during the 2016-2019 building code cycle. Yet we expect that number to double or triple for the 2019-2021 code cycle.

Adopting these local reach codes requires a significant amount of local government staff time, specialized knowledge and technical expertise. Most jurisdictions do not have such capacity readily available to deploy, which creates a significant capacity deficiency around local reach code adoption.

The purpose of this primer is to provide Investor Owned Utility (IOU) stakeholders with a better understanding of the adoption process and particular challenges reach code adoption presents for local governments, so that IOUs may enhance their reach code support offerings.

Readers new to the subject may wish to read start to finish. Those who already have a partial understanding of the subject can use the document to fill in knowledge gaps by skipping familiar concepts and focusing on topics that need bolstering.

Being a primer, this document begins with pre-requisite concepts important to a full understanding of the local government reach code process. These include a discussion of:

- Reach Code Fundamentals (page 5)
- Local Government Fundamentals (page 8)
- Climate Action Plan Fundamentals (page 12)

The second part of this document does a deep dive into the process local governments go through when adopting a reach code. This starts with a discussion of the impetus for reach codes (page 16). Then the reach code process is broken down into twelve stages (page 17). After explaining each stage, common challenges and resource needs are identified, and opportunities for IOU assistance are enumerated.

2. Fundamental Concepts

2.1. Reach Codes

The term *reach code* refers to a local government[1] law requiring buildings to meet energy standards that are more stringent than the California Energy Code. While local governments are required by law to adopt and enforce state energy standards within their jurisdiction, they have authority to establish additional energy conservation requirements, or "Reach Codes." State law requires reach codes to meet certain conditions. Primarily, reach codes must result in lower energy consumption than state requirements, and they must be cost-effective. Energy conserving reach codes must also be approved by the Energy Commission and filed with the California Building Standards Commission (CBSC) before they may be enforced locally.

For a simple example, a City may adopt an ordinance that requires new homes to include attic insulation that meets a higher efficiency rating than the energy code requires. Better attic insulation will result in less heat exchange between the unconditioned attic and the conditioned parts of the home. As a result, a home's heating and cooling systems will not have to work as hard to maintain the home's interior temperature setting and will consume less energy. Or, in contrast to this example, a reach code will often include a combination of measures[2] such as energy use reducing lighting controls, higher performing insulation, better energy efficient windows, more reflective roofing materials, and hot water drain recovery systems. Whether a single measure, or several, when a reach code requires specific measures, such requirements are referred to as prescriptive requirements.

Like the energy code, reach codes often include flexibility for builders to deviate from the prescriptive requirements as long as the building meets similar performance levels. The energy code's performance path allows trade-offs between different building components as long as the overall building energy consumption remains within maximum allowable values. Some reach codes may only include a performance specification requiring the whole building to perform to a certain standard, such as using less energy than the same building under a prescriptive path. A reach code might also require a specific building element (e.g., roof, glazing) to perform to a specified standard.

Local jurisdictions also have some authority to adopt amendments to the California Building Standards Code that are energy related, but do not directly reduce energy use. For example, a local ordinance could require additional wiring and electrical panel capacity adequate to support a future electric vehicle charging system. Although such a requirement is energy related, it does not directly result in using any more or less energy and is not, strictly-speaking, a home energy efficiency measure. It would be an amendment to the broader building code, not the energy code. As such, it is not subject to CEC approval and a cost-effectiveness test and is outside of the scope of this primer. Find more information about these types of ordinances.

State Reach Code Adoption Requirements

Reach codes are considered amendments to the California Energy Code. There are specific requirements that local governments must meet before reach codes may be legally enforced. Figure 1 shows an outline of the process and requirements.

[1] The terms local government and jurisdiction are used interchangeably in this primer and refer to any local public agency with the authority to enforce building codes. This includes cities, counties, as well as certain authorities, districts and tribal areas.

[2] The term "measure" refers to a single energy efficiency requirement.

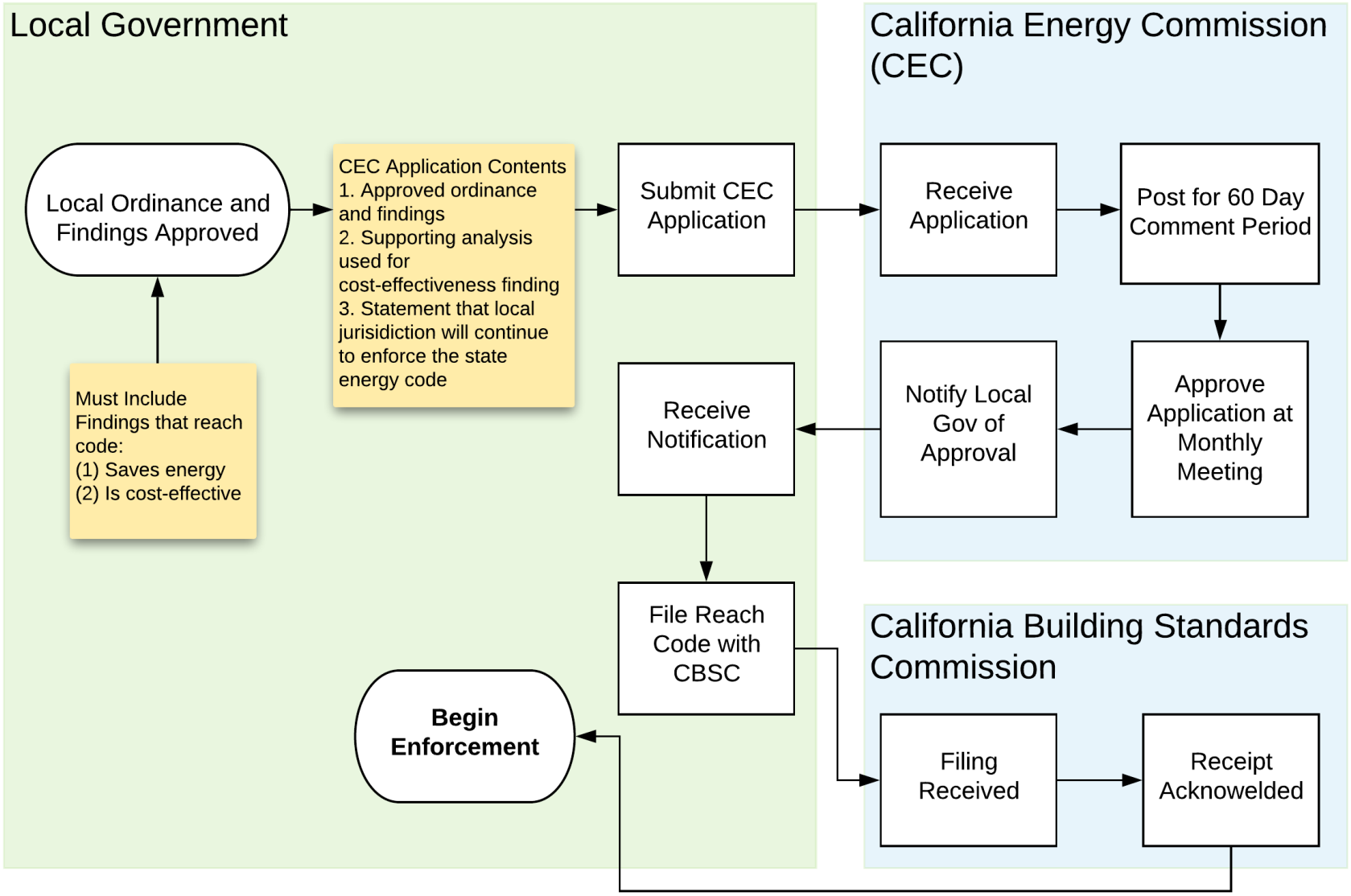
When a local public agency adopts an amendment to the energy code, the Energy Commission requires the agency to make an official determination that the changes are cost-effective and will result in less energy consumption. The Energy Commission does not provide an approved method for determining cost effectiveness nor do they review a public agency's findings for accuracy. They do require that the evidence used by the local public agency to make their cost effectiveness findings be submitted to the Energy Commission as part of the application package.

Cost effectiveness is often measured by a simple benefit-to-cost ratio. The benefit is the total energy bill savings over the lifetime of the measures and the cost is the incremental cost and replacement costs of complying with the amended requirements. A ratio of at least 1.0 is considered cost-effective.

Actual costs and benefits will vary for each building. To estimate these, a model building is used that reasonably represents typical buildings. The measure installation costs are typically estimated by surveying building contractors. The savings estimates are derived using energy modeling software, such as California Building Energy Code Compliance (CBECC) which is the open source software maintained by the Energy Commission and often used in the permit compliance process. There are also Energy Commission approved privately owned software options.

An alternative approach, albeit less common, is to use an estimate of the overall societal savings as the benefit (including factors like the value of emissions reductions and energy grid impacts), instead of just the energy bill savings. This is calculated in the same energy compliance modeling software using a metric developed by the Energy Commission known as Time Dependent Valuation (TDV). TDV considers the different values of energy consumption depending on time of day and day of the year as the strain on grid capacity and the availability of renewable energy sources fluctuates.

Figure 1: State Reach Code Adoption Requirements and Procedures



2.2. Local Government

There are roughly 2,500 local governments in California. There are several basic types, structures, and processes as to how they make laws and other policies.

California Local Government Structure

The state of California is subdivided into 58 counties and about 500 cities. Counties are an administrative division of the state, responsible for adapting and enacting state law and policy locally. Counties exercise wider authority for local government services over the unincorporated areas (areas not within a city) in their territory (e.g. zoning, planning, building permits, police, parks, street maintenance, land use, waste disposal) and retain a more limited authority over the entire county (e.g. jails, elections, property assessment, public health, social services, flood control). Counties have the ability to make their own laws and policies provided they are within the overriding authority of state law. Three counties in the state do not contain cities (Alpine, Mariposa and Trinity), and San Francisco is both a county and city.

There are two types of counties within California, *charter counties* and *general law counties.* General law counties have greater authority than charter counties to deviate from state policy, within limits set by California Government Code, to provide for the health and welfare of their residents. Charter counties are controlled more strictly by state law.

Cities have the ability to make their own laws and policies provided they are within the overriding authority of state law. The approximately 500 cities within the state fall under two general types. The state counts around 378 *general law cities,* which are organized according to California Government Code, and there are 121 *charter cities.* Charter cities have a higher degree of autonomy in their governance as their authority is derived from their own locally enacted charter. The ten largest cities in California are all charter cities.

Cities enforce state building codes and local amendments, such as reach codes, within their city limits. And similarly, counties do the same within their un-incorporated areas, that is, areas not within a city. Reach code adoption requirements are the same for both counties and cities.

While all cities and counties fundamentally have an elected legislative body, they differ somewhat when it comes to their makeup, authorities and procedures. Accordingly, the reach code adoption process will differ slightly. Counties call their legislative body a Board of Supervisors while cities have City Councils. Legislative powers and procedures also differ somewhat from county to county and to a larger extent, from city to city. Some of these differences are discussed further in the box at below, however, for the purposes of this primer, these nuances are less important.

There are also more than 2,000 special districts in the state. Most of these serve specific governance functions in unincorporated areas. A few exercise authority over building permits.

California City and County Governance Forms
Counties are governed by an elected, five-member, *Board of Supervisors*, which operates as both the legislative and executive branch. The Board adopts resolutions and ordinances, approves the annual budgets, and oversees county officials. The Board of Supervisors may not interfere in the day-to-day operations of a county department or limit the authority vested in county officials.

All cities have an elected City Council, and for 44% of cities, these are the only elected officials. City councils consist of five members in 90% of cities in the state. While all the ten largest cities elect City Council members representing specific geographic council districts, most cities (86%) use at-large districts where council members are elected based on votes cast citywide.

Some 468 cities (or 97%) operate under the *council-manager* form of government. This functions much like a corporation where the City Council directs the overall vision, sets policies, passes ordinances, and appoints a professional manager (like a CEO) to oversee city administration. Typically, the title of Mayor is held by a member of the City Council.

In contrast, five of California's largest cities operate under the *council-Mayor* form of government including Los Angeles, San Diego, San Francisco, Fresno and Oakland. Under this form, the Mayor is separately elected, and that person serves as the top executive of the city with the authority to veto, appoint and remove department heads, and propose budgets. The City Council's role is to approve or reject the Mayor's budgets, proposals and appointments. The exception to this is a weak-Mayor type of the council-Mayor form in which the Mayor title is more of a ceremonial role with little to no executive power. Weak-Mayor cities are rare and usually found in small cities with few full-time staff.

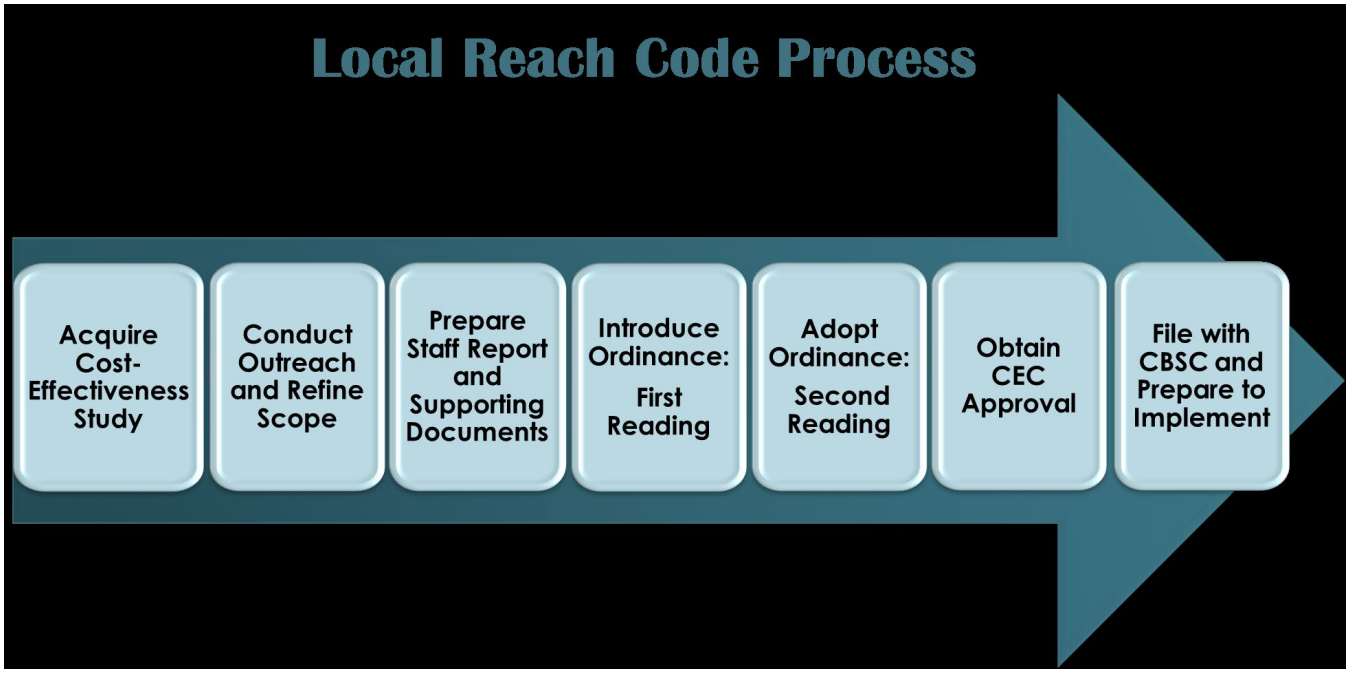
Policy Types

Local government policy vehicles, or pieces of legislation, consist mainly of *ordinances* and *resolutions*.

Ordinances are the vehicle through which local governments impose permanent requirements or prohibitions that carry the full effect of law. Violation of ordinances can be subject to penalties and fines, and/or action by municipal court. Once adopted, ordinances become part of the *municipal or county code*, which is an indexed compilation of local law. Reach codes are adopted by ordinance.

To be enacted, ordinances must be heard and approved by a majority vote *twice*. The *first reading* of the ordinance is also referred to as the *introduction*. The *second reading* must take place 5 days or more following the introduction, and if any substantive changes are made in the interim, the ordinance will require *re-introduction.*

Resolutions are formal legal actions that express opinion or guidance as a collective entity. They can be used to guide staff efforts, make findings, set rules, declare goals and intentions, or make administrative orders. Adopted resolutions are effective immediately. They do not become part of the public code, however they do remain part of the agency's public record. Many local jurisdictions adopting a reach code choose to make findings required by the CEC via a resolution that is considered concurrently with the reach code ordinance. Also, Climate Action Plans, along with other plan documents are usually adopted by resolution.



Boards and Commissions

Local governments operate a collection of boards, commissions and committees with varying missions, scopes, powers and procedures. Some are required by federal or state statute to provide specific governance, oversight and advisory functions, often as a condition for receiving certain types of funding or participating in a certain state or federal program. Others are created at the discretion of the local government. While there is some common overlap, each local government has its own unique collection of boards and commissions with their own scope, makeup, powers and nomenclature. Members of these bodies can be appointed or even elected. These bodies hold regular formal meetings open to the public and follow procedures like those of the City Council or Board of Supervisors as described in the sections below.

Boards and Commissions are pertinent to the reach code adoption process for a few reasons. First, some bodies may be required to hear and issue a recommendation for ordinances like reach codes before they can be brought to City Council or the Board of Supervisors for consideration. Second, even when it may not be *required* for such a body to hear a reach code, staff or the Mayor may opt to present a proposed reach code to such bodies, nonetheless. This can be strategically beneficial to get feedback from both supporters and opposition, giving staff and stakeholders the opportunity to address concerns and resolve issues. These hearings are also opportunities to build public awareness, support and endorsements for a reach code in advance of consideration by City Council or the Board of Supervisors.

The path a reach code travels through such bodies will be different in every city, and even boards and commissions similarly named in two cities can have different sets of powers. Most commonly, reach codes are presented to one to four such bodies prior to the first reading at City Council or the Board of Supervisors. Although there is some regional variation, common lower bodies that hear reach codes include: Planning Commission, Sustainability Commission, Development Oversight Board, or the Environment Committee.

Legislative Scheduling and Agendas

State law requires California local government legislative bodies to consider policies in an open public hearing (commonly referred to as "the Brown Act", or "sunshine laws"). This applies to City Councils, Boards of Supervisors, and any standing committee, board, commission or other body, that is created out of a formal action of another legislative body.

Meetings of legislative bodies are subject to various transparency requirements. The time and location of meetings must be made public. The public must also be given the opportunity to make two types of comments at all legislative body meetings: comments on agenda items and general comments on any topic. Also, an agenda listing the legislative items to be considered, also referred to as the *docket*, must be publicly posted at least 72 hours in advance. Any documents or other information provided to legislators regarding agenda items in advance of the meeting must also be made available to the public 72 hours in advance of the meeting. And any documents provided to legislators within 72 hours of meeting must be made public at the same time.

The supporting documents for an item on the agenda for a meeting usually include the full text of the ordinance or resolution, a staff report explaining the policy background and rationale, and other supporting documents referenced by the staff report. For reach codes, this usually includes the cost-effectiveness report.

City Councils and Boards of Supervisors have the authority to set their own agendas or make rules for how this happens. Sometimes this agenda setting power is permanently ceded to the top executive official such as the City Manager or Mayor.

Legislative Meeting Proceedings

Meetings follow the publicly posted agenda beginning at the specified time. Typically, there is no fixed end time; they proceed until all agenda items have been heard or until a motion to adjourn is approved. Meetings typically begin with an open public comment period. Then c*eremonial items* typically follow, including symbolic declarations and recognitions.

Next are *consent items,* which are agenda items expected to be adopted without opposition or discussion. The ordinances and resolutions on the *consent calendar* are voted-on all together in a single vote without discussion. That is, unless there is an objection raised and an item gets *pulled* from consent. In that case the item in question will go back on the *regular item* agenda and be considered individually, giving it the opportunity for discussion, public comment and a separate vote.

Proceedings for consideration of a regular item generally follow the subsequent format:

1. Item title is announced, and the presenting staff member or official is called to the front
2. Staff member(s) or their delegates make a short presentation
3. Public comment
4. Discussion and questions from legislators
5. Motions (amend, adopt, etc.)
6. Vote

To provide public comment on an item, an individual must fill out a *speaker slip.* This usually asks what item the speaker wishes to comment on, and sometimes asks the speaker to designate whether they are speaking in support or against the item or whether they are being paid to speak. For items with many public comment requests, it is common for the legislative body to give speakers a time limit such as three minutes.

2.3. Climate Action Plans

At the highest level, California has recognized the threats that uncontrolled global warming presents to the state. The state has passed specific statewide GHG emissions targets and established an array of legislation, executive orders, official guidelines and agency plans. Figure 2 summarizes the policies most relevant to local government climate action.

Figure 2: Selected State Policies Driving Local Climate Action Plans

Date	Item	Effect
1970	California Environmental Quality Act	Requires local agencies to review environmental impact of proposed projects and take all feasible mitigation steps. Public agency projects must adhere to the same requirements.
2005	Governor Arnold Schwarzenegger's Executive Order S-3-05	2050 statewide GHG reduction target of 80 percent below 1990 levels.
2006	AB32 – Global Warming Solutions Act	2020 statewide GHG reduction target of returning to 1990 levels.
2007	SB97	Directs local governments to include GHG emissions' impact in the scope of environmental impacts considered under CEQA.
2008, 2014, 2017	CARB AB32 Scoping Plan	Recommends local governments adopt a goal and chart a reduction trajectory that meets or exceeds statewide goals.
2015	Governor Jerry Brown issued Executive Order B-30-15	2030 statewide GHG reduction target of 40 percent below 1990 levels. All state agencies with jurisdiction over GHG emission sources directed to achieve 2030 and 2050 targets.
2016	SB32	2030 statewide GHG reduction target of 40 percent below 1990 levels.

These state policies pressure local governments to take action to curb emissions under their authority to help achieve California's reduction targets. Perceptions vary over whether these policies amount to voluntary guidelines or legal mandates for local governments to meet GHG targets. What is certain is that most local governments are faced with strong normative expectations to plan and implement actions to curb GHG emissions. Aside from state policies, this pressure also comes from citizens, civic organizations, other external stakeholders, peer cities, internal staff and international norms.

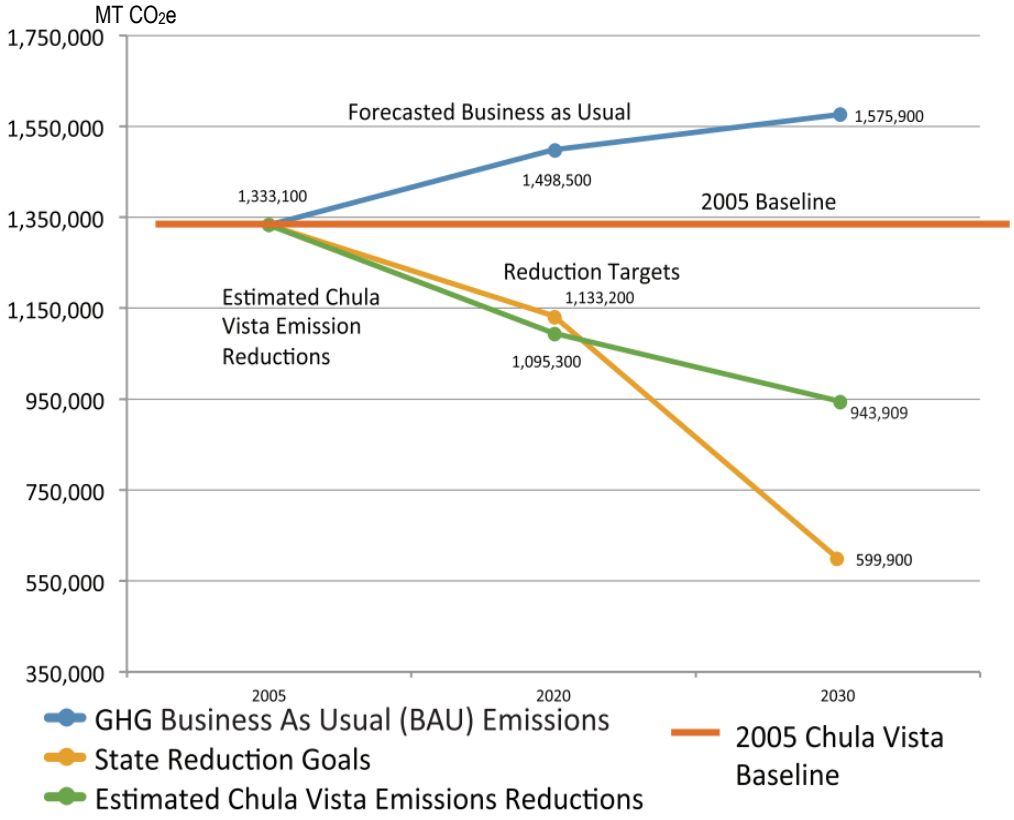
While emissions reduction plans can take a variety of names and forms (e.g. Community Inventories, Sustainability Plans, Energy Action Plans) Climate Action Plans, or CAPs, have emerged as the most common approach. Some 21 counties and 200 cities had adopted CAPs by November 2019. This includes 31 out of the state's 50 most populous cities, and eight of the 10 most populous counties. California's Air Resources Board (ARB) maintains an interactive map that tracks the climate planning progress of each local government.

Including all plans that account for GHGs and energy, 74% of all cities are covered by an existing plan including 85% of the largest 100. Besides CAPs, these include regional air quality or sustainability plans (53% of CA cities), energy action plans (10% of CA cities) and plans of other types (8% of CA cities).

Plan Contents

CAPs and other plan types typically follow a fairly consistent format. They take a top down approach, starting with an accounting of total GHG emissions within the jurisdiction for some recent year. Then future reduction percentages are applied (usually in line with state targets) calculating target emissions levels for milestone years such as 2020, 2035 and 2050. Next, plans project what the emissions levels will be in those years without efforts to reduce, aka "business-as-usual". See Figure 3 for an example taken from Chula Vista, CA's 2017 CAP Update.

Figure 3: Example of CAP Emissions Target Chart (City of Chula Vista)



Required emissions reductions are then allocated across sectors or categories, such as *Transportation and Land Use*, *Water and Wastewater*, *Solid Waste*, *Residential and Commercial Buildings*, *Government Operations*, and *Energy Production*. Within each category, individual *measures* or *strategies* are specified to achieve the emissions reductions needed.

Besides reach codes, common building sector emissions reduction strategies include voluntary green building incentive programs, retrofit incentives, financing programs, benchmarking requirements, and energy education and outreach. California cities and counties have adopted 222 plans containing residential and commercial energy efficiency strategies to reduce emissions. Of those, 64% contain strategies relating to new building efficiency standards, or reach codes.

Building sector emissions strategies named in CAPs and other plans often lack specificity, leaving the door open to an array of policy options that could potentially satisfy them. For example, a plan might include language planning to: "Reduce building sector energy consumption by 20% by 2030." Though a reach code is consistent with such a strategy, it is not the only policy option. Benchmarking, retrofit incentives, green leasing, owner education, or a combination of such programs may be viable alternatives.

In other cases, CAP strategies can be more specific, often distinguishing between new construction and existing buildings, as well as building types. Consider the counter example: “Require new commercial buildings to exceed state code by 15%.” Such a strategy strongly implies a reach code.

In other cases, strategies that are not consistent with reach codes can lead to eventual reach code adoption. Consider a strategy calling for “Incentives and education to make new buildings 15% more energy efficient.” Local staff may explore implementing this strategy and then come back to their governing body with a recommendation for adoption of a reach code as the best way to achieve this, arguing that previous incentive and education programs have fallen short of the 15% impact level specified. In many jurisdictions, this would be perfectly acceptable as there is often an underlying recognition that CAP strategies were developed many years prior by stakeholders with little data and only a basic understanding of building sector energy policy. In those cases, the intent is prioritized over the letter of the plan. In other jurisdictions, departing from an adopted CAP strategy can be less accepted. Staff may adopt a program consistent with the exact language of the strategy despite their misgivings or they may wait for the CAP to be updated at a future date and recommend modifying the strategy at that time. Different jurisdictions afford their staff varying degrees of latitude when implementing CAP strategies.

CAP Development

The CAP development process within a local government usually relies on a host of readily available external and internal resources.[3] Technical support is often available through utilities, regional planning organizations, local foundations, state and federal grants, universities, and environmental non-profits. As the process gets under way it is common for a local government to form or appoint a stakeholder group representing various interested parties such as representatives of the chamber of commerce, the local United States Green Building Council (USGBC) chapter, environmental organizations, academia, water agencies, clean tech businesses, architects, contractors, and developers. City staff representatives from several departments such as Planning, Development Services, Conservation, Transportation, and Waste Management may also be included in this stakeholder group or form a separate, internal, committee.

Subject matter experts normally perform the GHG accounting, and then ideas for reductions are sourced from stakeholders. These are refined to fit the overall plan by the consultant and then drafts of the plan are submitted to internal and external stakeholders for comment.

CAP Implementation

I*mplementing* an adopted CAP may be a multi-phase, complex task, particularly in resource-constrained situations. It may be useful to think of the implementation period as a living phase, ongoing over time depending upon the resources and circumstances faced by a jurisdiction. Implementing a CAP largely consists of establishing one or more new policies and programs for *each* strategy listed in the CAP. Some of these new policies or programs might encompass months of work, subject specific expertise, research, development, stakeholder engagement, consensus building, crafting, and process development.

CAPs may designate a single local government staff member responsible for overseeing implementation. Sometimes this person may already have other responsibilities. Also, the resources that are available during CAP development may not always support implementation. Specifically, consultants that assist with CAP development typically complete their scope once the CAP is approved. And unlike producing a plan with a

[3] External agencies offering resources, such as consulting services for CAP drafting, may even be the drivers that initiate the CAP development process.

defined timeline and deadline, maintaining ongoing collaboration on implementing CAP measures may be challenging for a cross-departmental committee or a committee of stakeholders.

Consider that CAPs can include dozens of strategies across a wide range of subject areas. Assembling the necessary knowledge may involve time, learning and perhaps even missteps as a team continues with CAP implementation.

One reason why CAP implementation resources tend to be so sparse is that stakeholders, in their zeal to adopt a CAP, may inadvertently under-specify the actual resources that implementation will require. For instance, if staff predicted that a new department with 10 new full-time staff members would be needed permanently to facilitate CAP implementation, many jurisdictions might hesitate to approve a CAP initially. Of course, allocating resources for any new initiative requires making budget trade-offs with political implications and complicates the adoption process. And the objective of adopting and implementing CAPs-- curbing GHG emissions-- certainly presents a worthy goal for jurisdictions to pursue.

As with other CAP implementation efforts, there is a great need for technical support when it comes to reach code implementation.

3. Local Government Reach Code Adoption

The remainder of this document examines the process local governments go through to put a reach code in place, and how IOUs can support this process. Section 3.1 explains what triggers local governments to begin a reach code initiative. Section 3.2 lays out the broad categories of support IOUs provide. Section 3.3 provides a window into the internal workings of local government during the twelve stages of reach code adoption, and goes into detail about the challenges, sources of delay, resource needs and opportunities for IOU assistance at each stage.

3.1. How Reach Codes Begin

The inception of a reach code can occur in a variety of different ways. In the most straightforward cases, reach code initiatives are originated by those charged with implementing a CAP to fulfill a specific strategy outlined therein. In other cases, the initiative may originate out of policy objectives unrelated to a CAP—such as a local government's aims to promote green building, support the clean technology business sector, increase building comfort and safety, or to lower energy costs. In such cases, links to the CAP may only be drawn later in the process, if at all.

Reach codes often do not fit into any single local government department. Depending on the City or County, reach codes can align variously with the missions of Economic Development, Planning, Development Services, Sustainability, or the Energy division. Reach codes may align directly with many elected officials' policy priorities. Leadership or staff from any of these units can initiate a reach code effort.

Influence from other local governments can also be a strong driver. Cities and counties conceptualize themselves somewhere along the spectrum from leader to follower, like a consumer technology adoption curve. Some strive to be the first regions to adopt new policies. However even these governments usually look to leaders from other regions, states, or even countries for examples to follow. Less progressive local governments that still wish to lead may wait until one or more other local governments in the area have pursued a policy, and then move forward with a similar policy before most of their peers do. Others may initiate a policy similar to what most of their peers have done, in an effort to avoid being among the last.

The spread of a policy from one local government to another within a region is not just a psychological phenomenon, it also has practical benefits. New policies can come with unresolved legal questions creating legal exposure that early adopters bear unevenly. Also, staff and elected officials tend to act more boldly in the face of push back from constituents when they can point to other jurisdictions that have already adopted similar policies. And finally, being a follower can be an effective way of coping with resource constraints. Modeling policy language, adoption documents, communication materials, training materials, and other work products from those used by a respected neighboring jurisdiction can dramatically reduce the time and technical expertise needed throughout the adoption process. Facilitating such resource sharing among local governments is one important way IOUs are helping and will be discussed further below.

While an individual staff person may be tasked with shepherding a reach code through the process, many internal departments are involved along the way. Departments like Planning, Development Services, and Legal are almost always involved. The names of other involved departments or divisions vary. Identifying other involved units is complicated by the fact that local governments differ in whether they have stand-alone divisions or organizational units specifically dedicated to energy, conservation, or sustainability. When they do, it is common for these to be housed within the planning or economic development department, or for these units to report directly to the City Manager or even the Mayor's office.

3.2. Types of IOU Reach Code Support

Given the challenges and resource constraints local governments experience when establishing a reach code, IOUs provide a variety of types of support:

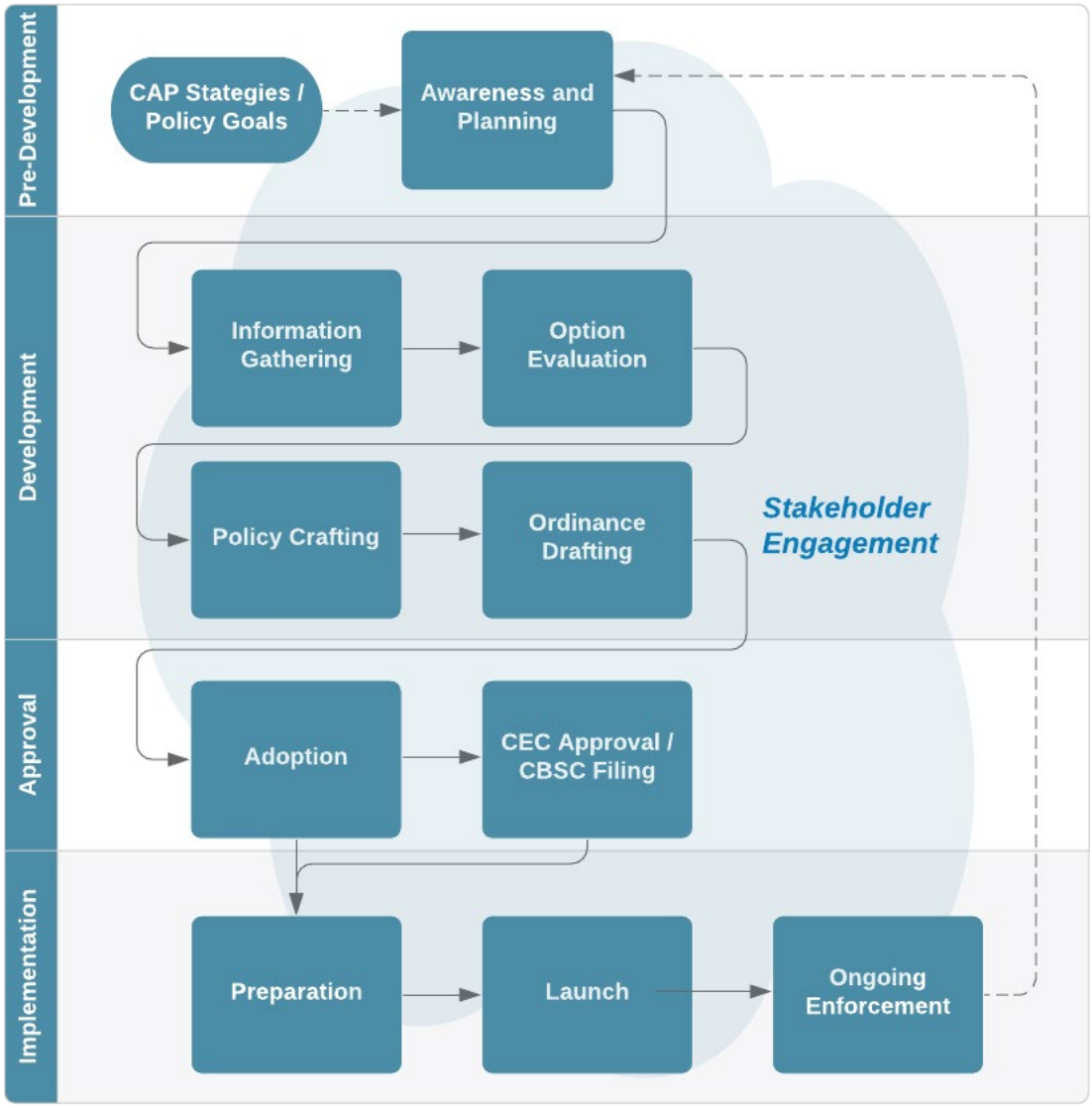
- Technical Analysis - Cost-effectiveness investigations, climate-zone specific findings, information on energy efficiency measures, efficiency standards, predicted customer bill savings.
- On-Call Guidance - Direct, rapid, responsive expertise to assist local government staff by answering questions as needed or pointing them to other available resources.
- Data - Energy usage, number of buildings in a jurisdiction, construction forecasts.
- Procurement and Funding for Consultants – Access to consultants chosen by local governments from a pre-qualified pool procured and paid for through the IOU Reach Code Program.
- Knowledge Sharing - Providing general information on reach code process requirements, building codes, permitting, state legislation, activities of other local governments, or process knowledge pertaining to specific local government functions (i.e. permitting).
- Templates and Materials - Template ordinances, stakeholder communication materials, training materials, model compliance forms.
- Connection to Peer Governments and Organizations - Linking local government staff to other jurisdictions and organization for purposes of sharing knowledge, best practices and experiences.

3.3. Stages of Reach Code Process

From start to finish, reach code adoption takes anywhere from six to 18 months. The typical process has distinct components as a local government develops a policy, takes steps to approve it, prepares for it to take effect and enforces it. Broadly, a policy transitions through 12 stages as shown in Figure 4.

The stages are explained in chronological order and portrayed as distinct steps. In reality, stages often overlap. A local government can proceed with multiple stages at once. It is common for a policy to encounter an obstacle, and then go back several stages to be re-worked.

Figure 4: Stages of the Reach Code Adoption Process



Different challenges occur at each stage, and likewise, opportunities for IOU support differ. Figure 5 summarizes the most common type of needs at each stage. These stages and their needs are explained further below.

Figure 5: Reach Code Stages and Support Matrix

Reach Code Stage	Support Type						
	Technical Info	On-call Guidance	Data	Funding for Consultants	Knowledge Sharing	Templates /Materials	Connection to Peers
1. Awareness and Planning	X	X		X	X	X	X
2. Information Gathering	X	X		X	X	X	X
3. Option Evaluation	X	X	X	X	X		X
4. Policy Crafting	X	X	X	X	X		X
5. Stakeholder Engagement		X	X	X		X	X
6. Ordinance Drafting	X	X	X	X	X	X	X
7. Adoption	X	X	X	X	X	X	X
8. CEC Approval/CBSC Filing		X			X	X	
9. Preparing for Implementation		X		X	X	X	X
10. Launch		X					X
11. Ongoing Enforcement		X			X		X
12. Future Policy Planning	X	X	X	X	X	X	X

Stage 1: Awareness and Planning

Internal Process

Before active policy development begins, local government policymakers[4] are passively exposed to information that begins to shape their knowledge of a policy area. This information comes by way of conversations with peers, attending conferences, and reviewing messaging on the topic. This stage has no distinguishable starting point and includes the planning process for CAPs and other documents. During this stage policy objectives coalesce; plans are developed and conversations take place about what eventual policies might result.

Policymakers who may be involved in developing a future policy related to building energy efficiency will pay attention to information about what actions other jurisdictions have taken, the effectiveness of those efforts, the amount of resources required, and the response from key stakeholders. Information retained from this period forms the basis of knowledge and initial direction that policymakers start from in the next phases as they actively begin the policy development phase.

[4] The term *policymaker* is used throughout this document to refer to any local government official or staff person involved in creating a reach code.

For resource constrained local governments, a future policy will often remain in this stage until a solution appears for the resource constraint, allowing the policy to proceed to the next stage. Local government policymakers are patient and opportunistic in this way—out of necessity they balance the importance/value of a future policy against the resources that will be needed to develop it. In other words, policymakers during this stage are often aware of a need for a policy but perceive that they lack the technical expertise or bandwidth to proceed to active development. The calculus can suddenly change when, for example, a policymaker learns of a new model ordinance that fits their policy parameters, or that a trusted peer jurisdiction has done a cost-effectiveness study and written a relevant ordinance. Or a qualified consultant may come forward offering key assistance paid for by outside funding. Any of these things might suddenly make a future policy feasible and provide the impetus for proceeding to the next stage.

Challenges/Sources of Delay:

- Lack of resources to proceed to policy development
- Lack of accountability for implementing CAPs
- Perceived risk or uncertainty associated with a policy area
- Aversion to potential push back/lack of political will

Resource Needs/Opportunities for Assistance:

- Updates on other jurisdictions' policy efforts (including policy options explored, rationale for policy choices made, and information that critically assesses the policy performance)
- Programs that provide opportunities for networking
- Updates about significant developments with cost-effectiveness studies
- Information about external reach code support resources available
- Funds for, or access to, experienced consultants
- Access to approachable technical experts that save policymakers' time

Stage 2: Information Gathering

Internal Process

The information gathering stage typically begins when a decision is made to begin actively exploring ways to reduce building energy use. At this point either the policymaker has a formal discussion with their superior to get permission to begin, or a superior will delegate the policy development task to an individual staff person. Next, the policymaker may reach out laterally to other departments for input. Policymakers at this stage are chiefly concerned with what is possible in a policy area as they try to quickly fill in their understanding gaps. They will seek to identify and contact other jurisdictions further down the policy development path and discover those jurisdictions' basic policy designs and the thinking that led to those design choices. Policymakers will start to compare alternative policies and assess how willing other jurisdictions may be to provide guidance during future stages.

In this stage, as well as the remainder of the policy development stages, policymakers commonly encounter information surprises that result in setbacks. For example, a policymaker thinking about requiring more efficient appliances may discover that federal law preempts state and local governments from regulating most appliances. Or a policymaker may be surprised to learn that to adopt any energy-conserving building requirements the CEC requires the local government to make a cost-effectiveness determination. Or a policymaker may discover that a policy idea (like requiring PV on all new residential buildings or annual benchmarking for buildings larger than 50,000 square feet) is already in place due to state efforts. This stage is the best time to stumble upon these information surprises. Policymakers are eager to identify all these hidden

icebergs now when it's easy to change course, rather than learning of them later when they might "sink the ship", causing political embarrassment, delay, or legal issues.

The practical result is that policymakers in this stage are hesitant to move forward and recommend one option over all others for fear that they have not gathered enough information to avoid these surprises. Therefore, connections to area experts and trusted peer jurisdictions are important to inform policymakers of these unknown obstacles now and build confidence that there are no others lurking.

Challenges/Sources of Delay:

- Lack of readily available information on other jurisdictions' policy thinking
- Lack of comfort with subject matter and key technical knowledge
- Risk of information surprises

Resource Needs/Opportunities for Assistance:

- Resources outlining potential policy approaches, identifying approaches peer jurisdictions have taken, communicating rationale
- Connection to peer jurisdictions and subject area experts that can make policymakers aware of key obstacles at this stage, and that will reliably be available in more advanced stages
- Funds for, or access to, policy consultants
- Resources designed to give policymakers working knowledge of relevant technical subjects
- Cost-effectiveness studies and summary information

Stage 3: Option Evaluation

Internal Process

Once a certain quantity of information on potential policy approaches is gathered, and policymakers feel confident they are ready, option evaluation begins. The goal of this stage is to evaluate a set of policy options, produce a recommendation, and make the case for it to superiors (and likely other involved departments) to win their favor. Doing so at this point helps avoid wasting resources on developing a detailed policy when superiors may be against the basic policy concept in the first place.

At this stage policymakers and their superiors tentatively make the decision to pursue a reach code, instead of other types of policies, and develop a broad outline of the reach code requirements. These choices are made on a variety of criteria. Main considerations include the potential impact of the policy (i.e. emissions reductions, utility bill savings, percentage improvement in energy efficiency) the cost and resources required to develop and enforce the policy, cost to residents to comply with the policy, the amount of expected push back from stakeholders (both internal and external), the degree to which the policy aligns with the CAP and other plans, the policy's fit with political objectives, perceived legal risk, perceived probability of success, and how the policy fits with a jurisdiction's desire to lead or follow among peers.

Information in these areas is rarely quantifiable so policy makers must make subjective judgments and comparisons about how alternatives measure up against one another. As options are analyzed and discussed internally, critical feasibility questions are raised such as: Is the policy legal? Is the policy reasonably enforceable? Are resources for enforcement available? What is the risk that this policy will be subject to costly litigation?

Many other questions will be raised further on in the policy development process. The distinction here is that these critical feasibility questions at this stage are deal breakers, or at least, they must be answered before a superior will authorize the policymaker to proceed with a policy choice.

Challenges/Sources of Delay:

- Lack of objective or comparable information on policy impacts and effectiveness
- Measures specified in CAP may be infeasible or favor sub-optimal policy choices
- Misleading information or pressure from special interests
- Difficulty getting reliable answers to policy feasibility questions

Resource Needs/Opportunities for Assistance:

- Answers to feasibility questions
- Resources that compare policy approaches based on projected impacts
- Funds for, or access to, policy consultants
- Direct assistance from subject matter experts
- Connection to peer jurisdictions
- Cost-effectiveness studies and summaries

Stage 4: Policy Crafting

Internal Process

Once a policy option is prioritized over others, focused policy development begins. This stage entails thinking through what a policy is going to look like, how it will be implemented, the schedule for adoption and enforcement, and the resource needs. Typically, the policymaker will discuss the policy with the involved departments in pursuit of guidance and input on unresolved questions and to build buy-in. This is an iterative process. As the policy takes shape and details are penciled in, the policymaker will discuss the policy with new individuals or revisit it with individuals already consulted. These discussions, in turn, generate new questions and raise new issues. As these get answered or dealt with incrementally, the policy is strengthened, specifics take shape, and ideally, consensus builds.

The main goals of this stage are to work through enough detail to be ready to proceed to policy drafting while exposing the policy to as much critical feedback as possible to identify and work through potential issues. Changes to the policy may still occur in later phases, however it is easier and less time consuming to make adjustments now.

When a policymaker believes a policy is ready for the next stage, they ordinarily present an outline of the policy up the chain of command to get comments and seek sign-off. Often it is at this stage that review of the policy ‘rises’ to a higher level than it has before. For example, if previously the most senior official involved was a Division head, the Department Director, City Manager, or a representative of the Mayor's office may be involved at this stage. The conversations that result there often uncover new concerns and questions and lead to further policy development before superiors give the green-light to begin the next stage—drafting.

It is also common during this stage for the policymaker and their superior(s) to produce a tentative adoption schedule laying out when the policy may be brought to City Council or the Board of Supervisors for a vote, and

likewise, any applicable boards or committees. These timetables are commonly subject to delay; however, they are useful for planning and to help create a sense of urgency to move the policy along.

Challenges/Sources of Delay:

- Policymakers and involved departments may have challenges understanding each other as well as differing motives and priorities, making collaboration challenging
- Interest group lobbying
- Push back from affected departments
- New developments in policy landscape

Resource Needs/Opportunities for Assistance:

- Direct assistance from subject matter experts
- Connection to peer jurisdictions
- Funds for, or access to, policy consultants

Stage 5: Stakeholder Engagement

Internal Process

Stakeholder engagement, as discussed here, includes meeting with individuals, organizations, or groups (i.e. the local USGBC chapter head, or a group of home builders) as well as presentations to advisory bodies (i.e. a city's Sustainability Commission). Decision-making bodies, such as appointed groups that have the authority to approve a policy for adoption, are discussed in the Adoption phase.

Stakeholder engagement occurs concurrently with other stages in the reach code process. It may begin as early as the Awareness and Planning stage or as late as the Preparation for Launch phase. Engagement earlier in the process is often more focused on gathering high-level input and as the policy progresses to adoption, the scope of feedback solicited becomes more and more specific. For example, when policymakers consult stakeholders during the Information Gathering stage, those stakeholders may be invited to suggest policy options consistent with the overall goals of a policy (i.e. reduce building sector emissions). During policy development, policymakers might share a tentative outline of a policy and ask for feedback on a narrower set of specific parameters. The reason for this is that receiving negative feedback on the basic policy direction after the policy is already well into development or drafting will potentially disrupt or delay the process. Staff may try to prevent this by choosing to engage key stakeholders early, by trying to shape the *type* of feedback they get at each stage, and by bringing experts into stakeholder meetings to get ahead of dissent and assuage concerns quickly during later stages.

Staff differ in the degree to which they value stakeholder engagement. Some policymakers patiently welcome stakeholder feedback of all types and avoid attachment to certain outcomes. Others might value certain types of feedback as it helps create a stronger policy, while fearing other kinds of feedback that can jeopardize a policy's chance of adoption or lead to delay. The most cautious staff may view stakeholder engagement as a risk. Such policymakers may wait to begin engagement until a policy is nearly completely developed or even once it has been adopted, and they may structure engagement meetings more as one-way information sessions rather than inviting input.

One possible outcome of stakeholder engagement, which staff generally try to prevent, is awakening powerful and well-connected stakeholders or special interests that will lobby elected or senior officials against a policy.

No staff person wants to learn that the Mayor got a complaint from a well-connected stakeholder seething about a policy in progress. To mitigate risk, staff may bring such stakeholders in early and make efforts to win their support. Or staff may warn superiors in advance of potential pushback and try to keep them briefed on the rationale for a policy choice. The ability to anticipate the reactions of certain interest groups is valuable.

Engaging specific stakeholders who possess needed expertise is another common tactic that policymakers use when resource constrained. Interested individuals or groups are usually willing to provide information, opinions and analyses to policymakers. Policymakers may be wary of bias and hesitant to rely solely on advocate support, however, access to impartial experts helps policymakers assess and validate information.

Challenges/Sources of Delay:

- Unanticipated stakeholder feedback
- Critical feedback during latter stages
- Complaints to senior or elected officials
- Research needed to adequately respond to stakeholder questions and concerns
- Potentially biased information from groups or individuals with interests at stake

Resource Needs/Opportunities for Assistance:

- Materials to help with stakeholder engagement at each phase
- Connection to other jurisdictions and experts who can help anticipate stakeholder reactions
- Experts that can attend key stakeholder meetings
- Technical data to respond to stakeholder questions and illustrate why certain policy choices are necessary
- Direct assistance from subject matter experts
- Funds for, or access to, policy consultants

Stage 6: Ordinance Drafting

Internal Process

Drafting ordinance language usually begins once the main policy parameters are complete, approval from superiors is given, and collaborating departments have no major objections. Sometimes the policymaker writes the first draft; other times it is written by an outside consultant, legal staff, or more technically-oriented staff from the Development Services Department (e.g. the Building Official). The draft ordinance will be shared in successive rounds of revisions with all the aforementioned parties and related departments.

Almost inevitably, new issues or questions are raised during the drafting process that require additional development, research, and outreach to specific stakeholders. Questions arising at this stage tend to be the most technical and legalistic, and staff may look to other jurisdictions that have implemented similar policies or outside technical experts for assistance.

Even when the ordinance is modeled after a template or another jurisdiction's language, the parties involved will scrutinize the ordinance and seek to understand the rationale. Some of the issues raised at this point may relate to implementation processes, rather than the ordinance language itself. It is common to begin discussing implementation and developing procedures here or even earlier in the policy development stage.

Usually during this stage, the policymaker will invite Energy Commission Reach Code staff to review a draft for consistency with Energy Commission requirements for local amendments and confirm the process for Commission approval.

In addition to the ordinance itself, other policy documents may need to be drafted, such as resolutions or cost-effectiveness memos. As a matter of local preference, some jurisdictions will choose to include resolution language in the *whereas* section of the ordinance, while others may put findings in one or more separate resolutions to be considered concurrently with the ordinance by the applicable legislative bodies.

Challenges/Sources of Delay:

- Time to track down specialized technical information
- Time awaiting feedback on ordinance language from internal stakeholders
- Concerns from cautious legal staff who may have little to no reach code or energy knowledge
- Needs for technical details not published in cost-effectiveness studies

Resource Needs/Opportunities for Assistance:

- Expert support responding to concerns from legal staff
- Connections to other jurisdictions
- Connections to technical experts involved in cost-effectiveness studies
- Connections to technical experts in building energy efficiency compliance
- Funding for, or access to, Consultants who can draft or review ordinance language, or do specialized technical analysis

Stage 7: Adoption

Internal Process

This stage culminates when the Board of Supervisors or City Council considers the proposed policy and votes whether to approve it during two official meetings at least 5 days apart, the *first reading* and *second reading*. The stage begins when staff start to ready the supplementary documents required for legislative consideration. Together these documents, known as the *item package*, are shared with the representatives of the governing body who will be voting on the item and posted for public viewing. The item package consists of the proposed ordinance, any resolutions, supporting cost-effectiveness data/studies, other key supporting documents, and a *staff report*. These documents must be posted at least 3 days in advance of a public meeting. When the item is heard, staff make a short slide presentation known as the *staff presentation*.

Among these documents, the staff report and presentation require the bulk of the work at this stage as the other documents are already developed. The staff report should clearly summarize background information, the main elements of the proposed ordinance and resolutions, and the rationale for the policy, all in language that both elected officials and the general public can understand. The staff presentation is expected to do the same and is typically shorter than 15 minutes. The staff person who developed the ordinance usually drafts these two documents, then they are reviewed. The expectation is that these two documents should be precisely worded, fact based, persuasive, and hold up to scrutiny. New questions or needs for technical data may arise during drafting as staff conduct final due diligence and document their findings. For example, staff may fact check any remaining untested assumptions, including topics such as policy impact and implementation cost, to assure they are precise and defensible.

The item package and staff presentation are typically drafted 3-4 weeks before an item is heard by council or the board to allow time for internal reviews and approval. At this stage, a routing sheet (or digital equivalent) is usually attached to the policy. The department head, attorney's office, and other leaders in the executive branch conduct a final review and formally sign off on the policy before it is released to legislators and the public. In many cases, this is the first time certain senior officials see the policy in such a mature state of development. Last minute questions and concerns may come up.

During this process senior staff will also assess whether the item is expected to get the support it needs to pass. If there is doubt, the item may simply be delayed or called off. Or, if the item is considered important, high-level political discussions and maneuvering will take place. Concessions may be made to amend the item or elected officials may trade support for one item in exchange for another.

When the item is finally heard at a formal legislative meeting, the staff presentation comes first. Then, any members of the public who have requested to speak are given time. Subsequently, elected members may speak, ask questions, or make motions. The ordinance may be approved, rejected, amended, or sent back for further development with specific direction. As explained in Section 2.2, the law requires ordinances to be presented and voted upon at two meetings at least five days apart. Once an item is approved at the second reading, it is considered adopted. An exception exists for cities where the Mayor has the authority to either sign or veto the ordinance after it is approved at the second reading.

Challenges/Sources of Delay:

- Lack of policymaker time and focus necessary to draft presentation and staff report
- Opposition from legislative officials
- Political negotiation
- Scheduling difficulties when legislative calendars are full
- Sequential scheduling of committee hearings that meet infrequently
- Late ordinance revisions that require re-approval by prior bodies or additional public notice
- Last minute questions and involvement with stakeholders

Resource Needs/Opportunities for Assistance:

- Rapid on-call politically savvy advice and expertise
- Support for technical questions and data requests
- Staff reports and presentations from other jurisdictions or templates
- Experts able to present on behalf of staff or speak in support of an item
- Connection to interest groups that can mobilize support

Stage 8: CEC Approval and CBSC Filing

Internal Process

Once the reach code ordinance is adopted, local governments are usually in a hurry to get through Energy Commission approval. Staff are eager to see that everything proceeds as planned as any surprises from the Energy Commission or CBSC would be quite embarrassing. If there are no hiccups the whole process takes roughly 60 days. This includes time for Energy Commission staff to review the application, post it for a 15 days public comment period, and for the Commission to formally approve it at their monthly business meetings.

The local government work required at this stage is minimal. Staff submit the adopted ordinance, item package and cost-effectiveness information to the Energy Commission with a cover letter. Local government staff often

work with the Energy Commission staff and/or consultants to ensure the package is complete and accurate. CBSC filing is a procedural step that conveys little risk; some local governments may still seek expert guidance here.

Challenges/Sources of Delay:

- Public criticism during comment period
- Unexpected issues and interpretations of the law by the Energy Commission

Resource Needs/Opportunities for Assistance:

- Guidance on Energy Commission and CBSC procedures
- Template cover letter for Energy Commission and CBSC submissions
- Expert support to address public comments

Stage 9: Preparing for Implementation

Internal Process

Preparations to enforce the reach code usually begin immediately after adoption (while awaiting Energy Commission approval) and continue through launch. Local governments use this time to put in place internal program infrastructure, train staff and notify affected parties (i.e. building owners, developers, contractors) of the new requirements.

During this stage, any detailed policy requirements that have not yet been fully specified are hashed out, and any procedures, workflows, forms, educational materials and guiding documents are created. Staff that previously lead policy development may begin to step back from coordinating as the implementing department (e.g. Development Services, a.k.a. “the Building Department”) plays a greater role. Staff will often have questions about building and energy code compliance procedures and may request additional technical information while creating forms and compliance checklists.

As local governments publicize the new requirements, the affected constituents may have questions and concerns. At times, a local jurisdiction will plan a pilot or trial rollout to test new processes before the policy takes effect.

Challenges/Sources of Delay:

- Push back from affected constituents asking for more time to adjust and prepare
- Pushback from implementing staff who may already feel overworked
- Unanticipated challenges with implementation procedures

Resource Needs/Opportunities for Assistance:

- Template training materials, education and implementation documents
- Access to technical expertise for implementation procedures
- Trainers experienced in working with inspectors, plan checkers and other permit staff

Stage 10: Launch

Internal Process

Ordinances contain a provision specifying their effective date to allow time to prepare. However, an adopted reach code cannot legally be enforced until approved by the Energy Commission. Reach codes may state that the policy is effective immediately following Energy Commission approval, or take effect upon Energy Commission approval or on a specific date, whichever comes later.

It is common for issues to arise early in the implementation process. It is valuable for implementing staff to connect with jurisdictions that have already run into these issues and dealt with them (i.e. building official to building official). It is important for staff responsible for initiating the new policies to work collaboratively with those who will be enforcing them, such as creating checklists or other documents that harmonize with existing compliance processes and procedures. This will help avoid issues that may otherwise result when procedures have not been developed in partnership with implementing staff and departments.

Challenges/Sources of Delay:

- Confusion among staff and the public
- Procedural inefficiencies or failures

Resource Needs/Opportunities for Assistance:

- Connections with other jurisdictions with implementation experience
- On-call compliance expertise

Stage 11: Ongoing Enforcement

Internal Process

New construction reach codes are usually in force for a period of one to three years, as their validity expires when the next energy code cycle takes effect per Energy Commission rules. During this time, occasional new issues may arise from special cases for which jurisdictions need outside assistance to handle. Other times, new state policies or legal precedents may develop that affect the adopted reach code. Jurisdictions may need assistance keeping abreast of these new developments and responding to them.

Challenges/Sources of Delay:

- Special cases that raise new compliance questions
- Changing legal or regulatory landscape, especially when a new source of legal uncertainty is concerned

Resource Needs/Opportunities for Assistance:

- On-call compliance and enforcement assistance
- Updates on developing legal or regulatory issues
- Connection to peer jurisdictions

Stage 12: Sunset and Future Policy Planning

Internal Process

Often the reach code process is regarded as complete when the next energy code takes effect and the reach code policy sunsets. A more holistic approach is to look at reach code adoption as an ongoing cycle. While a reach code is in place, local governments would do well to work on preparing a reach code for the next code cycle. In this way, after the Launch stage, a jurisdiction essentially enters the Awareness and Planning, or Information Gathering stage anew. Ideally, reach codes are continuously in place from code cycle to code cycle with no gaps, allowing a local government to make good on its policy commitment and CAP goals and maintain its position of regional leadership.

However prudent, such thinking represents a shift from the norm. For one, once a reach code is in place, policymakers are under pressure to move on to other priority projects that have been waiting in the wings. Secondly, the information needed to begin planning a follow-up reach code is usually not available far enough in advance. The next Energy Code Standards language is adopted by the Energy Commission 18 months prior to the effective date. During that time, jurisdictions can explore additional requirements they may be interested in adopting locally. However, to determine the cost-effectiveness of the next potential reach code, compliance software, forms, and other enforcement infrastructure for the next code cycle needs to be developed, tested and approved. This typically occurs much closer to the code effective date.

And finally, as future building codes take shape there is a predictable cycle of building community opinion. As people naturally tend to resist change, the building industry tends to express concerns about their ability to comply with new requirements. This often has the effect of discouraging local government staff from considering requirements that would be more stringent still.

Not all reach codes expire when a new code cycle takes effect. Those relating to existing building upgrades that are not tied to current code requirements may remain valid beyond the end of a code cycle. Determining which policies may remain into the next code cycle and what procedural steps are needed can be complex, as this is subject to change. Jurisdictions may seek assistance with navigating these questions; guidelines are published by the CBSC.

Challenges/Sources of Delay:

- Time it takes to finalize subsequent energy codes
- Time it takes to get new compliance software in place and free of major errors
- Time it takes to for new cost-effectiveness studies to be published
- Uncertainty about perishability of existing reach codes as new code cycles take effect
- Lack of available cost-effectiveness studies matching policy interests
- Anxiety about difficulty of complying with future codes

Resource Needs/Opportunities for Assistance:

- Guidance on timing and updates on the development of next cycle energy codes
- Guidance on timing and updates on the development of cost-effectiveness studies
- Communications materials and best practice around reducing future code anxiety
- Ongoing engagement with jurisdictions to survey their policy interests around future reach codes
- Updates on future reach code possibilities and policy ideas

4. Conclusion

Statewide, we are in the process of major transition as reach codes go from a seldom-used mechanism to a mainstream policy tool that an increasing number of local governments will rely upon over the next decade. This shift is driven by local government efforts to meet carbon mitigation goals for 2030 and beyond. Education, financing and incentive programs can all be helpful to support more energy efficient buildings, but consensus is building that none of those will reliably produce the predictable, consistent and large-scale impacts that reach codes can have. As a result, local governments' emissions reduction plans, such as CAPs, commonly call for amended building codes.

A substantial capacity gap remains. Local governments are under-equipped to design, develop, adopt and enforce reach codes on their own. For starters, the Energy Commission's reach code application and approval process is ill understood. Secondly, local governments often lack the full array of technical skills and specialized knowledge necessary. Finally, local governments tend to under provision the human, technical, and financial resources necessary to implement their CAPs and other emissions reduction plans.

There is a significant need for assistance to local governments at every stage of the reach code process. While IOUs are already carrying a substantial share of this burden, the need continues to grow. There is substantial opportunity for IOUs to continue to scale up existing offerings and create new ones to facilitate widespread reach code adoption.

And the better IOU stakeholders can understand the inner-workings, challenges, and sources of delay within local governments during the reach code process, the better they can respond to them by appropriately scaling and adapting existing offerings, as well as developing new ones. To assist in those efforts, this primer provides a window into 12 stages of the local government reach code adoption process and catalogs the types of support commonly needed during each.

By optimizing reach code support offerings to match the needs of the coming reach-code wave, IOUs can help California's local governments achieve the aggressive carbon reduction targets demanded by the state. And California can continue to serve as an example to governments around the globe for effective energy efficiency policies.

The adoption of reach codes can differentiate jurisdictions as efficiency leaders and help accelerate the adoption of new equipment, technologies, code compliance, and energy savings strategies.

As part of the Statewide Codes & Standards Program, the Reach Codes Subprogram is a resource available to any local jurisdiction located throughout the state of California.

Our experts develop robust toolkits as well as provide specific technical assistance to local jurisdictions (cities and counties) considering adopting energy reach codes. These include cost-effectiveness research and analysis, model ordinance language and other code development and implementation tools, and specific technical assistance throughout the code adoption process.

If you are interested in finding out more about local energy reach codes the Reach Codes Team stand ready to assist jurisdictions at any stage of a reach code project.

- Follow us on Twitter
- Visit LocalEnergyCodes.com to access our resources and sign up for newsletters
- Contact info@localenergycodes.com for no-charge assistance from expert Reach Code advisors