

## 8. Local Policy Opportunity

Scott Anders, Energy Policy Initiatives Center, University of San Diego

Nilmini Silva Send, Energy Policy Initiatives Center, University of San Diego

Joseph Kaatz, Energy Policy Initiatives Center, University of San Diego

Yichao Gu, Energy Policy Initiatives Center, University of San Diego

Marc Steele, Energy Policy Initiatives Center, University of San Diego

### 8.1 Executive Summary

This chapter will be developed based in part on the initial drafts of the other chapters of this report. This draft provides an overview of the approach the Energy Policy Initiatives Center (EPIC) will use to identify local policy opportunities.

The overall goal of the Local Policy Opportunity chapter is to identify local policy opportunities that support the pathways to deep decarbonization identified in the Regional Decarbonization Framework technical analysis.

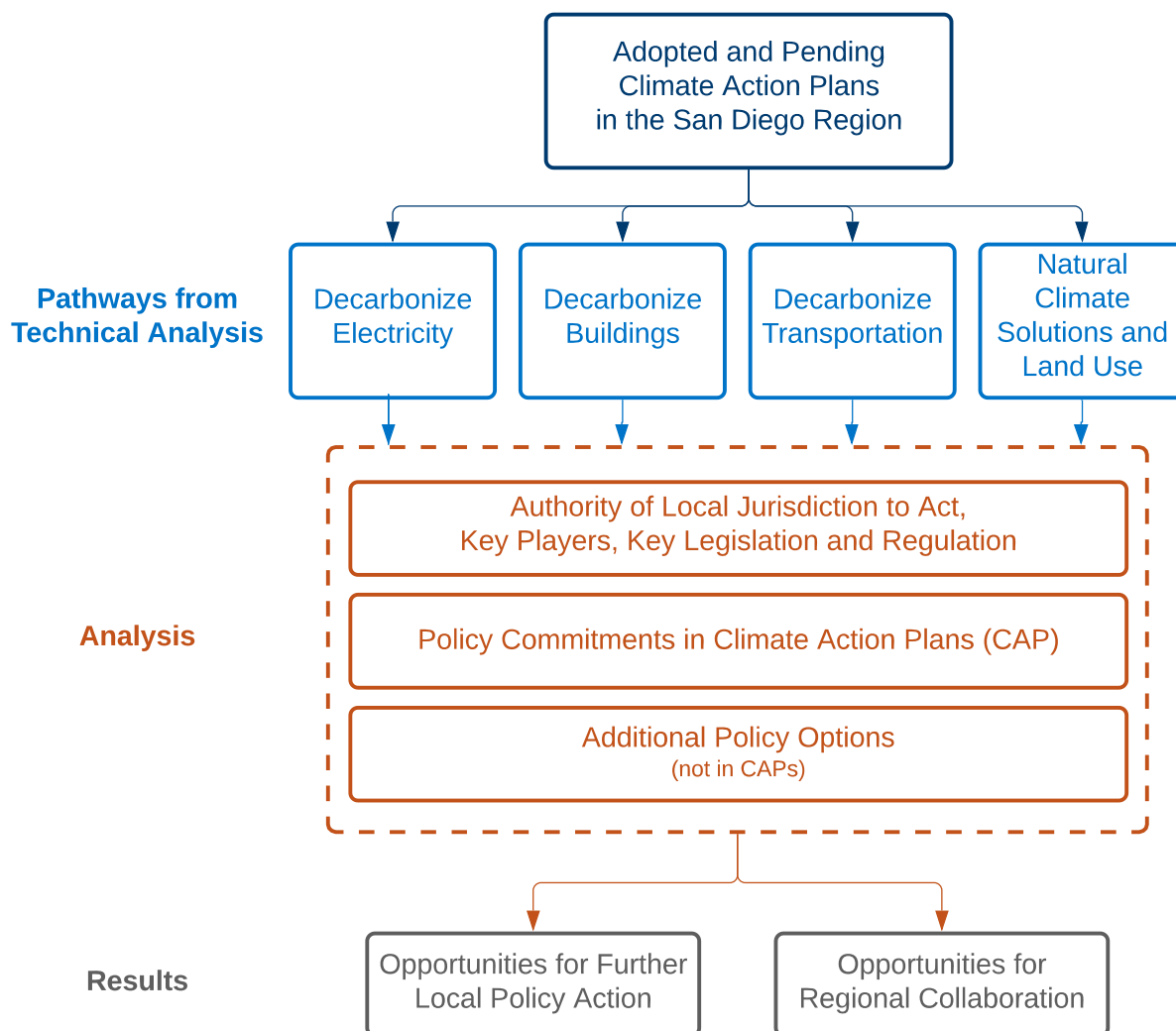
To achieve this overall goal, EPIC will conduct analysis to:

- Identify the authority of local governments and agencies to act to influence and regulate GHG emissions, including summary of key players and key legislation and regulation at the federal and state levels to help to clarify the ability of local governments to act to reduce greenhouse gas emissions;
- Evaluate adopted and pending climate action plans (CAPs) to determine the level of policy commitments and to determine if there are any policies that could be adopted by other local jurisdictions; and,
- Conduct a literature review to determine if there are policies not included in regional CAPs but that could support GHG reductions.

Results of this analysis will:

- Identify policy opportunities to support the decarbonization pathways; and,
- Identify opportunities where regional collaboration can enhance and improve GHG reductions.

Figure 8.1 summarizes the overall project approach.



**Figure 8.1.** Overall Approach to Identifying Local Policy Options.

The following sections will summarize each aspect of this overall approach.

## 8.2 Adopted and Pending Climate Action Plans

EPIC will update its Mitigation Measure Database to include the most recently adopted and pending climate action plans (CAP) in the San Diego region. We will modify the database to facilitate analysis necessary for this project, including alignment with findings in the technical chapters of this report. The database contains information on all measures in CAPs adopted since 2010 and draft CAPs that are complete but not yet adopted (pending).

Figure 8.2 summarizes which CAPs we plan to include or exclude from the analysis. We propose to include pending CAPs to represent recent policies and actions. Also, we propose to exclude

City of National City because its CAP was adopted in 2011 and is an outlier among the sample of CAPs. Further, its methods, data, and measures predate significant development in methods and state guidance. Two CAPs – County of San Diego and El Cajon – were withdrawn or invalidated. Because these are no longer valid and cannot be considered a policy commitment, we will exclude them from the analysis.

Jurisdiction	Year Adopted	Included?
Carlsbad	2020	Y
Chula Vista	2017	Y
Coronado	Pending	Y
County, SD	Withdrawn	N
Del Mar	2016	Y
El Cajon	Withdrawn	N
Encinitas	2020	Y
Escondido	2021	Y
Imperial Beach	2019	Y
La Mesa	2018	Y
Lemon Grove	2020	Y
National City	2011	N
Oceanside	2019	Y
Poway	NA	N/A
San Diego	2015	Y
San Marcos	2020	Y
Santee	2020	Y
Solana Beach	2017	Y
Vista	Pending	Y

**Figure 8.2.** CAPs Included in Local Policy Analysis.

Focusing on more recently adopted and pending CAPs improves the analysis in the following ways:

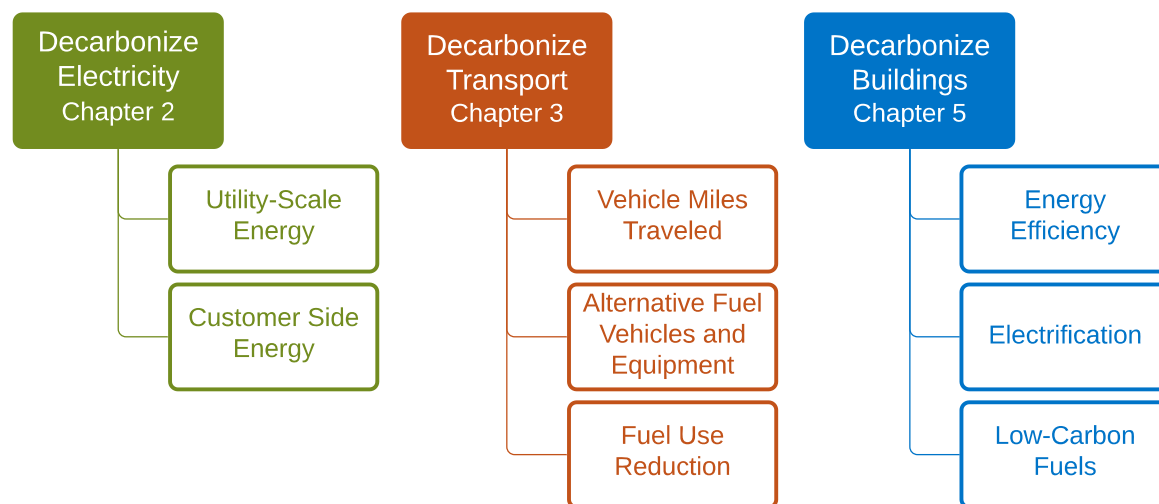
- Provides a more up-to-date sample of measures;
- Creates a more consistent sample of measures that are more closely aligned with current federal, state, and regional efforts including the San Diego Association of Government’s (SANDAG) Regional Climate Action Planning (ReCAP) Framework; and
- Provides a collection of measures that rely on more consistent methodologies for GHG reduction calculations as methods may evolve over time.

## 8.3 Decarbonization Pathways

The local policy analysis is based in part on the findings and frameworks of the technical chapters of this document, including:

- Chapter 2: Geospatial Analysis of Renewable Energy Production
- Chapter 3: Transportation Sector Regional Plans and Decarbonization
- Chapter 4: Natural Climate Solutions and other Land Use Considerations
- Chapter 5: Decarbonization of Buildings

Figure 8.3 illustrates the organizational structure for the analysis and eventual chapter. Our analysis will cover all four areas of decarbonization in these chapters; Figure 8.3 focuses on the main decarbonization pathways. These three pillars of decarbonization – focused on buildings, electricity supply, and transportation – represent both the highest emitting sectors and those with the highest potential to reduce GHG emissions. Natural climate solutions and other land uses, including agriculture, are important and will be included in the analysis but to a lesser extent than the three main pathways. The broad pathways can be further organized into subcategories.



**Figure 8.3.** Main Decarbonization Pathways and Subcategories.

Each of the subcategories contains more specific local policy categories. For example, policies to reduce vehicles miles traveled could include the following.

- Bike
- Walk
- Mass Transit
- Parking Reductions
- Commuter TDM
- Smart Growth Development
- Micromobility (excluding bicycles)
- Complete Streets

These local policy categories can be used to conduct a more detailed analysis of policies in CAPs.

### **Analysis**

Our analysis to identify local policy opportunities will include three elements:

- Assess the local governments ability to act to influence or regulate GHG emissions. As part of this we will identify the authority of local governments and relevant agencies; identify the key players at the federal, state, and local levels; and identify key legislation relevant to each decarbonization pathway and subcategory (Figure 8.3).
- Evaluate adopted and pending climate action plans (CAPs) to determine the level of policy commitments and to determine if there are any policies that could be adopted by other local jurisdictions; and,
- Conduct a literature review to determine if there are policies not included in regional CAPs but that could support decarbonization pathways.

The following sections provide additional information on each element.

### **Authority, Key Players, Key Legislation**

EPIC will provide an overview of the following aspects of the ability of local governments and agencies to influence or regulate GHG emissions.

- What constitutional or delegated authority exists for local action and to what extent is local authority preempted by federal or California law or regulation?
- What state and federal players can influence or regulate GHG emissions (e.g., state regulators like the California Air Resources Board) and what are their respective roles relative to local jurisdictions and agencies?
- What key legislation or regulation applies in a given area (e.g., building electrification) that will affect GHG emissions at the local level?

***Local Authority***

These sections will discuss existing local jurisdiction authority to regulate GHG emissions by analyzing the broad constitutionally derived “police authority” of local governments as well as delegated authority from California or federal law. How and to what extent preemption exists under California and federal law will be discussed to determine where local authority is clear and where local authority is either uncertain or preempted. Police authority will also be discussed in terms of whether a local government is a charter or common law city or county. The analysis will address authority over direct emissions, procurement of electric and natural gas supply, regulation of demand for electricity and natural gas, land use, and transportation.

***Key Players***

The federal and California entities that are responsible for regulating GHG emission by source will be highlighted and used to discuss the role and authority of local governments. These will include the U.S. Environmental Protection Agency, Department of the Interior (including Bureau of Land Management, National Parks Service, and U.S. Fish and Wildlife), Department of Agriculture (including the National Forest Service), Department of Defense, San Diego County Water Authority, California Air Resources Board, California Energy Commission, and California Public Utilities Commission. Local government entities will be identified and discussed as well. These will include all cities and the county, San Diego Association of Governments, San Diego Pollution Control District, Port of San Diego, school districts, water districts, universities, community college districts, San Diego Metropolitan Transit System, North County Transit District, and any other relevant local government entity.

***Key Legislation and Regulation***

Key legislation and regulations will be identified and analyzed to determine local authority to act. This will include identifying relevant constitutional language, statutes, and regulations applicable to local jurisdictions. For example, although emissions from passenger cars and light-duty trucks is the largest single source of emissions in the region, local governments are preempted from setting tailpipe emissions standards under the federal Clean Air Act, but California acts with delegated authority under the Clean Air Act to adopt and enforces aggressive mobile source regulations in this area. Local jurisdictions act with limited authority over mobile source emissions but still can act to influence fuel use by on-road vehicles through local land use, zoning, incentives, and permitting. In this way, we will show how local authority to act on GHG emissions is nested with state, and in some cases, federal authority. This can help identify areas where local authority may not exist but where advocacy of changes at the state and federal levels will be beneficial to local and regional GHG emissions levels.

**Local Policy Commitments**

EPIC will analyze CAP measures and supporting actions to identify current local policy commitments in the San Diego region that support decarbonization. To identify further opportunities, EPIC will:

- Update the CAP Mitigation Measure Database;
- Determine the distribution and frequency of measures across all CAPs;
- Determine the relative contribution of categories of CAP measures to the local GHG reduction commitment in CAPs;
- Determine how CAPs integrate social equity considerations.

***Categorization***

All CAP measures and supporting actions will be categorized by the following to EPIC-defined groups to facilitate multiple levels of analysis (Figure 8.3 above):

- Decarbonization pathway;
- Decarbonization pathway subcategory;
- Local policy category; and
- Implementation mechanism.

Categories will be defined in a way to align with the structure of the broader Regional Decarbonization Framework report and findings within other chapters. The implementation mechanism will identify how a jurisdiction intends to achieve some type of activity (e.g., through a requirement, incentive program, or education and outreach).

Additionally, specific policy categories will be further categorized where relevant. For instance, building electrification policy options differ between new construction and/or the current building stock, and between building types (e.g., residential and non-residential). This will permit further analysis to assist in identifying specific policy opportunities for the region and its jurisdictions.

***Policy Distribution and Frequency***

Outputs from the above analysis will include a summary of the number of jurisdictions that have committed to one or more policy actions organized by the categories listed above. We will develop summary tables to present findings from this analysis and inform what additional policy options exist for jurisdictions in the region. Table 8.1 is an illustrative example of how high-level results for building energy efficiency could be summarized.

Implementation Mechanism	Existing Building Stock		New Construction		Municipal Only
	Residential	Nonresidential	Residential	Nonresidential	
Policy Option: Information Disclosure					
Education, Outreach, & Coordination	32%	32%	-	-	-
Incentive Program	5%	5%	-	-	-
Requirement	16%	11%	-	-	5%
Policy Option: Implement Energy Efficiency Measure(s)					
Education, Outreach, & Coordination	47%	42%	21%	21%	5%
Incentive Program	26%	26%	-	-	-
Requirement	32%	37%	16%	21%	47%

**Table 8.1.** Percent of Jurisdictions with One or More Building Energy Efficiency.

### ***CAP Measures or Supporting Actions***

Summary tables similar to Table 8.1 will allow us to identify which policy options are frequently used by local jurisdictions to achieve GHG reductions and which policy options are not as common. In addition, these tables will illustrate where jurisdictions can look to achieve further reductions and identify potential opportunities to use an implementation mechanism that may achieve greater GHG reductions. For example, policies that rely on education and outreach are likely to achieve fewer, if any, reductions than an incentive program, which are likely to achieve fewer than a requirement. This can be paired with information collected on local authority to determine the extent at which jurisdictions can utilize certain implementation mechanisms (e.g., requirements).

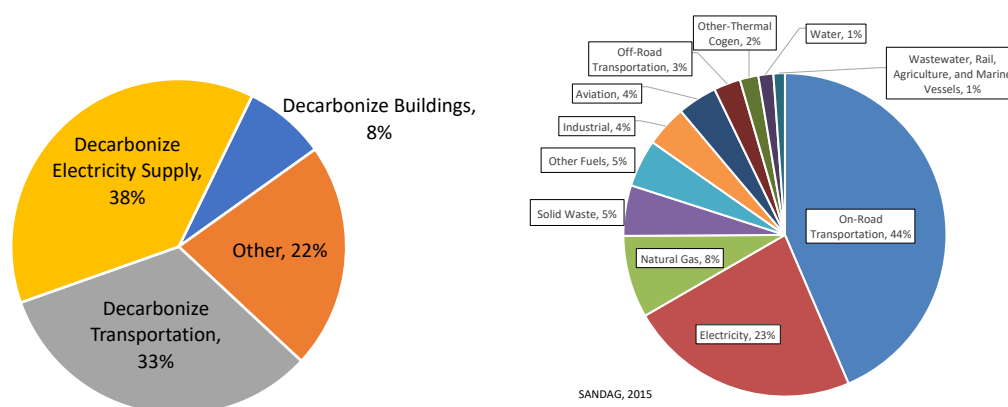
Summary tables also illustrate the policies that have been adopted, but still have room to expand their scope. For instance, jurisdictions have committed to electrification requirements for new residential and/or nonresidential construction, but have few, if any, policies to electrify the existing building stock. This indicates an opportunity area, one that may see an outsized reduction in GHG emissions relative to what is currently in place, as the existing building stock is much larger than the anticipated amount of new development.

### ***Contribution to Local GHG Reductions in CAP***

To understand how these local policy commitments translate to GHG reduction contributions, a second analysis will be conducted to determine the relative contribution of CAP measures – grouped by decarbonization pathway and pathway subcategories – to the local GHG reductions expected from all local CAP measures.



There are challenges with comparing GHG emissions across CAPs. Currently, not all CAPs report GHG reductions in the same target year(s); however, EPIC has identified 2035 as a common reporting year for most CAPs and will analyze GHG reduction contributions estimated for that year. If a CAP does not have emissions reductions reported in 2035, then EPIC will assign 2035 reductions using one of two methods. First, if 2035 is in between two CAP target years, reductions will be linearly interpolated between those two years. Second, 2030 reductions will be carried over to 2035. These results will be shown alongside the regional GHG inventory to understand how reductions from local policy efforts align with emission sources (e.g., transportation or building energy) (Figure 8.4). EPIC is working to develop an intuitive method to express results of the GHG reduction contribution analysis for local policy commitments in CAPs.



**Figure 8.4.** Average CAP Contribution to Local GHG Reduction by Decarbonization Pathway (left) and San Diego Regional GHG Inventory (right).

Results from the GHG contribution analysis will highlight where local policy commitments align, or do not align, with GHG inventories. For example, many CAPs rely on electric supply measures for a majority of their emissions reductions; however, the regional inventory shows that a significant majority (44%) of emissions come from the transportation sector. This signals a potential need – and opportunity – for more local policy that decarbonizes the transportation sector.

## Equity

As part of the policy analysis, we will consider social equity in two ways. First, we will assess whether and how regional CAPs integrate social equity considerations. This includes whether there is a separate section on equity, whether equity is integrated into implementation sections, and whether CAPs address workforce development. Second, we will consider the equity implications of the local policy and regional collaboration opportunities. As an example, what equity implications result from widespread electrification of buildings and transportation and could regional programs be developed to address any impacts?

**Limitations**

There are several limitations associated with analyzing local policy commitments in CAPs, including:

- CAP language may be high-level and/or vague, requiring subjective judgment when categorizing the policy into one or more groups;
- CAPs may rely on different methods and inputs (e.g., emission factors) that may change over time or may vary based on the consultant preparing the CAP;
- Jurisdictions may not have activity in all emissions sectors (e.g., agriculture) and will consequently not have associated policies included in their CAP;
- Some jurisdictions may implement decarbonization-related policies that are not included within their CAP;
- Some CAP measures have, since adoption, been superseded by federal, state, and regional requirements and/or activity (e.g., low carbon fuel standards, updated building code standards, and SB 375); and
- CAP target years do not consistently align and, for some CAPs, data on GHG reductions in interim years may be limited.

To address these limitations, GHG reductions should not be summed across CAPs and results of the local policy commitments contribution analysis are meant to illustrate the relative magnitude of certain policy options only.

**Additional Local Policy Options**

In addition to the local CAP policy commitment analysis, EPIC will conduct a literature review to identify additional policy options not included in regional CAPs. For this, we will identify and review a range of sources, including CAPs from outside the region, journal articles, and related reports and papers. Research for this will also include key organizations that focus on the specific policy areas related to the decarbonization pathways, including for energy efficiency, for example, American Council for an Energy Efficient Economy (ACEEE), Alliance to Save Energy (ASE), RMI, Institute for Market Transformation, etc.

**Timeline**

Figure 8.5 provides a draft project timeline.

	2021			2022	
Project Tasks	OCT	NOV	DEC	JAN	FEB
Update CAP Mitigation Database					
Conduct Analysis of Local CAP Measures					
Conduct Analysis of Authority to Act					
Identify of Additional Policy Actions					
Complete Draft Report					
Conduct External Review					
Present Findings to Board of Supervisors					
Complete Final Report					

**Figure 8.1.** Draft Project Timeline.